Sun™ Management Center 3.0
Supplement for
Sun Fire™ 15K Systems

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Preface

This *Sun™ Management Center 3.0 Supplement for the Sun Fire™ 15K System* provides instructions on how to install, configure, and use Sun Management Center software on the Sun Fire 15K system.

This supplement is intended for Sun Fire 15K system administrators who install and use the Sun Management Center software to monitor and manage their Sun Fire 15K system.

The Sun Management Center 3.0 software and documents for Sun Fire 15K systems are available in French, German, Italian, Spanish, Japanese, Korean, Simplified Chinese, and Traditional Chinese. However, the examples of screens in this supplement appear only in English.

Before You Read This Book

Read this supplement after the *Sun Management Center 3.0 Software Installation Guide*, which provides instructions for installing Sun Management Center 3.0 software and the *Sun Management Center 3.0 Software User's Guide*, which provides instructions for configuring and using Sun Management Center software.

Note – For the latest information about this product, go to the Sun Management Center Web site at `http://www.sun.com/sunmanagementcenter`.

How This Book Is Organized

Chapter 1 introduces Sun Management Center software on the Sun Fire 15K system.

Chapter 2 describes how to install, set up, start, stop, uninstall, reinstall, and reconfigure Sun Management Center software on a Sun Fire 15K system. Use this chapter with the *Sun Management Center 3.0 Software Installation Guide.*

Chapter 3 describes how to set up administrative access security for Sun Management Center on the Sun Fire 15K system.

Chapter 4 describes how to create, modify, and discover Sun Fire 15K system topology objects.

Chapter 5 describes platform, system controller, and domain data, which is specific to a Sun Fire 15K system and is shown in the respective Details window.

Chapter 6 describes briefly each property and the alarm rules used by the Sun Fire 15K system add-on components.

Chapter 7 describes how to use the dynamic reconfiguration and other management commands from the Platform/Domain State Management (PDSM) module, which is based on the System Management Services (SMS) commands.

Chapter 8 describes how to use the dynamic reconfiguration and other management commands from the Dynamic Reconfiguration (DR) module, which is based on the configuration administration `cfgadm`(1M) command.

The glossary defines abbreviations and acronyms used in this supplement and in the Sun Management Center graphical user interface (GUI) for Sun Fire 15K system–specific modules.

A comprehensive index helps find information quickly in this supplement.

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.

Refer to one or more of the following for this information:

- *Solaris Handbook for Sun Peripherals*

- Online documentation for the Solaris™ operating environment
- Other software documentation included with your system

Typographical Conventions

Typeface or Symbol	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	Read Chapter 6 in the *Users Guide*. These are called *class* options. You *must* be superuser to do this.
	Command-line variable; replace with a real name or value	To delete a file, type `rm` *filename*.

Shell Prompts

Shell	Prompt
C shell	*machine_name*: *directory task_no* %
C shell superuser	*machine_name*#
Bourne shell and Korn shell	$
Bourne shell and Korn shell superuser	#

Related Documentation

Application	Title	Part Number
Overview	*Sun Fire 15K Software Overview Guide*	816-3285
Preinstallation	*Sun Management Center 3.0 Configuration and Deployment Guide* at `http://www.sun.com/solaris/ sunmanagementcenter/docs/ config-deploy3.0.guide.html`	n/a
Installation	*Sun Management Center 3.0 Software Installation Guide*	806-5943
Usage	*Sun Management Center 3.0 Software User's Guide*	806-5942
Issues, Limitations, and Bugs	*Sun Management Center 3.0 Software Release Notes*	806-5944
Issues, Limitations, and Bugs for Platform Update 3	*Sun Management Center 3.0 Platform Update 4 Software Release Notes*	816-2700
Issues, Patches, Limitations, and Bugs for the Sun Fire 15K System	*Sun Management Center 3.0 Release Notes for Sun Fire 15K Systems*	816-2702
Solaris 8 Reference	Sun Solaris 8 Reference Manual Collection at `docs.sun.com`	n/a
Issues, Limitations, and Bugs for SMS and SMS DR	*System Management Services (SMS) 1.2 Installation Guide and Release Notes*	816-2529
SMS Reference	*Sun System Management Services (SMS) 1.2 Reference Manual*	816-2528
SMS Administration	*Sun System Management Services (SMS) 1.2 Administrator Guide*	816-2527
Issues, Limitations, and Bugs for Sun Fire 15K DR	*Sun Fire 15K Dynamic Reconfiguration Release Notes*	816-3284
Sun Fire 15K DR	*Sun Fire 15K Dynamic Reconfiguration User Guide*	816-3283
SMS DR	*System Management Services (SMS) 1.2 Dynamic Reconfiguration User Guide*	816-3282
`Hardware`	*Sun Fire 15K System Service Manual*	806-3512

Application	Title	Part Number
`luxadm`	*Platform Notes: Using luxadm Software*	816-1466
Netra Servers	*Sun Management Center 3.0 Supplement for Netra Servers*	816-3407
Starfire Servers	*Sun Management Center 3.0 Supplement for Starfire Servers*	806-7231
Sun Fire 6800, 4810, 4800, and 3800 Systems	*Sun Management Center 3.0 Supplement for Sun Fire 6800, 4810, 4800, and 3800 Systems*	816-2703
Sun Fire™ Link Systems	*Sun Management Center 3.0 Supplement for Sun Fire Link Systems*	806-1405
Workgroup Servers	*Sun Management Center 3.0 Supplement for Workgroup Servers*	816-1581
Workstations	*Sun Management Center 3.0 Supplement for Workstations*	806-7146
Advanced System Monitoring (ASM)	*SPARCengine ASM Reference Manual*	805-7581

Accessing Sun Documentation Online

A broad selection of Sun system documentation is located at:

`http://www.sun.com/products-n-solutions/hardware/docs`

A complete set of Solaris documentation and many other titles are located at:

`http://docs.sun.com`

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CHAPTER **1**

Introduction

Sun Management Center 3.0 software is an open, extensible system monitoring and management application that uses Java™ software protocol and Simple Network Management Protocol (SNMP) to provide an integrated and comprehensive enterprise-wide management of Sun™ products and their subsystems, components, and peripheral devices.

The add-on Sun Fire 15K packages provide support for the Sun Fire 15K platform, system controllers, and domains. For the Sun Fire 15K platform, hardware configuration information resides on both system controllers (SCs), currently CP 1500s, and on each of the individual Sun Fire 15K platform domains (up to 18). Hardware configuration information, process monitoring, and management operations for the Sun Fire 15K system are provided by the Sun Fire 15K agent modules listed in TABLE 1-1:

TABLE 1-1   Sun Fire 15K Agent Modules

Agent Modules	Description
Platform Config Reader (PCR)	Provides information about the hardware configuration for the entire Sun Fire 15K platform
Platform/Domain State Management (PDSM)	Enables an administrator to perform platform and domain management, and global dynamic reconfiguration of system boards across the platform
Domain Config Reader (DCR)	Provides the hardware configuration for Sun Fire 15K domains
Dynamic Reconfiguration (DR)	Enables an administrator to perform dynamic reconfiguration of boards on one domain at a time

TABLE 1-1   Sun Fire 15K Agent Modules *(Continued)*

Agent Modules	Description
SC Config Reader	Provides the hardware configuration for the Sun Fire 15K system controllers
SC Monitoring (SCM)	Monitors the System Management Services (SMS) daemons on the active Sun Fire 15K system controller
SC Status	Determines whether a Sun Fire 15K system controller is the main or spare system controller

Refer to Chapter 1 of the *Sun Management Center 3.0 Software User's Guide*, which includes definitions, explanations, and diagrams that clarify the Sun Management Center architecture. Review that chapter whenever you have questions about how consoles, servers, agents, domains, and modules interact.

Installation and Setup

This chapter describes how to install, set up, start, stop, uninstall, reinstall, and reconfigure the Sun Management Center 3.0 software for the Sun Fire 15K system.

The Sun Management Center software is divided into:

- Core packages that provide the Sun Management Center infrastructure and basic support
- Add-on components that provide support for particular hardware platforms
- Licensed add-on products for additional features

Sun Fire 15K support requires the Sun Management Center 3.0 core packages and the add-on Sun Fire 15K packages. The *Sun Management Center 3.0 Software Installation Guide* describes basic information about installing and setting up the Sun Management Center 3.0 core packages and starting and stopping the software. This chapter describes the processes specifically related to the Sun Fire 15K system.

> **Caution –** Use the installation script (`es-inst`) and the setup scripts (`es-setup`) provided with the Sun Management Center 3.0 software. Do *not* manually add packages or manually change configuration files.

Your Sun Management Center 3.0 installation and setup scripts may not display exactly the same messages in exactly the same sequence as the examples shown in this chapter. However, these examples show the basic messages you will receive in approximately the sequence you will receive them. Your actual installation and setup scripts depend on the add-on components you choose to install and other choices you make.

Sun Fire 15K System-Specific Packages

The Sun Fire 15K system-specific packages received with the Sun Management Center 3.0 basic functionality, and the minimum size required for installation in kilobytes (KB) are listed in TABLE 2-1. Refer to the *Sun Management Center 3.0 Software Installation Guide* for information about general Sun Management Center prerequisites, including minimum disk space requirements.

TABLE 2-1   Sun Management Center Packages for the Sun Fire 15K System

Package	Description	Size (KB)
SUNWesscp	Sun Management Center Sun Fire 15K Platform Agent Support	2558 KB
SUNWesscd	Sun Management Center Sun Fire 15K Domain Agent Support	1838 KB
SUNWscsca	Sun Management Center Sun Fire 15K System Controller Agent Support	1500 KB
SUNWesscs	Sun Management Center Sun Fire 15K Server Support	1500 KB
SUNWscscs	Sun Management Center Sun Fire 15K System Controller Server Support	128 KB

Preparing for Installation

Your Sun Fire 15K system must meet certain requirements before you install Sun Management Center 3.0 software on the Sun Fire 15K system. These requirements are explained in this section.

Choosing Server Machine

Before installing the Sun Management Center software, determine which server is to be the Sun Management Center server machine. The server must have a minimum of 256 megabytes of memory available. The server should be a system with high availability. When the Sun Management Center server is down, you will *not* be able to use Sun Management Center software to manage your system. Refer to the *Sun Management Center 3.0 Configuration and Deployment Guide* for more information about server machine requirements.

Required Software Versions

TABLE 2-2 lists the software versions required for Sun Fire 15K platform support.

TABLE 2-2   Required Software Versions

Host	Required Software	Version
Server machine	Solaris operating environment	2.6, 2.7, 8
	Sun Management Center	3.0
System controllers	Solaris operating environment	8
	System Management Services (SMS)	1.2
	Sun Management Center	3.0
Sun Fire 15K domains	Solaris operating environment	8
	Sun Management Center	3.0
Workstations (for console layer)	Solaris operating environment	2.6, 2.7, 8
	Sun Management Center	3.0

Network Port Configuration

Sun Management Center software requires network ports to communicate with various components of the system. The default port addresses for these components are listed in TABLE 2-3:

TABLE 2-3   Default Sun Management Center Port Addresses

Layer	Component	Default Port Number
Agent	Agent	161
Server	Trap handler	162
Server	Event manager	163
Server	Topology manager	164
Server	Configuration server	165
Agent	Platform agent	166
Server	Metadata	168

In some cases, this default port configuration conflicts with software already running on your system. Some Sun Fire 15K domains might have port 161 conflicts because of the presence of legacy SMNP agents. During the Sun Management Center software setup, specify an alternate network port to avoid this conflict. Refer to the *Sun Management Center 3.0 Software Installation Guide* for further information about solving port conflicts.

To create and access topology objects, the Sun Management Center agent layer software uses port 161 by default. If you configure an agent to use an alternate port, you must specify that port when the topology object is created or discovered. To simplify your Sun Management Center network configuration and management and enable more efficient discovery of Sun Management Center agents, select an alternate port number and use that number for all agent installations that cannot use the default port configuration.

The Sun Fire 15K system controller has two Sun Management Center agents: the agent and the platform agent. The agent provides information about the system controller and the platform agent provides information about the Sun Fire 15K system. Usually there are no port conflicts with the default port configuration for the platform agent. When a platform topology object is created or discovered, the correct default port is provided and does not need to be specified.

Software Installation and Setup Summary

This section summarizes the procedures for installing and setting up Sun Management Center 3.0 software on a Sun Fire 15K system. FIGURE 2-1 illustrates the Sun Management Center software that needs to be installed on the Sun Fire 15K system controllers and other hosts.

Sun Fire 15K System Controllers

Main

Spare

- Core Sun Management Center agent layer
- Sun Fire 15K platform agent and system controller add-on components

Sun Management Center Server

(can be any host with 256 MB of RAM)

- Core Sun Management Center server layer and *optional* agent layer
- Sun Fire 15K server and system controller server add-on components

Sun Fire 15K Domains

Domain R
Domain Q
Domain P
Domain O

Domain D
Domain C
Domain B
Domain A

- Core Sun Management Center agent layer
- Sun Fire 15K domain agent add-on component

Workstations

(or a common network location)

- Core Sun Management Center console layer and basic help component

FIGURE 2-1 Installation and Setup on a Sun Fire 15K System

Server Layers on Server Machine

Following is a summary of the procedures for installing Sun Management Center 3.0 software on the server machine.

- Install and set up the Sun Management Center 3.0 core server layer and Sun Fire 15K and system controller server add-on components on the designated Sun Management Center server machine.
- *(Optional)* Install and set up the Sun Management Center 3.0 core agent layer on the Sun Management Center 3.0 server machine if you want to monitor the server machine itself.

Agent Layers on System Controllers and Sun Fire 15K Domains

Following is a summary of the procedures for installing and setting up Sun Management Center 3.0 software on the system controllers and Sun Fire 15K domains:

1. Install and set up the Sun Management Center 3.0 core agent layer and Sun Fire 15K domain agent add-on component for each Sun Fire 15K domain you want to monitor.

2. Install and set up the Sun Management Center 3.0 core agent layer and the Sun Fire 15K platform agent and system controller add-on components on the main and spare system controllers.

Console Layer and Basic Help on Workstations or Network

Following is a summary of the procedures for installing Sun Management Center 3.0 software on workstations or the network:

- Install and set up the Sun Management Center 3.0 core console layer and basic help component on a common network location or on each workstation from which you want to monitor by using the GUI.

Installing and Setting Up Sun Management Center 3.0 Software

For Sun Fire 15K system support, install and set up the Sun Management Center 3.0 software on the Sun Fire 15K system hosts as shown in TABLE 2-4. The *Sun Management Center 3.0 Software Installation Guide* provides information about installing and setting up the core software. It also provides instructions for starting and stopping Sun Management Center 3.0 software. The sections following TABLE 2-4 provide instructions for installing and setting up the Sun Management 3.0 software on the various hosts in the Sun Fire 15K system.

TABLE 2-4   Sun Fire 15K System Hosts and Installed Layers

Host	Layer	Installed Software
Sun Management Center server machine	Server	Core Sun Management Center server layer
		Core Sun Management Center agent layer (*optional*)
		Sun Fire 15K server add-on component
		Sun Fire 15K system controller server add-on component
Sun Fire 15K domains	Agent	Core Sun Management Center agent layer
		Sun Fire 15K domain agent add-on component
Main SC	Agent	Core Sun Management Center agent layer
		Sun Fire 15K platform agent add-on component
		Sun Fire 15K system controller add-on component
		No other Sun Management Center layers should be installed here.
Spare SC	Agent	Core Sun Management Center agent layer
		Sun Fire 15K platform agent add-on component
		Sun Fire 15K system controller add-on component
		No other Sun Management Center layers should be installed here.
Workstations or common network location	Console	Core Sun Management Center console layer and basic help component

Installing From Installation CDs

TABLE 2-5 lists the three installation CDs supplied with your system. These CDs contain all software and documentation necessary for installing and using Sun Management Center 3.0 software with the Sun Fire 15K system. The contents of the CDs are:

- Sun Management Center 3.0 files containing basic core functionality and official patches.
- *Sun Management Center 3.0 User's Guide*, *Installation Guide*, and *Release Notes.*
- Sun Fire 15K add-on components
- *Sun Management Center 3.0 Supplement* and *Release Notes for Sun Fire 15K Systems*
- Localized versions of code and documentation.
- Other platforms' code and documentation

Note – Two methods of installing the Sun Management Center 3.0 software are to (1) insert each of the three CDs into a separate CD-ROM drive, load the three directories into a common network location, and then perform the installation from the common network location; or (2) download the CDs to a disk location for easier access.

TABLE 2-5   Sun Management Center 3.0 Software Installation CDs

CD Label Name	Directory Name
Sun Management Center 3.0 Platform Update *n*(1 of 3)	`Sun_Management_Center_3_0`
Sun Management Center 3.0 Platform Update *n*(2 of 3)	`Sun_Management_Center_3_0#1`
Sun Management Center 3.0 Platform Update *n*(3 of 3)	`Sun_Management_Center_3_0#2`

where *n* is the number of the Platform Update.

Mounting Remote CD-ROM Drive

If any of the hosts do not have a local CD-ROM drive, you need to mount a remote CD-ROM drive before installing the software on that host. The following example shows how to mount a remote CD-ROM drive for the Sun Management Center 3.0 Sun Fire 15K CD. If you cannot insert three CDs into three separate drives or install from a common network location as noted previously, then you will need to perform this procedure for each CD on each host.

▼ To Mount Remote CD-ROM Drive

1. **Log in as superuser to a host that has a CD-ROM drive.**

2. **Insert the Sun Management Center 3.0 Sun Fire 15K CD into the CD-ROM drive.**

3. **Type the** share**(1M) command on the same host as the CD-ROM drive to make the CD-ROM usable across the network.**

   ```
   # share -o ro,anon=0 -F nfs /cdrom/Sun_Management_Center_3_0xx
   ```

   where *xx* is the number of the CD.

4. **Log in as superuser to the host without a CD-ROM drive, where you want to install the software.**

5. **Make a local directory, if it does not already exist, on which to mount the CD-ROM:**

   ```
   # mkdir /cdrom/Sun_Management_Center_3_0xx
   ```

   where *xx* is the number of the CD.

6. **Mount the** /cdrom **directory from the host with a CD-ROM drive on the** /cdrom **directory you created on the host without a CD-ROM drive.**

   This example assumes that the host with a CD-ROM drive is a system controller.

   ```
   # mount SCn:/cdrom/SunMC_3.0_Sun-Fire-15000 /cdrom/Sun_Management_Center_3_0xx
   ```

   where *n* is the number of the main system controller (0 or 1) and xx is the number of the CD.

7. **Change to the Sun Management Center software installation directory:**

   ```
   # cd /cdrom/Sun_Management_Center_3_0xx
   ```

   where *xx* is the number of the CD.

   Note – If you receive the message Stale NFS file handle, reboot and start over.

▼ To Unmount Remote CD-ROM Drive

1. **If you have only one CD-ROM drive available, you need to first unmount and unshare the previous drive and then eject the CD.**

2. **Unmount the CD-ROM drive from the host with a CD-ROM drive.**

```
# cd /
# umount /cdrom/Sun_Management_Center_3_0xx
```

where *xx* is the number of the CD.

3. **Unshare the CD-ROM drive from the host with a CD-ROM drive.**

```
# cd /
# unshare /cdrom/Sun_Management_Center_3_0xx
```

where *xx* is the number of the CD.

4. **Remove the installation CD from the CD-ROM drive.**

```
# cd /
# eject cdrom
```

Stopping Server and Agents Running on Host Machine

If the Sun Management Center server or any agents are already running on a host where you are going to install Sun Management Center software, stop them first (see "Stopping and Exiting Sun Management Center Software" on page 43).

Installing and Setting Up Server Machine

This section describes how to install and set up Sun Management Center 3.0 software on the Sun Management Center dedicated server machine.

Note – When setting up or installing the Sun Management Center software, type **y** for yes, **n** for no, or **q** to quit.

▼ To Install Core Software on Server Machine

1. **Log in as superuser on the server machine.**

2. **Change the directory to the** *PUn_path*/sbin **directory, where** *n* **is the number of the Platform Update, and** *PUn_path* **is the location of the Sun Management Center 3.0 Platform Update** *n***(1 of 3) CD or the disk copy of the CD.**

```
# cd PUn_path/sbin
```

3. **Start the installation by entering:**

```
# ./es-inst
```

The system displays this message:

```
Please enter the target directory [/opt]:
```

4. **Press Return to accept the default directory of** /opt **or type another directory where the Sun Management Center 3.0 core software is to be installed.**

Note – If you type your own directory, be sure you replace your directory for /opt in any path in subsequent instructions.

The system displays this message:

```
Select one of the following:

(1) Production Environment (PE)
(2) Developer Environment (DE)

Enter your choice: [1|2]
```

5. **Type** `1` **for the Production Environment.**

   The system displays the following message:

```
Production Environment Installation
----------------------------------
There are 3 layers for your selection:
Do you want to install components in layer: Server Layer? [y|n|q]
Do you want to install components in layer: Agent Layer? [y|n|q]
Do you want to install components in layer: Console Layer? [y|n|q]
```

6. **Type** `y` **to install the Server Layer. Type** `n` **to** *not* **install the Agent Layer and Console Layer.**

   After the system finishes installing the core software, the system displays a similar message to this, depending on your system configuration:

```
========================================================================
Sun Management Center 3.0 Addons Product Selection:
========================================================================

Do you want to install the product: Advanced System Monitoring? [y|n|q]
Do you want to install the product: Premier Management Applications? [y|n|q]
Do you want to install the product: Monitoring and Management of A5x00 and T3
devices [y|n|q]
Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
Do you want to install the product: System Reliability Manager Product? [y|n|q]
Do you want to install the product: Sun Management Center Integration for
Unicenter TNG? [y|n|q]
```

7. **The only product listed in the preceding box that is essential for monitoring the Sun Fire 15K system is Sun Fire 15000 Monitoring. Determine which other products to install based on licenses you have for additional features or any additional servers in your installation that you want to monitor. If you want to install Sun Fire 15K add-on products now, go to Step 5 in the next procedure "To Install Sun Fire 15K Server Support on Server Machine" on page 15.**

   If you choose not to install Sun Fire 15K add-on products now, the system displays this message, after finishing the remainder of the installation:

```
Do you want to run setup now? [y|n|q]
```

8. **Because the system can take up to 20 minutes running server setup and you will have to set up the server again after you install the Sun Fire 15K packages, it is more efficient to type** `n` **to** *not* **run setup now.**

▼ To Install Sun Fire 15K Server Support on Server Machine

If you are installing only Sun Fire 15K server support now and have not already installed core server software, perform Steps 1 through 4. If the core software has been installed already, continue with Step 5.

1. **Log in as superuser on the server machine.**

2. **Change the directory to the** /opt/SUNWsymon/sbin **directory.**

   This example assumes that you are installing in the default area/opt. If not replace /opt with your own path.

   ```
   # cd /opt/SUNWsymon/sbin
   ```

3. **Start the installation by entering:**

   ```
   # ./es-inst
   ```

   The system displays this message:

   ```
   Please enter the source directory:
   ```

4. **Type the source directory where the Sun Fire 15K server add-on packages (**SUNWesscs **and** SUNWscscs**) reside.**

   For example, if you are installing from the Sun Management Center CD-ROM, you would type:

   ```
   Please enter the source directory: /cdrom/Sun_Management_Center_3_0xx/image
   ```

   where *xx* is the number of the CD. The system displays this message:

   ```
   =======================================================================
   Sun Management Center 3.0 Addons Product Selection:
   =======================================================================

   Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
   ```

5. **Type** `y` **to install the Sun Fire 15K server add-on packages (**`SUNWesscs` **and** `SUNWscscs`**) now.**

6. **The Sun Fire 15K server support packages are installed, and the system displays these messages:**

```
....
....
Installation of <SUNWesscs> was successful.
....
....
Installation of <SUNWscscs> was successful.

Do you want to run setup now? [y|n|q]
```

7. **See the following procedure for setting up the Sun Management Center 3.0 software on the server machine.**

▼ To Set Up Software on Server Machine

After you have successfully installed the Sun Management Center 3.0 core software and Sun Fire 15K add-on components on the server machine, the system displays this message:

```
Do you want to run setup now? [y|n|q]
```

Caution – Be aware that you need to run setup before using the system initially, and anytime you need to make changes to the configuration file.

1. **Do one of the following:**

   a. **Type** `n` **for no to** *not* **run the setup now. The setup script ends.**

b. Type y **for yes to run the setup now.**

The system displays this message:

```
-----------------------------------
Sun Management Center Setup Program
-----------------------------------
....
....
You have the following Sun Management Center components installed

Sun Management Center Server
Sun Management Center Agent
....
....
This part of setup generates security keys used for communications
between processes....
....
....
Do you want to generate these keys using the Sun Management Center
default seed? [y|n|q]
```

2. Type y **for yes to use the default seed.**

The system displays this message:

```
....
....
The Sun Management Center base URL is relative to the Sun Management Center
Console.
The Sun Management Center Console is able to request help documentation via the
network.
If you have installed Sun Management Center help documentation in an http-
accessible location within your network, you may specify this location.
If Sun Management Center help is installed on the console host, simply accept
the default value.
Please enter base URL to Sun Management Center help [local]:
```

3. **Press Return if Sun Management Center help is installed on the console host. If Sun Management Center help is in an http-accessible location within your network, specify the URL.**

   Either way, the system might display the following message if you install the agent layer on the server machine, and another process is using the default port of 161:

```
---------------WARNING---------------------
It appears that agent.snmpPort 161 is already in use.
Sun Management Center agent may not be able to run due to this conflict.
There are two ways to correct this conflict:
1. Reconfigure the port that Sun Management Center uses.
2. Stop the process that is using the port.
You are currently running snmpdx, which may be causing the conflict.

Do you want to use a different port number for agent? [y|n|q]
```

4. **Do one of the following:**

   a. **If you do not want a different port number, type** n **for no.**

      This system displays this message:

```
NOTE: Prior to starting Sun Management Center agent, stop the
process using port 161.
```

      Go to the message about starting the Sun Management Center Sun Fire 15K Server setup in Step 5.

   b. **If you do want a different port number, type** y **for yes.**

      The system displays the message:

```
Please enter any port [ 1100 to 65535 ] :
```

5. **Type the new port number.**

   The system displays this message:

```
-----------------------------------------------------------------
Starting Sun Management Center Sun Fire 15000 Server Setup
-----------------------------------------------------------------

Would you like to setup this Sun Management Center package? [y|n|q]
```

6. **Type** y **to set up the Sun Fire 15K server support now. Type** n **to** *not* **set up the Sun Fire 15K server support now.**

Either way, the system displays this message:

```
----------------------------------------------------
Starting Sun Management Center Sun Fire 15000 System Controller Server Setup
----------------------------------------------------

Would you like to setup this Sun Management Center package? [y|n|q]
```

7. **Type** y **to set up the Sun Fire 15K system controller server support now. Type** n **to** *not* **set up the Sun Fire 15K system controller server support now.**

Either way, the system displays this message:

```
Do you want to setup Sun Fire (6800/4810/4800/3800) platform administration
module [y|n|q]
```

Note – You do *not* need the Sun Fire (6800∕4810∕4800∕3800) platform administration module to monitor your Sun Fire 15K system. You need to set up this module *only* if you want to monitor a Sun Fire (6800∕4810∕4800∕3800) platform from this server.

---

8. **Type** y **to set up the Sun Fire (6800/4810/4800/3800) platform administration module now. Type** n **to** *not* **set up this module now.**

Either way, the system displays this message, where *nnnnnnnnnnnn.nnnn* is the identifying number of the setup log:

```
Please wait, Sun Management Center database setup in progress. It may take 15
to 20 minutes.
....
....
Setup log stored in /var/opt/SUNWsymon/install/setup.nnnnnnnnnnnn.nnnn

Do you want to start Sun Management Center agent and server components now?
[y|n|q]
```

9. **Type** y **to start the Sun Management Center core agent, server, and Sun Fire 15K server support now. Type** n **to** *not* **start this software now.**

Installing and Setting Up Sun Fire 15K Domains

This section describes how to install and set up the Sun Management Center 3.0 core software and Sun Fire 15K domain agents. Install and set up this software for each Sun Fire 15K domain to be monitored using the Sun Management Center GUI. The procedure is the same for installing and setting up each domain. If you are reinstalling Sun Management Center software on a domain, be sure you uninstall the Sun Management Center 3.0 software on a domain, before you reinstall (see "Reinstalling Sun Management Center 3.0 Software" on page 38).

Note – When setting up or installing the Sun Management Center software, type `y` for yes, `n` for no, or `q` to quit.

▼ To Install Core Software on Sun Fire 15K Domains

1. **Log in as superuser on the Sun Fire 15K domain.**

2. **Change the directory to the *PUn_path/*sbin directory, where *n* is the number of the Platform Update, and *PUn_path* is the location of the Sun Management Center 3.0 Platform Update *n*(1 of 3) CD or the disk copy of the CD.**

   ```
   # cd PUn_path/sbin
   ```

3. **Start the installation by typing:**

   ```
   # ./es-inst
   ```

   The system displays this message:

   ```
   Please enter the target directory [/opt]:
   ```

4. **Press Return to accept the default directory of `/opt` or type another directory where the Sun Management Center 3.0 core software is to be installed.**

The system displays this message:

```
Select one of the following:

(1) Production Environment (PE)
(2) Developer Environment (DE)

Enter your choice: [1|2]
```

5. **Type** 1 **for the Production Environment.**

The system displays the following message:

```
Production Environment Installation
---------------------------------
There are 3 layers for your selection:
Do you want to install components in layer: Server Layer? [y|n|q]
Do you want to install components in layer: Agent Layer? [y|n|q]
Do you want to install components in layer: Console Layer? [y|n|q]
```

6. **Type** y **to install the Agent Layer. Type** n **to** *not* **install the Server Layer and Console Layer.**

After the system finishes installing the core software, the system displays a similar message to this, depending on your system configuration:

```
=============================================================================
Sun Management Center 3.0 Addons Product Selection:
=============================================================================

Do you want to install the product: Advanced System Monitoring? [y|n|q]
Do you want to install the product: Premier Management Applications? [y|n|q]
Do you want to install the product: Monitoring and Management of A5x00 and T3
devices [y|n|q]
Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
Do you want to install the product: System Reliability Manager Product? [y|n|q]
Do you want to install the product: Sun Management Center Integration for
Unicenter TNG? [y|n|q]
```

7. **The only product listed in the preceding box that is essential for monitoring the Sun Fire 15K system is Sun Fire 15000 Monitoring. Determine which other products to install based on licenses you have for additional features or any additional servers in your installation that you want to monitor. If you want to install Sun Fire 15K domain agents now, go to Step 5 in the next procedure "To Install Sun Fire 15K Domain Agents" on page 22.**

If you choose not to install Sun Fire 15K add-on products now, the system displays this message, after the system finishing the remainder of the installation:

```
Do you want to run setup now? [y|n|q]
```

8. **It is more efficient to type** n **to** *not* **run setup now if you need to install the Sun Fire 15K packages. Otherwise, type** y **to run setup now.**

▼ To Install Sun Fire 15K Domain Agents

Install the Sun Fire 15K domain agent software for each domain to be monitored using the Sun Management Center software. If you are only installing Sun Fire 15K domain agents and have not installed core software already, perform Steps 1 through 4. If you have installed core software already, continue with Step 5.

1. **Log in as superuser on the Sun Fire 15K domain.**

2. **Change the directory to the** /opt/SUNWsymon/sbin **directory.**

This example assumes that you are installing in the default area /opt. If not, replace /opt with your own path.

```
# cd /opt/SUNWsymon/sbin
```

3. **Start the installation by typing:**

```
# ./es-inst
```

The system displays this message:

```
Please enter the source directory:
```

4. **Type the source directory where the Sun Fire 15K domain agent package (**`SUNWesscd`**) resides.**

   For example, if you are installing from the Sun Management Center CD-ROM, you would type:

```
Please enter the source directory: /cdrom/Sun_Management_Center_3_0xx/image
```

   where *xx* is the number of the CD. The system displays this message:

```
=====================================================
Sun Management Center 3.0 Addons Product Selection:
=====================================================

Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
```

5. **Type** `y` **for yes to install the Sun Fire 15K domain agent package (**`SUNWesscd`**) now.**

   The system installs the Sun Fire 15K domain agent and displays this message:

```
    Installation of <SUNWesscd> was successful.
```

▼ To Set up Domain Agents

After you have successfully installed the Sun Fire 15K domain agent, the system displays this message:

```
    Do you want to run setup now? [y|n|q]
```

Caution – Be aware that you need to run setup before using the system initially, and anytime you need to make changes in the configuration file.

1. **Do one of the following:**

   a. **Type** `n` **for no to *not* set up the Sun Fire 15K domain agent now. The setup script ends.**

b. Type `y` **for yes to set up the Sun Fire 15K domain agent now.**

The system displays this message:

```
You have the following Sun Management Center components installed

Sun Management Center Agent

This part of setup generates security keys used for communications
between processes....
....
....
Do you want to generate these keys using the Sun Management Center
default seed? [y|n|q]
```

2. Type `y` **for yes to use the default seed.**

The system displays this message:

```
Please enter the Sun Management Center Server Hostname:
```

3. Type your server host name.

The system might display the following message if another process is using the default port of 161:

```
---------------WARNING--------------------
It appears that agent.snmpPort 161 is already in use.
Sun Management Center agent may not be able to run due to this conflict.
There are two ways to correct this conflict:
1. Reconfigure the port that Sun Management Center uses.
2. Stop the process that is using the port.
You are currently running snmpdx, which may be causing the conflict.

Do you want to use a different port number for agent? [y|n|q]
```

4. **Do one of the following:**

   a. **If you do not want to use a different port number, type** n **for no.**

   This system displays this message:

   ```
   NOTE: Prior to starting Sun Management Center agent, stop the
   process using port 161.
   ```

   Go to the message about starting the Sun Management Center Sun Fire 15K domain setup in Step 6.

   b. **If you do want a different port number, type** y **for yes.**

   The system displays the message:

   ```
   Please enter any port [ 1100 to 65535 ] :
   ```

Caution – Be sure you specify the same port number for *all* Sun Fire 15K domains. Otherwise, the Sun Fire 15K composite will *not* work. See also Steps 4 and 5 in the procedure "To Set Up Software on System Controllers" on page 30.

5. **Type the new port number.**

   The system displays this message:

   ```
   Do you want to setup Sun Fire (6800/4810/4800/3800) platform administration
   module [y|n|q]
   ```

Note – You do *not* need the Sun Fire (6800/4810/4800/3800) platform administration module to monitor your Sun Fire 15K system. You need to set up this module *only* if you want to monitor a Sun Fire (6800/4810/4800/3800) platform from this domain.

6. **Type** y **to set up the Sun Fire (6800/4810/4800/3800) platform administration module now. Type** n **to** *not* **set up this module now.**

Either way, the system displays this message:

```
-----------------------------------------------------------------
Starting Sun Management Center Sun Fire 15000 Domain Setup
-----------------------------------------------------------------

Would you like to setup this Sun Management Center package? [y|n|q]
```

7. **Type** y **to set up the Sun Fire 15K domain now. Type** n **to** *not* **set up the Sun Fire 15K domain now.**

Either way, the system displays this message:

```
Do you want to start Sun Management Center agent now [y|n|q]
```

8. **Type** y **for yes to start the Sun Management Center core agent and Sun Fire 15K domain agent now. Type** n **to** *not* **start this software now.**

Installing and Setting Up System Controllers

This section describes how to install and set up the Sun Management Center 3.0 software on a system controller. You need to install and set up this software on both system controllers; the procedure is the same for both. If you are reinstalling software on a system controller, be sure to uninstall the Sun Management Center software on a system controller, before you reinstall (see "Reinstalling Sun Management Center 3.0 Software" on page 38).

Note – When setting up or installing the Sun Management Center software, type **y** for yes, **n** for no, or **q** to quit.

▼ To Install Core Agent on System Controllers

1. **Log in as superuser on the system controller.**

2. **Change the directory to the *PUn_path*/sbin directory, where *n* is the number of the Platform Update, and *PUn_path* is the location of the Sun Management Center 3.0 Platform Update *n*(1 of 3) CD or the disk copy of the CD.**

```
# cd PUn_path/sbin
```

3. **Start the installation by typing:**

```
# ./es-inst
```

The system displays this message:

```
Please enter the target directory [/opt]:
```

4. **Press Return to accept the default directory of /opt or type another directory where the Sun Management Center 3.0 core software is to be installed.**

Note – If you type your own directory, be sure to replace your directory for /opt in any path in subsequent instructions.

The system displays this message:

```
Select one of the following:

(1) Production Environment (PE)
(2) Developer Environment (DE)

Enter your choice: [1|2]
```

5. **Type** `1` **for the Production Environment.**

   The system displays the following message:

```
Production Environment Installation
----------------------------------
There are 3 layers for your selection:
Do you want to install components in layer: Server Layer? [y|n|q]
Do you want to install components in layer: Agent Layer? [y|n|q]
Do you want to install components in layer: Console Layer? [y|n|q]
```

6. **Type** `y` **to install the Agent Layer. Type** `n` **to** *not* **install the Server Layer and Console Layer.**

   The system displays a similar message to this, depending on your system configuration:

```
========================================================================
Sun Management Center 3.0 Addons Product Selection:
========================================================================

Do you want to install the product: Advanced System Monitoring? [y|n|q]
Do you want to install the product: Premier Management Applications? [y|n|q]
Do you want to install the product: Monitoring and Management of A5x00 and T3
devices [y|n|q]
Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
Do you want to install the product: System Reliability Manager Product? [y|n|q]
Do you want to install the product: Sun Management Center Integration for
Unicenter TNG? [y|n|q]
```

7. **The only product listed in the preceding box that is essential for monitoring the Sun Fire 15K system is Sun Fire 15000 Monitoring. Determine which other products to install based on licenses you have for additional features or any additional servers in your installation that you want to monitor. If you want to install Sun Fire 15K add-on products now, go to Step 5 in the next procedure "To Install Sun Fire 15K Platform Agent on System Controllers" on page 29.**

   If you choose not to install Sun Fire 15K add-on products now, the system displays this message after finishing the remainder of the installation:

```
    Do you want to run setup now? [y|n|q]
```

8. **It is more efficient to type** `n` **to** *not* **run setup now if you still need to install the Sun Fire 15K Platform Agent. Otherwise, type** `y` **to run setup now.**

▼ To Install Sun Fire 15K Platform Agent on System Controllers

If you are only installing the Sun Fire 15K platform agent now and have not installed the core software already, perform Steps 1 through 4. If you have installed the core software already, continue with Step 5.

1. **Log in as superuser on the system controller.**

2. **Change the directory to the** `/opt/SUNWsymon/sbin` **directory.**

   This example assumes that you are installing in the default area `/opt`. If not, replace `/opt` with your own path.

   ```
   # cd /opt/SUNWsymon/sbin
   ```

3. **Start the installation by typing:**

   ```
   # ./es-inst
   ```

   The system displays this message:

   ```
   Please enter the source directory:
   ```

4. **Type the source directory where the Sun Fire 15K platform agent add-ons (**`SUNWesscp` **and** `SUNWscsca`**) reside.**

   For example, if you are installing from the Sun Management Center CD-ROM, you would type:

   ```
   Please enter the source directory: /cdrom/Sun_Management_Center_3_0xx/image
   ```

   where *xx* is the number of the CD. The system displays this message:

   ```
   ====================================================================
   Sun Management Center 3.0 Addons Product Selection:
   ====================================================================

   Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
   ```

5. **Type** y **for yes to install the Sun Fire 15K platform agent add-ons (**SUNWesscp **and** SUNWscsca**) now.**

   The Sun Fire 15K platform agent add-ons are installed, and the system displays this message:

   ```
   Installation of <SUNWesscp> was successful.
   ....
   ....
   Installation of <SUNWscsca> was successful.
   ```

▼ To Set Up Software on System Controllers

After successfully installing the Sun Fire 15K platform agent support, the system displays this message:

```
Do you want to run setup now? [y|n|q]
```

Caution – Be aware that you need to run setup before using the system initially, and anytime you need to make changes in the configuration file.

1. **Do one of the following:**

   a. **Type** n **for no to** *not* **run the setup now. The setup script ends.**

b. Type y **for yes to run the setup now.**

The system sets up the core agent layer on the system controller and displays this message:

```
-----------------------------------
Sun Management Center Setup Program
-----------------------------------
....
....
You have the following Sun Management Center components installed

Sun Management Center Agent

This part of setup generates security keys used for communications
between processes....
....
....
Do you want to generate these keys using the Sun Management Center
default seed? [y|n|q]
```

2. **Type** y **for yes to use the default seed.**

The system displays this message:

```
Please enter the Sun Management Center Server Hostname:
```

3. **Type your server host name.**

The system might display the following message if another process is using the default port of 161:

```
--------------WARNING-------------------
It appears that agent.snmpPort 161 is already in use.
Sun Management Center agent may not be able to run due to this
conflict.
There are two ways to correct this conflict:
1. Reconfigure the port that Sun Management Center uses.
2. Stop the process that is using the port.
You are currently running snmpdx. which may be causing the
conflict.

Do you want to use a different port number for agent? [y|n|q]
```

4. **Do one of the following:**

a. **If you do not want a different port number, type** n **for no.**

   This system displays this message:

   ```
   NOTE: Prior to starting Sun Management Center agent, stop the
   process using port 161.
   ```

   Go to the message about starting the Sun Management Center Sun Fire 15K Platform setup in Step 6.

b. **If you do want a different port number, type** y **for yes.**

   The system displays the message:

   ```
   Please enter any port [ 1100 to 65535 ] :
   ```

5. **Type the new port number.**

   The system displays this message:

   ```
   Do you want to setup Sun Fire (6800/4810/4800/3800) platform administration
   module [y|n|q]
   ```

   Note – You do *not* need the Sun Fire (6800/4810/4800/3800) platform administration module to monitor your Sun Fire 15K system. Set up this module *only* to monitor a Sun Fire (6800/4810/4800/3800) platform from this system controller.

   ---

6. **Type** y **to set up the Sun Fire (6800/4810/4800/3800) platform administration module now. Type** n **to** *not* **set up this module now.**

   Either way, the system displays this message:

   ```
   -----------------------------------------------------------------
   Starting Sun Management Center Sun Fire 15000 Platform Setup
   -----------------------------------------------------------------

   Would you like to setup this Sun Management Center package? [y|n|q]
   ```

7. **Type** y **for yes to set up Sun Fire 15K platform agent now.**

   The system displays this message:

   ```
   Is this Sun Fire 15000 platform configured with a spare SC? [y|n|q]
   ```

8. **Type** y **for yes if your Sun Fire 15K system is configured with a spare system controller, or type** n **for no if there is no spare system controller.**

   If you choose yes, the system displays this message:

   ```
   Please enter the alternate SC hostname (not main_hostname) for this
   platform.
   Alternate SC hostname: alternate_hostname
   ```

9. **If you have a spare system controller, type in the host name for the spare (or alternate) system controller.**

   The system displays this message:

   ```
   The Platform agent will create a composite object that includes
   Sun Management Center agents loaded on Sun Fire 15000 domains.

   The default port to be checked for Sun Fire 15000 Domains is: 161.

   Do you want to change the port that will be checked? [y|n|q]
   ```

Caution – Specify the *same* port number that you specified when setting up the domain agents on *all* Sun 15K domains. Otherwise, the Sun Fire 15K composite will *not* work. See also Steps 4 and 5 of the procedure "To Set up Domain Agents" on page 23. Type n to *not* change the default port or y to change the default port. If you type y, you are prompted to specify a new default port number; type in the port number.

Either way, the system completes the platform agent setup and displays this message, where *port_number* is the default port number you specified:

```
Sun Fire 15000 domain agent ports: port_number
...
...
--------------------------------------------------------------
Starting Sun Management Center Sun Fire 15000 System Controller
Agent Setup
--------------------------------------------------------------

Would you like to setup this Sun Management Center package? [y|n|q]
```

10. **Type y to set up the system controller agent now.**

   The system displays the following message. Note that the es-startup script loads the following drivers automatically on the CP1500 if you type **y** for yes to continue:

```
Proper setup requires loading the drivers i2c, i2cadc, i2cgpio.
This will enable us to collect voltage and temperature data for
the CP1500.
Please refer to the SPARCengine ASM Reference Manual for more
information.

Would you like to continue? [y|n|q]
```

11. **Type y to load the three drivers automatically and continue the system controller agent setup.**

   The system completes the system controller agent setup and displays this message:

```
   Do you want to start Sun Management Center agent now? [y|n|q]
```

12. **Type y to start the Sun Management Center core agent, Sun Fire 15K platform agent, and Sun Fire 15K system controller agent now. Type n to *not* start this software now.**

Installing and Setting Up Workstations or Network

This section describes how to install and set up the Sun Management Center 3.0 core console software. There is no Sun Fire 15K system-specific console software. You need to install and set up the core console software on a common network location or for each workstation where you want to monitor the Sun Fire 15K system by using the Sun Management Center GUI. The procedure is the same for installing and setting up the common network location or each workstation. If you are reinstalling Sun Management Center software on a common network location or a workstation, be sure you uninstall the Sun Management Center 3.0 software on the common network location or a workstation, before you reinstall (see "Reinstalling Sun Management Center 3.0 Software" on page 38).

Note – When setting up or installing the Sun Management Center software, type `y` for yes, `n` for no, or `q` to quit.

▼ To Install and Set Up Console Software on Workstations or Network

1. **Log in as superuser on the workstation or network where the Sun Management Center 3.0 console software is to be installed.**

2. **Change the directory to the *PUn_path*/sbin directory, where *n* is the number of the Platform Update, and *PUn_path* is the location of the Sun Management Center 3.0 Platform Update *n*(1 of 3) CD or the disk copy of the CD.**

```
# cd PUn_path/sbin
```

3. **Start the installation by typing:**

```
# ./es-inst
```

The system displays this message:

```
Please enter the target directory [/opt]:
```

4. **Press Return to accept the default directory of** `/opt` **or type another directory where you want Sun Management Center 3.0 console software to be installed.**

Note – If you type your own directory, be sure you replace your directory for `/opt` in any path in subsequent instructions.

The system displays this message:

```
Select one of the following:

(1) Production Environment (PE)
(2) Developer Environment (DE)

Enter your choice: [1|2]
```

5. **Type** `1` **for the Production Environment.**

The system displays the following message:

```
Production Environment Installation
-----------------------------------
There are 3 layers for your selection:
Do you want to install components in layer: Server Layer? [y|n|q]
Do you want to install components in layer: Agent Layer? [y|n|q]
Do you want to install components in layer: Console Layer? [y|n|q]
```

6. **Type** `y` **to install the Console Layer. Type** `n` **to** *not* **install the Server Layer and Agent Layer.**

After the system finishes the installation, the system displays a similar message to this, depending on your system configuration:

```
==========================================================================
Sun Management Center 3.0 Addons Product Selection:
==========================================================================

Do you want to install the product: Advanced System Monitoring? [y|n|q]
Do you want to install the product: Premier Management Applications? [y|n|q]
Do you want to install the product: Monitoring and Management of A5x00 and T3
devices? [y|n|q]
Do you want to install the product: Sun Fire 15000 Monitoring? [y|n|q]
Do you want to install the product: System Reliability Manager Product? [y|n|q]
Do you want to install the product: Sun Management Center Integration for
Unicenter TNG? [y|n|q]
```

7. **None of the products listed in the preceding box is essential for monitoring the Sun Fire 15K system. Determine which products to install based on licenses you have for additional features or any additional servers in your installation that you want to monitor.**

   After the system finishes the remainder of the installation, the system displays this message:

   ```
   Do you want to run setup now? [y|n|q]
   ```

8. **Because there are no Sun Fire 15K system-specific console packages to install, it is more efficient to type y to run setup now.**

   If you type **y**, the system performs the console setup

Installing Localized Versions of Sun Management Center Add-on Packages From the CD

To install the localized packages, perform the following steps *after* the installation of the English Sun Management Center 3.0 software and add-on product packages is complete.

▼ To Install Localized Packages

1. **Insert the Platform Update 3 CD (2 of 3) into the CD-ROM drive.**

2. **Open a command window and (if you are not already superuser) become superuser by using the su – command.**

3. **Change to the CD-ROM directory and type the following command:**

   ```
   # cd /cdrom/sun_management_center_3_0
   ```

4. **From the** `localization` **directory, type the following command to run the installation script:**

```
# ./es-inst-l10n
```

Reinstalling Sun Management Center 3.0 Software

Before reinstalling Sun Management Center software, uninstall the existing software using the uninstall script (`es-uninst`). Refer to the *Sun Management Center 3.0 Software Installation Guide* for instructions about how to uninstall the software. The Sun Fire 15K system-specific components are uninstalled with the rest of the Sun Management Center software. Before reinstalling the software, ensure that there are no files remaining in the `/var/opt/SUNWsymon` directory.

Reinstalling Sun Fire 15K Add-on Packages Only

When reinstalling Sun Fire 15K add-on packages *only*, remove and uninstall the Sun Fire 15K add-on packages first. You do not need to remove and uninstall the Sun Management Center 3.0 core packages. Use the `pkgrm`(1) command to remove the Sun Fire 15K add-on packages. See the list of Sun Fire 15K add-on packages in TABLE 2-1.

Reconfiguring Sun Fire 15K Setup Parameters

You can reconfigure the Sun Fire 15K setup parameters at any time by running the setup script (es-setup) again. You must reconfigure the appropriate Sun Fire 15K setup parameters if certain changes occur, including:

- If the Sun Fire 15K system name is changed, reconfigure the Sun Fire 15K domain and platform components.
- If the Sun Management Center agent port configuration changes for the Sun Fire 15K domain agents, reconfigure the Sun Fire 15K platform component.
- If a spare system controller is added or removed from the platform configuration, reconfigure the Sun Fire 15K platform component.
- If the Sun Management Center server host or trap agent port configuration changes, reconfigure the Sun Fire 15K platform and domain components.
- If a host IP address changes, reconfigure the components on that host.

For information about where these components are located, see TABLE 2-4.

Note – You do not need to rerun setup after System Management Services (SMS) software is reinstalled; however, you do need to restart the Sun Management Center software.

▼ To Rerun Setup Script

1. **Log in as superuser on the machine where the components are that you want to reconfigure (see** TABLE 2-4 **for the location of the components).**

2. **Change the directory to the** /opt/SUNWsymon/sbin **directory.**

   This example assumes that you are using the default area /opt. If not, replace /opt with your own path.

   ```
   # cd /opt/SUNWsymon/sbin
   ```

3. **Stop the components to be reconfigured.**

   The command you use to stop the component depends on which component you are reconfiguring:

a. **To stop the Sun Fire 15K server and agent components if they are currently running on the server machine:**

```
# ./es-stop -Sa
```

b. **To stop a Sun Fire 15K domain agent currently running in a domain, type:**

```
# ./es-stop -a
```

c. **To stop the host agent, which monitors the SC, and platform agent, if they are currently running on the SC:**

```
# ./es-stop -al
```

4. **Run the setup script to set up the component layers:**

```
# ./es-setup
```

5. **Follow the instructions in the setup procedures for the corresponding components with these two additional prompts:**

a. **Sun Management Center Server**

In the setup for the Sun Management Center server, the system displays this message:

```
Do you want to preserve your existing data? [y|n|q]
```

Note – If you answer `y` for yes, the system preserves any data in the database, including open and closed alarms, loaded modules and their configurations, discoveries, managed objects, and rule thresholds.

Type `y` **to keep any existing topology and event data; or type** `n` **to discard the data.**

b. Sun Fire 15K Domain Agent

In the setup for the Sun Fire 15K domain agent, the system displays this message:

```
server-hostname appears to be configured as your Sun Management Center
server. Is this correct? [y|n|q]
```

Type `y` for yes if this is your Sun Management Center server, or type `n` for no if not. If you type `n`, you are prompted to type your correct server host name.

6. **Restart the components that you stopped.**

Starting Sun Management Center Software

The `es-start` command requires different command arguments, depending on which component you are starting. Refer to the *Sun Management Center 3.0 Software Installation Guide* for a list of the options for `es-start`. The `-h` option for `es-start` also lists all the options. The following procedure describes some common `es-start` options.

▼ To Start Sun Management Center Software

1. **Log in as superuser on the machine where the components are to be started (see** TABLE 2-4 **for the location of the components).**

2. **Change the directory to the** `/opt/SUNWsymon/sbin` **directory.**

   This example assumes that your software in the default area `/opt`. If not, replace `/opt` with your own path.:

   ```
   # cd /opt/SUNWsymon/sbin
   ```

   On the system controller, start the Sun Management Center agents:

   ```
   # ./es-start -al
   ```

   This command starts the core and platform agents. The platform agent provides all the Sun Fire 15K system information to Sun Management Center software.

3. **To start the Sun Management Center agent on a Sun Fire 15K domain with only the Sun Management Center agent layer installed, type:**

   ```
   # ./es-start -a
   ```

4. **To start all the Sun Management Center components on the Sun Management Center server host with all layers installed, type:**

   ```
   # ./es-start -A
   ```

Note – Upon rebooting, all Sun Management Center agents start automatically.

---

5. **To start the console, type:**

   ```
   # ./es-start -c
   ```

Note – To start the console, you can also be logged in as your own user ID; you do not have to be logged in as superuser. However, to access the Platform or Domain Config Reader, you must be in the appropriate security access groups. See "Security Considerations for Defining Groups" on page 47.

Stopping and Exiting Sun Management Center Software

This section describes stopping and exiting Sun Management Center software:

- Stop the server and agent components by typing the `es-stop` command with the correct command argument.
- Exit the console through the main console window.

▼ To Stop Server and Agents

The `es-stop` command requires different command arguments depending on which component you are stopping. Refer to the *Sun Management Center 3.0 Software Installation Guide* for a list of the `es-stop` options. The `-h` option for `es-stop` also lists all the options. The following procedure describes some common `es-stop` options.

1. **Log in as superuser on the machine where the components are to be stopped (see** TABLE 2-4 **for the location of the components).**

2. **Change the directory to the** `/opt/SUNWsymon/sbin` **directory.**

   This example assumes that your software is in the default area `/opt`. If not, replace `/opt` with your own path:

   ```
   # cd /opt/SUNWsymon/sbin
   ```

3. **To stop the server and agent components on the server machine, type:**

   ```
   # ./es-stop -Sa
   ```

4. **To stop the domain agent components on the host machine for a domain, type:**

   ```
   # ./es-stop -a
   ```

5. On the system controller, to stop the host agent, which monitors the SC, and platform agent:

```
# ./es-stop -al
```

▼ To Exit Console

1. **From the menu bar on the main console window, select File and Exit.**

2. **Click the Exit button on the Exit Sun Management Center dialog box.**

Sun Management Center Web Interface

The Sun Management Center Web Interface is an optional, licensed Sun Management Center feature that provides most of the functionality available in the Sun Management Center Java-based Console. For a detailed description of the Sun Management Center Web Interface, refer to Chapter 20 in the *Sun Management Center 3.0 Software User's Guide*.

Note – Be aware that the Web Interface provides no physical or logical views of the Sun Fire 15K system. See Chapter 5 in this document for more information about physical and logical views.

Installation and Setup Log Files

This sections provides examples of messages the system displays at the end of the installation and setup scripts. You can look at these files to see if there were any problems during installation and setup, and you can use these files for diagnosing errors.

This example shows a message when an installation script completes, where *nnnnnnnnnnnn.nnnnn* is the identifying number of the installation log:

```
Log file: /var/opt/SUNWsymon/install/install.nnnnnnnnnnnn.nnnnn
```

This example shows a message when a setup script completes, where *nnnnnnnnnnnn.nnnn* is the identifying number of the setup log:

```
Log file: /var/opt/SUNWsymon/install/setup.nnnnnnnnnnnn.nnnn
```

Security Access Setup

This chapter describes how to set up user privileges to perform Sun Management Center administrative tasks on a Sun Fire 15K system. After the Sun Management Center software is installed and set up, you need to set up users in two different software administrative groups according to the tasks they will perform:

- Sun Management Center user groups—refer to Chapter 14, "Sun Management Center Security," in the *Sun Management Center 3.0 Software User's Guide* for more information about general Sun Management Center security.
- System Management Services (SMS) user groups—because SMS software manages the Sun Fire 15K system controller, you need to set up user privileges in SMS groups, as well as Sun Management Center groups, to manage the Sun Fire 15K platform and domains from the system controller. Refer to Chapter 2, "SMS Security," in the *System Management Services (SMS) 1.2 Administrator Guide* for more information about general SMS security.

Security Considerations for Defining Groups

To use a Sun Management Center tool or module that requires membership in a System Management Services administrative group, your user ID must be listed as a member of that group in the group definition accessed by each of the two software packages. In other words, both the Sun Management Center and the System Management Services software must find your user ID as a member of the appropriate administrative group.

There are two ways to ensure that both Sun Management Center and System Management Services identify your user ID as a member of the appropriate System Management Services administrative group:

- Define and maintain the groups in a centralized network name service such as Network Information Service (NIS) that both the Sun Management Center and System Management Services software access.
- Define and maintain the groups locally in separate /etc/groups files on the Sun Management Center server host and the Sun Fire 15K system controller and make sure that the System Management Services group definition on the Sun Management Center server host is identical to (or a subset of) the definition on the Sun Fire 15K system controller. In other words, user IDs listed as members of System Management Services administrative groups on the Sun Management Center server host must also be identified as members of those groups on the Sun Fire 15K system controller.

Obviously, maintaining a single file on a centralized name server host is more convenient and less prone to error than maintaining two separate files with identical information on two different machines. But there are security considerations that might affect the method you choose and how you implement it.

Superuser Access

Both the Sun Management Center and SMS environments provide different administrative groups, so that you can assign different administrative privileges to different users. This system assumes that the power to add or remove users from these groups is tightly controlled. However, anyone with superuser privileges on the machine where group membership is defined has the power to create or delete groups and add or remove group members. Clearly, if unauthorized users have superuser privileges, they gain the ability to add themselves (or others) to administrative groups and that undercuts the purpose of having such groups.

Therefore, a key security consideration is how many people (and which people) have superuser privileges on either the central name server or the combination of Sun Management Center server host and Sun Fire 15K system controller. While it is assumed that superuser privileges on the system controller are tightly controlled, in some environments, superuser privileges on the Sun Management Center server host are held by many people. At other sites, superuser privileges are tightly restricted. In some environments, many people are granted superuser privileges on the name server. In others, superuser access to the name server is strictly limited.

Name Service Switch

The `group` setting in the name service switch file (`/etc/nsswitch.conf`) on both the Sun Management Center server host and the Sun Fire 15K system controller affects group membership security. By default, most switch files are set up so that if an application does not find the group information it needs in one source (such as the `/etc/group` file), it looks in another source such as an NIS name server; or vice versa. Therefore, if security is a consideration, you need to edit the `group` setting in the name service switch file to specify only a single source.

- To specify that the only source for group membership is the NIS server, edit the `group` line in the `/etc/nsswitch.conf` file on both the Sun Management Center and the Sun Fire 15K system controller to read:

```
group nis
```

- To specify that the only source for group membership is the local `/etc/groups` file, edit the `group` line in `/etc/nsswitch.conf` file on both the Sun Management Center and the Sun Fire 15K system controller to read:

```
group files
```

Network Name Service

If you have more than one Sun Fire 15K system and you maintain group definitions on a central NIS name server, you may want to rename the System Management Services administrative groups from their default values. If group membership is maintained on a central name server, and two or more Sun Fire 15K systems use the same name for an SMS administrative group, then members of that group have administrative privileges on *both* machines.

For example, the default name for the Domain B administrative group is `dmnbadmn`. If more than one machine uses that name, then members of that group have administrative privileges over each machine's Domain B. You can restrict administrative privileges to a single machine by renaming the administrative groups on each machine to have unique values such as `dmnbadmn1` and `dmnbadmn2`.

Sun Management Center Groups

TABLE 3-1 describes the default Sun Management Center administrative groups.

TABLE 3-1   Default Sun Management Center Administrative Groups

Group Name	Group	Description
esadm	Administrator group	Can perform all administrative tasks including loading and unloading modules, maintaining access control for users and groups, and working with administrative domains, hosts, and modules.
esops	Operator group	Has a subset of esadm privileges. Can enable and disable modules but cannot load and unload them. Can perform monitoring tasks. Can acknowledge, delete, or fix events.
esdomadm	Domain group	Has a Sun Management Center domain-specific subset of esadm privileges. Can create administrative domains, create groups within administrative domains, add objects to groups or administrative domains.
General user	General user group	By default, anyone listed in the esusers file is considered to be a member of the ANYGROUP group. Can view administrative domains, hosts, modules, events; graph data; and trigger manual refreshes. Can also run ad-hoc commands.

▼ To Add Users Into Sun Management Center User Groups

● **Add the user IDs of *all* Sun Management Center users in the** `/var/opt/SUNWsymon/cfg/esusers` **file on the Sun Management Center server host.**

The user IDs must be valid UNIX user IDs.

The following example is a typical partial listing in the `/var/opt/SUNWsymon/cfg/esusers` file for *all* Sun Management Center users:

```
esmaster
espublic
root
user1
user2
user3
user4
user5
....
....
```

Note – The Sun Management Center user ID `esmaster` is comparable to being a superuser or `root` in UNIX; it provides administrative privileges. The Sun Management Center user ID `espublic` is comparable to logging into a UNIX system as `guest`; it provides general access privileges. These two user IDs are added to the Sun Management Center `esusers` file when the software is installed on the server and *cannot* be changed. To use these user IDs to perform management operations on a Sun Fire 15K platform or domain, add these IDs to the appropriate SMS group.

System Management Services Groups

TABLE 3-2 describes the default SMS administrative groups.

TABLE 3-2   Default SMS Administrative Groups

Group Name	Group	Description
platadmn	Platform administrator group	Has all platform administrative privileges including controlling boards and components power and assigning system boards to Sun Fire 15K domains. Does not have platform service privileges. Can assign board to domains if the board is free (unassigned). Can delete (unassign) a board from a domain if the board is not connected. Cannot connect, configure, unconfigure, or disconnect a board from a domain.
platoper	Platform operator group	Has a subset of platadmn privileges. Can view platform status.
dmn*x*admn[1]	Domain administrator group	Can access the Sun Fire 15K domain's console and perform Sun Fire 15K domain control, status, and access control tasks. Can connect, configure, unconfigure, and disconnect system boards from the domain. Can assign boards to the domain if they are listed in the domain's ACL and they have not been assigned to some other domain.
dmn*x*rcfg[2]	Domain reconfiguration group	Has a subset of dmn*x*admn privileges. Can reconfigure and control power to system boards in the Sun Fire 15K domain.

1.Where *x* is a letter from a through r indicating a specific Sun Fire 15K domain. For example, dmnbadmn is the administrative group for domain B.

2.Where *x* is a letter from a through r indicating a specific Sun Fire 15K domain. For example, dmnbrcfg is the reconfiguration group for domain B.

▼ To Add Users Into System Management Services Groups

Note – The user IDs must be valid UNIX user IDs.

1. **Add user IDs to the appropriate SMS group either in a central name service such as Network Information Service (NIS), which both the Sun Management Center server and the Sun Fire 15K can access, or in the** `/etc/group` **file on the Sun Management Center server host** *and* **the Sun Fire 15K system controller.**

2. **If you are using the** `/etc/group` **files, the group IDs are automatically created during SMS installation on the system controllers. Use the** `smsconfig`**(1M) command with the** `-a` **option to add user IDs one at a time to the** `/etc/group` **file on the system controllers. Refer to the** *Sun System Management Services (SMS) 1.2 Reference Manual* **for more information about using the** `smsconfig`**(1M) command.**

3. **On the Sun Management Center server, add the group IDs and user ID in the** `/etc/group` **file in the exact manner they appear in the system controllers'** `/etc/group` **files.**

   For example, this is a typical partial listing in the `/etc/group` file of groups and user IDs for access to various Sun Management Center tasks:

   ```
   root::0:root
   other::1:
   bin::2:root,bin,daemon
   sys::3:root,bin,sys,adm
   adm::4:root,adm,daemon
   uucp::5:root,uucp
   mail::6:root
   tty::7:root,tty,adm
   lp::8:root,lp,adm
   nuucp::9:root,nuucp
   staff::10:
   daemon::12:root,daemon
   sysadmin::14:
   nobody::60001:
   noaccess::60002:
   nogroup::65534:
   esadm::1000:root,guest,user1,user2
   esdomadm::1001:root,guest,user3
   esops::1002:guest,user4
   platadmn::118:root,guest,user1,user2
   platoper::119:root,guest,user4
   dmnaadmn::121:user1, user3
   dmnarcfg::122:user3
   dmnbadmn::123:user1, user5
   dmnbrcfg::124:user5
   ....
   ....
   ....
   dmnradmn::155:
   dmnrrcfg::156:
   ```

Using Sun Fire 15K Modules

Administrative group requirements for using Sun Fire 15K modules are summarized in TABLE 3-3.

TABLE 3-3   Sun Fire 15K Modules and Administrative Groups

Module Name	Sun Management Center Groups	System Management Services Groups
Platform Config Reader	Any	`platadmn`, `platoper`
Platform/Domain State Management (PDSM)	Any	Depends on operation (see "SMS Groups Required for PDSM Operations")
Domain Config Reader	`esadm`	No requirement
Dynamic Reconfiguration	`esadm`	No requirement
SC Config Reader	Any	No requirement
SC Monitoring	Any	No requirement
SC Status	Any	No requirement

For more information about setting up or changing service administrative groups, refer to *Sun System Management Services (SMS) 1.2 Administrator Guide*. For more information about setting up, changing, or further access privileges of Sun Management Center groups, refer to *Sun Management Center 3.0 Software User's Guide.*

SMS Groups Required for PDSM Operations

To perform Sun Fire 15K Platform/Domain State Management (PDSM) operations, you must be a member of the appropriate SMS group for that operation:

- Platform View (TABLE 3-4)
- Domain View (TABLE 3-5)

Platform View Access Permissions

The platform view is readable only by the platform administrator (`platadmn`) and platform operator (`platoper`). TABLE 3-4 describes the management operations available in the platform view and the access privileges required for each operation.

TABLE 3-4 Sun Fire 15K Platform View Management Operations and Access

Platform View Operation	Access
System Controller Power	`platadmn, platoper`
Power Supply Power	`platadmn, platoper`
Fan Tray Speed	`platadmn, platoper`
Slot 0 and Slot 1 Board Power	`platadmn, platoper`
Addboard for Slot 0 and 1 Boards and Empty Slots	`platadmn`
Deleteboard for Slot 0 and 1 Boards and Empty Slots	`platadmn`
Moveboard for Slot 0 and 1 Boards and Empty Slots	`platadmn`
Show Status	`platadmn, platoper`

Domain View Access Permissions

Each of the 18 Sun Fire 15K domains (`a` through `r`) are readable only by their respective Sun Fire 15K domain administrator (`dmnxadmn`) and Sun Fire 15K domain reconfigurer (`dmnxrcfg`), and for some tasks performed by the platform administrator (`platadmn`) and platform operator (`platoper`). TABLE 3-5 describes the management operations available in a Sun Fire 15K domain view and the access privileges required for each operation.

TABLE 3-5 Sun Fire 15K Domain View Management Operations and Access

Domain View Operation	Access
Domain Tag	`platadmn`
Keyswitch	`dmnxadmn`
Domain ACL	`platadmn`
Reset	`dmnxadmn`
Slot 0 and Slot 1 Board Power	`dmnxadmn, dmnxrcfg, platadmn, platoper`
Slot 0 and Slot 1 Board Test	`dmnxadmn`

Domain View Operation	Access
Addboard for Slot 0 and Slot 1 Boards and Empty Slots	dmn*x*admn, dmn*x*rcfg, platadmn
Deleteboard for Slot 0 and 1 Boards and Empty Slots	dmn*x*admn, dmn*x*rcfg, platadmn
Moveboard for Slot 0 and 1 Boards and Empty Slots	dmn*x*admn, dmn*x*rcfg, platadmn
Show Status	dmn*x*admn, dmn*x*rcfg, platadmn, platoper

Limit of 16 Group IDs for a User ID

Caution – Any single user ID can have up to 16 group IDs associated with it; any group ID over 16 is ignored, which causes access problems for the user ID. In other words, a user might appear to belong to a group, but if the 16 group limit is exceeded, the user might not have the access privileges of that group. For more information about how the system reacts when a user has more than 16 group IDs, see "Possible Reasons for DR Operation Attempts Failing" on page 201.

Sun Fire 15K Topology Objects

This chapter describes how to create, modify, and discover Sun Fire 15K topology objects. Refer to Chapter 3 of the *Sun Management Center 3.0 Software User's Guide* for general information about creating and monitoring Sun Management Center objects.

Sun Fire 15K Platform Composites

A Sun Fire 15K composite is a Sun Management Center group object that contains all hosts associated with a Sun Fire 15K platform. This composite includes these icons:

- Sun Fire 15K group
- Main Sun Fire 15K platform
- Spare Sun Fire 15K platform, designated with a circled X on the lower-right corner
- Each Sun Fire 15K domain
- Main Sun Fire 15K system controller (CP 1500)
- Spare Sun Fire 15K system controller (CP 1500), designated with a circled X on the lower-right corner

The Sun Fire 15K composite groups these objects together to enable easier management of components of the Sun Fire 15K platform. TABLE 4-1 shows the Sun Fire 15K icons.

TABLE 4-1 Sun Fire 15K Icons

Icon	Description
	Sun Fire 15K Group Icon
	Main Sun Fire 15K Platform Icon
	Spare Sun Fire 15K Platform Icon or required SMS daemon(s) is stopped
	Sun Fire 15K Platform Icon (when Sun Management Center agent is not running)
	Sun Fire 15K Domain Icon

TABLE 4-1   Sun Fire 15K Icons *(Continued)*

Icon	Description
	Sun Fire 15K Domain Icon (when Sun Management Center agent is not running)
	Main Sun Fire 15K System Controller (CP 1500)
	Spare Sun Fire 15K System Controller (CP 1500)

Note – Icons for the hosts monitored by Sun Management Center agents include a tag with the machine model, such as F15000. The icons for hosts that are not monitored by Sun Management Center agents display no tags.

The Sun Fire 15K system controller and domain hosts are independent hosts running their own Solaris operating environment, so they also can be created and discovered independently from the Sun Fire 15K platform composite. The Sun Fire 15K system controller and domains can be created individually without having to create a Sun Fire 15K platform composite.

The Sun Fire 15K system controller and domain hosts in a Sun Fire 15K platform composite can be included in multiple groupings in the Sun Management Center topology so that you can view the hosts by their Sun Fire 15K platform association as well as by their network grouping. When Sun Fire 15K hosts are found by a discovery request, they are placed in the topology according to their network groupings.

A Sun Fire 15K platform has 18 domain hosts. Only domains that are active and running the Solaris operating environment are included in the composite object.

To monitor Sun Fire 15K domains and platforms, create a Sun Management Center Sun Fire 15K composite from the Create Topology Object window, or use a Sun Management Center discovery request.

▼ To Create a Sun Fire 15K Composite Object

For more information about this procedure, see "Creating a Composite Object" in Chapter 3 of the *Sun Management Center 3.0 Software User's Guide.*

1. **In the hierarchy view of the main console window, select the level in the Sun Management Center domain topology where the new composite object is to be created.**

2. **In the main console window, select Create an Object from the Edit menu.**

3. **Click the Composite tab in the Create Topology Object window.**

4. **From the Object list box, select the Sun Fire 15K Composite object.**

5. **Type relevant information in the text boxes.**

6. **Click OK.**

   The system displays this message:

   ```
   Creating composite object... Please Wait.
   ```

   The amount of time this operation requires depends on how many Sun Fire 15K domains are running.

   You can see the Sun Fire 15K folder added to the current location in the Sun Management Center domain topology. If the Sun Fire 15K composite is not created, follow the steps in "To Troubleshoot Composite Failure".

7. **Open the composite folder to see all the objects associated with the Sun Fire 15K platform.**

   See FIGURE 4-1 for an example of a Sun Fire 15K composite.
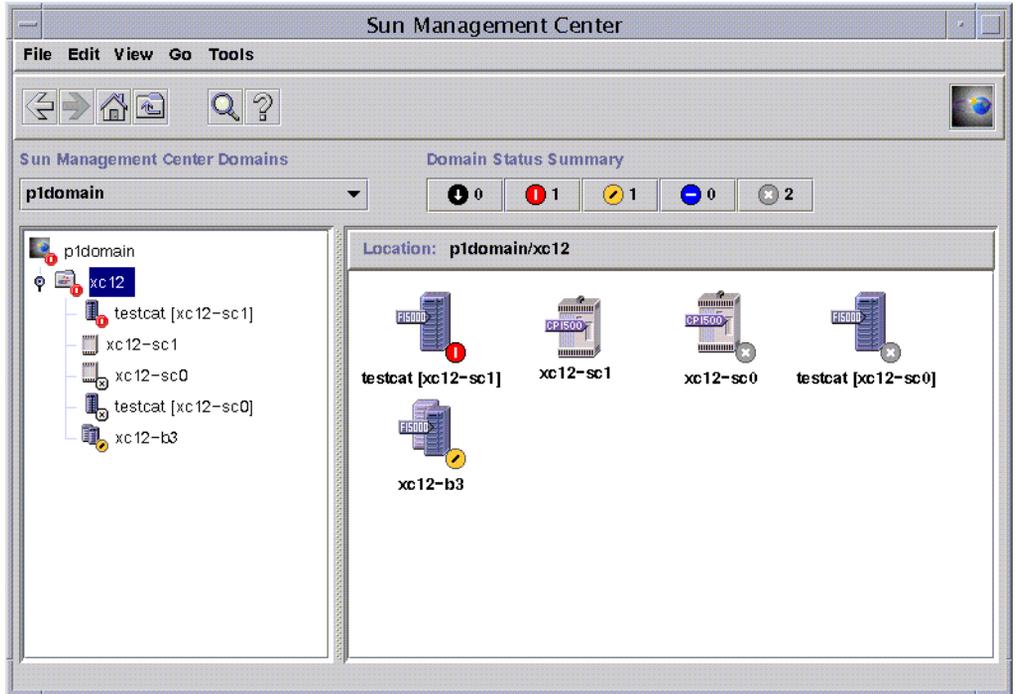
FIGURE 4-1   Example of a Sun Fire 15K Composite

▼ To Discover a Sun Fire 15K Composite

For more information about this procedure, refer to "Initiating a Discovery Request" in Chapter 4 of the *Sun Management Center 3.0 Software User's Guide.*

1. **In the hierarchy view of the main console window, select the level in the Sun Management Center domain topology where you want to discover a Sun Fire 15K composite object.**

2. **Select Discover from the Tools menu.**

3. **In the Discovery Requests dialog box, click Add.**

4. **Type information in the New Discover Request dialog box.**

5. **If the Sun Fire 15K composite is not created, follow the steps in "To Troubleshoot Composite Failure" on page 64.**

You can use the following Discovery Request filter options to customize your Sun Fire 15K composite discovery request:

- The Platform Type filter criteria enable you to include or exclude Sun Fire 15K domain and platform types.
- Sun Fire 15K domain hosts and the system controller within the composite can be filtered by the host names and operating system filter criteria. The host names and operating system filter criteria do not filter Sun Fire 15K platform objects.
- If the system controller is excluded by a filter criterion, the Sun Fire 15K composite objects are still examined by the Discovery Manager for inclusion in the Sun Management Center domain.

Updating a Sun Fire 15K Platform Composite

After you have created the Sun Fire 15K platform composite, the contents and type of the composite Sun Management Center topology objects do not change. The composite objects must be updated if:

- Sun Fire 15K domains become active (running the Solaris operating environment).
- Spare system controller is added to or deleted from the platform configuration.
- Sun Management Center monitoring for an object no longer shows the correct monitor type. For example, if the Sun Management Center agent is not running on the Sun Fire 15K domain at the time the composite was created, an ICMP Ping monitoring type host object is created for the Sun Fire 15K domain. After the Sun Management Center agent is running again, the Sun Fire 15K domain host object needs to be updated so that it can be monitored as a Sun Management Center Agent—Host type.

▼ To Update Composite Created by Create Topology Object

● **If the Sun Fire 15K platform composite was created using the Create Topology Object window, perform all updates to the composite manually.**

   ■ If Sun Fire 15K composite objects have been added or deleted, delete or create the objects as described in Chapter 3 of the *Sun Management Center 3.0 Software User's Guide*.

   ■ If the monitoring type has changed, modify the topology object as described in the "Modifying Objects" section of Chapter 3 in the *Sun Management Center 3.0 Software User's Guide*.

Note – If the changes are numerous, it may be easier to delete the current Sun Fire 15K composite object from the topology and recreate it. See "To Create a Sun Fire 15K Composite Object" for instructions.

▼ To Update Composite Created by Discovery

1. **If the Sun Fire 15K platform composite was created by the Discovery Manager, many of the updates can be made by running a discovery request for the main system controller. This discovery request can either be started manually or scheduled for periodic running.**

   Running the discovery request makes these changes:

   ■ New Sun Fire 15K object, such as a spare system controller, is added to the platform composite.

   ■ If an object monitoring type has changed to a level of higher monitoring capability, the monitoring type is updated. Monitoring capability increases from the ICMP Ping monitoring type to the SNMP Ping monitoring type to the Sun Management Center Agent - Host monitoring type.

   When running a discovery request, be aware of the following:

   ■ Topology objects are *not* deleted from the platform composite.

   ■ If any of the topology objects have been modified from the Sun Management Center console window, the object monitoring type is *not* updated.

2. **If you prefer, you can create an updated platform composite by deleting the Sun Fire 15K platform composite from the topology and running a discovery request.**

▼ To Troubleshoot Composite Failure

If you are unable to create a Sun Fire 15K platform composite, check for the following:

1. **Verify that the correct system controller host name and Sun Management Center agent port number were specified in the Create Topology Object procedure or discovery request.**

   Note – The system controller must be the main system controller for the platform, not the spare system controller.

   ---

2. **Log in to the system controller and verify that the two Sun Management Center agents are running:**

   ```
   SC# ps -ef | grep esd
   root 21020 1 2 Mar 10 ? 84:03 esd – init agent -dir
   /var/opt/SUNWsymon
   root 21858 1 3 Mar 10 ? 103:07 esd – init platform -dir
   /var/opt/SUNWsymon
   ```

3. **Try rerunning the discovery request or increasing the discovery request SNMP time-out value.**

4. **Create the Sun Fire 15K platform object directly by creating a node as described in "To Create a Sun Fire 15K Platform Object" on page 66.**

5. **Examine the Browser tab of the platform Details window to confirm that the Config Reader (Sun Fire 15K) module is loaded under Hardware and that the module is not disabled. The Discovery Object Table provided by this module defines the objects that are included in the Sun Fire 15K platform composite.**

6. **On the system controller, run this command to ensure that the Discovery Table was created correctly:**

```
SC# /opt/SUNWsymon/sbin/es-dt -v
```

If the output is not present or does not have the information contained in the following example, the Discovery Table was *not* created correctly:

```
Label              Sun-Fire-15000
Host               <host name>
Port               <port number>
OID                1.3.6.1.4.1.42.2.85.1.1.22
Node Object Type   Sun-Fire-15000-platform-group
```

If you do not see this type of output, repeat the process starting with Step 5. If that still does not work, contact your Sun service representative.

Sun Fire 15K Platform Objects

Sun Fire 15K platform information is provided by a Sun Management Center platform agent running on the main system controller. When a spare system controller is configured, two Sun Fire 15K platform objects are present in the Sun Fire 15K platform composite. Sun Fire 15K platform information is only available from the platform object associated with the main system controller. When a platform object is created as part of a composite, the platform object name includes the associated system controller name in square brackets. The spare system controller object and its associated spare Sun Fire 15K platform topology objects are designated with a circled X on the lower-right corner of the icon to distinguish the spare from the main topology objects (TABLE 4-1).

After Sun Management Center has been installed and set up on the main and spare system controllers and the Sun Fire 15K platform objects have been created, no Sun Management Center configuration changes are required when the spare system controller becomes the acting main system controller. When this switch from spare to acting main system controller occurs, the platform agent on the acting main system controller becomes active and collects current information about the Sun Fire 15K platform.

Not all information that was available prior to this switch is available from the newly active platform agent. The number of domain stops (`dstops`) and record stops (`rstops`) encountered are reset to zero. A current error, such as a high temperature, is reported if the condition still persists.

The Sun Management Center agents on the spare and main system controller are not automatically synchronized. If you modify any of the default limits, attributes, or loaded modules on either the main or spare system controller, you should make the corresponding changes to the agents operating on the other system controller.

▼ To Create a Sun Fire 15K Platform Object

Sun Fire 15K platform objects are created as part of the Sun Fire 15K composite. You can also create the platform objects directly.

1. **Follow the instructions in "Creating a Node" in Chapter 3 of the** *Sun Management Center 3.0 Software User's Guide* **to create a Sun Fire 15K platform object.**

2. **In Step 3 of that procedure, select the Agent - Platform monitoring type from the pull-down menu (Monitor Via).**

3. **In Step 4 of that procedure, type the requested information.**

Note – The default platform agent port number is port 166. Do not change this port number unless the platform agent was configured on a different port during Sun Management Center setup.

---

4. **Click OK.**

Sun Fire 15K System Details Windows

This chapter describes how to find hardware summaries, physical views, and logical views from the platform, domain, and system controller Details windows for a Sun Fire 15K system. TABLE 5-1 lists the Sun Management Center agent modules for the Sun Fire 15K system that are viewable from the Sun Fire 15K system Details windows:

TABLE 5-1   Sun Fire 15K Agent Modules Viewable from the Details Windows

Module Name	Details Window
Platform Config Reader (PCR)	Sun Fire 15K platform
Platform/Domain State Management (PDSM)	Sun Fire 15K platform
SC Monitoring Module (SCM)	Sun Fire 15K platform
Domain Config Reader (DCR)	Sun Fire 15K domain
Dynamic Reconfiguration (DR)	Sun Fire 15K domain
SC Config Reader	Sun Fire 15K system controller
SC Status	Sun Fire 15K system controller

These modules provide Sun Fire 15K hardware monitoring and management capabilities and provide information about the Sun Fire 15K composite configuration. See Chapter 6 in this supplement for detailed information about the objects and properties provided by these modules. See Chapter 7 and Chapter 8 in this supplement for detailed information about performing Sun Fire 15K platform and domain dynamic reconfiguration and other management operations.

This chapter provides details about the Sun Fire 15K platform, system controller, and domain information shown in the Details window. Three related chapters in the *Sun Management Center 3.0 Software User's Guide* provide general information about using the Sun Management Center Details window:

- Chapter 5, "Sun Management Center Software Main Console Window," describes how to use the main Sun Management Center console window.
- Chapter 6, "Browser," describes how to display the Details window from the main Sun Management Center console window.
- Chapter 13, "Details," describes how to use the Details window.

Note – The Sun Fire 15K Platform Config Reader module does not provide configuration information for I/O devices attached to the platform. To view this information, open a Sun Fire 15K domain Details window for each domain whose I/O devices you want to check.

Views Under the Hardware Tab

For the Sun Fire 15K platform, domain, and SC Details windows, you can access three types of views from the Hardware tab.

- Hardware Summary
- Physical View
- Logical View

Hardware Summary

The Hardware Summary provides a table summary of the resources available to that entity.

Physical View

The Physical View provides a photo-realistic view of the Sun Fire 15K system. The Physical View shows only components that are visible in the chassis. For example, the centerplane board and I/O devices are not shown in the Physical View. To view information on these devices, examine the Logical View or Browser displays.

Logical View

The Logical View provides a hierarchical view of the boards and components in that entity. Unlike the Physical View, which shows only those boards and components physically visible in the chassis, the Logical View shows all the boards and components, such as the centerplane and I/O devices.

Sun Fire 15K Platform Details Window

The Sun Management Center Details window for a Sun Fire 15K platform displays information about the entire platform hardware. This window includes the following tabs, which are explained in Chapter 13 of the *Sun Management Center 3.0 Software User's Guide*:

- Info
- Browser
- Alarms
- Hardware

Note – If your Sun Fire 15K Platform Details window does not include the preceding four tabs, Sun Fire 15K support has not been correctly installed on your Sun Management Center server machine. Confirm that the add-on Sun Fire 15K components have been installed and set up correctly, and that the Sun Management Center server process has been restarted following installation.

The Sun Fire 15K platform is monitored by a Sun Management Center platform agent on the system controller. The platform agent is dedicated to this task; therefore, you cannot load or unload agent modules from the Sun Fire 15K platform Details window.

This section describes using the Hardware tab to display information provided by the Sun Fire 15K Platform Config Reader module. This module provides up-to-date information about platform hardware, including:

- Voltage and temperature
- All boards
- Power supplies
- Fan trays
- Hardware errors encountered, such as the number of domain stops (`dstop`)

▼ To Find the Hardware Summary for the Sun Fire 15K Platform

To find a summary of the Sun Fire 15K platform's hardware resources (FIGURE 5-1):

1. **Open the Sun Fire 15K platform Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, select Hardware Summary.**

FIGURE 5-1   Hardware Summary for a Sun Fire 15K Platform

The Sun Fire 15K Platform Information table shown in FIGURE 5-1 includes these properties (TABLE 5-2):

TABLE 5-2 Sun Fire 15K Platform Information

Property	Description
Platform Name	Name given to the platform during SMS configuration
Main System Controller Hostname	Host name of the main system controller
Spare System Controller Hostname	Host name of the spare system controller
Main System Controller	Identifier of the primary system controller: SC0 or SC1
Number of Active Domains	Number of active domains (up to 18)

The Sun Fire 15K Platform Hardware Resources table shown in FIGURE 5-1 includes these properties (TABLE 5-3):

TABLE 5-3 Sun Fire 15K Platform Hardware Resources

Property	Description
Number of Expander Boards	Number of expander boards
Number of Slot0 System Boards	Number of system boards in slot 0
Number of Slot1 System Boards	Number of system boards in slot 1
Number of System Controllers	Number of system controllers
Number of System Controller Peripherals	Number of system controller peripherals
Number of Centerplanes	Number of Sun™ Fireplane interconnects, also known as centerplanes
Number of Centerplane Support Boards	Number of centerplane support boards
Number of Fan Trays	Number of fan trays
Number of Bulk Power Supplies	Number of bulk power supplies
Total Memory (MB)	Total memory in megabytes as configured by the power-on self-test (POST)
Total Processors	Total number of processors as configured by POST

▼ To Find the Physical View of the Sun Fire 15K Platform

To find a photo-realistic view of the Sun Fire 15K platform (FIGURE 5-2):

1. **Open the Sun Fire 15K platform Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, click system under Physical View.**

4. **In the Rotate Current View pull-down menu, click system—Front to view the front of the platform.**

   FIGURE 5-2 illustrates a Physical View of a Sun Fire 15K platform from the front. For more information about navigating the Physical Views, refer to "Physical View" in Chapter 13 in the *Sun Management Center 3.0 Software User's Guide*.

Note – The Physical View of the Sun Fire 15K platform shows *only* processors that are known to be present. The Physical View of the Sun Fire 15K platform does *not* show processors whose presence is unknown. For example, a processor with a POST status of BLACKLISTED in the Processor Table may or may not be physically present, but is not shown in the platform Physical View.

FIGURE 5-2   Sun Fire 15K Platform Physical View—Front

5. **Click on one of the CPU boards in the top slots of the Sun Fire 15K platform to display a Physical View of the top of a CPU board (**FIGURE 5-3**).**
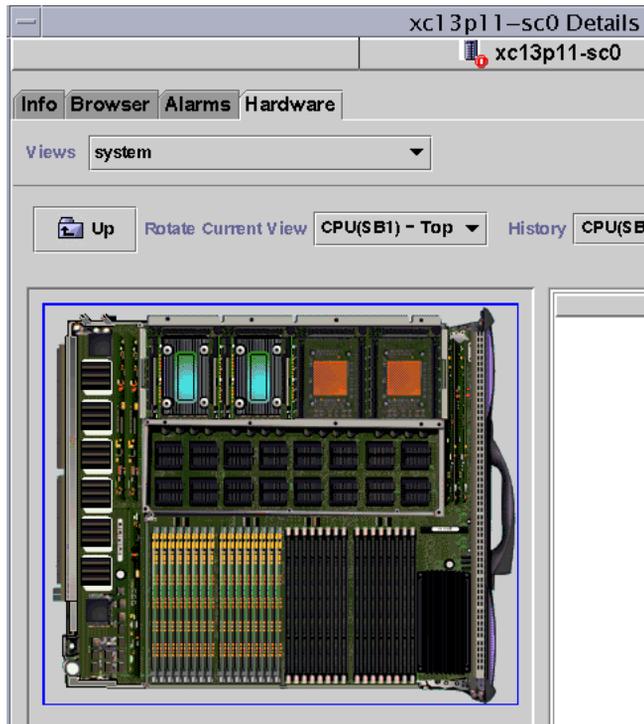
FIGURE 5-3 Top of CPU Board in Platform Physical View

▼ To Find the Logical View of the Sun Fire 15K Platform

The platform Logical View shows the hierarchy of all boards and components attached to the entire Sun Fire 15K system. To find a hierarchical view of a Sun Fire 15K platform:

1. **Open the Sun Fire 15K platform Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, click system under Logical View.**

4. **Click on the Expand All button and then click on an object in the left pane to see a logical view similar to** FIGURE 5-4**.**

FIGURE 5-4   Sun Fire 15K Platform Logical View

For more information about navigating Logical Views, refer to "Logical View" in Chapter 13 in the *Sun Management Center 3.0 Software User's Guide*

Sun Fire 15K Domain Details Window

The Sun Management Center Details window for a Sun Fire 15K domain displays information about that domain's hardware. The Sun Fire 15K domain Details window resembles the host Details window described in Chapter 13 of the *Sun Management Center 3.0 Software User's Guide*.

Only the boards and components allocated to the Sun Fire 15K domain are included in this information. Information about the hardware configuration of the entire platform can be viewed from the Sun Fire 15K platform Details window. See "Sun Fire 15K Platform Details Window" on page 69 for more information.

This window includes the following tabs, which are explained in Chapter 13 of the *Sun Management Center 3.0 Software User's Guide*:

- Info
- Browser
- Alarms
- Modules
- Applications
- Hardware

Note – If your Sun Fire 15K domain Details window does not include the preceding six tabs, Sun Fire 15K support has not been installed correctly on your Sun Management Center server machine. Confirm that the add-on Sun Fire 15K components have been installed and set up correctly, and that the Sun Management Center server process has been restarted following installation.

This section describes using the Hardware tab to display information provided by the Sun Fire 15K Domain Config Reader module. This module provides up-to-date information about system boards and components that reside on those boards including:

- Processors
- Memory
- Attached I/O devices

▼ To Find the Hardware Summary for a Sun Fire 15K Domain

To find a summary of a Sun Fire 15K domain's hardware resources (FIGURE 5-5):

1. **Open the Sun Fire 15K domain Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, select Hardware Summary.**
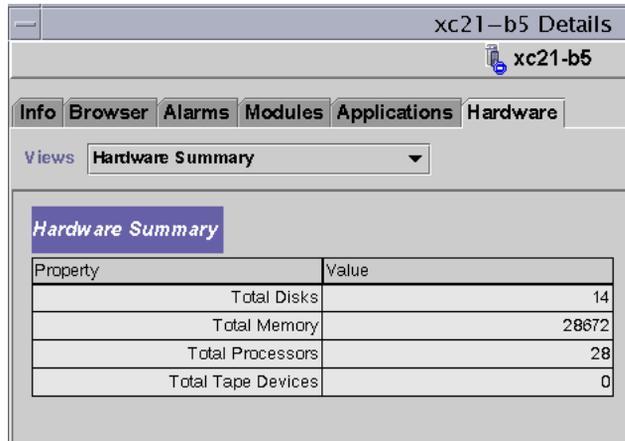
FIGURE 5-5   Hardware Summary for a Sun Fire 15K Domain

The Sun Fire 15K domain information shown in FIGURE 5-5 includes these properties (TABLE 5-4):

TABLE 5-4   Sun Fire 15K Domain Hardware Summary

Property	Description
Total Disks	Number of disks present in the system
Total Memory	Total memory in megabytes
Total Processors	Number of processors, which includes all processors allocated to the domain
Total Tape Devices	Number of tape devices present in the system

▼ To Find the Physical View of a Sun Fire 15K Domain

In the Physical View of a Sun Fire 15K domain, the picture has dimmed areas, such as power supplies, fan trays, the system controller, and the system controller peripherals. Only domain system board information is available from the Physical View of a Sun Fire 15K domain.

To find a photo-realistic view of system board information for a Sun Fire 15K domain (FIGURE 5-6):

1. Open the Sun Fire 15K domain Details window.

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, click system under Physical View.**

4. **In the Rotate Current View pull-down menu, click system—Front to see the system boards assigned to the domain, which are physically in the front of the platform.**

   FIGURE 5-6 illustrates a Physical View of systems boards assigned to the domain, which are physically in the front of the Sun Fire 15K platform. For more information about navigating Physical Views, refer to "Physical View" in Chapter 13 in the *Sun Management Center 3.0 Software User's Guide.*

Note – The domain chassis image in the physical view is the same as that of the platform with the fan trays and power supplies dimmed.
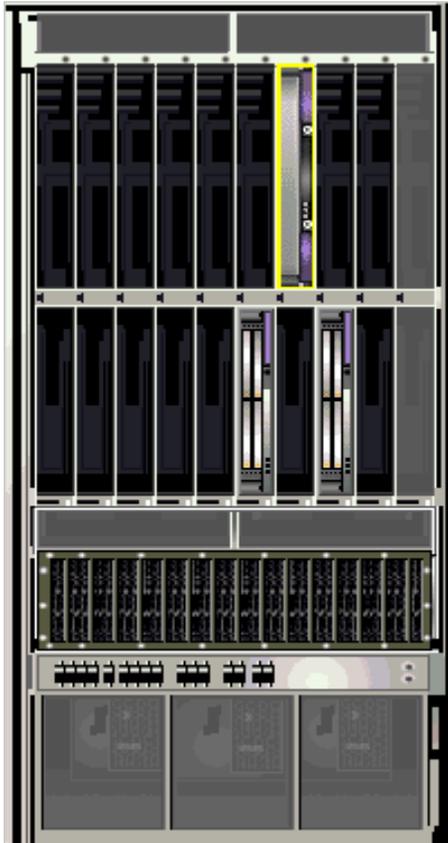
FIGURE 5-6   Sun Fire 15K Domain Physical View—Front

5. **Click on one of the HPCI boards in the bottom slots of the Sun Fire 15K domain to display a Physical View of the top of a HPCI board (**FIGURE 5-7**).**
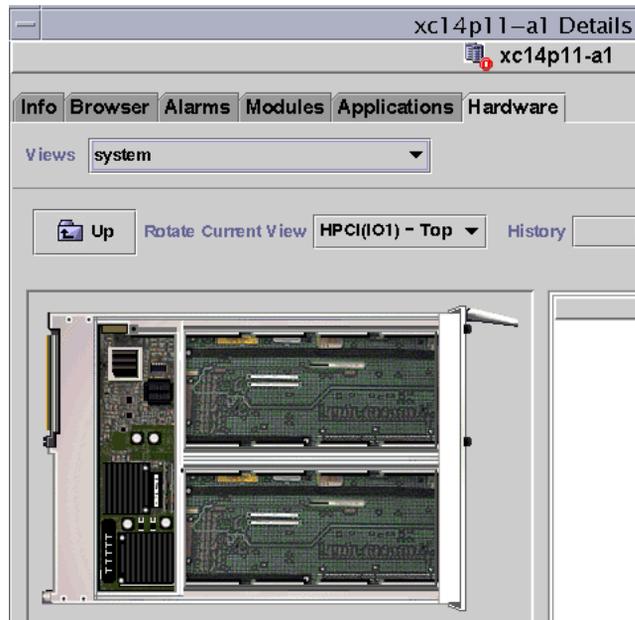
FIGURE 5-7   Top of HPCI Board in Domain Physical View

▼ To Find the Logical View of a Sun Fire 15K Domain

The domain Logical View shows the hierarchy of all boards and components attached to a Sun Fire 15K domain. To find the hierarchical view of a Sun Fire 15K domain:

1. **Open the Sun Fire 15K domain Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, click system under Logical View.**

4. **Click on the Expand All button and then click on an object in the left pane to see a logical view similar to** FIGURE 5-8**.**
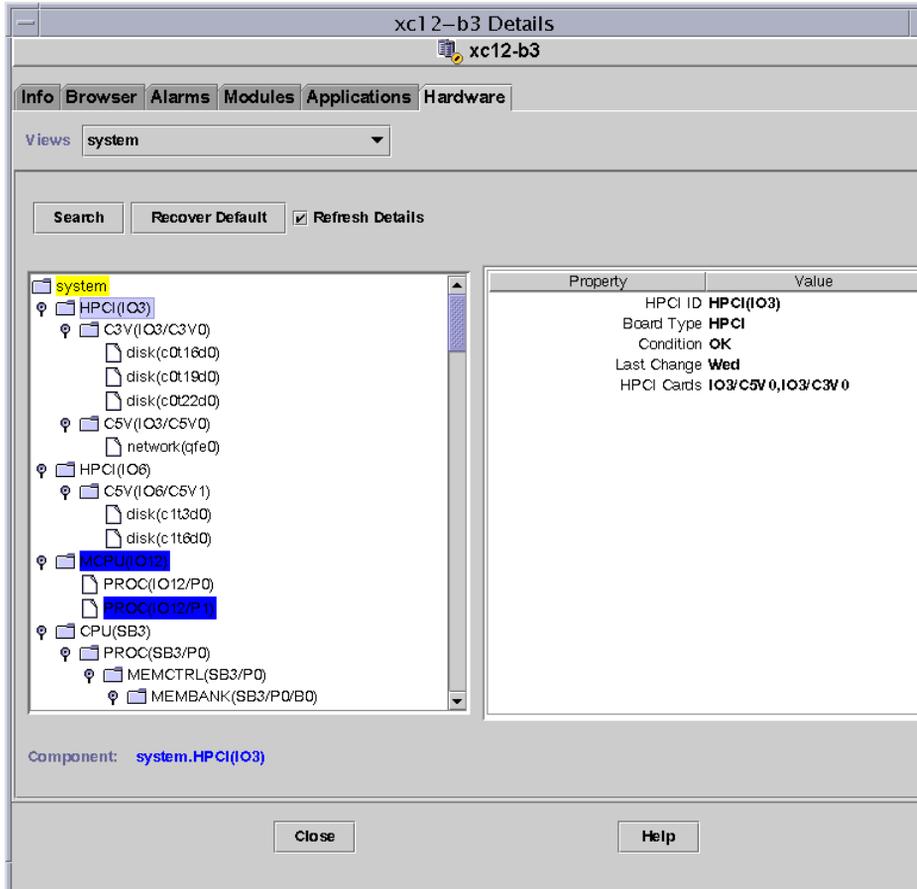
FIGURE 5-8 Sun Fire 15K Domain Logical View

For more information about navigating Logical Views, refer to "Logical View" in Chapter 13 in the *Sun Management Center 3.0 Software User's Guide*

Sun Fire 15K SC Details Window

The Sun Management Center Details window for a Sun Fire 15K SC displays information about the system controller's hardware. The Sun Fire 15K SC Details window resembles the host Details window described in the *Sun Management Center 3.0 Software User's Guide.*

Only boards and components allocated to the Sun Fire 15K system controller are included in this information. Information about the hardware configuration of the entire platform can be viewed from the Sun Fire 15K platform Details window. See "Sun Fire 15K Platform Details Window" on page 69 for more information.

The window includes the following tabs, which are explained in the *Sun Management Center 3.0 Software User's Guide*:

■ Info
■ Browser
■ Alarms
■ Modules
■ Applications
■ Hardware

Note – If your Sun Fire 15K SC Details window does not include each of the preceding six tabs, the Sun Fire 15K support has not been installed correctly on your Sun Management Center server machine. Confirm that the add-on Sun Fire 15K components have been installed and set up correctly, and that the Sun Management Center server process has been restarted following installation.
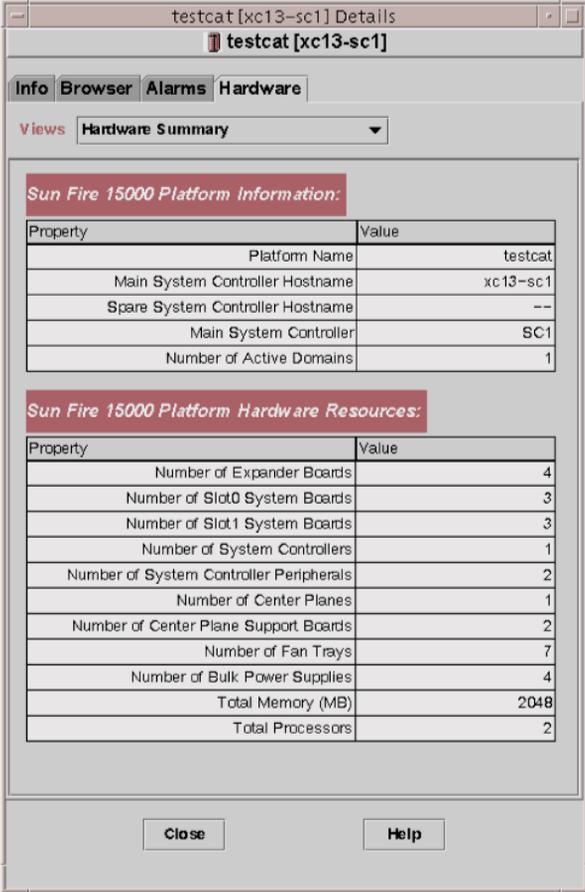

This section describes using the Hardware tab to display information provided by the Sun Fire 15K SC Config Reader module. This module provides up-to-date information about the system boards and the components that reside on those boards including:

■ Processors
■ Memory
■ Attached I/O devices

▼ To Find the Hardware Summary for a Sun Fire 15K System Controller

To find a summary of the hardware resources for a Sun Fire 15K system controller (FIGURE 5-9):

1. **Open the Sun Fire 15K SC Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, select Hardware Summary.**
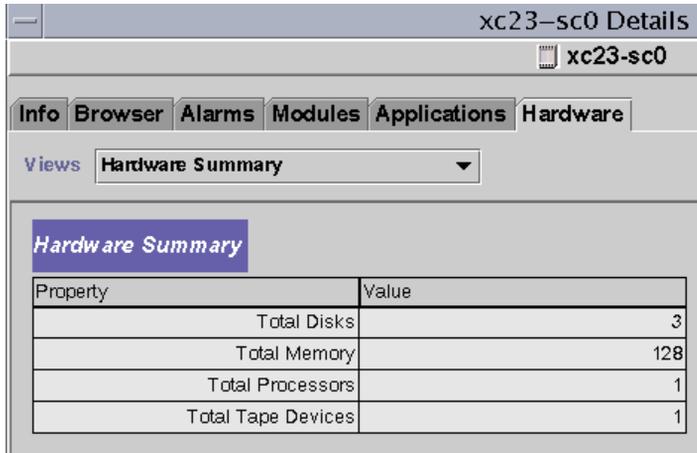
FIGURE 5-9   Hardware Summary for a Sun Fire 15K System Controller

The Sun Fire 15K SC information shown in FIGURE 5-9 includes these properties (TABLE 5-5):

TABLE 5-5   Sun Fire 15K SC Hardware Summary

Property	Description
Total Disks	Number of disks present in the system
Total Memory	Total memory in megabytes
Total Processors	Number of processors in the system controller
Total Tape Devices	Number of tape devices present in the system

▼ To Find the Physical View of the Sun Fire 15K System Controller

The system controller is in the upper-right corner of the Sun Fire 15K platform. To find a photo-realistic view of a Sun Fire 15K system controller (FIGURE 5-10):

1. **Open the Sun Fire 15K SC Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, click system under Physical View.**

4. **To see the system controller in the front of the platform, click system - Front in the Rotate Current View pull-down menu.**

Note – The system controller chassis image in the physical view is the same as that of the platform except the system controller slot is populated.

FIGURE 5-10 Sun Fire 15K System Controller Physical View—Front

5. **Click on the system controller in the upper right of the Sun Fire 15K platform to display a Physical View of the top of a system controller (**FIGURE 5-11**).**
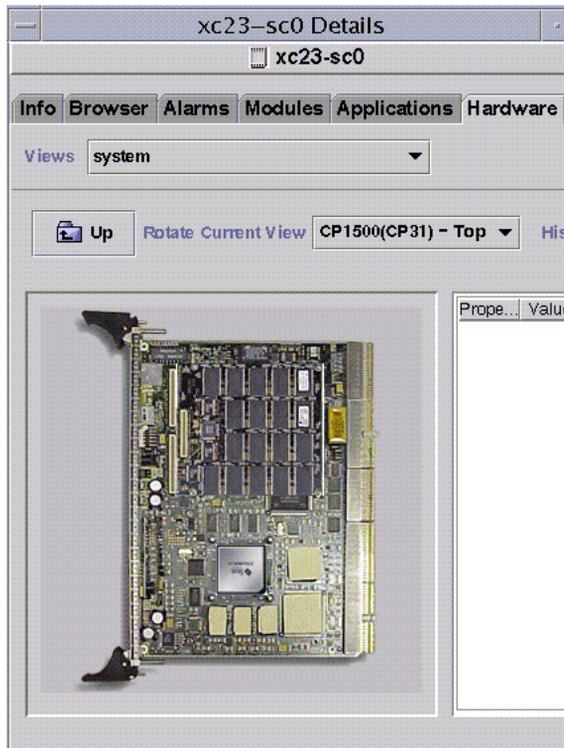
FIGURE 5-11 Top of System Controller Physical View

FIGURE 5-11 illustrates a Physical View of the top of a system controller. For more information about navigating Physical Views, refer to "Physical View" in Chapter 13 in the *Sun Management Center 3.0 Software User's Guide*.

▼ To Find the Logical View of a Sun Fire 15K System Controller

The Logical View of a system controller shows the hierarchy of all the boards and components attached to the system controller. To find a hierarchical view of a Sun Fire 15K system controller (FIGURE 5-12):

1. **Open the Sun Fire 15K SC Details window.**

2. **Click on the Hardware tab.**

3. **In the Views pull-down menu, click system under Logical View.**

4. **Click on the Expand All button and then click on an object in the left pane to see a logical view similar to** FIGURE 5-12**.**
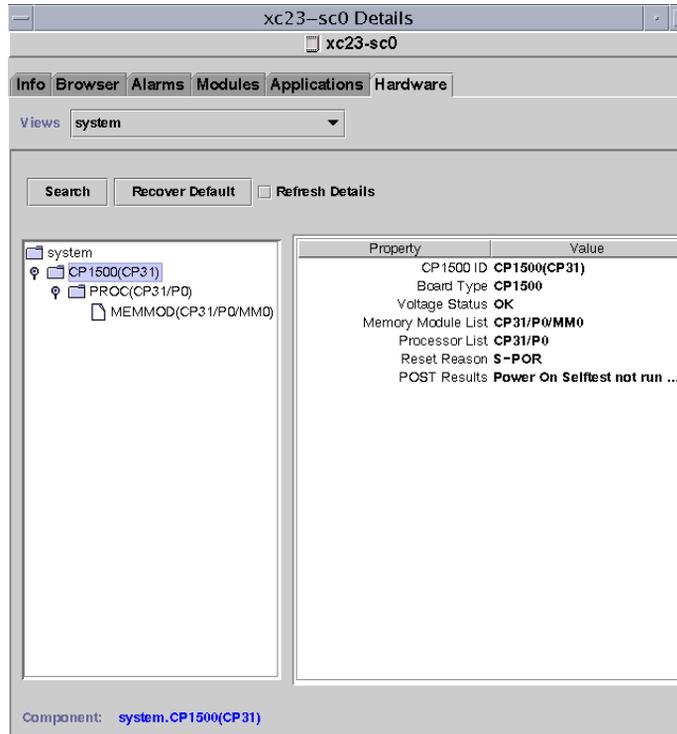
FIGURE 5-12 Sun Fire 15K System Controller Logical View

For more information about navigating Logical Views, refer to "Logical View" in Chapter 13 in the *Sun Management Center 3.0 Software User's Guide*

CHAPTER **6**

Sun Fire 15K Agent Modules

This chapter describes how to open each of the Sun Fire 15K system-specific agent modules and describes the tables, properties, and alarm rules for each module.

TABLE 6-1 shows each Sun Fire 15K system–specific module, a brief description, and whether the module is loaded by default, loadable, or unloadable. For specific information about loading and unloading Sun Management Center modules, refer to Chapter 11, "Managing Modules," in the *Sun Management Center 3.0 Software User's Guide.*

TABLE 6-1   Summary of Sun Fire 15K Agent Modules

Module	Description	Loaded by Default?	Loadable?	Unloadable?
Platform Config Reader	Provides information about the hardware configuration for the entire Sun Fire 15K platform	yes	no	no
Domain Config Reader	Provides the hardware configuration for a Sun Fire 15K domain	yes	yes	yes
SC Config Reader	Provides the hardware configuration for Sun Fire 15K system controllers (SCs)	yes	yes	yes
SC Status	Determines whether a Sun Fire 15K system controller is the main or spare system controller	yes	yes	yes
SC Monitoring	Monitors the System Management Services (SMS) daemons on the active Sun Fire 15K system controller	yes	yes	yes

TABLE 6-1 Summary of Sun Fire 15K Agent Modules *(Continued)*

Module	Description	Loaded by Default?	Loadable?	Unloadable?
Platform/ Domain State Management	Enables an administrator to perform platform and domain management, and global dynamic reconfiguration of system boards across the platform from the system controller	no	yes	yes
Dynamic Reconfiguration	Enables an administrator to perform dynamic reconfiguration of boards on one Sun Fire 15K domain at a time from the domain	no	yes	yes

Appendix D of the *Sun Management Center 3.0 Software User's Guide* describes the core Sun Management Center modules that monitor various components of the system, including hardware, operating environment, local applications, and remote systems.

Platform Modules Disabled

The platform modules—Platform Config Reader, Platform/Domain State Management, and SC Monitoring—are automatically disabled if either of these conditions exist:

- System controller is the spare system controller
- One of the required SMS daemons for a given platform module is not active (TABLE 6-2)

TABLE 6-2 Required SMS Daemons for Platform Modules

Platform Module	Required SMS Daemons
Platform Config Reader	Event Front-end Daemon (efe) Environmental Status Monitoring Daemon (esmd) Failover Management Daemon (fomd) Hardware Access Daemon (hwad) Platform Configuration Daemon (pcd)
Platform/Domain State Management	Event Front-end Daemon (efe) Environmental Status Monitoring Daemon (esmd) Failover Management Daemon (fomd) Hardware Access Daemon (hwad) Platform Configuration Daemon (pcd)
SC Monitoring	Event Front-end Daemon (efe)

When a platform module is automatically disabled, an alarm is generated and the platform icon is designated with a circled X on the lower-right corner.

Sun Fire 15K Module Properties

The tables in this chapter provide brief descriptions of each property in each module, if any. Properties that can be graphed are noted in the property description. Refer to Chapter 8 of the *Sun Management Center 3.0 Software User's Guide* for more information about graphing properties.

Sun Fire 15K Module Alarm Rules

Each module section contained in the Sun Fire 15K add-on component describes the alarm rules for that module, if any. You cannot change the limits for any of these rules. The system provides a message with the alarm stating the current property and the limit. If a property is monitored by a Sun Management Center rule, the name of that rule is shown in the property tables for each module.

For descriptions of the alarm rules for each module, see:

- "Platform Config Reader Alarm Rules" on page 119
- "Domain Config Reader Alarm Rules" on page 143
- "SC Config Reader Alarm Rules" on page 153
- "SC Monitoring Alarm Rule—Process Down Rule (`rDownProc`)" on page 178

Appendix E of the *Sun Management Center 3.0 Software User's Guide* lists the Sun Management Center alarm rules for core Sun Management Center modules.

Platform Config Reader Module

The Platform Config Reader module provides information about the hardware configuration for the entire Sun Fire 15K platform. During Sun Fire 15K platform add-on setup, this module loads automatically, and you *cannot* unload it.

FIGURE 6-1 shows the icon for the module—Config Reader (Sun Fire 15000)—as it is displayed in the platform Details window under the Browser tab and Hardware icon.
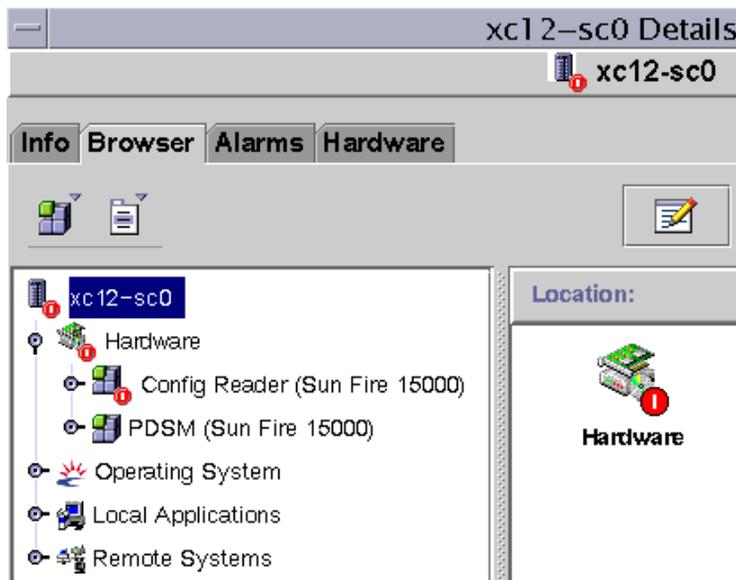
FIGURE 6-1   Platform Config Reader Module

Platform Config Reader Module Refresh

The Platform Config Reader module stores platform information in an internal cache. It gathers and refreshes this information in two ways:

- At periodic intervals, currently set at 60 minutes, the Platform Config Reader interacts with SMS daemons on the SC to repopulate the entire contents of the cache. You cannot change the value of the refresh interval.
- Whenever platform properties change, such as temperature or voltage changes, SMS daemons notify the Sun Management Center software. The Platform Config Reader then updates the affected hardware table in the Browser view.

By using the browser from the platform Details window, you can refresh any module property; however, doing so only retrieves the current value of the property from the platform agent. It does not force a recalculation of the data.

Platform Config Reader Properties

The tables in this section describe each of the visible properties for each Sun Fire 15K Platform Config Reader object. If a property has a value of -- or -1, the Platform Config Reader is unable to get data for that property.

Note – All temperatures are measured in degrees Celsius (C).

System

The following table provides a brief description of the properties for the Sun Fire 15K Platform Config Reader system (TABLE 6-3):

TABLE 6-3   Sun Fire 15K Platform Config Reader System

Property	Rule (if any)	Description
Name		`system`
Platform Type		Platform type identifier
Platform Name		Name assigned to this Sun Fire 15K platform during SMS software configuration
Rack ID		Rack identifier
Failover State	`scFoStat`	Current failover state: `ACTIVE`, `DISABLED`, or `FAILED`
Admin Group		Administrative group identifier, such as `platadmn`
Operator Group		Operator group identifier, such as `platoper`
Service Group		Service group identifier, such as `platsvc`
Main System Controller Hostname		Host name of the main system controller
Spare System Controller Hostname		Host name of the spare system controller

TABLE 6-3 Sun Fire 15K Platform Config Reader System *(Continued)*

Property	Rule (if any)	Description
Main System Controller		Identifier of the current main system controller: SC0 or SC1
System Controller Internal IP Address		Internal IP address of the current main system controller
Clock Frequency (MHz)		Clock frequency in megahertz
Clock Type		Clock type used
Number of Active Domains		Number of active domains (1–18)
Number of Expander Boards		Number of expander boards (1–18)
Number of Slot0 System Boards		Number of system boards in slot 0 (1–18)
Number of Slot1 System Boards		Number of system boards in slot 1 (1–18)
Number of System Controllers		Number of system controllers (1–2)
Number of System Controller Peripherals		Number of system controller peripherals (1–2)
Number of Centerplanes		Number of centerplanes (1)
Number of Centerplane Support Boards		Number of centerplane support boards (1–2)
Number of Fan Trays		Number of fan trays (1–8)
Number of Bulk Power Supplies		Number of bulk power supplies (1–6)
Total Memory (MB)		Total memory in megabytes as configured by the power-on self-test (POST)
Total Processors		Total number of processors as configured by POST
Last Full Refresh		Last date and time the data in the internal cache was fully updated

Centerplane

The following table provides a brief description of the properties for the Sun Fire 15K Platform Config Reader Sun Fireplane interconnect—also known as the centerplane (TABLE 6-4):

TABLE 6-4   Sun Fire 15K Platform Config Reader Centerplane

Property	Rule (if any)	Description
CP ID		Centerplane identifier containing FRU ID(Slot ID): `CP(CP0)`
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
CSBs Present		Comma-separated list of the numbers for the centerplane support boards that are present
EXBs Present		Comma-separated list of the numbers for the expander boards that are present
SCs Present		Comma-separated list of the numbers for the system controllers that are present
SCPERs Present		Comma-separated list of the numbers for the system controller peripherals that are present
DARB Temp 0	`scBTemp`	(graphable) Temperature of the DARB ASIC on centerplane board 0
RMX Temp 0	`scBTemp`	(graphable) Temperature of the RMX ASIC on logical centerplane board 0
AMX0 Temp 0	`scBTemp`	(graphable) Temperature of the AMX0 ASIC on logical centerplane board 0
AMX1 Temp 0	`scBTemp`	(graphable) Temperature of the AMX1 ASIC on logical centerplane board 0

TABLE 6-4 Sun Fire 15K Platform Config Reader Centerplane *(Continued)*

Property	Rule (if any)	Description
DMX0 Temp 0	scBTemp	(graphable) Temperature of the DMX0 ASIC on logical centerplane board 0
DMX1 Temp 0	scBTemp	(graphable) Temperature of the DMX1 ASIC on logical centerplane board 0
DMX3 Temp 0	scBTemp	(graphable) Temperature of the DMX3 ASIC on logical centerplane board 0
DMX5 Temp 0	scBTemp	(graphable) Temperature of the DMX5 ASIC on logical centerplane board 0
DARB Temp 1	scBTemp	(graphable) Temperature of the DARB ASIC on logical centerplane board 1
RMX Temp 1	scBTemp	(graphable) Temperature of the RMX ASIC on logical centerplane board 1
AMX0 Temp 1	scBTemp	(graphable) Temperature of the AMX0 ASIC on logical centerplane board 1
AMX1 Temp 1	scBTemp	(graphable) Temperature of the AMX1 ASIC on logical centerplane board 1
DMX0 Temp 1	scBTemp	(graphable) Temperature of the DMX0 ASIC on logical centerplane board 1
DMX1 Temp 1	scBTemp	(graphable) Temperature of the DMX1 ASIC on logical centerplane board 1
DMX3 Temp 1	scBTemp	(graphable) Temperature of the DMX3 ASIC on logical centerplane board 1
DMX5 Temp 1	scBTemp	(graphable) Temperature of the DMX5 ASIC on logical centerplane board 1

Expander Board

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader expander board (TABLE 6-5).

TABLE 6-5 Sun Fire 15K Platform Config Reader Expander Board

Property	Rule (if any)	Description
EXB ID		Expander board identifier containing FRU ID(Slot ID): `EXB(EXx)`, where *x* is the expander board number (`0-17`)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	`scBPower`	Indicates whether the expander board power is `ON` or `OFF`
Slot 0		Identifier of the system board that occupies slot 0: `CPU(SBx)` or `NOT_PRESENT`, where *x* is the number of the centerplane slot containing the board (`0-17`)
Slot 1		Identifier of the system board that occupies slot 1: `HPCI(IOx)`, `MCPU(IOx)`, or `NOT_PRESENT`, where *x* is `0-17`
PS0 State	`scOBURul`	Status of power supply 0: `OK`, `BAD`, or `UNKNOWN`
PS1 State	`scOBURul`	Status of power supply 1: `OK`, `BAD`, or `UNKNOWN`
Ambient Top Temp (C)	`scBTemp`	(graphable) Ambient top temperature
Ambient Bottom Temp (C)	`scBTemp`	(graphable) Ambient bottom temperature
SBBC Temp (C)	`scBTemp`	(graphable) Temperature of the SBBC ASIC
SDI5 Temp (C)	`scBTemp`	(graphable) Temperature of the SDI5 ASIC

Property	Rule (if any)	Description
SDI0 Temp (C)	`scBTemp`	(graphable) Temperature of the SDI0, or master, ASIC
SDI3 Temp (C)	`scBTemp`	(graphable) Temperature of the SDI3 ASIC
AXQ Temp (C)	`scBTemp`	(graphable) Temperature of the AXQ ASIC
+3.3HK Volt	`scBVolt`	(graphable) Voltage level for the board +3.3 VDC housekeeping power
+3.3V Volt	`scBVolt`	(graphable) Voltage level for the board +3.3 VDC power
+1.5V Volt	`scBVolt`	(graphable) Voltage level for the board +1.5 VDC power
+2.5V Volt	`scBVolt`	(graphable) Voltage level for the board +2.5 VDC power

Centerplane Support Board

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader centerplane support board (TABLE 6-6).

TABLE 6-6   Sun Fire 15K Platform Config Reader Centerplane Support Board

Property	Rule (if any)	Description
CSB ID		Centerplane support board identifier containing FRU ID(Slot ID): `CSB(CS0)` or `CSB(CS1)`
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit

TABLE 6-6   Sun Fire 15K Platform Config Reader Centerplane Support Board
(Continued)

Property	Rule (if any)	Description
Power State	scBPower	Indicates whether the board power is ON or OFF
PS0 State	scOBURul	Status of power supply 0: OK, BAD, or UNKNOWN
PS1 State	scOBURul	Status of power supply 1: OK, BAD, or UNKNOWN
Ambient Top Temp (C)	scBTemp	(graphable) Ambient top temperature
Ambient Bottom Temp (C)	scBTemp	(graphable) Ambient bottom temperature
SBBC Temp (C)	scBTemp	(graphable) Temperature of the SBBC ASIC
+3.3HK Volt	scBVolt	(graphable) Voltage level for the board +3.3 VDC housekeeping power
+3.3V Volt	scBVolt	(graphable) Voltage level for the board +3.3 VDC power
+2.5V Volt	scBVolt	(graphable) Voltage level for the board +2.5 VDC power
+1.5V Volt	scBVolt	(graphable) Voltage level for the board +1.5 VDC power

System Controller

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader system controller (TABLE 6-7).

TABLE 6-7   Sun Fire 15K Platform Config Reader System Controller

Property	Rule (if any)	Description
SC ID		System controller identifier containing FRU ID(Slot ID): SC(SC0) or SC(SC1)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit

TABLE 6-7   Sun Fire 15K Platform Config Reader System Controller *(Continued)*

Property	Rule (if any)	Description
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	scBPower	Indicates whether the SC power is ON or OFF
RIO Temp (C)	scBTemp	(graphable) Temperature of the RIO board
IOA0 Temp (C)	scBTemp	(graphable) Temperature of the input/output adapter (IOA0) board
PS0 Temp (C)	scBTemp	(graphable) Temperature of power supply 0
PS1 Temp (C)	scBTemp	(graphable) Temperature of power supply 1
SBBC Temp (C)	scBTemp	(graphable) Temperature of the SBBC ASIC. The value of this property is 0.0 if the SC is the spare SC.
CBH Temp (C)	scBTemp	(graphable) Temperature of the CBH ASIC. The value of this property is 0.0 if the SC is the spare SC.
+12V Volt	scBVolt	(graphable) Voltage level for the +12 VDC power supply
-12V Volt	scBVolt	(graphable) Voltage level for the -12 VDC power supply
+3.3HK Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC housekeeping power
+3.3V Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC power supply
+1.5V Volt	scBVolt	(graphable) Voltage level for the +1.5 VDC power supply
+5.0V Volt	scBVolt	(graphable) Voltage level for the +5 VDC power supply
+5V Current 0	scBCurrt	(graphable) Current level 0 for the +5 VDC power
+5V Current 1	scBCurrt	(graphable) Current level 1 for the +5 VDC power
+3.3V Current 0	scBCurrt	(graphable) Current level 0 for the +3.3 VDC power
+3.3V Current 1	scBCurrt	(graphable) Current level 1 for the +3.3 VDC power

System Controller Peripheral

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader system controller peripheral (TABLE 6-8).

TABLE 6-8 Sun Fire 15K Platform Config Reader System Controller Peripheral

Property	Rule (if any)	Description
SCPER ID		System controller peripheral identifier containing FRU ID(Slot ID): SCPER(SCPER0) or SCPER(SCPER1)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	scBPower	Indicates whether the power is ON or OFF
Ambient0 Temp (C)		(graphable) Ambient temperature for probe point 0
Ambient1 Temp (C)		(graphable) Ambient temperature for probe point 1
Ambient2 Temp (C)		(graphable) Ambient temperature for probe point 2
Average Ambient Temp (C)	scBTemp	(graphable) Average ambient temperature for the three probe points
+12V Volt	scBVolt	(graphable) Voltage level for the board +12 VDC power
+5.0V Volt	scBVolt	(graphable) Voltage level for the board +5 VDC power
+3.3HK Volt	scBVolt	(graphable) Voltage level for the board +3.3 VDC housekeeping power

Fan Tray

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader fan tray (TABLE 6-9):

TABLE 6-9   Sun Fire 15K Platform Config Reader Fan Tray

Property	Rule (if any)	Description
FANTRAY ID		Fan tray identifier containing FRU ID(Slot ID): `FT(FT0)` through `FT(FT7)`
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	scOnOff	Indicates whether the fan power is `ON` or `OFF`
Speed		Fan tray speed: `NORMAL`, `HIGH`, or `FAILED`
Fan0 State	scOkFail	State of fan 0: `OK` or `FAIL`
Fan1 State	scOkFail	State of fan 1: `OK` or `FAIL`
Fan2 State	scOkFail	State of fan 2: `OK` or `FAIL`
Fan3 State	scOkFail	State of fan 3: `OK` or `FAIL`
Fan4 State	scOkFail	State of fan 4: `OK` or `FAIL`
Fan5 State	scOkFail	State of fan 5: `OK` or `FAIL`
Fan6 State	scOkFail	State of fan 6: `OK` or `FAIL`

Power Supply

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader power supply (TABLE 6-10):

TABLE 6-10 Sun Fire 15K Platform Config Reader Power Supply

Property	Rule (if any)	Description
PS ID		Power supply identifier containing FRU ID(Slot ID): `PS(PS0)` through `PS(PS5)`
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
State	scOkFail	Overall state of the entire power supply: `OK` or `FAIL`
Fan0 State	scOkFail	State of fan 0: `OK` or `FAIL`
Fan1 State	scOkFail	State of fan 1: `OK` or `FAIL`
AC0 State	scOkFail	State of the alternating current input from the power supply (AC0): `OK` or `FAIL`
AC1 State	scOkFail	State of the alternating current input from the power supply (AC1): `OK` or `FAIL`
Breaker0 State	scBreakr	State of circuit breaker 0: `OPEN` or `CLOSE`
Breaker1 State	scBreakr	State of circuit breaker 1: `OPEN` or `CLOSE`
DC0 Power State	scOnOff	State of the direct current from the facility power source DC 0 is `ON` or `OFF`
DC1 Power State	scOnOff	Indicates whether the direct current from the facility power source DC 1 is `ON` or `OFF`
Current0		(graphable) Current 0 level

TABLE 6-10 Sun Fire 15K Platform Config Reader Power Supply *(Continued)*

Property	Rule (if any)	Description
Current1		(graphable) Current 1 level
+48V Volt		(graphable) Voltage level for the +48 VDC power
+3.3HK Volt		(graphable) Voltage level for the +3.3 VDC housekeeping power

CPU Board

The following table provides a brief description of the properties for the Sun Fire 15K Platform Config Reader CPU board (TABLE 6-11):

TABLE 6-11 Sun Fire 15K Platform Config Reader CPU Board

Property	Rule (if any)	Description
CPU ID		CPU board identifier containing FRU ID(Slot ID): CPU(SB*x*), where *x* is the number of the centerplane slot containing the board (0–17).
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	scBPower	Indicates whether the CPU board power is ON or OFF
DR State	scDrStat	Indicates whether the dynamic reconfiguration state of the CPU board is UNKNOWN, FREE, ASSIGNED, or ACTIVE
Test Status	scBTest	Indicates whether the test status of the CPU is UNKNOWN, IPOST (in POST), PASSED, DEGRADED, or FAILED

TABLE 6-11 Sun Fire 15K Platform Config Reader CPU Board *(Continued)*

Property	Rule (if any)	Description
POST Status	scPOST	Indicates whether the POST status of the CPU board is UNKNOWN, OK, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED
Test Level		(graphable) POST test level for this board
Domain Assigned		Domain to which this board is assigned: A–R or UNASSIGNED
Domain ACL		Domain access control list—comma-separated list of domains to which this board is available: A–R or NONE
DX0 Temp (C)	scBTemp	(graphable) Temperature of the DX0 ASIC on this board
DX1 Temp (C)	scBTemp	(graphable) Temperature of the DX1 ASIC on this board
DX2 Temp (C)	scBTemp	(graphable) Temperature of the DX2 ASIC on this board
DX3 Temp (C)	scBTemp	(graphable) Temperature of the DX3 ASIC on this board
SDC Temp (C)	scBTemp	(graphable) Temperature of the SDC ASIC on this board
SBBC0 Temp (C)	scBTemp	(graphable) Temperature of the SBBC0 ASIC on this board
SBBC1 Temp (C)	scBTemp	(graphable) Temperature of the SBBC1 ASIC on this board
AR Temp (C)	scBTemp	(graphable) Temperature of the AR ASIC on this board
+3.3V Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC power
+1.5V Volt	scBVolt	(graphable) Voltage level for the +1.5 VDC power

HPCI Board

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader hot-swap PCI (hPCI) board (TABLE 6-12):

TABLE 6-12   Sun Fire 15K Platform Config Reader HPCI Board

Property	Rule (if any)	Description
HPCI ID		hPCI board identifier containing FRU ID(Slot ID): `HPCI(IOx)`, where *x* is the number of the centerplane slot containing the board (`0-17`)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	`scBPower`	Indicates whether the hPCI board power is `ON` or `OFF`
DR State	`scDrStat`	Indicates whether the dynamic reconfiguration state of the hPCI board is `UNKNOWN`, `FREE`, `ASSIGNED`, or `ACTIVE`
Test Status	`scBTest`	Indicates whether the test status of the hPCI board is `UNKNOWN`, `IPOST` (in POST), `PASSED`, `DEGRADED`, or `FAILED`
POST Status	`scPOST`	Indicates whether the POST status of the hPCI board is `UNKNOWN`, `OK`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, or `REDLISTED`
Test Level		(graphable) POST test level for this board
Domain Assigned		Domain to which this board is assigned: `A-R` or `UNASSIGNED`
Domain ACL		Domain access control list—comma-separated list of domains to which this board is available: `A-R` or `NONE`

TABLE 6-12 Sun Fire 15K Platform Config Reader HPCI Board *(Continued)*

Property	Rule (if any)	Description
PS0 Temp (C)	scBTemp	(graphable) Temperature of power supply 0
PS1 Temp (C)	scBTemp	(graphable) Temperature of power supply 1
IOA0 Temp (C)	scBTemp	(graphable) Temperature of the IOA0 ASIC on this board
IOA1 Temp (C)	scBTemp	(graphable) Temperature of the IOA1 ASIC on this board
DX0 Temp (C)	scBTemp	(graphable) Temperature of the DX0 ASIC on this board
DX1 Temp (C)	scBTemp	(graphable) Temperature of the DX1 ASIC on this board
SDC Temp (C)	scBTemp	(graphable) Temperature of the SDC ASIC on this board
SBBC Temp (C)	scBTemp	(graphable) Temperature of the SBBC ASIC on this board
AR Temp (C)	scBTemp	(graphable) Temperature of the AR ASIC on this board
+12V Volt	scBVolt	(graphable) Voltage level for the +12 VDC power
-12V Volt	scBVolt	(graphable) Voltage level for the -12 VDC power
+3.3V Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC power
+3.3HK Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC housekeeping power
+1.5V Volt	scBVolt	(graphable) Voltage level for the +1.5 VDC power
+1.5V Converter 0	scBCurrt	(graphable) Voltage level for the +1.5 VDC converter 0
+1.5V Converter 1	scBCurrt	(graphable) Voltage level for the +1.5 VDC converter 1
+5.0V Volt	scBVolt	(graphable) Voltage level for the +5 VDC power
+5V Current 0	scBCurrt	(graphable) Current level 0 for the +5 VDC power
+5V Current 1	scBCurrt	(graphable) Current level 1 for the +5 VDC power
+3.3V Current 0	scBCurrt	(graphable) Current level 0 for the +3.3 VDC power
+3.3V Current 1	scBCurrt	(graphable) Current level 1 for the +3.3 VDC power

WPCI Board

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader Sun Fire Link PCI (WPCI) board (TABLE 6-13). Refer to the *Sun Management Center 3.0 Supplement for Sun Fire Link Systems* for more information about Sun Fire Link systems.

TABLE 6-13   Sun Fire 15K Platform Config Reader WPCI Board

Property	Rule (if any)	Description
WPCI ID		WPCI board identifier containing FRU ID(Slot ID): `WPCI(IOx)`, where *x* is the number of the centerplane slot containing the board (`0–17`)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	`scBPower`	Indicates whether the WPCI board power is `ON` or `OFF`
DR State	`scDrStat`	Indicates whether the dynamic reconfiguration state of the WPCI board is `UNKNOWN`, `FREE`, `ASSIGNED`, or `ACTIVE`
Test Status	`scBTest`	Indicates whether the test status of the WPCI board is `UNKNOWN`, `IPOST` (in POST), `PASSED`, `DEGRADED`, or `FAILED`
POST Status	`scPOST`	Indicates whether the POST status of the WPCI board is `UNKNOWN`, `OK`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, or `REDLISTED`
Test Level		(graphable) POST test level for this board
Domain Assigned		Domain to which this board is assigned: `A–R` or `UNASSIGNED`

TABLE 6-13 Sun Fire 15K Platform Config Reader WPCI Board *(Continued)*

Property	Rule (if any)	Description
Domain ACL		Domain access control list—comma-separated list of domains to which this board is available: A–R or NONE
+1.5 Converter 0 OK	scOkFail	Converter status is OK or FAIL
+1.5 Converter 1 OK	scOkFail	Converter status is OK or FAIL
+1.5 Converter 0 PS Status	scOkFail	Converter power supply status is OK or FAIL
+1.5 Converter 1 PS Status	scOkFail	Converter power supply status is OK or FAIL
+2.5 Converter 0 OK	scOkFail	Converter status is OK or FAIL
+2.5 Converter 1 OK	scOkFail	Converter status is OK or FAIL
+2.5 Converter 0 PS Status	scOkFail	Converter power supply status is OK or FAIL
+2.5 Converter 1 PS Status	scOkFail	Converter power supply status is OK or FAIL
+3.3 Converter 0 OK	scOkFail	Converter status is OK or FAIL
+3.3 Converter 1 OK	scOkFail	Converter status is OK or FAIL
+3.3 Converter 2 OK	scOkFail	Converter status is OK or FAIL
+3.3 Converter 0 PS Status	scOkFail	Converter power supply status is OK or FAIL
+3.3 Converter 1 PS Status	scOkFail	Converter power supply status is OK or FAIL
+3.3 Converter 2 PS Status	scOkFail	Converter power supply status is OK or FAIL
+5.0 Converter 0 OK	scOkFail	Converter status is OK or FAIL
+5.0 Converter 1 OK	scOkFail	Converter status is OK or FAIL
+5.0 Converter 0 PS Status	scOkFail	Converter power supply status is OK or FAIL
+5.0 Converter 1 PS Status	scOkFail	Converter power supply status is OK or FAIL
IOA Temp (C)	scBTemp	(graphable) Temperature of the IOA ASIC on this board
DX0 Temp (C)	scBTemp	(graphable) Temperature of the DX0 ASIC on this board
DX1 Temp (C)	scBTemp	(graphable) Temperature of the DX1 ASIC on this board
SDC Temp (C)	scBTemp	(graphable) Temperature of the SDC ASIC on this board
SBBC Temp (C)	scBTemp	(graphable) Temperature of the SBBC ASIC on this board
AR Temp (C)	scBTemp	(graphable) Temperature of the AR ASIC on this board

TABLE 6-13 Sun Fire 15K Platform Config Reader WPCI Board *(Continued)*

Property	Rule (if any)	Description
WCI0 Temp (C)	scBTemp	(graphable) Temperature of the WCI0 ASIC on this board
WCI1 Temp (C)	scBTemp	(graphable) Temperature of the WCI1 ASIC on this board
+12V Volt	scBVolt	(graphable) Voltage level for the +12 VDC power
-12V Volt	scBVolt	(graphable) Voltage level for the -12 VDC power
+3.3HK Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC housekeeping power
+3.3V Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC power
+1.5V Volt	scBVolt	(graphable) Voltage level for the +1.5 VDC power
+2.5V Volt	scBVolt	(graphable) Voltage level for the +2.5 VDC power
+5.0V Volt	scBVolt	(graphable) Voltage level for the +5 VDC power

MaxCPU Board

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader MaxCPU board (TABLE 6-14):

TABLE 6-14 Sun Fire 15K Platform Config Reader MaxCPU Board

Property	Rule (if any)	Description
MCPU ID		MaxCPU board identifier containing FRU ID(Slot ID): MCPU(IO*x*), where *x* is the number of the centerplane slot containing the board (0–17)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit

TABLE 6-14 Sun Fire 15K Platform Config Reader MaxCPU Board *(Continued)*

Property	Rule (if any)	Description
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	scBPower	Indicates whether the MaxCPU board power is ON or OFF
DR State	scDrStat	Indicates whether the dynamic reconfiguration state of the MaxCPU board is UNKNOWN, FREE, ASSIGNED, or ACTIVE
Test Status	scBTest	Indicates whether the test status of the MaxCPU board is UNKNOWN, IPOST (in POST), PASSED, DEGRADED, or FAILED
POST Status	scPOST	Indicates whether the POST status of the MaxCPU board is UNKNOWN, OK, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED
Test Level		POST test level for this board
Domain Assigned		Domain to which this board is assigned: A–R or UNASSIGNED
Domain ACL		Domain access control list— comma-separated list of the domains to which this board is available: A–R or NONE
Core 0 Power 0 Status	scOkFail	Power supply 0 to PROC 0 is OK or FAIL
Core 0 Power 1 Status	scOkFail	Power supply 1 to PROC 0 is OK or FAIL
Core 0 Power 2 Status	scOkFail	Power supply 2 to PROC 0 is OK or FAIL
Core 1 Power 0 Status	scOkFail	Power supply 0 to PROC 1 is OK or FAIL
Core 1 Power 1 Status	scOkFail	Power supply 1 to PROC 1 is OK or FAIL
Core 1 Power 2 Status	scOkFail	Power supply 2 to PROC 1 is OK or FAIL
+3.3V Power 0 Status	scOkFail	Power supply 0 to +3.3V is OK or FAIL
+3.3V Power 1 Status	scOkFail	Power supply 1 to +3.3V is OK or FAIL
+1.5V Power 0 Status	scOkFail	Power supply 0 to +1.5V is OK or FAIL
+1.5V Power 1 Status	scOkFail	Power supply 1 to +1.5V is OK or FAIL
DX0 Temp (C)	scBTemp	(graphable) Temperature of the DX0 ASIC on this board

TABLE 6-14 Sun Fire 15K Platform Config Reader MaxCPU Board *(Continued)*

Property	Rule (if any)	Description
DX1 Temp (C)	scBTemp	(graphable) Temperature of the DX1 ASIC on this board
DX2 Temp (C)	scBTemp	(graphable) Temperature of the DX2 ASIC on this board
DX3 Temp (C)	scBTemp	(graphable) Temperature of the DX3 ASIC on this board
SDC Temp (C)	scBTemp	(graphable) Temperature of the SDC ASIC on this board
SBBC Temp (C)	scBTemp	(graphable) Temperature of the SBBC ASIC on this board
AR Temp (C)	scBTemp	(graphable) Temperature of the AR ASIC on this board
+3.3V Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC power
+3.3HK Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC housekeeping power
+1.5V Volt	scBVolt	(graphable) Voltage level for the +1.5 VDC power

HPCI Cassette

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader hot-swap PCI (hPCI) cassette, which can contain two hPCI cards (TABLE 6-15).

Note – hPCI cassette information is available only when the corresponding hPCI board is powered on. When an hPCI board is powered off, information for the hPCI cassettes on that board is not available.

TABLE 6-15 Sun Fire 15K Platform Config Reader HPCI Cassette

Property	Rule (if any)	Description
Cassette ID		hPCI cassette identifier containing FRU ID(Slot ID): FRU ID is either C3V for a 3.3-volt card or C5V for a 5-volt card. Slot ID is IOx/CyVz, where x is the number of the centerplane slot containing the card (0–17), y is the card voltage (3 or 5), and z is the PCI controller containing the card (0 or 1)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Slot Power State	scOnOff	Indicates whether the slot power is ON or OFF
Card Present		YES indicates a card is present in the cassette; NO indicates no card is present in the cassette
Slot Frequency (MHz)		Indicates the frequency of the slot in megahertz (MHz): 33, 66, or 132
Slot Condition	scHPCIcd	Indicates whether the condition of the slot is GOOD, UNKNOWN, BAD SLOT, or BAD CARD
Slot Power Status	scOkFail	Indicates whether or not the power to the slot successfully switched on: OK or FAIL
Slot Power Fault	scOkFail	Indicates whether or not a power fault is detected in the slot: OK or FAIL

Paroli Card

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader parallel optical link (Paroli) card (TABLE 6-16). Refer to the *Sun Management Center 3.0 Supplement for Sun Fire Link Systems* for more information about the Sun Fire Link system.

Note – Paroli card information is available only when the corresponding WPCI board is powered on. When a WPCI board is powered off, information for the Paroli cards on that board is not available.

TABLE 6-16   Sun Fire 15K Platform Config Reader Paroli Card

Property	Rule (if any)	Description
Paroli ID		Paroli card identifier containing FRU ID(Slot ID): `PARS(IOx/PARy)`, where *x* is the number of the centerplane slot containing the card (`0–17`), and *y* is the Paroli card number (`0` or `1`)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
Power State	scOnOff	Indicates whether the Paroli card power is `ON` or `OFF`
+1.5V Volt	scBVolt	(graphable) Voltage level for the +1.5 VDC power
+3.3V Volt	scBVolt	(graphable) Voltage level for the +3.3 VDC power

Processor

The following table provides a brief description of the properties for a Sun Fire 15K
Platform Config Reader processor (TABLE 6-17).

Note – Processor information is available only when a domain is up (in OpenBoot™
PROM or running the Solaris operating environment). When a domain is down,
processor information for that domain is not available.

TABLE 6-17 Sun Fire 15K Platform Config Reader Processor

Property	Rule (if any)	Description
PROC ID		Processor identifier containing ID(SlotID): PROC(SB*x*/P*y*), where *x* is the number of the centerplane slot containing the board (0–17) and *y* is the processor number (0–3)
Power State	scOnOff	Power state for this processor: ON or OFF
POST Status	scPOST	Indicates whether the POST status of the processor is UNKNOWN, OK, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED
Clock Frequency (MHz)		Processor clock frequency in megahertz (MHz)
Temperature (C)	scBTemp	(graphable) Temperature of the processor
Voltage	scBVolt	(graphable) Voltage level for the processor
Ecache Size		(graphable) External cache size in megabytes
Memory Bank List		Comma-separated list of memory banks used by this processor (0,1)

Memory Bank

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader memory bank (TABLE 6-18).

Note – Memory bank information is available only when a domain is up (in OpenBoot PROM or running the Solaris operating environment). When a domain is down, memory bank information for that domain is not available.

TABLE 6-18 Sun Fire 15K Platform Config Reader Power Memory Bank

Property	Rule (if any)	Description
MEMBANK ID		Memory bank identifier containing ID(Slot ID): `MEMBANK(SBx/Py/Bz)`, where *x* is the number of the centerplane slot containing the board (`0–17`), *y* is the processor number (`0–3`), and *z* is the physical memory bank number (`0` or `1`)
Logical Bank 0 POST Status	`scPOST`	Indicates whether the POST status of logical memory bank 0 is `UNKNOWN`, `OK`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, or `REDLISTED`
Logical Bank 1 POST Status	`scPOST`	Indicates whether the POST status of logical memory bank 1 is `UNKNOWN`, `OK`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, or `REDLISTED`
Memory Size (MB)		(graphable) Memory bank size in megabytes

DIMM

The following table provides a brief description of the properties for the Sun Fire 15K Platform Config Reader Dual Inline Memory Module (DIMM) (TABLE 6-19).

Note – DIMM information is available only when a domain is up (in OpenBoot PROM or running the Solaris operating environment). When a domain is down, DIMM information for that domain is not available.

TABLE 6-19   Sun Fire 15K Platform Config Reader DIMM

Property	Rule (if any)	Description
DIMM ID		DIMM identifier containing FRU ID(Slot ID): `DIMM(SBw/Px/By/Dz)`, where *w* is the number of the centerplane slot containing the board (`0-17`), *x* is the processor number (`0-3`), *y* is the physical memory bank number (`0` or `1`), and *z* is the DIMM number (`0-3`)
FRU Part Number		Part number of the field-replaceable unit
FRU Serial Number		Serial number of the field-replaceable unit
Dash Level		Dash level of the field-replaceable unit
Rev Level		Revision level of the field-replaceable unit
Short Name		Short name of the field-replaceable unit
Description		Description of the field-replaceable unit
Manufacturer Location		Location of the manufacturer of the field-replaceable unit
Date of Manufacture		Date and time the field-replaceable unit was manufactured
Vendor Name		Vendor name for the field-replaceable unit
POST Status	`scPOST`	Indicates whether the POST status of the DIMM is `UNKNOWN`, `OK`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, or `REDLISTED`

Domain

The following table provides a brief description of the properties for a Sun Fire 15K Platform Config Reader domain (TABLE 6-20):

TABLE 6-20   Sun Fire 15K Platform Config Reader Domain

Property	Rule (if any)	Description
DOMAIN ID		Sun Fire 15K domain identifier: `A–R`
Status		Domain status as output from the SMS `showplatform` command, such as `Running Solaris`, `Running Domain POST`, or `Powered Off`. Refer to `showplatform`(1M) in the *System Management Services SMS 1.2 Reference Manual* for more information.
Domain Stop	`scStop`	Number of domain stops for this domain after the platform agent restarted or the alarm is acknowledged
Record Stop	`scStop`	Number of record stops for this domain after the platform agent restarted or the alarm is acknowledged
OS Version		Version of operating environment running in this domain, such as `Solaris 2.8`
OS Type		Type of operating environment running in this domain, such as `Solaris`, `Trusted`
Domain Tag		Tag name of the domain, such as `domainA` through `domainR`
External Host Name		External host name of the domain
Internal Host Name		Internal host name of the domain
Internal IP Address		Internal IP address of the domain
Slot0 Available Boards		Comma-separated list of slot 0 boards available to this domain (`0–17`) or `NONE`
Slot1 Available Boards		Comma-separated list of slot 1 boards available to this domain (`0–17`) or `NONE`
Slot0 Assigned Boards		Comma-separated list of slot 0 boards assigned to this domain (`0–17`) or `NONE`
Slot1 Assigned Boards		Comma-separated list of slot 1 boards assigned to this domain (`0–17`) or `NONE`
Slot0 Active Boards		Comma-separated list of slot 0 boards active on this domain (`0–17`) or `NONE`

TABLE 6-20 Sun Fire 15K Platform Config Reader Domain *(Continued)*

Property	Rule (if any)	Description
Slot1 Active Boards		Comma-separated list of slot 1 boards active on this domain (0–17) or NONE
Primary I/O Board		Identifier of the primary I/O board used for communication between the domain and the system controller: HPCI(IO*x*), where *x* is the number of the centerplane slot containing the board (0–17)
Keyswitch		Virtual keyswitch position: ON, STANDBY, OFF, DIAG, SECURE, or UNKNOWN
Address Bus Config		Address bus not configured (UNCONFIGURED), in degraded mode using CSB0 only (CSB0), in degraded mode using CSB1 only (CSB1), or fully functional using both centerplane support boards (BOTH)
Data Bus Config		Data bus not configured (UNCONFIGURED), in degraded mode using CSB0 only (CSB0), in degraded mode using CSB1 only (CSB1), or fully functional using both centerplane support boards (BOTH)
Response Bus Config		Response bus not configured (UNCONFIGURED), in degraded mode using CSB0 only (CSB0), in degraded mode using CSB1 only (CSB1), or fully functional using both centerplane support boards (BOTH)
Active Ethernet Board		Identifier of the I/O board that contains the active Ethernet controller: HPCI(IO*x*), where *x* is the number of the centerplane slot containing the board (0–17)
Admin Group		Administrative group identifier for the domain, such as dmn*x*admn, where *x* is a–r
Reconfigure Group		Reconfigure group identifier for the domain, such as dmn*x*rcfg, where *x* is a–r
Creation Time		Date and time the domain was created or UNKNOWN

Discovery Object Table

The Discovery Object table provides information used by the Discovery Manager and the Create Topology Object GUI to create Sun Fire 15K composites. This information is presented largely for diagnostics purposes and contains information not directly relevant to the Sun Management Center software user. This information consists of a table identifier (the Magic Number), followed by a table containing information for each topology object created as part of the Sun Fire 15K composite. A Magic Number value of 53444f54 identifies the following table as a valid Discovery Object Table.

The following table provides a brief description of the properties for Sun Fire 15K Platform Config Reader Discovery Object table (TABLE 6-21):

TABLE 6-21 Sun Fire 15K Platform Config Reader Discovery Object Table

Property	Rule (if any)	Description
TOPOLOGY ID		Encoded topology identifier
Topology Parent		Topology identifier of the parent of this object
Discovery Type		Encoded discovery type
IP Address		IP address for this topology object
Agent Port		Network port number for this topology object
Family Type		Topology object family type
Label		Object label displayed in the Sun Management Center topology
Description		Optional description of the object

Note – A value of –1 for the Agent Port indicates that the object is a Platform Group object.

Platform Config Reader Alarm Rules

This section describes the alarm rules for the Platform Config Reader module. You cannot change the limits for these rules. The system provides a message with the alarms telling what the current property is and what the limit is.

Board Current Rule (scBCurrt)

The board current rule generates a critical alarm when a current probe point is not within *x* percent of the average of all like components (TABLE 6-22). SMS software will take appropriate automatic system recovery (ASR) actions. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 9, Section "Environmental Events".

TABLE 6-22   Sun Fire 15K Platform Config Reader Board Current Rule

Current Threshold	Alarm Level	Meaning
Good		Current is within *x* percent of the average of all like components, where *x* is set by Sun service personnel.
Error	Critical	Current is *not* within *x* percent of the average of all like components, where *x* is set by Sun service personnel.

Action: Use the SMS showenvironment(1M) command to check whether the showenvironment command output is consistent with the value shown in the Sun Management Center table.

Board Power Rule (scBPower)

The board power rule generates an alarm when the board power state is OFF (TABLE 6-23). A caution alarm is for information only and is not an error.

TABLE 6-23   Sun Fire 15K Platform Config Reader Board Power Rule

Power State	Alarm Level	Meaning
ON		Board power is on.
OFF	Caution	Board power is off.

Action: Use the SMS poweron(1M) command to power on a board. Use the SMS showboards(1M) command to check whether the showboards command output is consistent with the value shown in the Sun Management Center table.

Board Temperature Rule (`scBTemp`)

The board temperature rule generates a caution, alert, or critical alarm when the temperature falls within a certain temperature threshold range shown in TABLE 6-24. Temperature alarms are *not* generated when the board is powered off.

TABLE 6-24 Sun Fire 15K Platform Config Reader Board Temperature Rule

Temperature Threshold	Alarm Level	Meaning
`Low Critical`	Critical	Temperature is in the low critical range as set by Sun service personnel.
`Low Warning`	Alert	Temperature is in the low warning range as set by Sun service personnel.
`High Warning`	Caution	Temperature is in the high warning range as set by Sun service personnel.
`High Critical`	Alert	Temperature is in the high critical range as set by Sun service personnel.
`Over Limit`	Critical	Temperature is in the over limit range as set by Sun Service personnel.

Actions:

- For the Low Critical, High Critical, and Over Limit alarms, SMS will take appropriate automatic system recovery (ASR) actions. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 9, Section "Environmental Events".
- For the Low Warning and High Warning alarms, contact your Sun service personnel for information about bringing the temperature within limits.

Use the SMS `showenvironment`(1M) command to check whether the `showenvironment` command output is consistent with the value shown in the Sun Management Center table.

Board Voltage Rule (`scBVolt`)

The board voltage rule generates a critical alarm when the voltage falls within a certain voltage threshold range shown in TABLE 6-25. The voltage alarms are *not* generated when the board is powered off.

TABLE 6-25 Sun Fire 15K Platform Config Reader Board Voltage Rule

Voltage Threshold	Alarm Level	Meaning
`Low Minimum`	Critical	Voltage is in the low minimum range as set by Sun service personnel.
`High Maximum`	Critical	Voltage is in the high maximum range as set by Sun service personnel.

Actions: For the Low Minimum and High Maximum alarms, SMS will take appropriate automatic system recovery (ASR) actions. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 9, Section "Environmental Events". Use the SMS `showenvironment`(1M) command to check whether the `showenvironment` command output is consistent with the value shown in the Sun Management Center table.

Domain Stop and Record Stop Rule (`scStop`)

The domain stop and record stop rule checks for domain stops and record stops on a domain. The rule generates an alarm when either of the counts is greater than zero (TABLE 6-26). The domain stop and record stop counts are set to zero when the platform agent is restarted or when the alarm is acknowledged.

TABLE 6-26 Sun Fire 15K Platform Config Reader hPCI Assembly Rule

Number of Stops	Alarm Level	Meaning
`0`		Either or both the domain stops and record stops are zero.
`>0`	Caution	Number of record stops is greater than zero.
`>0`	Critical	Number of domain stops is greater than zero.

Actions:

- The caution alarm when the record stop count is greater than zero is for information only and is not an error. The domain is still up and running. If necessary, provide your Sun service personnel with the appropriate record stop dump for analysis. The record stop dump is located in

/var/opt/SUNSWSMS/adm/[A-R]/dump. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 9, Section "Hardware Error Events".

- When a domain stop error occurs and the critical alarm is generated, SMS software will take appropriate automatic system recovery (ASR) actions. Provide your Sun service personnel with a domain stop dump for analysis. The domain stop dump is located in /var/opt/SUNSWSMS/adm/[A-R]/dump. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 9, Section "Hardware Error Events".

HPCI Cassette Rule (`scHPCIcd`)

The hot-swap PCI (hPCI) cassette rule generates a caution or critical alarm when the condition of the PCI slot is UNKNOWN, BAD SLOT, or BAD CARD (TABLE 6-27). Alarms are *not* generated if the hPCI cassette is powered off.

TABLE 6-27   Sun Fire 15K Platform Config Reader HPCI Cassette Rule

OK/BAD/UNKNOWN State	Alarm Level	Meaning
GOOD		Slot condition is good.
UNKNOWN	Caution	Slot condition is unknown.
BAD SLOT	Critical	Slot condition is bad.
BAD CARD	Critical	Card is bad.

Actions:

- The caution alarm is for information only and is not an error. If necessary, contact your Sun service personnel to see why the condition is UNKNOWN.
- For the critical alarm, contact your Sun service personnel.

Failover State Rule (`scFoStat`)

The failover state rule generates a caution or critical alarm when the current failover state is not ACTIVE (TABLE 6-28).

TABLE 6-28   Sun Fire 15K Platform Config Reader Failover State Rule

Failover State	Alarm Level	Meaning
ACTIVE		Failover is enabled.
DISABLED	Caution	Failover is disabled.
FAILED	Critical	Problem prevents failover from occurring.

Actions:

- The caution alarm is for information only and is not an error. You can enable failover by using the SMS setfailover(1M) command.
- The critical alarm means that at least one fault has occurred, which will prevent the failover mechanism from working. You can get more information about the faults by using the SMS showfailover(1M) command. You can also look at the SMS platform log file located in `/var/opt/SUNWSMS/adm/platform/messages` for messages from the SMS fomd process.

OK/BAD/UNKNOWN State Rule (`scOBURul`)

The OK/BAD/UNKNOWN state rule generates a critical or caution alarm when a component is in a BAD or UNKNOWN state (TABLE 6-29). Alarms are *not* generated if the containing component is powered off.

TABLE 6-29   Sun Fire 15K Platform Config Reader OK/BAD/UNKNOWN State Rule

OK/BAD/UNKNOWN State	Alarm Level	Meaning
OK		Component is in normal operational state.
BAD	Critical	Component is in a nonoperational state.
UNKNOWN	Caution	System is not able to determine the component's operational state.

Actions:

- The caution alarm is for information only and is not an error. If necessary, contact your Sun service personnel to see why the condition is UNKNOWN.
- For a critical alarm, contact your Sun service personnel.

OK/FAIL Rule (`scOkFail`)

The OK/FAIL rule generates a critical alarm when a component is found to have failed (TABLE 6-30). Alarms are *not* generated if the containing component is either powered off or in a FAIL state.

TABLE 6-30 Sun Fire 15K Platform Config Reader OK/FAIL Rule

OK/FAIL State	Alarm Level	Meaning
OK		Component is okay.
FAIL	Critical	Component has failed.

Action: For the critical alarm, contact your Sun service personnel.

ON/OFF Rule (`scOnOff`)

The ON/OFF Rule generates a caution alarm when the system detects a component is off (TABLE 6-31). Alarms are not generated if the containing component is either powered off or in the FAIL state.

TABLE 6-31 Sun Fire 15K Platform Config Reader ON/OFF Rule

ON/OFF State	Alarm Level	Meaning
ON		Component is on.
OFF	Caution	Component is off.

Actions: The caution alarm is for information only and is not an error. The reasons for the alarm and the actions you can take depend on the type of component:

- If the component is a fan try or power supply, you can use the SMS `poweron`(1M) command to power on the component.
- If the component is a processor, the board could be powered off or the processor has been powered off by SMS software because of automatic system recovery (ASR) actions.
- If the component is an hPCI cassette, the board could be powered off or the cassette is empty (does not contain a card).

POST Status Rule (`scPOST`)

The power-on self-test (POST) Status Rule generates a caution, alert, or critical alarm when the POST status is not `OK` (TABLE 6-32).

TABLE 6-32 Sun Fire 15K Platform Config Reader POST Status Rule

POST Status	Alarm Level	Meaning
OK		POST status is okay.
UNKNOWN	Caution	POST status is unknown.
BLACKLISTED	Caution	Component is blacklisted.
REDLISTED	Caution	Component is redlisted.
DISABLED	Alert	Component is disabled.
UNDEFINED	Alert	Component is undefined.
MISCONFIGURED	Alert	Component is misconfigured.
FAIL-OBP	Critical	Component has failed in OBP.
FAIL	Critical	Component has failed POST.

Actions:

- A caution alarm is for information only and is not an error. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 5, Section "Hardware Control".
- An alert alarm does not always indicate a problem, but you should inform your system administrator or Sun service personnel of a possible problem.
- A critical alarm indicates a problem. Contact your Sun service personnel.

For more information, look at the POST log file on the system controller. The POST log file is located in `/var/opt/SUNWSMS/adm/[A-R]/post`.

Power Supply Breaker Rule (`scBreakr`)

The Power Supply Breaker Rule generates a caution alarm when the power supply circuit breaker is OPEN (TABLE 6-33). The caution alarm is for information only and is not an error.

TABLE 6-33   Sun Fire 15K Platform Config Reader Power Supply Breaker Rule

Power Supply Breaker State	Alarm Level	Meaning
CLOSE		Circuit breaker is closed.
OPEN	Caution	Circuit breaker is open.

System Board DR State Rule (`scDrStat`)

The system board DR state rule generates a caution alarm when the dynamic reconfiguration (DR) state is UNKNOWN (TABLE 6-34).

TABLE 6-34   Sun Fire 15K Platform Config Reader System Board DR State Rule

DR State	Alarm Level	Meaning
FREE		Board is free.
ASSIGNED		Board is assigned to a domain.
ACTIVE		Board is active in a domain.
UNKNOWN	Caution	Dynamic reconfiguration state is unknown.

Action: The caution alarm is for information only and is not an error. The UNKNOWN state is equivalent to the board being free. If you issue the SMS showboards(1M) command, you will see that the UNKNOWN boards are marked as available.

System Board Test Status Rule (`scBTest`)

The system board test status rule generates a caution, alert, or critical alarm when the test status is UNKNOWN, IPOST (in POST), DEGRADED, or FAILED (TABLE 6-35). The caution alarm is for information only and is not an error.

TABLE 6-35 Sun Fire 15K Platform Config Reader System Board Test Status Rule

Test Status	Alarm Level	Meaning
PASSED		POST passed.
UNKNOWN	Caution	POST status is unknown.
IPOST (in POST)	Caution	POST is in progress.
DEGRADED	Alert	POST status is degraded.
FAILED	Critical	POST failed.

Actions: The reasons for the alarms and the actions to take depend on the test status.

- SMS software automatically sets test status to UNKNOWN whenever a board is powered on or off. It also implies that the board is not configured into any domain. When a board is configured into a domain, POST is run and gives the appropriate test status.
- When the test status is DEGRADED and an alert alarm is generated, contact your Sun service personnel.
- When the test status is FAILED and a critical alarm is generated, there is something wrong with the board. Contact your Sun service personnel.

For more information, look at the POST log file. The POST log file is located in `/var/opt/SUNWSMS/adm/[A-R]/post`.

Domain Config Reader Module

The Domain Config Reader module provides the hardware configuration for a Sun Fire 15K domain. During Sun Fire 15K domain agent setup, this module is automatically loaded, and you *can* unload it.

FIGURE 6-2 shows the icon for the module—Config Reader (Sun Fire 15000 Domain)—as it is displayed in the host Details window on a domain under the Browser tab and Hardware icon.
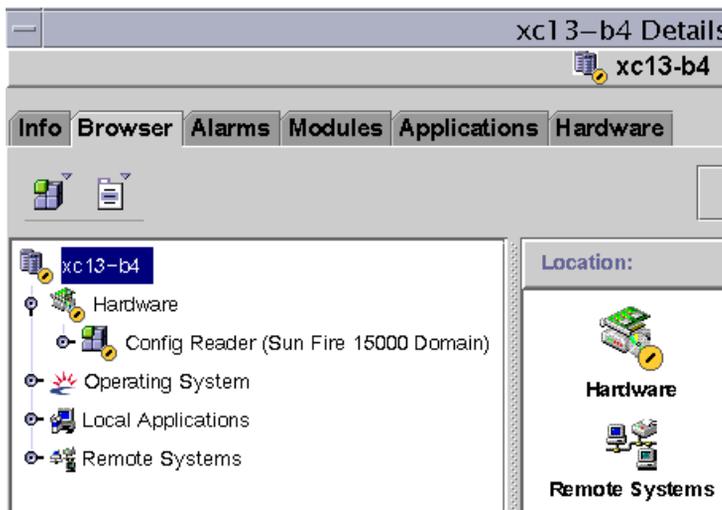

FIGURE 6-2   Domain Config Reader Module

Domain Agent May Not Start on a Configuration With Many External Disks

On a configuration with many external disks attached—for example, over 5,000 disks—you must make modifications to the `agent-stats-d.def` file to start the domain agent on the domain. Then you need to modify the attributes to the alarms that are generated. Once you do this you will receive an Alert alarm (yellow) instead of a Critical alarm (red), and you will be able to monitor the domain.

Perform these two procedures on the Sun Fire 15K domain:

1. Modify the `agent-stats-d.def` file

2. Modify two alarm attributes in the Sun Management Center 3.0 graphical user interface (GUI) for the domain.

▼ To Modify the `agent-stats-d.def` File

In the `/var/opt/SUNWsymon/cfg/agent-stats-d.def` file:

1. **Change the** `procstats:size:alarmlimit:error-gt` **to** `500000`

2. **Change the** `procstats:size:alarmlimit:warning-gt` **to** `250000`

3. **Change the** `procstats:rss:alarmlimit:warning-gt` **to** `250000`

▼ To Modify Alarm Attributes for the Domain

1. **Double-click on the domain you want to change in the hierarchical view of the Sun Management Center 3.0 GUI.**

2. **Double-click on Local Applications.**

3. **Double-click on Agent Statistics.**

4. **Double-click on Sun Management Center Total Process Statistics.**

5. **In the Sun Management Center Total Process Statistics table, right-click on the value for the property Total Virtual Size (KB) and Total Res Set Size.**

6. **Click on the Attribute Editor in the pull-down menu.**

7. **Click on the Alarms tab.**

8. **In the Critical Threshold text box, change the size to** `500000`**.**

9. **In the Alert Threshold text box, change the size to** `250000`**.**

10. **Click on the Apply button.**

11. **In the Sun Management Center Total Process Statistics table, right-click on the value for the property Total Res Set Size (KB).**

12. **Click on the Attribute Editor in the pull-down menu.**

13. **Click on the Alarms tab.**

14. **In the Critical Threshold text box, change the size to** `500000`**.**

15. **In the Alert Threshold text box, change the size to** `250000`**.**

16. **Click on the Apply button.**

Domain Config Reader Module Refresh Intervals

The Domain Config Reader module performs a complete refresh of all tables every 30 minutes.

The Domain Config Reader module also stores domain information in an internal cache. It gathers and refreshes this information in two ways:

- At periodic intervals, currently every two minutes, the Domain Config Reader checks for changes to the disk hardware, software, and transport error count and processor status (online or offline). You cannot change the value of the refresh interval for the Sun Fire 15K Domain Config Reader.
- The events module informs the Domain Config Reader whenever a dynamic reconfiguration operation has occurred, which means that a board or a component has changed, and that information is stored in the internal cache.

When viewing the module data from the Browser, you can request an immediate refresh of the module data from the internal cache.

▼ To Refresh Domain Config Reader Data

1. **Open the domain Details window and select the Browser tab.**

2. **Select any property within the System folder and refresh that data.**

   This causes the Domain Config Reader to refresh data from the internal cache.

3. **If you want to view information not contained in the System folder, select that property in the Browser and refresh the data.**

   This updates the Browser with the latest value of that property from the internal cache.

Domain Config Reader Properties

The tables in this section describe each of the visible properties for each Sun Fire 15K Domain Config Reader object. If a property has a value of --, the Domain Config Reader is unable to get data for that property.

System

The following table provides a brief description of the properties for the Sun Fire 15K Domain Config Reader system (TABLE 6-36):

TABLE 6-36 Sun Fire 15K Domain Config Reader System

Property	Rule (if any)	Description
Node Name		`system`
Hostname		Sun Fire 15K domain host name
Host ID		Host identification number
Operating System		Operating system running in the Sun Fire 15K domain
OS Version		Version of the operating system running
Architecture		Machine architecture
Last Update		Date and time the configuration information was last updated
Total Disks		Number of disks present in the domain
Total Memory		Total memory in megabytes
Total Processors		Number of processors, which includes all processors allocated to the domain
Total Tape Devices		Number of tape devices present in the domain

CPU/Memory Board

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader CPU/memory board (TABLE 6-37):

TABLE 6-37 Sun Fire 15K Domain Config Reader CPU/Memory Board

Property	Rule (if any)	Description
CPU ID		CPU/memory board identifier containing FRU ID(Slot ID): `CPU(SBx)`, where *x* is the number of the expander slot containing the board (`0–17`)
Board Type		CPU board type identifier: `CPU`
Memory Size		Total memory for all CPUs on this board

TABLE 6-37   Sun Fire 15K Domain Config Reader CPU/Memory Board *(Continued)*

Property	Rule (if any)	Description
Memory Controllers		Comma-separated list of identifiers for the memory controllers on this CPU/memory board: SBx/Py, where x is the number of the expander slot containing the board (0–17) and y is the processor number (0–3)
Memory Banks		Comma-separated list of identifiers for the memory banks on this CPU/memory board: SBx/Py/Bz, where x is the number of the expander slot containing the board (0–17), y is the processor number (0–3), and z is the memory bank number (0 or 1)
Processor List		Comma-separated list of identifiers for the processors on this CPU/memory board: SBx/Py, where x is the number of the expander slot containing the board (0–17) and y is the processor number (0–3)
Condition	scStateCheck	Attachment point condition of the CPU/memory board from cfgadm: OK, FAIL, or UNKNOWN
Last Change		Date and time of the last change or UNKNOWN

hPCI Board

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader hot-swap PCI (hPCI) board (TABLE 6-38):

TABLE 6-38   Sun Fire 15K Domain Config Reader hPCI Board

Property	Rule (if any)	Description
HPCI ID		hPCI board identifier containing FRU ID(Slot ID): HPCI(IOx), where x is the number of the expander slot containing the board (0–17)
Board Type		hPCI board type identifier: HPCI
Condition	scStateCheck	Attachment point condition of the hPCI board from cfgadm: OK, FAIL, or UNKNOWN
Last Change		Date and time of the last change or UNKNOWN
HPCI Cards		Comma-separated list of identifiers for hPCI cards connected to this board: IOx/CyVz, where x is the number of the expander slot containing the board (0–17), y is the card voltage (3 or 5), and z is the PCI controller number (0 or 1)

WPCI Board

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader Sun Fire Link PCI (WPCI) board (TABLE 6-39). Refer to the *Sun Management Center 3.0 Supplement for Sun Fire Link Systems* for more information about the Sun Fire Link system.

TABLE 6-39   Sun Fire 15K Domain Config Reader WPCI Board

Property	Rule (if any)	Description
WPCI ID		WPCI board identifier containing FRU ID(Slot ID): `WPCI(IOx)`, where *x* is the number of the expander slot containing the board (`0-17`)
Board Type		WPCI board type identifier: `WPCI`
Condition	`scStateCheck`	Attachment point condition of the WPCI board from `cfgadm`: `OK`, `FAIL`, or `UNKNOWN`
Last Change		Date and time of the last change or `UNKNOWN`
HPCI/Paroli Cards		Comma-separated list of identifiers for hPCI cards and Paroli cards on this WPCI board. The hPCI card identifier is `IOx`/`CyVz`, where *x* is the number of the expander slot containing the board (`0-17`), *y* is the card voltage (`3` or `5`), and *z* is the PCI controller number (`0` or `1`). The Paroli card identifier is `IOx`/`PARy`, where *x* is the number of the expander slot containing the board (`0-17`) and *y* is the number of the Paroli card (`0,1`).

MaxCPU Board

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader MaxCPU board (TABLE 6-40):

TABLE 6-40   Sun Fire 15K Domain Config Reader MaxCPU Board

Property	Rule (if any)	Description
MCPU ID		MaxCPU board identifier containing FRU ID(Slot ID): `MCPU(IOx)`, where *x* is the number of the expander slot containing the board (`0-17`)
Board Type		Board type identifier: `MCPU`

TABLE 6-40 Sun Fire 15K Domain Config Reader MaxCPU Board *(Continued)*

Property	Rule (if any)	Description
Processor List		Comma-separated list of identifiers for processors on the MaxCPU board: `CPU(SBx)`, where *x* is the number of the expander slot containing the board (`0–17`)
Condition	`scStateCheck`	Attachment point condition of the MaxCPU board from `cfgadm`: `OK`, `FAIL`, or `UNKNOWN`
Last Change		Date and time of the last change or `UNKNOWN`

hPCI Card

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader hot-swap PCI (hPCI) card (TABLE 6-41). An hPCI cassette can contain two hPCI cards.

TABLE 6-41 Sun Fire 15K Domain Config Reader hPCI Card

Property	Rule (if any)	Description
CARD ID		hPCI card identifier containing FRU ID(Slot ID): FRU ID is either `C3V` for a 3.3-volt card or `C5V` for a 5-volt card. Slot ID is `IOx/CyVz`, where *x* is the number of the expander slot containing the board (`0–17`), *y* is the card voltage (`3` or `5`), and *z* is the PCI controller number (`0` or `1`)
Device Type		Device type identifier for the hPCI card, such as `network`, `scsi-fcp`, or `fcal`
Device Class		Device class for the hPCI card, such as `Mass Storage Controller`,`SCSI`; `Network Controller`,`Ethernet`; `Network Controller`,`FDDI`; or `Network Controller`,`ATM`
Condition	`scStateCheck`	Attachment point condition of the hPCI card from `cfgadm`: `OK`, `FAIL`, or `UNKNOWN`
Last Change		Date and time of the last change or `UNKNOWN`
Name		Sun name for this hPCI card, such as `SUNW,qlc`; `SUNW,qfe`; `SUNW,hme`; or `network`
Manufacturer		Manufacturer of this hPCI card
Model		Model identifier of this hPCI card

TABLE 6-41 Sun Fire 15K Domain Config Reader hPCI Card *(Continued)*

Property	Rule (if any)	Description
Version		Version of this hPCI card
Revision ID		Revision identifier of this hPCI card
Vendor ID		Vendor identifier of this hPCI card

Paroli Card

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader parallel optical link (Paroli) card (TABLE 6-42). Refer to the *Sun Management Center 3.0 Supplement for Sun Fire Link Systems* for more information about the Sun Fire Link system.

Note – Paroli card presence can be determined only if the domain is part of a Sun Fire Link cluster. If the domain is not part of a Sun Fire Link cluster, the Paroli card table will be empty; however, this is not an indication that there is no Paroli card in the domain.

TABLE 6-42 Sun Fire 15K Domain Config Reader Paroli Card

Property	Rule (if any)	Description
CARD ID		Paroli card identifier containing FRU ID(Slot ID): `PARS(IOx/PARy)`, where *x* is the number of the expander slot containing the board (`0-17`) and *y* is the number of the Paroli card (`0` or `1`)
Type		Type identifier for the Paroli card: `DUAL` or `SINGLE`
Link Number		Link number of the Paroli card: `0`, `1`, or `2`
Link Validity	`scLnkVld`	Validity of the Paroli card link: `VALID` or `INVALID`
Link Status	`scLnkSt`	Status of the Paroli card link: `LINK UP`, `LINK DOWN`, `LINK NOT PRESENT`, `WAIT FOR SC LINK TAKEDOWN`, `WAIT FOR SC LINK UP`, `SC ERROR WAIT FOR LINK DOWN`, or `UNKNOWN`
Remote Link Number		Number of the remote link
Remote Port ID		Port identifier on the remote end of the link
Remote Cluster Member		Host name of the domain on the remote end of the link.

Processor

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader Processor (TABLE 6-43):

TABLE 6-43 Sun Fire 15K Domain Config Reader Processor

Property	Rule (if any)	Description
PROC ID		Processor identifier containing ID(Slot ID): `PROC(SBx/Py)`, where *x* is the number of the expander slot containing the board (`0-17`) and *y* is the processor number (0–3)
Processor Number		Processor number or port ID assigned to this processor
Module Revision		Processor module revision number
Module Type		Processor module type identifier
Manufacturer		Processor manufacturer identifier
SPARC Version		SPARC version identifier
Clock Frequency (MHz)		Processor clock frequency in megahertz (MHz)
Icache Size (KB)		Instruction cache size in kilobytes (KB)
Dcache Size (KB)		Data cache size in kilobytes (KB)
Ecache Size (KB)		External cache size in kilobytes (KB)
Status	`scCPUStatus`	Current status of the processor: `ONLINE`, `OFFLINE`, or `POWERED OFF`
Condition	`scStateCheck`	Attachment point condition of the processor from `cfgadm`: `OK`, `FAIL`, or `UNKNOWN`
Last Change		Date and time of last change or `UNKNOWN`

Memory Controller

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader memory controller (TABLE 6-44):

TABLE 6-44   Sun Fire 15K Domain Config Reader Memory Controller

Property	Rule (if any)	Description
Memory Controller ID		Memory controller identifier containing ID(Slot ID): `MEMCTRL(SBx/Py)`, where *x* is the number of the expander slot containing the board (`0-17`) and *y* is the processor number (0–3)
Memory Bank List		Comma-separated list of slot IDs for the memory banks: `SBx/Py/Bz`, where *x* is the number of the expander slot containing the board (0–17), *y* is the processor number (0–3), and *z* is the physical memory bank number (`0` or `1`)
Condition	`scStateCheck`	Attachment point condition of the memory controller from `cfgadm`: OK, FAIL, or UNKNOWN
Last Change		Date and time of last change or UNKNOWN

Memory Bank

The following table provides a brief description of the properties for a Sun Fire 15K Domain Config Reader memory bank (TABLE 6-45).

Note – It is possible to have an entry for a non-existing memory bank in this table. The entry will have DISABLED in the POST Status property.

TABLE 6-45   Sun Fire 15K Domain Config Reader Memory Bank

Property	Rule (if any)	Description
Memory Bank ID		Memory bank identifier containing ID(Slot ID): MEMBANK(SBx/Py/Bz), where x is the number of the expander slot containing the board (0–17), y is the processor number (0–3), and z is the physical memory bank number (0 or 1)
Memory Size		Memory size in megabytes of this memory bank
DIMM List		Comma-separated list of slot IDs for the DIMMS on this memory bank: SBw/Px/By/Dz, where w is the number of the expander slot containing the board (0–17), x is the processor number (0–3), y is the physical memory bank number (0 or 1), and z is the DIMM number (0–3)
Logical Bank 0 POST Status	scPOSTStatus	Indicates whether the POST status of logical memory bank 0 is UNKNOWN, OKAY, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED
Logical Bank 1 POST Status	scPOSTStatus	Indicates whether the POST status of logical memory bank 1 is UNKNOWN, OKAY, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED
Processor ID		Processor identifier for this memory bank: SBx/Py, where x is the number of the expander slot containing the board (0–17) and y is the processor number (0–3)
SEEPROM ID		Identifier of the SEEPROM; currently --

DIMM

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader dual inline memory module (DIMM) (TABLE 6-46).

Note – It is possible to have an entry for a non-existing DIMM in this table. The entry will have DISABLED in the POST Status property

TABLE 6-46 Sun Fire 15K Domain Config Reader DIMM

Property	Rule (if any)	Description
DIMM ID		DIMM identifier containing FRU ID(Slot ID): DIMM(SB*w*/P*x*/B*y*/D*z*), where *w* is the number of the expander slot containing the board (0–17), *x* is the processor number (0–3), *y* is the physical memory bank number (0 or 1), and *z* is the DIMM number (0–3)
Memory Size		Size of the memory for the DIMM in kilobytes (KB)
SEEPROM ID		Identifier of the SEEPROM; currently --
POST Status	scPOSTStatus	Indicates whether the POST status of the DIMM is UNKNOWN, OKAY, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED
ECC Memory Errors	scDimmErrCnt	Number of error-correcting code (ECC) memory errors for the DIMM

Disk Devices

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader disk devices (TABLE 6-47):

TABLE 6-47   Sun Fire 15K Domain Config Reader Disk Devices

Property	Rule (if any)	Description
Disk ID		Disk device identifier: `disk(c`*x*`t`*y*`d`*z*`)` where *x* is the PCI controller number (`0` or `1`), *y* is the target number, and `z` is the logical unit number; such as `c0t64d0`. If the disk is dual-ported, two disk device identifiers will be separated by a comma.
Card ID		Card identifier: `IO`*x*`/C`*y*`V`*z*, where *x* is the number of the expander slot containing the board (`0-17`), *y* is the card voltage (`3` or `5`), and *z* is the PCI controller number (`0` or `1`)
Enclosure Name		Enclosure identifier from `luxadm` or `--`. Refer to *Platform Notes: Using luxadm Software* for more information.
Path		Physical path to the disk device
Block Size		Block size established when the disk was partitioned
Block Count		Number of blocks allocated for the file system
Blocks Available		Number of unused blocks for the file system
File Count		Number of files existing on the file system
Files Available		Number of unused files available for the file system
Status		Status of this disk: `OK` or a message describing the problem encountered
Hardware Errors	`scDskErrCnt`	Number of hardware-related errors
Software Errors	`scDskErrCnt`	Number of software-related errors
Transport Errors	`scDskErrCnt`	Number of transport-related errors

Tape Devices

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader tape devices (TABLE 6-48).

TABLE 6-48 Sun Fire 15K Domain Config Reader Tape Devices

Property	Rule (if any)	Description
Tape ID		Tape device identifier, following the standard naming convention for tape devices
Card ID		Card identifier: IO*x*/C*y*V*z*, where *x* is the number of the expander slot containing the board (0-17), *y* is the card voltage (3 or 5), and *z* is the PCI controller containing the card (0 or 1)
Path		Physical path to the tape device
Device Name		Name that identifies the tape device, such as `Exabyte 4mm` or `QIC 8mm archive`. Can be up to 64 characters.
Status		Status of this tape device: OK or a message describing the problem encountered
Tape Errors	scTpeErrCnt	Number of tape errors as recorded in the `syslog` file

Network Interfaces

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader network interfaces (TABLE 6-49):

TABLE 6-49 Sun Fire 15K Domain Config Reader Network Interfaces

Property	Rule (if any)	Description
Network ID		Network interface identifier, such as `network(dman0)` or `network(qfe0)`
Card ID		Card identifier: IO*x*/C*y*V*z*, where *x* is the number of the expander slot containing the board (0-17), *y* is the card voltage (3 or 5), and *z* is the PCI controller number (0 or 1)
Symbolic Name		Host name of the host computer associated with this network interface
Ethernet Address		Ethernet address for the network interface

TABLE 6-49 Sun Fire 15K Domain Config Reader Network Interfaces *(Continued)*

Property	Rule (if any)	Description
IP Address		IP address for the network interface
Status		Status of this network interface: OK or blank
Network Error		If the system cannot obtain information for any network interface property, or obtains an error code, that message is shown here.

WCI

The following table provides a brief description of the properties for Sun Fire 15K Domain Config Reader Sun Fire Link Interface (WCI) (TABLE 6-50). Refer to the *Sun Management Center 3.0 Supplement for Sun Fire Link Systems* for more information about the Sun Fire Link system.

TABLE 6-50 Sun Fire 15K Domain Config Reader WCI

Property	Rule (if any)	Description
WCI ID		Sun Fire Link Interface identifier containing FRU ID(Slot ID):: WCI(IO*x*/WCI), where *x* is the number of the expander slot containing the WCI
Name		Driver or device name: SUNW,wci
Compatible		Drivers compatible with the WCI: wrsm or wssm
Number of Parolis		Number of parallel optical links

Domain Config Reader Alarm Rules

This section describes the alarm rules for the Domain Config Reader module. You cannot change the limits for these rules. The system provides a message with the alarms telling what the current property is and what the limit is.

CPU Status Rule (`scCPUStatus`)

The CPU status rule generates a caution alarm if the processor is `OFFLINE` (TABLE 6-51). This alarm is for information only and is not an error.

TABLE 6-51   Sun Fire 15K Domain Config Reader CPU Status Rule

CPU Status	Alarm Level	Meaning
`ONLINE`		CPU is online.
`OFFLINE`	Caution	CPU is offline.
`POWERED OFF`		CPU is powered off.

Action: You can use `psradm`(1M) to change the operational status of processors if necessary.

DIMM Error Count Rule (`scDimmErrCnt`)

The DIMM error count rule generates a caution, alert, or critical alarm depending on the number of error-correcting code (ECC) errors that have occurred in the memory module (TABLE 6-52).

TABLE 6-52   Sun Fire 15K Domain Config Reader DIMM Error Count Rule

Number of Errors	Alarm Level	Meaning
5	Caution	ECC memory error count exceeds 5.
10	Alert	ECC memory error count exceeds 10.
15	Critical	ECC memory error count exceeds 15.

Action: Dispatch a technician to test the memory module. Refer to the `syslog` file for the error descriptions.

Disk Error Count Rule (`scDskErrCnt`)

The disk error count rule generates a caution, alert, or critical alarm depending on the number of hardware, software, or transport errors that have occurred on a disk. (TABLE 6-53).

TABLE 6-53 Sun Fire 15K Domain Config Reader Disk Error Count Rule

Number of Errors	Alarm Level	Meaning
5	Caution	Hardware, software, or transport error count exceeds 5.
10	Alert	Hardware, software, or transport error count exceeds 10.
15	Critical	Hardware, software, or transport error count exceeds 15.

Action: Dispatch a technician to test the disk.

POST Status Rule (`scPOSTStatus`)

The power-on self-test (POST) Status Rule generates a caution, alert, or critical alarm when the POST status is not OKAY (TABLE 6-54).

TABLE 6-54 Sun Fire 15K Domain Config Reader POST Status Rule

POST Status	Alarm Level	Meaning
OKAY		POST status is okay.
UNKNOWN	Caution	POST status is unknown.
BLACKLISTED	Caution	Component is blacklisted.
REDLISTED	Caution	Component is redlisted.
DISABLED	Alert	Component is disabled.
UNDEFINED	Alert	Component is undefined.
MISCONFIGURED	Alert	Component is misconfigured.
FAIL-OBP	Critical	Component failed in OBP.
FAIL	Critical	Component failed POST.

Actions:

- A caution alarm is for information only and is not an error. Refer to the *Sun System Management Services (SMS) 1.2 Administrator Guide*, Chapter 5, Section "Hardware Control".
- An alert alarm does not always indicate a problem, but you should inform your system administrator or Sun service personnel of a possible problem.

■ A critical alarm indicates a problem. Contact your Sun service personnel.

For more information, look at the POST log file on the system controller. The POST log file is located in `/var/opt/SUNWSMS/adm/[A-R]/post`.

State Check Rule (`scStateCheck`)

The state check rule generates a caution alarm if any of the board, CPU, or memory controller attachment point conditions are not OK as reported from `cfgadm`(1M) (TABLE 6-55).

TABLE 6-55   Sun Fire 15K Domain Config Reader State Check Rule

CPU Status	Alarm Level	Meaning
OK		Attachment point condition from `cfgadm` is okay.
UNKNOWN	Caution	Attachment point condition from `cfgadm` is unknown.
FAIL	Caution	Attachment point condition from `cfgadm` is fail.

Action: If the condition is not OK, run `cfgadm`(1M) to double-check the condition of the attachment point. Contact your systems administrator.

Tape Error Count Rule (`scTpeErrCnt`)

The tape error count rule generates a caution, alert, or critical alarm depending on the number of errors that have occurred on a tape drive (TABLE 6-56).

TABLE 6-56   Sun Fire 15K Domain Config Reader Tape Error Count Rule

Number of Errors	Alarm Level	Meaning
10	Caution	Tape error count exceeds 10.
20	Alert	Tape error count exceeds 20.
30	Critical	Tape error count exceeds 30.

Action: Dispatch a technician to test the tape drive. Refer to the `syslog` file for the error descriptions.

Link Status Rule (`scLnkSt`)

The link status rule generates an alarm if the Link Status is not `LINK UP` (TABLE 6-57).

TABLE 6-57   Sun Fire 15K Domain Config Reader Link Status Rule

Link Status	Alarm Level	Meaning
LINK UP		Link is up.
LINK DOWN	Critical	Link is down.
LINK NOT PRESENT	Caution	Link is not present.
WAIT FOR SC LINK TAKEDOWN	Alert	Wait for the SC LINK TAKEDOWN status.
WAIT FOR SC LINK UP	Alert	Wait for the SC LINK UP status.
SC ERROR WAIT FOR LINK DOWN	Alert	SC error, wait for LINK DOWN status.
UNKNOWN	Critical	Link status is unknown.

Action: Dispatch a technician to analyze and fix the problem. The technician can look in the `syslog` file for more information.

Link Valid Rule (`scLnkVld`)

The link valid rule generates an alert alarm when the Link Validity is `INVALID` (TABLE 6-58).

TABLE 6-58   Sun Fire 15K Domain Config Reader Link Valid Rule

Link Validity	Alarm Level	Meaning
VALID		Link configuration is valid.
INVALID	Alert	Link configuration is invalid.

Action: The configuration problem could be in the striping, switch nodes, compute nodes, or partitions, depending on the installation topology. Dispatch a technician to analyze and fix the problem. The technician can look in the `syslog` file for more information.

SC Config Reader Module

The Sun Fire 15K SC Config Reader module provides the hardware configuration for a Sun Fire 15K system controller, which is a Sun CP 1500 machine. During Sun Fire 15K agent setup, this module is automatically loaded, and you *can* unload it.

FIGURE 6-3 shows the icon for the module—Config-Reader (Sun Fire 15000 SC)—as it is displayed in the host (SC) Details window under the Browser tab and Hardware icon.
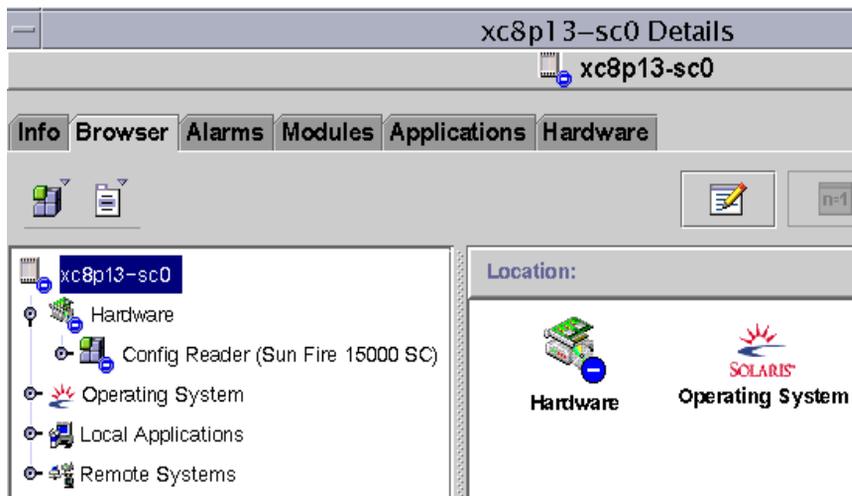
FIGURE 6-3   SC Config Reader Module

SC Config Reader Properties

The tables in this section describe each of the visible properties for each Sun Fire 15K SC Config Reader object. If a property has a value of --, the SC Config Reader is unable to get data for that property.

System

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader system (TABLE 6-59):

TABLE 6-59   Sun Fire 15K SC Config Reader System

Property	Rule (if any)	Description
Node Name		`system`
Hostname		Sun Fire 15K system controller host name
Host ID		Sun Fire 15K system controller serial number
Operating System		Operating system running on the Sun Fire 15K system controller
OS Version		Version of the operating system running
System Clock Frequency (MHz)		Frequency in megahertz (MHz) of the clock that provides system timing
Architecture		Machine architecture
Last Update		Date and time of the last update
Total Disks		Number of disks present for this system controller
Total Memory		Total memory in megabytes (MB) from the memory modules on this system controller
Total Processors		Number of processors for this system controller: `1`
Total Tape Devices		Number of tape devices attached to this system controller.

CP 1500 Board

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader CP 1500 board, which is a system controller (TABLE 6-60):

TABLE 6-60   Sun Fire 15K SC Config Reader CP 1500 Board

Property	Rule (if any)	Description
CP1500 ID		CP 1500 identifier containing FRU ID(Board ID); for example, `CP1500(CP31)`
Board Type		`CP1500`
Voltage Status	`cpBrdVolt`	Status of input voltage to CP 1500 board: `OK`, `FAIL`, or `UNKNOWN`

TABLE 6-60   Sun Fire 15K SC Config Reader CP 1500 Board *(Continued)*

Property	Rule (if any)	Description
Memory Module List		Identifiers of the one or two memory modules for this board; for example `CP31/P0/MM0`
Processor List		Identifier of the processor for this board; for example, `CP31/P0`
Reset Reason		Reset type from the last hardware reset; for example, `S-POR`
POST Results		Results of power-on self-test; also indicates whether POST ran during the last reset.

Processor

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader processor (TABLE 6-61):

TABLE 6-61   Sun Fire 15K SC Config Reader Processor

Property	Rule (if any)	Description
PROC ID		Identifier of the processor containing FRU ID(CPU ID); for example, `PROC(CP31/P0)`
Processor Number		UltraSPARC Port Architecture (UPA) port ID for the processor
Temperature (C)	`cpCPUTemp`	Temperature of the processor. Displays `-1` if the temperature cannot be determined.
Module Revision		Revision number of this module type
Module Type		Type of processor, such as `SUNW,UltraSPARC-III`
Manufacturer		Manufacturer number
SPARC Version		Version number of this SPARC processor architecture
Clock Frequency (MHz)		Clock frequency in megahertz (MHz) of this processor
Icache Size (KB)		Size of the processor's instruction cache in kilobytes (KB)
Dcache Size (KB)		Size of the processor's data cache in kilobytes (KB)
Ecache Size (KB)		Size of the processor's external cache in kilobytes (KB)
Status	`cpCPUStatus`	Current processor status: `ONLINE` or `OFFLINE`

Memory Module

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader memory module (TABLE 6-62):

TABLE 6-62   Sun Fire 15K SC Config Reader Memory Module

Property	Rule (if any)	Description
MEMMOD ID		Identifier of the memory module containing FRU ID(Memory Module ID); for example, `MEMMOD(CP31/P0/MM0)`
Memory Size (MB)		Size of memory in the memory module in megabytes (MB)

PCI Device

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader PCI device (TABLE 6-63):

TABLE 6-63   Sun Fire 15K SC Config Reader PCI Device

Property	Rule (if any)	Description
DEVICE ID		Identifier of the PCI device containing FRU ID(Device Driver ID): `PCI(xxx)`, where *xxx* is `eri`, `glm`, `hci 1394`, `hme`, or `usb`
Device Type		Device I/O protocol type used, such as `pci`, `sbus`, `network`, or `scsi-2`
Device Class		Required PCI class code, such as `Network Controller,Ethernet`; `Mass Storage Controller,SCSI`; `Serial Bus Controller`
Clock Frequency (MHz)		Clock frequency in megahertz (MHz)
Name		Device driver common or symbolic name, such as `network`, `scsi`, `firewire`, or `usb`
Manufacturer		Manufacturer number
Model		Device driver model number, such as `SUNW,pci-eri`; or `Symbios,53C875`
Version		Version of the driver
Revision ID		Driver revision
Vendor ID		Vendor number

Disk Device

The following table provides a brief description of the properties for Sun Fire 15K SC Config Reader disk device (TABLE 6-64):

TABLE 6-64   Sun Fire 15K SC Config Reader Disk Device

Property	Rule (if any)	Description
Disk ID		Disk device identifier: `disk(c`*x*`t`*y*`d`*z*`)` where *x* is the PCI controller number (`0` or `1`), *y* is the target number, and `z` is the logical unit number; such as `c0t4d0`. If the disk is dual-ported, two disk device identifiers will be separated by a comma.
Path		Physical path to the disk device; such as `/pci@1f,0/pci@1,1/scsi@2/sd@0,0;…1,0;` or `6,0`
Block Size		Block size established when the disk was partitioned
Block Count		Number of blocks allocated for the file system
Blocks Available		Number of unused blocks for the file system
File Count		Number of files existing on the file system
Files Available		Number of unused files available for the file system
Status		Status of this disk: `OK` or a message describing the problem encountered
Hardware Errors	`cpDskErrCnt`	Number of hardware-related errors
Software Errors	`cpDskErrCnt`	Number of software-related errors
Transport Errors	`cpDskErrCnt`	Number of transport-related errors

Tape Device

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader tape device (TABLE 6-65):

TABLE 6-65 Sun Fire 15K SC Config Reader Tape Device

Property	Rule (if any)	Description
Tape ID		Tape device identifier, following the standard naming convention for tape devices, such as `tape(0)`
Path		Physical path to the tape device, such as `/devices/pci@1f,0/pci@1,1/scsi@2/st@4,0`
Device Name		Name that identifies the tape device, such as `HP DDS-3 4MM DAT`
Status		Status of this tape device: `OK` or a message describing the problem encountered
Tape Errors	`cpTpeErrCnt`	Number of tape errors as recorded in the `syslog` file

Network Interface

The following table provides a brief description of the properties for a Sun Fire 15K SC Config Reader network interface (TABLE 6-66):

TABLE 6-66 Sun Fire 15K SC Config Reader Network Interface

Property	Rule (if any)	Description
Network ID		Network interface identifier, such as `network(hme0)`, `network(scman1)`, or `network(scman1:1)`
Symbolic Name		Host name of the host computer associated with this network interface
Ethernet Address		Ethernet address for the network interface
IP Address		IP address for the network interface
Status		Status of this network interface: `OK` or blank
Network Error		If the system cannot obtain information for any network interface property, or obtains an error code, that message is shown here.

SC Config Reader Alarm Rules

This section describes the alarm rules for the SC Config Reader module. You cannot change the limits for some of these rules. The system provides a message with the alarms telling what the current property is and what the limit is.

Board Voltage Rule (`cpBrdVolt`)

The board voltage rule generates an alarm when the voltage is not within 5 percent of the nominal value of 5 volts (TABLE 6-67). A voltage alarm is *not* generated when the board is powered off.

TABLE 6-67   Sun Fire 15K SC Config Reader Board Voltage Rule

Voltage Threshold	Alarm Level	Meaning
OK		Voltage is in range.
UNKNOWN	Caution	Unable to determine voltage.
FAIL	Critical	Voltage is out of range.

Actions:

- Contact your Sun service personnel for a critical alarm.

Caution – Shut down the system controller if the voltage is not within 5 percent of the nominal value. If the voltage is not within 10 percent of the nominal value, the system performs a power-on reset (POR).

Refer to Appendix A.2 of the *SPARCengine ASM Reference Manual* for more information.

- A caution alarm indicates that one or more i2c device drivers are not loaded and the module is unable to take voltage readings. Rerun the system controller agent setup to load the needed i2c device drivers. See "To Set Up Software on System Controllers" on page 30 for more information.

CPU Status Rule (`cpCPUStatus`)

The CPU status rule generates a caution alarm if the processor is OFFLINE (TABLE 6-68).

TABLE 6-68   Sun Fire 15K SC Config Reader CPU Status Rule

CPU Status	Alarm Level	Meaning
ONLINE		CPU is online.
OFFLINE	Caution	CPU is offline.
POWERED OFF		CPU is powered off.

Action: The caution alarm is for information only and is not an error. Use `psradm`(1M) to change the operational status of processors if necessary.

CPU Temperature Rule (`cpCPUTemp`)

The CPU temperature rule generates an alarm when the temperature is above certain default threshold values (TABLE 6-69). A temperature alarm is *not* generated when the board is powered off.

TABLE 6-69   Sun Fire 15K SC Config Reader CPU Temperature Rule

Temperature Threshold	Alarm Level	Meaning
Warning	Alert	Temperature is over the default limit of 69 degrees Celsius.
	Caution	Temperature cannot be determined. (Temperature property in the Processor table displays -1.)
Error	Critical	Temperature is over the default limit of 74 degrees Celsius.

Action: Contact your Sun service personnel for an alert or a critical alarm.

Note – The default threshold values are specified in the OpenBoot PROM setup. Refer to Appendix A.3 of the *SPARCengine™ ASM Reference Manual* for a complete description. If these thresholds are changed, they also must be changed in the `ruleinit` file.

Disk Error Count Rule (`cpDskErrCnt`)

The disk error count rule generates a caution, alert, or critical alarm depending on the number of hardware, software, or transport errors that have occurred on a disk (TABLE 6-70).

TABLE 6-70   Sun Fire 15K SC Config Reader Disk Error Count Rule

Error Counts	Alarm Level	Meaning
5	Caution	Hardware, software, or transport error count exceeds 5.
10	Alert	Hardware, software, or transport error count exceeds 10.
15	Critical	Hardware, software, or transport error count exceeds 15.

Action: Dispatch a technician to test the disk.

Tape Error Count Rule (`cpTpeErrCnt`)

The tape error count rule generates a caution, alert, or critical alarm depending on the numbers of errors that have occurred on a tape drive (TABLE 6-71).

TABLE 6-71   Sun Fire 15K SC Config Reader Tape Error Count Rule

Tape Errors	Alarm Level	Meaning
10	Caution	Tape error count exceeds 10.
20	Alert	Tape error count exceeds 20.
30	Critical	Tape error count exceeds 30.

Action: Dispatch a technician to test the tape drive. Refer to the `syslog` file for error descriptions.

Platform/Domain State Management Module

The Platform/Domain State Management (PDSM) module enables an administrator to perform platform and domain management, and dynamic reconfiguration of system boards in the same manner that you would with the command-line interface (CLI) commands in SMS only with the Sun Management Center 3.0 GUI.

During the software installation, this module is automatically installed. You need to load this module to use it the first time. You must load it from the platform Details window (where the Platform Config Reader is automatically loaded.) You can unload the module, but you may want to keep it loaded as long as it is being used. For specific information about loading and unloading Sun Management Center modules, refer to Chapter 11, "Managing Modules," in the *Sun Management Center 3.0 Software User's Guide.*

FIGURE 6-4 shows the icon for the module—PDSM (Sun Fire 15000)—as it is displayed in the platform Details window under the Browser tab and Hardware icon.
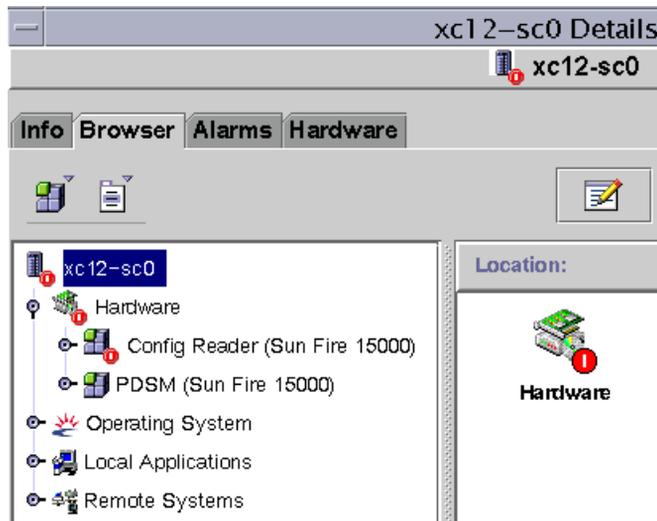
FIGURE 6-4   Platform/Domain State Management (PDSM) Module

The PDSM module has two types of views:

- Platform View
- Domain Views (one for each domain A through R)

Platform View

The Platform View contains the following tables:

- Platform Info
- Platform Slot 0 Boards
- Platform Slot 1 Boards
- Platform Empty Slots
- Power Supplies
- Fan Trays

Platform Info

The following table provides a brief description of the properties for the Sun Fire 15K PDSM platform info (TABLE 6-72):

TABLE 6-72 Sun Fire 15K PDSM Module Platform Info

Property	Rule (if any)	Description
Platform ID		Platform identifier
Platform Type		Platform type
Max Domains		Maximum number of domains for a Sun Fire 15K system (18)
Active Domains		Number of active domains on this Sun Fire 15K system
SC Power		Power state of the system controller: ON or OFF

Platform Slot 0 Boards

The following table provides a brief description of the properties for the Sun Fire 15K PDSM platform slot 0 boards (TABLE 6-73):

TABLE 6-73 Sun Fire 15K PDSM Module Platform Slot 0 Boards

Property	Rule (if any)	Description
Board ID		Board identifier in slot 0 containing FRU ID(Slot ID): `CPU(SBx)`, where *x* is the number of the expander slot containing the board (`0-17`)
Board State		State of the board in slot 0: `ACTIVE`, `ASSIGNED`, or `FREE`
Power State		Indicates whether the power state of the board in slot 0 is `ON` or `OFF`
Test Status		Indicates whether the test status of the CPU is `UNKNOWN_TEST_STATUS`, `IPOST` (in POST), `PASSED`, `DEGRADED`, or `FAILED`
Test Level		POST test level for this board in slot 0
Domain ID		Identifier of the domain assigned to this board in slot 0: `A-R` or `UNASSIGNED`

Platform Slot 1 Boards

The following table provides a brief description of the properties for the Sun Fire 15K PDSM platform slot 1 boards (TABLE 6-74):

TABLE 6-74 Sun Fire 15K PDSM Module Platform Slot 1 Boards

Property	Rule (if any)	Description
Board ID		Board identifier in slot 1 containing FRU ID(Slot ID): `HPCI(IOx)`, where *x* is the number of the expander slot containing the board (`0-17`)
Board State		State of the board in slot 1: `ACTIVE`, `ASSIGNED`, or `FREE`
Power State		Indicates whether the power state of the board in slot 1 is `ON` or `OFF`

TABLE 6-74 Sun Fire 15K PDSM Module Platform Slot 1 Boards *(Continued)*

Property	Rule (if any)	Description
Test Status		Indicates whether the test status of the board is `UNKNOWN_TEST_STATUS`, `IPOST` (in POST), `PASSED`, `DEGRADED`, or `FAILED`
Test Level		POST test level for this board in slot 1
Domain ID		Identifier of the domain assigned to this board in slot 1: `A–R` or `UNASSIGNED`

Platform Empty Slots

The following table provides a brief description of the properties for the Sun Fire 15K PDSM platform empty slots (TABLE 6-75):

TABLE 6-75 Sun Fire 15K PDSM Module Platform Empty Slots

Property	Rule (if any)	Description
Board ID		Available board identifier: Input/output card number (`IO`*x*) or system board number (`SB`*x*), where *x* is the number of the expander slot containing the board (`0–17`)
Board State		State of the available board: `FREE` or `ASSIGNED`
Power State		Indicates whether the power state of the available board is `OFF` or `--`
Test Status		Indicates whether the test status of the available board is `UNKNOWN` or `--`
Test Level		POST test level for this available board
Domain ID		Identifier of the domain assigned to this available board: `A–R` or `UNASSIGNED`

Power Supplies

The following table provides a brief description of the properties for the Sun Fire 15K PDSM platform power supplies (TABLE 6-76):

TABLE 6-76   Sun Fire 15K PDSM Module Platform Power Supplies

Property	Rule (if any)	Description
Power Supply ID		Power supply identifier containing FRU ID(SlotID): PS(PS*x*), where *x* is the power supply number (0–5)
Power State		If either DC 0 or DC 1 is on, the power state indicates ON. If both DC 0 and DC 1 are off, the power state indicates OFF.

Fan Trays

The following table provides a brief description of the properties for the Sun Fire 15K PDSM platform fan trays (TABLE 6-77):

TABLE 6-77   Sun Fire 15K PDSM Module Platform Fan Trays

Property	Rule (if any)	Description
Fan Tray ID		Fan tray identifier containing FRU ID(SlotID): FT(FT*x*), where *x* is the fan tray number (0–7)
Power State		Power state of the fan tray: ON or OFF
Fan Speed		Speed of the fan: OFF, NORMAL, or HIGH

Domain *X* View

The Domain *X* View, where *X* is the domain identifier A through R, contains the following tables for each domain.

- Domain *X* Info
- Domain *X* Slot 0 Boards
- Domain *X* Slot 1 Boards
- Domain *X* Empty Slots

Domain *X* Info

The following table provides a brief description of the properties for the Sun Fire 15K PDSM domain *X* info (TABLE 6-78):

TABLE 6-78   Sun Fire 15K PDSM Module Domain *X* Info

Property	Rule (if any)	Description
Domain ID		Domain identifier: `A–R`
Domain Tag		Domain tag: `domain`*X*, where *X* is `A–R`
Domain State		Domain status as output from the SMS `showplatform` command, such as `Running Solaris` or `Powered Off`. Refer to `showplatform`(1M) in the *System Management Services SMS 1.2 Reference Manual* for more information.
Solaris Node Name		Host name of the Solaris operating environment node
Keyswitch		Virtual keyswitch position: `ON`, `STANDBY`, `OFF`, `DIAG`, `SECURE`, or `UNKNOWN`
Domain ACL		Domain access control list—space-separated input/output card numbers (`IO`*x*) and system board numbers (`SB`*x*), where *x* is the number of the expander slot containing the board (`0–17`)
Primary IO Board		Identifier of the primary input/output board used for communication between the domain and the system controller: `HPCI(IO`*x*`)`, where *x* is the number of the expander slot containing the board (`0–17`).
Internal Ethernet Board		Identifier of the I/O board that contains the active Ethernet controller: `HPCI(IO`*x*`)`, where *x* is the number of the expander slot containing the board (`0–17`).

Domain *X* Slot 0 Boards

The following table provides a brief description of the properties for the Sun Fire 15K PDSM domain *X* slot 0 boards (TABLE 6-79):

TABLE 6-79 Sun Fire 15K PDSM Module Domain *X* Slot 0 Boards

Property	Rule (if any)	Description
Board ID		Board identifier in slot 0: CPU(SB*x*), where *x* is the number of the expander slot containing the board (0–17)
Board State		State of the board in slot 0: ACTIVE, ASSIGNED, or FREE
Power State		Indicates whether the power state of the board in slot 0 is ON or OFF
Test Status		Indicates whether the test status of the CPU is UNKNOWN_TEST_STATUS, IPOST (in POST), PASSED, DEGRADED, or FAILED
Test Level		POST test level for this board in slot 0
Domain ID		Identifier of the domain assigned to this board in slot 0: A–R or UNASSIGNED

Domain *X* Slot 1 Boards

The following table provides a brief description of the properties for the Sun Fire 15K PDSM domain *X* slot 1 boards (TABLE 6-80):

TABLE 6-80 Sun Fire 15K PDSM Module Domain *X* Slot 1 Boards

Property	Rule (if any)	Description
Board ID		Board identifier in slot 1: HPCI(IO*x*), where *x* is the number of the expander slot containing the board (0–17)
Board State		State of the board in slot 1: ACTIVE, ASSIGNED, FREE
Power State		Indicates whether the power state of the board in slot 1 is ON or OFF

TABLE 6-80   Sun Fire 15K PDSM Module Domain *X* Slot 1 Boards   *(Continued)*

Property	Rule (if any)	Description
Test Status		Indicates whether the test status of the CPU is UNKNOWN_TEST_STATUS, IPOST (in POST), PASSED, DEGRADED, or FAILED
Test Level		POST test level for this board in slot 1
Domain ID		Identifier of the domain assigned to this board in slot 1: A–R or UNASSIGNED

Domain *X* Empty Slots

The following table provides a brief description of the properties for the Sun Fire 15K PDSM domain *X* empty slots (TABLE 6-81):

TABLE 6-81   Sun Fire 15K PDSM Module Domain *X* Empty Slots

Property	Rule (if any)	Description
Board ID		Available board identifier: Input/output card number (IO*x*) or system board number (SB*x*), where *x* is the number of the expander slot containing the board (0–17)
Board State		State of the available board: FREE or ASSIGNED
Power State		Indicates whether the power state of the available board is OFF or --
Test Status		Indicates whether the test status of the available board is UNKNOWN or --
Test Level		POST test level for this available board
Domain ID		Identifier of the domain assigned to this available board: A–R or UNASSIGNED

Dynamic Reconfiguration Module

The Dynamic Reconfiguration module enables you to perform dynamic reconfiguration operations from the domain in the same manner that you would with the cfgadm(1M) command only with the Sun Management Center 3.0 GUI. This module works on Sun Fire 3800, 4800, 4810, 6800, and 15000 systems.

During the software installation, this module is automatically installed. You need to load this module to use it the first time. You can unload the module, if desired. For specific information about loading and unloading Sun Management Center modules, refer to Chapter 11, "Managing Modules," in the *Sun Management Center 3.0 Software User's Guide*.

FIGURE 6-5 shows the icon for the module—Dynamic Reconfiguration Sun Fire (3800-15000)—as it is displayed in the host Details window on a domain under the Browser tab and Hardware icon.
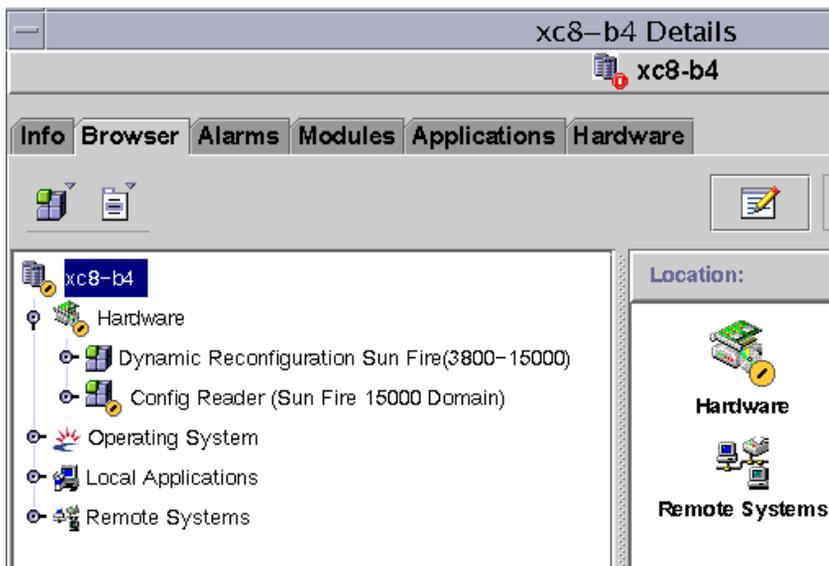
FIGURE 6-5   Dynamic Reconfiguration Module

Dynamic Reconfiguration Properties

There are two sections of tables:

- Attachment Points—single attachment points for larger assemblies such as system boards and I/O boards
- Dynamic Attachment Points—dynamic attachment points for individual devices and components such as CPU modules, DIMMs, and SCSI drives

Attachment Points

An attachment point is a collective term for a board and its slot. The Attachment Points tables show information about the following types of board slots:

- CPU/MEM
- PCI/cPCI/hPCI IO
- WPCI
- cPCI/hPCI cards
- SCSI
- Empty Slots
- MaxCPU

The Dynamic Reconfiguration Module allows you to perform dynamic reconfiguration operations from the domain on the attachment points in the tables. See Chapter 8 for the procedures for dynamic reconfiguration operations from the domain.

CPU/MEM

The following table provides a brief description of the attachment point properties for a CPU/memory board (TABLE 6-82):

TABLE 6-82 Attachment Point Properties for a CPU/MEM Board

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`: SB*x*, where *x* is the number of the centerplane slot containing the board (`0-17`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`

TABLE 6-82 Attachment Point Properties for a CPU/MEM Board

Property	Rule (if any)	Description
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Board type: `CPU`
Condition		Board condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General board type information; for example, `powered-on`, `assigned`
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:SBx`, where *x* is the number of the centerplane slot containing the board (`0–17`)

PCI/cPCI/hPCI IO

The following table provides a brief description of the attachment point properties for a PCI/cPCI/hPCI IO board (TABLE 6-83). For a Sun Fire 3800, 4800, 4810, or 6800 system, the table shows properties *only* for PCI and cPCI IO boards. For a Sun Fire 15K system, the table shows properties *only* for hPCI IO boards.

TABLE 6-83 Attachment Point Properties for a PCI/cPCI/hPCI IO Board

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`: `IOx`, where *x* is the number of the centerplane slot containing the board (`0–17`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`

TABLE 6-83   Attachment Point Properties for a PCI/cPCI/hPCI IO Board *(Continued)*

Property	Rule (if any)	Description
Type		Board type, such as `PCI`, `CPI`, or `HPCI`
Condition		Board condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General board type information; for example, `powered-on`, `assigned`
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr/@0:IO`*x*, where *x* is the number of the centerplane slot containing the board (`0-17`)

WPCI

The following table provides a brief description of the attachment point properties for a WPCI board (TABLE 6-84). Refer to the *Sun Management Center 3.0 Supplement for Sun Fire Link Systems* for more information about the Sun Fire Link system.

TABLE 6-84   Attachment Point Properties for a WPCI Board

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`: `IO`*x*, where *x* is the number of the centerplane slot containing the board (`0-17`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Board type: `WPCI`
Condition		Board condition: `ok`, `unknown`, `failed`, or `unusable`

TABLE 6-84   Attachment Point Properties for a WPCI Board *(Continued)*

Property	Rule (if any)	Description
Information		General board type information; for example, `powered-on`, `assigned`
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr/@0:IOx`, where *x* is the number of the centerplane slot containing the board (`0–17`)

cPCI/hPCI cards

The following table provides a brief description of the attachment point properties for the cPCI/hPCI card (TABLE 6-85). For a Sun Fire 3800, 4800, 4810, or 6800 system, the table shows properties *only* for cPCI cards. For a Sun Fire 15K system, the table shows properties *only* for hPCI cards.

TABLE 6-85   Attachment Point Properties for a cPCI/hPCI card

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`, such as `pcisch2:e04b1slot3`
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Type, such as `pci-pci/hp`
Condition		Board condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General information; for example, `unknown`

TABLE 6-85   Attachment Point Properties for a cPCI/hPCI card *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID, such as `/devices/pci@9d,7000000:e04b1slot3`

SCSI

The following table provides a brief description of the attachment point properties for a SCSI (TABLE 6-86):

TABLE 6-86   Attachment Point Properties for a SCSI

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`, such as `pcisch3:e04b1slot2`
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Type, such as `scsi/hp`
Condition		Component condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General component information, such as `unknown`

TABLE 6-86 Attachment Point Properties for a SCSI

Property	Rule (if any)	Description
When		Date and time when the component was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID, such as `/devices/pci@9d,600000:e04b1slot2`

Empty Slots

The following table provides a brief description of the attachment point properties for empty slots (TABLE 6-87):

TABLE 6-87 Attachment Point Properties for Empty Slots

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`, such as `pcisch0:e17b1slot1`
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Board type: `unknown`
Condition		Component condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General board type information: `assigned` or `unknown`
When		Date and time when the slot was configured into the domain
Busy		`n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID, such as `/devices/pci@9d,6000000:e17b1slot1`

MaxCPU

The following table provides a brief description of the attachment point properties for a MaxCPU board (TABLE 6-88). This table appears *only* for a Sun Fire 15K system.

TABLE 6-88   Sun Fire 15K Attachment Point Properties for a MaxCPU Board

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm` for the MaxCPU board
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Board type: `MCPU`
Condition		Board condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General board type information; for example, `powered-on`, `assigned`
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID for the MaxCPU board

Dynamic Attachment Points

Dynamic attachment points refer to components on the system boards, such as CPUs, memory, and I/O devices. The dynamic attachment points are created by the DR driver. Refer to the `dr`(7D) man page in the Sun Solaris 8 Reference Manual Collection for more details about the DR driver. The Dynamic Attachment Point tables show information about the following types of components:

- CPU
- Memory
- I/O
- SCSI Components

The Dynamic Reconfiguration Module allows you to perform dynamic reconfiguration operations from the domain on the dynamic attachment points in the tables. See Chapter 8 for the procedures for dynamic reconfiguration operations from the domain.

CPU Components

The following table provides a brief description of the dynamic attachment point properties for CPU components (TABLE 6-89):

TABLE 6-89 Dynamic Attachment Point Properties for CPU Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm`: `SBx::cpuy`, where *x* is the number of the centerplane slot containing the board (`0-17`) and *y* is the CPU number (0–3)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Component type: `cpu`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General CPU type information: for example, `cpuid 2`, `speed 750 MHz`, `ecache 8 MBytes`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris 8 Reference Manual Collection for descriptions of the fields.

TABLE 6-89   Dynamic Attachment Point Properties for CPU Components   *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:SBx::cpuy`, where *x* is the number of the centerplane slot containing the board (`0–17`), and *y* is the CPU number (`0–3`)

Memory Components

The following table provides a brief description of the dynamic attachment point properties for memory components (TABLE 6-90):

TABLE 6-90   Dynamic Attachment Point Properties for Memory Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm`: such as `SBx::memory`, where *x* is the number of the centerplane slot containing the board (`0–17`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `unconfigured` or `configured`
Type		Component type: `memory`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General information for the memory type, as appropriate; for example, `base address 0x0, 2097 152 KBytes total, 420920 KBytes permanent`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris 8 Reference Manual Collection for descriptions of the fields.

TABLE 6-90 Dynamic Attachment Point Properties for Memory Components *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:SBx::memory`, where *x* is the number of the centerplane slot containing the board (`0–17`)

I/O Components

The following table provides a brief description of the dynamic attachment point properties for I/O components (TABLE 6-91):

TABLE 6-91 Dynamic Attachment Point Properties for I/O Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm`: `IOx::pciy`, where *x* is the number of the centerplane slot containing the board (`0–17`) and *y* is the PCI number (`0–3`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Component type: `io`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General information for the `io` type; for example, `device/pci@23d,700000 referenced`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris 8 Reference Manual Collection for descriptions of the fields.

TABLE 6-91   Dynamic Attachment Point Properties for I/O Components *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:IO`*x*`::pci`*y*, where *x* is the number of the centerplane slot containing the board (`0-17`) and *y* is the PCI number (`0-3`)

SCSI Components

The following table provides a brief description of the dynamic attachment point properties for SCSI components (TABLE 6-92):

TABLE 6-92   Dynamic Attachment Point Properties for SCSI Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm` for the SCSI component
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Component type: `disk`, `CD-ROM`, or `tape`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General information for the type
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID for the SCSI component

SC Monitoring Module

The SC Monitoring module monitors the System Management Services (SMS) daemons on the active, or main, Sun Fire 15K system controller. The Sun Fire 15K SC Monitoring Module table is automatically loaded when the agent is installed on the system controller, and you *can* unload it.

FIGURE 6-6 shows the icon for the module—SC Monitoring (Sun Fire 15000)—as it is displayed in the platform host Details window under the Browser tab and Local Applications icon.
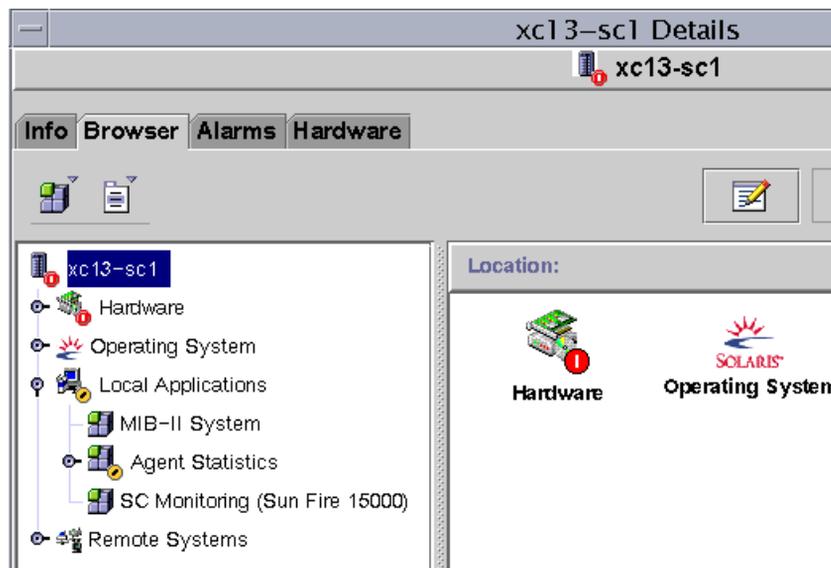
FIGURE 6-6 SC Monitoring Module

Many of the SMS daemons are critical to the operation of the Sun Fire 15K system, and this module generates an alarm according to the assigned priority when any of the SMS daemons fails, even if it restarts. Refer to the *System Management Services (SMS) 1.2 Administrator Guide* for more information about the SMS daemons. Refer to the ps(1) command for more information about displaying the status of current processes.

This module monitors the following SMS daemons:

- Domain Configuration Administration (dca) – One per domain
- Domain Services Monitoring Daemon (dsmd)
- Domain X Server (*x*/dxs), where *x* is domain a–r

- Event Front-end Daemon (efe)
- Environmental Status Monitoring Daemon (esmd)
- Failover Management Daemon (fomd)
- FRU Access Daemon (frad)
- Hardware Access Daemon (hwad)
- Key Management Daemon (kmd)
- Management Network Daemon (mand)
- Message Logging Daemon (mld)
- OpenBoot PROM Support Daemon (osd)
- Platform Configuration Daemon (pcd)
- SMS Startup Daemon (ssd)
- Task Manager Daemon (tmd)

SC Monitoring Properties—SC Daemon Process

The following table provides a brief description of the properties for a Sun Fire 15K SC daemon process (TABLE 6-93):

TABLE 6-93 Sun Fire 15K SC Daemon Process

Property	Rule (if any)	Description
Command		Command name for this daemon
Process ID		Process identifier number for the daemon
Parent Process ID		Parent process identifier number for the daemon
User ID		User identifier under which the daemon is running
User Name		Name of the user associated with the User ID
Effective User ID		Effective user identifier
Group ID		Group identifier for the user
Effective Group ID		Effective group identifier for the user
Session ID		Process identifier of the session leader
Process Group ID		Process identifier of the process group leader
TTY		Controlling terminal for the daemon; should always be blank
Start Time		Time (within 24 hours) or date (after 24 hours) when the process was started
CPU Time		CPU time this process has run

TABLE 6-93   Sun Fire 15K SC Daemon Process *(Continued)*

Property	Rule (if any)	Description
State		State of the daemon, such as `R` for running or `S` for sleeping.
Wait Channel		Address of an event on which the process is sleeping. If blank, the process is running.
Schedule Class		Scheduling class name for the process, which indicates three possible scheduling algorithms: • `SYS` - System process owned by the kernel, which has the highest priority • `RT` - Real-time process, which has a fixed priority that is not changed by the scheduler • `TS` - Time-sharing process, which has a dynamic priority that is set lower if it takes too much CPU time and higher if it is not getting enough CPU time
Address		Memory address for the process
Size		Size (in pages) in main memory for the image of the swappable process
Priority		Process priority
Nice		Decimal value of the system scheduling priority of the process, if applicable
Percent CPU Time		Current CPU usage for the daemon expressed as a percentage of CPU time available
Percent Memory		Current memory usage for the daemon expressed as a percentage of the physical memory on the machine
Command Line	`rDownProc`	Full command string used to start the daemon

SC Monitoring Alarm Rule—Process Down Rule (`rDownProc`)

This section describes the alarm rule for the SC Monitoring module. You cannot change the limits for this rule. The system provides a message with the alarm telling what the current property is and what the limit is.

The process down rule generates a critical alarm when any SMS daemon other than `dca` or `dxs` is down. If the Command Line column of the SC Monitoring Module table is `--`, the system considers the process down.

Action: Contact your systems administrator for a critical alarm.

SC Status Module

The SC Status module monitors the main or spare status of the system controller. The module enables the user to see at a glance which system controller is the active, or main, system controller. For further information about the status of the system controller, see the SC Config Reader tables.

The Sun Fire 15K SC Status module is automatically loaded when the agent is installed on the system controller, and you *can* unload it.

To find the module, first open the SC Details Window. (For more information about finding the SC Details Window, see "SC Config Reader Module" on page 147.)

FIGURE 6-7 shows the icon for the module—SC Status—as it is displayed in the host (SC) Details window under the Browser tab and Local Applications icon. FIGURE 6-7 also shows the SC Information icon, under the SC Status icon, which you click to view the SC Information table.
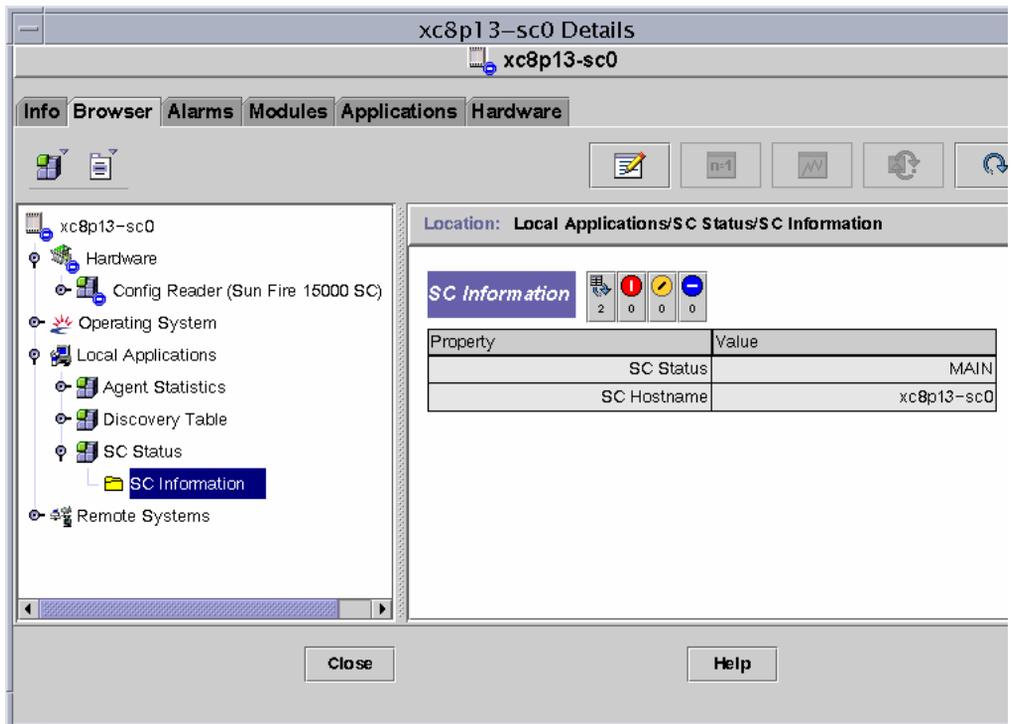
FIGURE 6-7   SC Information Showing MAIN Status

SC Status Properties

The SC Status property has three possible values:

- `MAIN` – This system controller is acting as the main system controller (FIGURE 6-7).
- `SPARE` – This system controller is acting as the spare system controller.
- `UNKNOWN` –The role of this system controller could not be determined.

SC Status Alarm Rule (`rscstatus`)

The SC status alarm rule generates a disabled alarm when the status of the system controller is not `MAIN`.

Displaying Platform and Domain Log Files

To display platform and domain log files for diagnosing errors, type these commands:

```
# /opt/SUNWsymon/sbin/es-run ccat /var/opt/SUNWsymon/log/platform.log
# /opt/SUNWsymon/sbin/es-run ccat /var/opt/SUNWsymon/log/agent.log
```

Platform/Domain State Management From the System Controller

This chapter describes how to perform dynamic reconfiguration (DR) and other management operations for a Sun Fire 15K system using the Sun Management Center 3.0 GUI and the PDSM module. The dynamic reconfiguration operations include such operations as adding a board to a Sun Fire 15K domain, removing a board from a Sun Fire 15K domain, and moving a board between Sun Fire 15K domains. Some other management operations that you might want to perform either as part of a dynamic reconfiguration operation or as part of another operation are testing a board, updating the ACL, or powering a board off or on.

Two Sun Fire 15K system–specific modules contain functionality for managing the Sun Fire 15K platform and domains:

■ Platform/Domain State Management (PDSM), which runs on the system controller and is described in this chapter.
■ Dynamic Reconfiguration (DR), which runs on a Sun Fire 15K domain. (See Chapter 8 for information about using this module.)

The PDSM monitoring and management capabilities from the Sun Management Center console are organized into one platform view and 18 domain views. See "Platform/Domain State Management Module" on page 156 for information about where this module is located and what tables you can view.

Prerequisites

You need to be familiar with dynamic reconfiguration operations before you use the Sun Management Center 3.0 GUI to perform DR operations. Refer to the following documents to learn more about dynamic reconfiguration operations on a Sun Fire 15K system:

- *System Management Services (SMS) 1.2 Dynamic Reconfiguration User Guide* (underlying operations for the PDSM module, which is discussed in this chapter)
- *Sun Fire 15K Dynamic Reconfiguration User Guide* (underlying operations for the domain DR module, which is discussed in Chapter 8)
- `cfgadm` man page (underlying command for the domain DR module, which is discussed in Chapter 8)

For the latest general issues, known limitations, and known bugs about dynamic reconfiguration operations, refer to the *System Management Services (SMS) 1.2 Installation Guide and Release Notes.*

SMS Commands Supported by PDSM

Some of the System Management Services (SMS) command-line interface (CLI) commands are supported by the Platform/Domain State Management module. In other words, you can use the Sun Management Center graphical user interface (GUI) to monitor and manage the system components rather than using the SMS CLI commands that do the same thing. Refer to the *System Management Services (SMS) 1.2 Reference Manual* for more information about the SMS commands.

TABLE 7-1 lists the SMS CLI commands that are supported by PDSM.

TABLE 7-1   SMS CLI Commands Supported by PDSM

SMS CLI Command	Sun Management Center GUI Menu Item	Description
addboard	Add Board	Assign, connect, and configure a board to a domain
addtag	Add Tag	Assign a domain name (tag) to a domain
deleteboard	Delete Board	Unconfigure, disconnect, and unassign a board from a domain
deletetag	Delete Tag	Remove the domain name (tag) associated with the domain

TABLE 7-1 SMS CLI Commands Supported by PDSM *(Continued)*

SMS CLI Command	Sun Management Center GUI Menu Item	Description
moveboard	Move Board	Move a board from one domain to another
poweroff	Power Off	Control power off
poweron	Power On	Control power on
rcfgadm -t	Test Board	Test a board
reset	Reset Domain	Send reset to all CPU ports of a specified domain
setkeyswitch	Keyswitch	Change the position of the virtual keyswitch
setupplatform -a|-r	Access Control List	Add or remove boards from the existing ACL

Platform Management Operations From the System Controller

This section contains procedures that describe how to perform platform-wide management operations from the system controller. The following dynamic reconfiguration procedures are described:

- Adding a board
- Deleting a board
- Moving a board

The following additional management procedures are described:

- Powering off a board or peripheral
- Powering on a board or peripheral
- Showing status

Showing Platform Information

Before you attempt to perform any of the platform-wide management operations from the system controller, look at the Platform View tables in the PDSM module under Hardware. See "Platform View" on page 157 for more information about Platform View tables.

Adding a Board

This operation assigns, connects, or configures a board to a domain on the platform. Refer to the `addboard`(1M) command in the *Sun System Management Services 1.2 Reference Manual* for more information about adding a board.

▼ To Add a Board

Note – Empty slots can only be assigned.

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **group.**

2. **Right-click on the board you want to add in the Platform Slot 0 or 1 Boards or Empty Slots table.**

   The system displays a menu of board operations.

3. **Left-click on the Add Board menu selection.**

   The system displays the Add Board dialog box.

4. **After ensuring that you have selected the board you want to add, select the domain to which to add the board in the drop-down list box.**

5. **Left-click on the appropriate radio button to select the state in which you want the board to be after the board is added.**

6. **Left-click on the Add Board button.**

   You can see the progress of the Add Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Deleting a Board

This operation unconfigures, disconnects, or unassigns a system board from a domain on the platform. Refer to the `deleteboard`(1M) command in the *Sun System Management Service (SMS) 1.2 Reference Manual* for more information about deleting a board.

▼ To Delete a Board

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **group.**

2. **Right-click on the board you want to delete in the Platform Slot 0 or 1 Boards table.**

   The system displays a menu of board operations.

3. **Left-click on the Delete Board menu selection.**

   The system displays the Delete Board dialog box.

4. **Ensure that you have selected the board you want to delete.**

5. **Left-click on the appropriate radio button to select the state in which you want the board to be after the board is deleted.**

6. **Left-click on the Delete Board button.**

   You can see the progress of the Delete Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Moving a Board

This operation moves a board from one domain to another on the platform. The board you are moving must be in the ACL of both affected domains. Refer to the `moveboard`(1M) command in the *Sun System Management Service 1.2 Reference Manual* for more information about moving a board.

▼ To Move a Board

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **group.**

2. **Right-click on the board you want to move in the Platform Slot 0 or 1 Boards table.**

   The system displays a menu of board operations.

3. **Left-click on the Move Board menu selection.**

   The system displays the Move Board dialog box.

4. **After ensuring that you have selected the board you want to move, select the domain to which you want to move the board in the drop-down list box.**

5. **Left-click on the appropriate radio button to select the state in which you want the board to be after the board is moved.**

6. **Left-click on the Move Board button.**

   You can see the progress of the Move Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Powering on a Board or Peripheral

This operation powers on a board, power supply, or fan tray on the platform. Refer to the `poweron`(1M) command in the *Sun System Management Service 1.2 Reference Manual* for more information about powering on a board or peripheral.

▼ To Power on a Board or Peripheral

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **or** `platoper` **group.**

2. **Right-click on the board, power supply, or fan tray you want to power on in the corresponding Platform View table.**

   The system displays a menu of operations.

3. **Left-click on the Power On menu selection.**

   The system displays the Power On dialog box.

4. **After ensuring that you have selected the correct board or peripheral to power on, left-click on the OK button.**

Powering off a Board or Peripheral

This operation powers off a board, power supply, or fan tray on the platform. Refer to the `poweroff`(1M) command in the *Sun System Management Service 1.2 Reference Manual* for more information about powering off a board or peripheral.

▼ To Power off a Board or Peripheral

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **or** `platoper` **group.**

2. **Right-click on the board, power supply, or fan tray you want to power off in the corresponding Platform View table.**

   The system displays a menu of operations.

3. **Left-click on the Power Off menu selection.**

   The system displays the Power Off dialog box.

4. **After ensuring that you have selected the correct board or peripheral to power off, left-click on the OK button.**

Showing Status

This operation shows the status of the last dynamic reconfiguration command executed for that board or slot. The status display is dynamically updated with the status of the command currently being executed. If the command being executed halts on an error, an error message is displayed. The message "`No status from the agent`" is displayed if no command has been executed, or if a command finishes execution without errors.

Note – You receive a status message if you attempt a dynamic reconfiguration operation that is not permitted. Refer to the *Sun System Management Services 1.2 Installation Guide and Release Notes* for any known limitations on dynamic reconfiguration operations in this release.

▼ To Show Status

1. **Log in as a member of the** `platadmn` **or** `platoper` **group.**

2. **Right-click on the the system board or slot for which you want to show status in the appropriate board table.**

   The system displays a menu of board or slot operations.

3. **Left-click on the Show status menu selection.**

   The system displays the Status box showing the execution status of the most current dynamic reconfiguration command, if any. There can be a slight delay (up to a minute) before you receive the most current status.

   For example, if an operation fails, the status shows the type of message in FIGURE 8-6 on page 223.

   As another example, after the configure operation finishes successfully—or if no command has been executed—the status shows the type of message in FIGURE 8-7 on page 223.

4. **Left-click on the OK button when you are finished looking at the status.**

Domain Management Operations from the System Controller

This section contains procedures that describe how to perform Sun Fire 15K domain management operations from the system controller. The following dynamic reconfiguration procedures are described:

- Adding a board
- Deleting a board
- Moving a board

The following additional management procedures are described:

- Powering on a board
- Powering off a board
- Testing a board
- Adding a tag
- Deleting a tag
- Changing the position of the keyswitch
- Updating the Access Control List (ACL)
- Resetting a domain
- Showing status

Showing Domain Information from the System Controller

Before you perform Sun Fire 15K domain management operations from the system controller, look at the Domain View tables in the PDSM modules under Hardware. See "Domain X View" on page 161 for more information about the Domain View tables.

Adding a Board

This operation adds a board to a specific domain. Refer to the `addboard`(1M) command in the *Sun System Management Service (SMS) 1.2 Reference Manual* for more information about adding a board.

▼ To Add a Board

1. **Log in to the Sun Management Center console as a member of the** `platadmn`, `dmn`*x*`admn`, **or** `dmn`*x*`rcfg` **group, where** *x* **is the domain where you want to add a board.**

2. **Right-click on the board you want to add in the Domain** *X* **Slot 0 or 1 Boards table.**

   The system displays a menu of board operations.

3. **Left-click on the Add Board menu selection.**

   The system displays the Add Board dialog box.

4. **After ensuring that you have selected the board you want to add, select the domain to which to add the board.**

5. **Left-click on the appropriate radio button to select the state in which you want the board to be after the board is added.**

6. **Left-click on the Add Board button.**

   You can see the progress of the Add Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Deleting a Board

This operation unconfigures, disconnects, and unassigns a system board from a specific domain. Refer to the `deleteboard`(1M) command in the *Sun System Management Service (SMS) 1.2 Reference Manual* for more information about deleting a board.

▼ To Delete a Board

1. **Log in to the Sun Management Center console as a member of the** `platadmn`, `dmn`*x*`admn`, **or** `dmn`*x*`rcfg` **group, where *x* is the domain where you want to delete a board.**

2. **Right-click on the board you want to delete in the Domain *X* Slot 0 or 1 Boards table.**

   The system displays a menu of board operations.

3. **Left-click on the Delete Board menu selection.**

   The system displays the Delete Board dialog box.

4. **Ensure that you have selected the board you want to delete.**

5. **Left-click on the appropriate radio button to select the state in which you want the board to be after the board is deleted.**

6. **Left-click on the Delete Board button.**

   You can see the progress of the Delete Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Moving a Board

This operation moves a board from one domain to another. The board you are moving must be in the ACL of both affected domains. Refer to the moveboard(1M) command in the *Sun System Management Service (SMS) 1.2 Reference Manual* for more information about moving a board.

▼ To Move a Board

1. **Log in to the Sun Management Center console.**

   If you log in as a member of the platadmn group, you do not need additional access privileges. If you log in as a member of the dmn*x*admn or dmn*x*rcfg group, where *x* is the domain, you need to have access to both affected domains.

2. **Right-click on the board you want to move in the Domain *X* Slot 0 or 1 Boards table.**

   The system displays a menu of board operations.

3. **Left-click on the Move Board menu selection.**

   The system displays the Move Board dialog box.

4. **After ensuring that you have selected the board you want to move, select the domain to which to move the board.**

5. **Left-click on the appropriate radio button to select the state in which you want the board to be after the board is moved.**

6. **Left-click on the Move Board button.**

   You can see the progress of the Move Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Powering on a Board

This operation powers on a board for a specific domain. Refer to the `poweron`(1M) command in the *Sun System Management Service (SMS) 1.2 Reference Manual* for more information about powering on a board.

▼ To Power on a Board

Before you power on a board, the power state must be `OFF`.

1. **Log in to the Sun Management Center console as a member of the** `platadmn`, `platoper`, dmn*x*admn, **or** dmn*x*rcfg **group, where** *x* **is the domain where you want to power on a board.**

2. **Right-click on the board you want to power on in the one of the Domain** *X* **View tables.**

   The system displays a menu of board operations.

3. **Left-click on the Power On menu selection.**

   The system displays the Power On dialog box.

4. **After ensuring that you have selected the correct board to power on, left-click on the OK button.**

Powering off a Board

This operation powers off a board for a specific domain. Refer to the `poweroff`(1M) command in the *Sun System Management Service (SMS) 1.2 Reference Manual* for more information about powering off a board.

▼ To Power off a Board

Before you power off a board, the power state must be ON.

1. **Log in to the Sun Management Center console as a member of the** `platadmn`, `platoper`, dmn*x*admn, **or** dmn*x*rcfg **group, where** *x* **is the domain where you want to power off a board.**

2. **Right-click on the board you want to power off in the Domain** *X* **Slot 0 or 1 Boards table.**

   The system displays a menu of board operations.

3. **Left-click on the Power Off menu selection.**

   The system displays the Power Off dialog box.

4. **After ensuring that you have selected the correct board to power off, left-click on the OK button.**

Testing a Board

This operation tests a board in a specific domain. Refer to the `rcfgadm`(1M) command, option `-t`, in the *Sun System Management Services 1.2 Reference Manual* for more information about testing a board.

▼ To Test a Board

1. **Log in to the Sun Management Center console as a member of the** `dmnxadmn` **group, where** *x* **is the domain where you want to test a board.**

2. **Right-click on the board you want to test in the Domain** *X* **View table.**

   The system displays a menu of board operations.

3. **Left-click on the Test Board menu selection.**

   The system displays the Test Board dialog box.

4. **Left-click on the radio button beside the test option you want.**

5. **If you want to force the test, left-click on the check box beside Use Force Option. If you do choose this option, note the caution on the menu. If you do not want to force the test, be sure that the check box is blank.**

6. **After ensuring that you have selected the correct board to test and have the correct options checked, left-click on the Start Test button.**

   You can see the progress of the Test Board operation in the dialog box.

7. **If you want to abort the operation after it has started, left-click on the Abort button.**

   You can see the progress of the Abort operation in the dialog box.

Adding or Changing a Domain Tag

This operation adds the specified domain tag name to a domain or changes the domain tag name. Only one name tag can be assigned to a domain, and it must be unique across all domains. Refer to the addtag(1M) command in the *Sun System Management Services 1.2 Reference Manual* for more information about adding or changing a domain tag.

▼ To Add or Change a Domain Tag

1. **Log in to the Sun Management Center console as a member of the** platadmn **group.**

2. **Right-click on the Domain (**A–R**) in the Domain *X* Info table for which you want to add or change a tag.**

   The system displays a menu of domain operations.

3. **Left-click on the Add Tag menu selection.**

   The system displays the Add Tag dialog box.

4. **After ensuring that you have selected the correct domain for which you want to add a tag, type the new domain tag name in the text box under Set new tag:**

5. **Left-click on the OK button.**

Deleting a Tag

This operation removes the domain tag name associated with the domain. Refer to the `deletetag`(1M) command in the *Sun System Management Services 1.2 Reference Manual* for more information about deleting a tag.

▼ To Delete a Domain Tag

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **group.**

2. **Right-click on the Domain (`A–R`) in the Domain *X* Info table for which you want to delete a tag.**

   The system displays a menu of domain operations.

3. **Left-click on the Delete Tag menu selection.**

   The system displays the Delete Tag dialog box.

4. **After ensuring that you have selected the correct domain for which you want to delete a tag, left-click on the OK button.**

Changing the Keyswitch Position

This operation changes the position of the virtual keyswitch for a domain to one of these specified values:

- On
- Off
- Diagnostics
- Secure
- Standby

Refer to the `setkeyswitch`(1M) command in *Sun System Management Services (SMS) 1.2 Reference Manual* for more information about the virtual keyswitch and definitions of the positions.

▼ To Change the Keyswitch Position

1. **Log in to the Sun Management Center console as a member of the** `dmnxadmn` **group, where** *x* **is the domain for which you want to change the keyswitch position.**

2. **Right-click on the Domain (**`A–R`**) in the Domain** *X* **Info table for which you want to change the keyswitch position.**

   The system displays a menu of domain operations.

3. **Left-click on the Keyswitch menu selection.**

   The system displays the Keyswitch dialog box.

4. **Left-click on the radio button next to the position you want to set for the domain.**

5. **Left-click on the OK button.**

Setting Up or Changing the Access Control List (ACL)

This operation sets up or changes the Access Control List for the domain. The default for an ACL for a domain is empty. You need to set up the ACL list for a domain initially and put in all boards you want to assign to the domain. You cannot assign a board from a domain if the board is not in the domain's ACL. Refer to the `setupplatform`(1M) command in *Sun System Management Services (SMS) 1.2 Reference Manual* for more information about setting up or changing the ACL.

Note – The Access Control List in the Sun Management Center 3.0 GUI is the same list that is called the Available Component List in the Systems Management Services (SMS) `setupplatform`(1M) command.

▼ To Set Up or Change the Access Control List

1. **Log in to the Sun Management Center console as a member of the** `platadmn` **group.**

2. **Right-click on the Domain (**A–R**) in the Domain** *X* **Info table for which you want to set up or change the Access Control List.**

   The system displays a menu of domain operations.

3. **Left-click on the Access Control List menu selection.**

   The system displays the Access Control List dialog box.

4. **If you want to add a slot to the ACL for a domain, select the slot from the left list box (Add To ACL List:), and left-click on Add. If you want to remove a slot from the ACL for a domain, select the slot from the right list box (Slots in ACL:), and left-click on Remove.**

5. **When you have the ACL exactly the way you want it, left-click on the OK button.**

Resetting a Domain

This operation resets all the CPU ports of a specified domain; in other words, resets the hardware to a clean state. Refer to the reset(1M) command in the *Sun System Management Services (SMS) 1.2 Reference Manual* for more information about resetting a domain.

▼ To Reset a Domain

To reset a domain, the virtual keyswitch must *not* be in the secure position. If the keyswitch is in the secure position and you attempt to reset the domain, you receive an error message. See "Changing the Keyswitch Position" on page 198 for instructions on changing the keyswitch position.

1. **Log in to the Sun Management Center console as a member of the** dmn*x*admn **group, where** *x* **is the domain you want to reset.**

2. **Right-click on the Domain (**A–R**) in the Domain** *X* **Info table that you want to reset.**

   The system displays a menu of domain operations.

3. **Left-click on the Reset Domain menu selection.**

   The system displays the Reset Domain dialog box.

4. **If you are sure this is the domain you want to reset, left-click on the OK button.**

Showing Status

This operation shows the status of the last dynamic reconfiguration command executed for that board or slot. The status display is dynamically updated with the status of the command currently being executed. If the command being executed halts on an error, an error message is displayed. The message "No status from the agent" is displayed if no command has been executed, or if a command finishes execution without errors.

Note – You receive a status message if you attempt a dynamic reconfiguration operation that is not permitted. Refer to the *Sun System Management Services 1.2 Installation Guide and Release Notes* for any known limitations on dynamic reconfiguration operations in this release.

▼ To Show Status

1. **Log in as a member of the** `platadmn`, `platoper`, `dmn`*x*`admn`, **or** `dmn`*x*`rcfg` **group, where** *x* **is the domain in which you want to show status for a system board or slot.**

2. **Right-click on the the system board or slot for which you want to show status in the appropriate board table.**

   The system displays a menu of board or slot operations.

3. **Left-click on the Show status menu selection.**

   The system displays the Status box showing the execution status of the most current dynamic reconfiguration command, if any. There can be a slight delay (up to a minute) before you receive the most current status.

   For example, if an operation fails, the status shows the type of message in FIGURE 8-6 on page 223.

   As another example, after the configure operation finishes successfully—or if no command has been executed—the status shows the type of message in FIGURE 8-7 on page 223.

4. **Left-click on the OK button when you are finished looking at the status.**

Possible Reasons for DR Operation Attempts Failing

There are a number of reasons why a dynamic reconfiguration operation attempt might fail:

- User does not have permission to do the operation. In most cases, these operations are disallowed at the console level. However, there are cases (most notably with move board operations) where the operation privilege cannot be determined without the console being queried. In these cases, the user can attempt the operation, but it fails with an error message stating `Generic data request error`.

- User does not have proper authorization for the operation, either because of an inconsistency in group settings between the Sun Management server and agent, or because of problems exceeding the 16 group limit. The operation fails with an error message stating `Insufficient security privilege` or `Not writable error`. See Chapter 3 for more information about security access. Specifically, see "Limit of 16 Group IDs for a User ID" on page 56 for more information about the 16 group limit.

- Network connection to the platform agent is down. The operation fails with an error message stating `Timeout error`.

When you receive any of these messages other than `Timeout error`, refer to the following files for more information:

- `platform.log` and `pdsm.log` files in `/var/opt/SWUNWsymon/log`
- `/tmp/pdsm.log` file
- console log file
- `/var/opt/SUNWSMW/`*SMS version*`/adm/platform/messages`, where *SMS version* is the running version of SMS, such as `SMS1.2`

Dynamic Reconfiguration From the Domain

This chapter describes how to perform dynamic reconfiguration (DR) operations from a Sun Fire 3800, 4800, 4810, 6800, or 15K domain using the Sun Management Center 3.0 GUI and the Dynamic Reconfiguration module. The dynamic reconfiguration operations include such operations as attaching a board to a Sun Fire domain, detaching a board from a Sun Fire domain, and configuring a board on a Sun Fire domain. Some other management operations that you might want to perform either as part of a dynamic reconfiguration operation or as part of another operation are testing a board or powering a board off or on.

Prerequisites

You need to be familiar with dynamic reconfiguration operations before you use the Sun Management Center 3.0 GUI to perform DR operations. Refer to the following documents to learn more about dynamic reconfiguration operations on a Sun Fire system:

■ *Sun Fire 15K Dynamic Reconfiguration User Guide*, which describes the underlying Sun Fire 15K operations for the DR module. For the latest general issues, known limitations, and known bugs about dynamic reconfiguration operations for the Sun Fire 15K, refer to the *System Management Services (SMS) 1.2 Installation Guide and Release Notes.*

■ *Sun Fire 6800, 4810, 4800, and 3800 Systems Dynamic Reconfiguration User's Guide*, which describes the underlying Sun Fire 6800, 4810, 4800, and 3800 operations for the DR module.

■ cfgadm(1M) man page, which describes the underlying command for the DR module.

Dynamic Reconfiguration Module

The Dynamic Reconfiguration module enables you to perform dynamic reconfiguration operations from the domain in the same manner that you would with the `cfgadm`(1M) command only using the Sun Management Center 3.0 GUI. This module works on Sun Fire 3800, 4800, 4810, 6800, and 15K systems.

During the software installation, this module is automatically installed. You need to load this module to use it the first time. You can unload the module, if desired. For specific information about loading and unloading Sun Management Center modules, refer to Chapter 11, "Managing Modules," in the *Sun Management Center 3.0 Software User's Guide.*

FIGURE 8-1 shows the icon for the module—Dynamic Reconfiguration Sun Fire (3800-15000)—as it is displayed in the host Details window on a domain under the Browser tab and Hardware icon.

Labels on the figure:
- Dynamic Reconfiguration Icon
- Data Table
- Dynamic Reconfiguration Commands
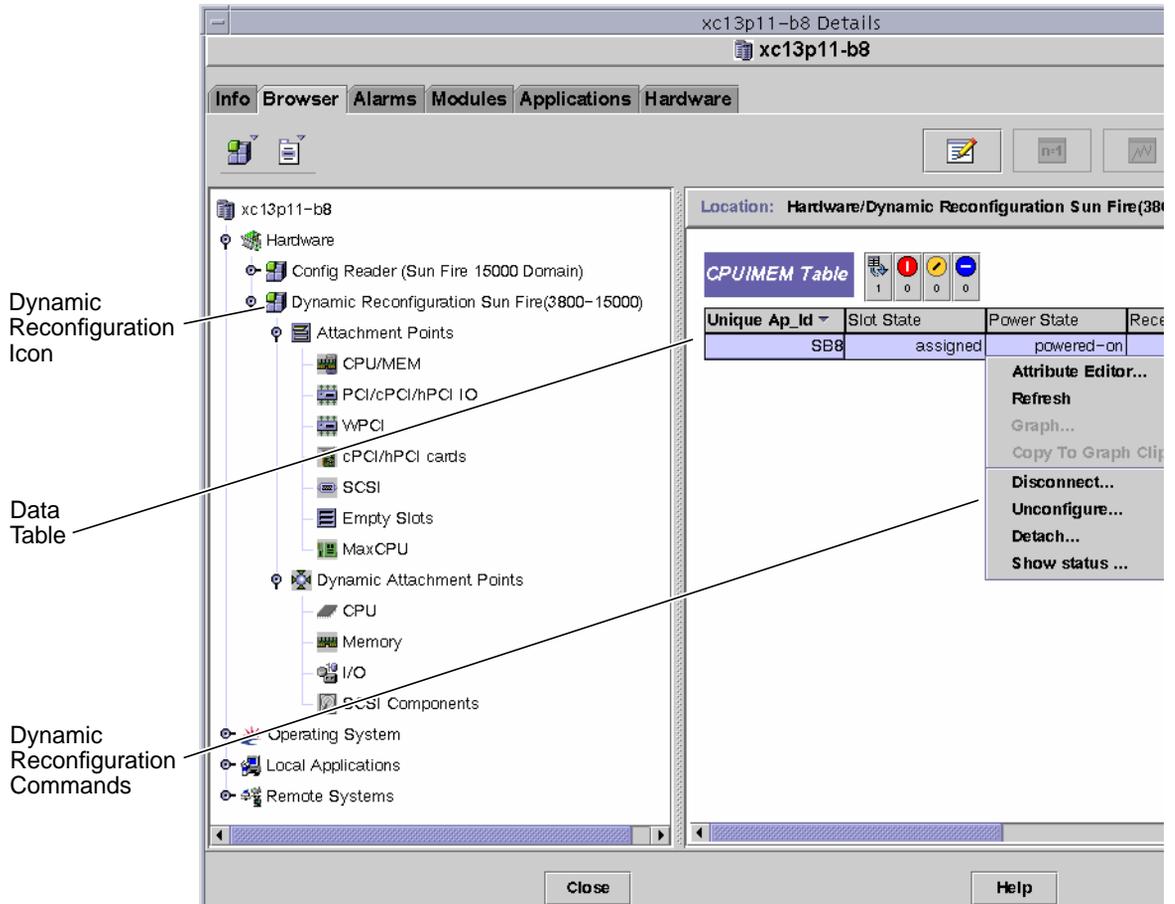
FIGURE 8-1   Dynamic Reconfiguration Features

There are two sections of tables:

- Attachment Points—single attachment points for larger assemblies such as system boards and I/O boards
- Dynamic Attachment Points—dynamic attachment points for individual devices and components such as CPU modules, DIMMs, and SCSI drives

Attachment Points

An attachment point is a collective term for a board and its slot. The Attachment Points tables show information about the following types of board slots:

- CPU/MEM
- PCI/cPCI/hPCI IO
- WPCI
- cPCI/hPCI cards
- SCSI
- Empty Slots
- MaxCPU

The Dynamic Reconfiguration module allows you to perform dynamic reconfiguration operations from the domain on the attachment points in the tables.

Dynamic Attachment Points

Dynamic attachment points refer to components on the system boards, such as CPUs, memory, and I/O devices. The dynamic attachment points are created by the DR driver. Refer to the dr(7D) man page in the Sun Solaris 8 Reference Manual Collection for more details about the DR driver. The Dynamic Attachment Point tables show information about the following types of components:

- CPU
- Memory
- I/O
- SCSI Components

The Dynamic Reconfiguration module allows you to perform dynamic reconfiguration operations from the domain on the dynamic attachment points in the tables.

Data Tables

Use the Dynamic Reconfiguration data tables in the right half of a Details window to find the last-known state of a dynamically-reconfigurable board or device.

All data tables for Dynamic Reconfiguration Sun Fire(3800-15000) use the format shown in TABLE 8-1.

TABLE 8-1 Dynamic Reconfiguration Data Table Format

Property	Description
Unique Ap_Id	Logical name for the attachment point or dynamic attachment point
Slot State	State of the slot
Power State	Power state for the slot
Receptacle	Receptacle state
Occupant	Occupant state
Type	Type of attachment point or dynamic attachment point
Condition	Board or component condition
Information	General information for the type
When	Date and time when components were configured
Busy	Indicates whether or not the attachment point or dynamic attachment point is busy
Phys_Id	Physical name for the attachment point or dynamic attachment point

Dynamic Reconfiguration Operations from the Domain

This section describes how to perform dynamic reconfiguration operations from the domain from a Sun Fire domain using the Sun Management Center 3.0 Dynamic Reconfiguration module. The dynamic reconfiguration operations from the domain are based on the `cfgadm`(1M) command. Refer to the `cfgadm`(1M) command in the Sun Solaris 8 Reference Manual Collection for more information about the various `cfgadm` options.

There are both logical and physical aspects of Sun Fire domains:

- The *logical* domain is the set of slots—either containing or not containing system boards—grouped as belonging to a specific domain.
- The *physical* domain is the set of boards in the logical domain that are physically interconnected.

A slot—whether occupied or empty—can be a member of a logical domain, while not being part of a physical domain. After boot, a board or empty slot can be assigned to or unassigned from a logical domain. A board becomes part of a physical domain when the Solaris operating environment requests it. An empty slot is never part of a physical domain.

The following dynamic reconfiguration and other management operations from the domain are described in this section of the supplement:

- Attaching a board
- Detaching a board
- Assigning a board
- Unassigning a board
- Connecting a board
- Disconnecting a board
- Configuring a board or components
- Unconfiguring a board, components, or memory
- Powering on a board
- Powering off a board
- Testing a board

`cfgadm` Options Supported

TABLE 8-2 describes the cfgadm(1M) options that are supported by the Dynamic Reconfiguration module. Refer to the cfgadm(1M) command in the Sun Solaris 8 Reference Manual Collection for more information about the various cfgadm options.

TABLE 8-2 cfgadm Options Supported by Dynamic Reconfiguration

`cfgadm` **Option**	**Sun Management Center GUI Menu Item**	**Description**
-c configure	Attach	Attach a board
-c disconnect	Detach	Detach a board
-x assign	Assign	Assign a board
-c disconnect -x unassign	Unassign	Unassign a board
-c connect	Connect	Connect a board
-c disconnect	Disconnect	Disconnect a board
-c configure	Configure	Configure a board or another component
-c unconfigure	Unconfigure	Unconfigure a board or another component
-x poweron	Power On	Power on a board
-x poweroff	Power Off	Power off a board
-t	Test	Test a board

Showing Domain Information From the Domain

Before you perform any dynamic reconfiguration operations from a Sun Fire domain, look at the Attachment Points and Dynamic Attachment Points tables in the Dynamic Reconfiguration module under Hardware.

Ensure Boards Are in a Domain's ACL

Before you can perform certain dynamic reconfiguration operations on a system board from a domain, the board must be in the domain's ACL.

Assigning a Board

This operation adds a system board to the logical domain.

▼ To Assign a Board

1. **Log in as a member of the** `esadm` **group to the domain to which you want to assign a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to assign in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Assign menu selection.**

   The system displays the Assign confirmation box with this message:

   ```
   Assign a slot.
   Are you sure you want to assign?
   ```

4. **Left-click on the OK button to assign the selected board. Otherwise, left-click on the Cancel button to cancel the assign operation.**

Unassigning a Board

This operation removes a system board from the logical domain.

▼ To Unassign a Board

1. **Log in as a member of the** `esadm` **group to the domain from which you want to unassign a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to unassign in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Unassign menu selection.**

   The system displays the Unassign confirmation box with this message:

   ```
   Unassign.
   Are you sure you want to unassign?
   ```

4. **Left-click on the OK button to unassign the selected board. Otherwise, left-click on the Cancel button to cancel the unassign operation.**

Attaching a System Board

This operation attaches the specified system board to the Solaris operating environment running in the specified domain. The process of attaching a system board involves a series of automatic steps performed by the Dynamic Reconfiguration module:

- Assigns the system board to the logical domain.
- Powers on the system board.
- Tests the system board.
- Connects the system board to the domain physically through the system controller.
- Configures the components on the system board in the Solaris operating environment running on the domain, so that applications running on the domain can use the components.

Some of the automatic steps are not performed depending on the initial state of the system board and other components or whether hardware problems prohibit the successful completion of the attach operation.

▼ To Attach a System Board

1. **Log in as a member of the** `esadm` **group to the domain to which you want to attach a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to attach in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Attach menu selection.**

   The system displays the Attach Confirmation box with this message:

   ```
   Attach a board.
   Attach will connect and configure the selected board.
   Are you sure you want to attach?
   ```

4. **Left-click on the OK button to connect and configure the selected board. Otherwise, left-click on the Cancel button to cancel the attach operation.**

Detaching a System Board

This operation detaches the specified system board from the Solaris operating environment running in the specified domain. The process of detaching a system board involves a series of automatic steps performed by the Dynamic Reconfiguration module:

- Unconfigures the components on the system board from the Solaris operating environment running on the domain, so that applications running on the domain can no longer use the components.
- Communicates with the system controller to physically disconnect the system board from the domain. After this step, the system board is no longer part of the physical domain, although it is still part of the logical domain.
- Powers off the system board.

Some of the automatic steps are not performed depending on the initial state of the system board and other components or whether hardware problems prohibit the successful completion of the detach operation.

▼ To Detach a System Board

1. **Log in as a member of the** `esadm` **group to the domain from which you want to detach a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to detach in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Detach menu selection.**

   The system displays the Detach confirmation box (FIGURE 8-2FIGURE 8-2).
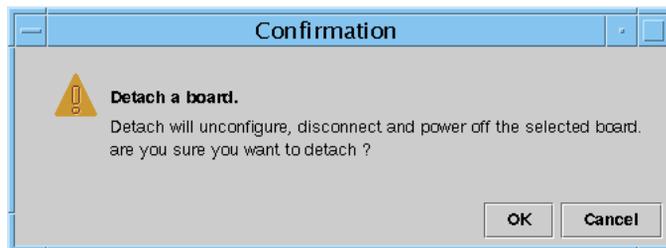
FIGURE 8-2   Detach Confirmation Box

4. **Left-click on the OK button to unconfigure, disconnect, and power off the selected board. Otherwise, left-click on the Cancel button to cancel the detach operation.**

Connecting a Board

This operation performs the following steps:

- Assigns the system board to a logical domain if the board is available and is not part of the logical domain
- Powers on the system board
- Tests the system board
- Connects the system board to the physical domain

▼ To Connect a System Board

1. **Log in as a member of the** `esadm` **group to the domain in which you want to connect a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to connect in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Connect menu selection.**

   The system displays the Connect confirmation box with this message:

   ```
   Connect
   Are you sure you want to connect?
   ```

4. **Left-click on the OK button to connect the selected board. Otherwise, left-click on the Cancel button to cancel the connect operation.**

Note – The Sun Fire 15K system allows you to click on an Abort button to stop the operation prematurely.

Disconnecting a Board

This operation performs the following steps:

- Unconfigures the system board, if necessary
- Disconnects the system board from the physical domain

▼ To Disconnect a System Board Other Than a SCSI Board

1. **Log in as a member of the** `esadm` **group to the domain in which you want to disconnect a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to disconnect in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Disconnect menu selection.**

   The system displays the Disconnect dialog box (FIGURE 8-3FIGURE 8-3).
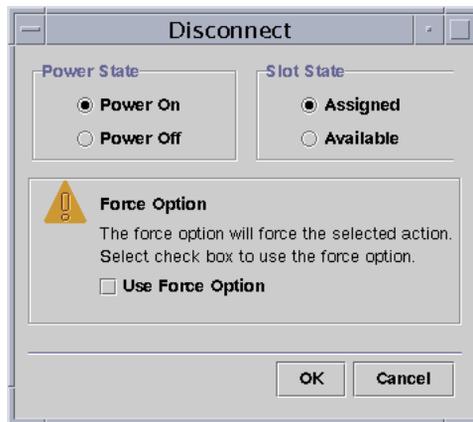
FIGURE 8-3   Disconnect Dialog Box

4. **Left-click on the radio button beside the Power State option you want the board to be in *after* it is disconnected.**

5. **Left-click on the radio button beside the Slot State option you want the board to be in *after* it is disconnected.**

6. **Left-click on the Use Force Option box to force the disconnect operation. Otherwise, leave the Use Force Option box blank.**

7. Left-click on the OK button to disconnect the selected board. Otherwise, left-click on the Cancel button to cancel the disconnect operation.

Note – The Sun Fire 15K system allows you to click on an Abort button to stop the operation prematurely.

▼ To Disconnect a SCSI Board

Log in as a member of the `esadm` group to the domain in which you want to disconnect a SCSI board.

8. Right-click on the Unique Ap_Id for the SCSI board you want to disconnect in the appropriate board table.

The system displays a menu of board operations.

9. Left-click on the Disconnect menu selection.

The system displays the Disconnect dialog box with this message:

```
Disconnect
Are you sure you want to continue?
```

10. Left-click on the OK button to disconnect the SCSI board. Otherwise, left-click on the Cancel button to cancel the disconnect operation.

Configuring a Board, a Component, or Memory

This operation performs the following steps:

- Connects the system board, if necessary.
- Configures a system board or a component or memory on a board into the Solaris operating environment running in the domain, so that applications running on the domain can use the board or the component or memory on the board.

▼ To Configure a System Board, a Component, or Memory

1. **Log in as a member of the** `esadm` **group to the domain in which you want to configure a system board, a component, or memory.**

2. **Right-click on the Unique Ap_Id for the system board, component, or memory you want to configure in the appropriate board table.**

   The system displays a menu of board, component, or memory operations.

3. **Left-click on the Configure menu selection.**

   The system displays the Configure confirmation box with this message:

   ```
   Configure
   Are you sure you want to configure?
   ```

4. **Left-click on the OK button to configure the selected board, component, or memory. Otherwise, left-click on the Cancel button to cancel the configure operation.**

   Note – The Sun Fire 15K system allows you to click on an Abort button to stop the operation prematurely.

Unconfiguring a Board, a Component, or Memory

This operation unconfigures a system board, a component on a board, or memory so that applications running on the domain can no longer use the board, component, or memory.

▼ To Unconfigure a System Board or a Component

1. **Log in as a member of the** `esadm` **group to the domain in which you want to unconfigure a system board or component.**

2. **Right-click on the Unique Ap_Id for the system board or component you want to unconfigure in the appropriate board table.**

   The system displays a menu of board or component operations.

3. **Left-click on the Unconfigure menu selection.**

   The system displays the Unconfigure dialog box with this message:

   ```
   Select Force Option
   The force option will force the selected action.
   Select check box to use the force option.
   ```

4. **Select the Use Force Option check box to force the unconfigure operation. Otherwise, leave the Use Force Option box blank.**

5. **Left-click on the OK button to unconfigure the selected board or component. Otherwise, left-click on the Cancel button to cancel the unconfigure operation.**

   Note – The Sun Fire 15K system allows you to click on an Abort button to stop the operation prematurely.

▼ To Unconfigure Memory

1. **Log in as a member of the `esadm` group to the domain in which you want to unconfigure memory.**

2. **Right-click on the Unique Ap_Id for the memory component you want to unconfigure in the Memory component table.**

   The system displays a menu of memory component operations.

3. **Left-click on the Unconfigure menu selection.**

   The system displays the Unconfigure Memory dialog box (FIGURE 8-4).

FIGURE 8-4   Unconfigure Memory Dialog Box

4. **Select the Use Force Option box to force the unconfigure operation. Otherwise, leave the Use Force Option box blank.**

5. **Left-click on the OK button to start unconfiguring memory. Otherwise, left-click on the Close button to cancel the unconfigure operation.**

Note – On the Sun Fire 3800, 4800, 4810, or 6800 system, if you want to keep the Unconfigure Memory dialog box open to monitor the progress of the operation, left-click on the Apply button to start unconfiguring memory. On the Sun Fire 15K system, if you start the unconfigure operation for memory, it may take a few minutes to complete. You can left-click on the Abort button to stop the unconfigure operation before it finishes.

Powering on a Board

This operation powers on a system board. The board must be assigned to the logical domain, but *not* be in the physical domain.

▼ To Power on a Board

1. **Log in as a member of the** `esadm` **group to the domain in which you want to power on a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to power on in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Power On menu selection.**

   The system displays the Power On confirmation box with this message:

   ```
   Power On a board.
   Are you sure you want to power on?
   ```

4. **Left-click on the OK button to power on a system board. Otherwise, left-click on the Cancel button to cancel the power on operation.**

Powering off a Board

This operation powers off a system board. The board must be assigned to the logical domain, but *not* be in the physical domain.

▼ To Power off a Board

1. **Log in as a member of the** `esadm` **group to the domain in which you want to power off a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to power off in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Power Off menu selection.**

   The system displays the Power Off confirmation box with this message:

   ```
   Power Off a board.
   Are you sure you want to power off?
   ```

4. **Left-click on the OK button to power off a system board. Otherwise, left-click on the Cancel button to cancel the power off operation.**

Testing a Board

This operation tests system boards. The board must be assigned to the logical domain, but *not* be in the physical domain.

▼ To Test a Board

1. **Log in as a member of the** `esadm` **group to the domain in which you want to test a system board.**

2. **Right-click on the Unique Ap_Id for the system board you want to test in the appropriate board table.**

   The system displays a menu of board operations.

3. **Left-click on the Test menu selection.**

   The system displays the Test Board dialog box (FIGURE 8-5).
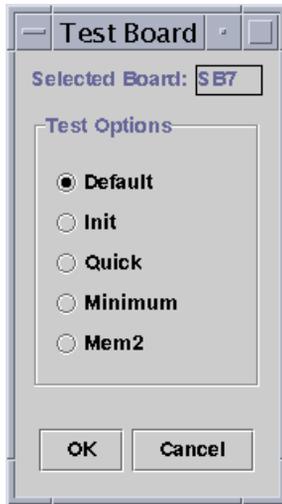
FIGURE 8-5 Test Board Dialog Box

4. Left-click on the radio button beside the Test Option you want.

5. After ensuring that you have selected the correct board to test and have the correct option checked, left-click on the OK button to start the test. Otherwise, left-click on the Cancel button to cancel the test.

Note – The Sun Fire 15K system allows you to click on an Abort button to stop the operation prematurely.

Showing Status

This operation shows the status of the last dynamic reconfiguration command executed for that board or slot. The status display is dynamically updated with the status of the command currently being executed. If the command being executed halts on an error, an error message from the cfgadm(1M) program is displayed. The message "No status from the agent" is displayed if no command has been executed, or if a command finishes execution without errors.

▼ To Show Status

1. Log in as a member of the esadm **group to the domain in which you want to show status for a system board or slot.**

2. **Right-click on the Unique Ap_Id for the system board or slot for which you want to show status in the appropriate board table.**

The system displays a menu of board or slot operations.

3. **Left-click on the Show status menu selection.**

The system displays the Status box showing the execution status of the most current dynamic reconfiguration command, if any.

For example, if an operation fails, the status shows this type of message (FIGURE 8-6):

FIGURE 8-6   Unsuccessful Operation in Show Status for Domain DR Operation

For another example, after the configure operation finishes successfully—or if no command has been executed—the status shows this message (FIGURE 8-7):
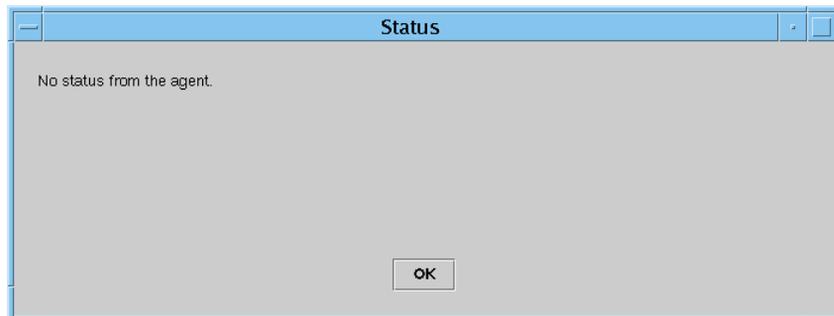
FIGURE 8-7   Successful Operation in Show Status for Domain DR Operation

4. **Left-click on the OK button when you are finished looking at the status.**

Glossary

This list defines abbreviations and acronyms in the Sun Management Center 3.0 Supplement for Sun Fire 15K Systems and in the Sun Management Center graphical user interface (GUI) for Sun Fire 15K system–specific modules.

Note – Sun Fire 15K systems are referred to as Sun Fire 15000 systems on the Sun Management Center GUI.

A

ABUS	Address Bus
AC	Alternating Current input from the power supply
ACL	Access Control List *in the Sun Management Center GUI, is the same as* Available Component List *in Systems Management Services (SMS)*
AMX	Address Multiplexer ASIC
AR	Address Register ASIC
ASIC	Application-Specific Integrated Circuit
ASM	Advanced System Monitoring
ASR	Automatic System Recovery
AXQ	System Address Controller ASIC

C

C	Celsius
CBH	Console Bus Hub
CLI	command-line interface
CP	Centerplane (Sun Fireplane interconnect)
CPU	Central Processing Unit
CS or CSB	Centerplane Support board

D

DARB	Data Arbiter ASIC
DAT	Digital Audio Tape
DBUS	Data Bus
DC	Direct Current from the facility power source
dca	Domain Configuration Administration
DCR	Domain Config Reader
Dcache	Data Cache
DDS	Digital Data Storage
DIMM	Dual Inline Memory Module
DMX	Data Multiplexer ASIC
DNS	Domain Name Service
DR	Dynamic Reconfiguration
dsmd	Domain Service Monitoring Daemon
DX	Data Extract ASIC
***x*/dxs**	Domain X Server, where *x* is domain a–r

E

Ecache	External Cache
ECC	Error-Correcting Code
efe	Event Front-end Daemon
esmd	Environmental Status Monitoring Daemon
EX or EXB	Expander board

F

fomd	Failover Management Daemon
frad	FRU Access Daemon
FRU	Field-Replaceable Unit
FT	Fan Tray

G

GUI	graphical user interface

H

HK	Housekeeping
HPCI, hPCI, or hsPCI	Hot-swap PCI assembly
HUP	Hang-up signal
hwad	Hardware Access Daemon

I

Icache   Instruction Cache

ICMP   Internet Control Message Protocol

ID   Identifier

IO   Input/Output board, such as MaxCPU board or hsPCI board

IOA   Input/Output Adapter

IP   Internet Protocol

K

kmd   Key Management Daemon

M

mand   Management Network Daemon

MB   Megabyte

MCPU   MaxCPU board

MHz   Megahertz

MIB   Management Information Base

mld   Message Logging Daemon

N

NIC   Network Interface Card

NIS   Network Information Services

O

OBP	OpenBoot PROM
OID	Object Identifier
osd	OpenBoot PROM Support Daemon

P

Paroli	Parallel Optical Link
pcd	Platform Configuration Daemon
PCI	Peripheral Component Interconnect
PCR	Platform Config Reader
PDSM	Platform/Domain State Management
PFA	Predictive Failure Analysis
POR	Power-on Reset
POST	Power-On Self-Test
PROC	Processor
PROM	programmable read-only memory
PS	Power Supply

R

RBUS	Response Bus
RIO	Read Input/Output ASIC
RMX	Response Multiplexer ASIC
RSM	Remote Shared Memory
RT	Real-time process

S

SAN	Storage Area Network
SB	System Board, such as CPU board
SBBC	Sun Fire Boot Bus Controller
SC	System Controller
SCM	System Controller Monitoring
SCSI	Small Computer System Interface
SDC	Sun Fire Data Controller ASIC
SDI	System Data Interface ASIC, which has six copies on the expander board
SDI0	System Data Interface Master ASIC; master of five copies of the System Data Interface ASIC
SDI3	Third of five copies of the System Data Interface ASIC
SDI5	Fifth of six copies of the System Data Interface ASIC
SEEPROM	serially electrically erasable PROM
SIMM	Single Inline Memory Module
SMS	System Management Services
SNMP	Simple Network Management Protocol
SRS	Sun Remote Services
ssd	SMS Startup Daemon
SSM	Scalable Shared Memory
SYS	System process

T

tmd	Task Manager Daemon
TNG	The Next Generation
TS	Time-sharing process

U

UPA   UltraSPARC™ Port Architecture

V

V   Volts or Voltage

VDC   Volts Direct Current

W

WCI   Sun Fire Link Interface ASIC

WPCI   Sun Fire Link PCI

wrsm   Sun Fire Link Remote Shared Memory driver

wssm   Sun Fire Link Scalable Shared Memory driver

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