



Sun™ Management Center 3.5 Supplement for Sun Fire™ 15K/12K Systems

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Preface

This *Sun™ Management Center 3.5 Supplement for Sun Fire™ 15K/12K Systems* provides instructions on how to install, configure, and use Sun Management Center software on the Sun Fire 15K/12K systems.

This supplement is intended for Sun Fire 15K/12K system administrators who install and use the Sun Management Center software to monitor and manage their Sun Fire 15K/12K systems.

The Sun Management Center 3.5 software and documents for Sun Fire 15K/12K systems are available in French, Japanese, Korean, Simplified Chinese, and Traditional Chinese. However, the examples of screens in this supplement appear only in English.

Note – If you have trouble seeing all the text in your language in a given window, resize the window.

Before You Read This Book

Read this supplement after the *Sun Management Center 3.5 Installation and Configuration Guide*, which provides instructions for installing and configuring Sun Management Center 3.5 software and the *Sun Management Center 3.5 User's Guide*, which provides instructions for 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/12K systems.

Chapter 2 describes how to install, set up, start, stop, uninstall, reinstall, and reconfigure Sun Management Center software on the Sun Fire 15K/12K systems. Use this chapter with the *Sun Management Center 3.5 Installation and Configuration Guide*.

Chapter 3 describes how to set up administrative access security for Sun Management Center on the Sun Fire 15K/12K systems.

Chapter 4 describes how to create, modify, and discover Sun Fire 15K/12K system topology objects.

Chapter 5 describes platform, system controller, and domain data, which is specific to Sun Fire 15K/12K systems and is shown in the respective Details window.

Chapter 6 describes briefly each property and the alarm rules used by the Sun Fire 15K/12K systems 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/12K system-specific modules.

A comprehensive index helps find information quickly in this supplement.

To view license terms, attribution, and copyright statements for open source software included in this release, the default path is:

```
/cdrom/sunmc_3_5_sparc/image/Webserver/Solaris_9/SUNWtcatr \
/install/copyright
```

If you are using Solaris 8 software, substitute `Solaris_8` for `Solaris_9` in the path.

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 System
- Other software documentation included with your system

Typographic Conventions

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

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

Shell Prompts

| Shell | Prompt |
|---------------------------------------|----------------------|
| C shell | <i>machine-name%</i> |
| C shell superuser | <i>machine-name#</i> |
| Bourne shell and Korn shell | \$ |
| Bourne shell and Korn shell superuser | # |

Related Documentation

| Application | Title | Part Number |
|--|--|----------------------|
| Overview | <i>Sun Fire 15K/12K Software Overview Guide</i> | 816-5322 |
| Installation and startup | <i>Sun Management Center 3.5 Installation and Configuration Guide</i> | 816-2678 |
| Usage | <i>Sun Management Center 3.5 User's Guide</i> | 816-2716 |
| Issues, limitations, and bugs | <i>Sun Management Center 3.5 Release Notes</i> | 816-2718 |
| Solaris 8 or 9 reference | Sun Solaris 8 or 9 Reference Manual Collection at docs.sun.com | n/a |
| Issues, limitations, and bugs for SMS and SMS DR | <i>System Management Services (SMS) 1.3 Installation Guide and Release Notes for the Sun Fire 15K/12K System</i> | 816-5320 816-5321 |
| SMS reference | <i>System Management Services (SMS) 1.3 Reference Manual for the Sun Fire 15K/12K System</i> | 816-5319 |
| SMS administration | <i>System Management Services (SMS) 1.3 Administrator Guide for the Sun Fire 15K/12K System</i> | 816-5318 |
| Sun Fire 15K/12K DR | <i>Sun Fire 15K/12K Dynamic Reconfiguration User Guide</i> | 816-5075 |
| SMS DR | <i>System Management Services (SMS) 1.3 Dynamic Reconfiguration User Guide</i> | 816-5076 |
| Hardware | <i>Sun Fire 15K/12K Systems Service Manual</i> | 806-3512 |
| luxadm | <i>Platform Notes: Using luxadm Software</i> | 816-5074 |
| Netra servers | <i>Sun Management Center 3.5 Supplement for Netra Servers</i> | 817-1388 |
| Starfire servers | <i>Sun Management Center 3.5 Supplement for Starfire Servers</i> | 816-7379 |
| Sun Fire 6800/4810/4800/3800 systems | <i>Sun Management Center 3.5 Supplement for Sun Fire 6800/4810/4800/3800 Systems</i> | 816-7381 |
| Administering Sun Fire™ Link systems | <i>Sun Fire Link Fabric Administrator's Guide</i> | 806-1405 |

| Application | Title | Part Number |
|-----------------------------------|--|--------------------|
| Installing Sun Fire™ Link systems | <i>Sun Fire Link Software Installation Guide</i> | 817-0401 |
| Workgroup servers | <i>Sun Management Center 3.5 Supplement for VSP High-End Entry Servers (Workgroup Servers)</i> | 816-7259 |
| Workstations | <i>Sun Management Center 3.5 Supplement for Workstations</i> | 816-7196 |
| Advanced System Monitoring (ASM) | <i>SPARCengine™ ASM Reference Manual</i> | 805-7581 |

Accessing Sun Documentation

You can view, print, or purchase a broad selection of Sun documentation, including localized versions, at:

<http://www.sun.com/documentation>

Contacting Sun Technical Support

If you have technical questions about this product that are not answered in this document, go to:

<http://www.sun.com/service/contacting>

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Sun is interested in improving its documentation and welcomes your comments and suggestions. You can submit your comments by going to:

<http://www.sun.com/hwdocs/feedback>

Please include the title and part number of your document with your feedback:

Sun Management Center 3.5 Supplement for Sun Fire 15K/12K Systems, part number
816-7377-10

Introduction

Sun Management Center 3.5 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/12K packages provide support for the Sun Fire 15K/12K platforms, system controllers, and domains. For the Sun Fire 15K/12K platforms, hardware configuration information resides on both system controllers (SCs), currently CP 1500s, and on each of the individual platform domains (up to 18 for the Sun Fire 15K system and up to 9 for the Sun Fire 12K system). Hardware configuration information, process monitoring, and management operations for the Sun Fire 15K/12K systems are provided by the Sun Fire 15K/12K agent modules listed in TABLE 1-1:

TABLE 1-1 Sun Fire 15K/12K Agent Modules

| Agent Modules | Description |
|---|---|
| Platform Config Reader (PCR) | Provides information about the hardware configuration for the entire Sun Fire 15K/12K 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/12K 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/12K Agent Modules (*Continued*)

| Agent Modules | Description |
|----------------------|--|
| SC Config Reader | Provides the hardware configuration for the Sun Fire 15K/12K system controllers |
| SC Monitoring (SCM) | Monitors the System Management Services (SMS) daemons on the active Sun Fire 15K/12K system controller |
| SC Status | Determines whether a Sun Fire 15K/12K system controller is the main or spare system controller |

Refer to Chapter 1 of the *Sun Management Center 3.5 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 3.5 software for the Sun Fire 15K/12K systems.

The Sun Management Center software is divided into:

- Base 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/12K support requires the Sun Management Center 3.5 base packages and the add-on Sun Fire 15K/12K packages. The *Sun Management Center 3.5 Installation and Configuration Guide* describes basic information about installing and setting up the Sun Management Center 3.5 base packages and starting and stopping the software. This chapter describes the processes specifically related to the Sun Fire 15K/12K systems.



Caution – Use the installation scripts and the setup scripts provided with the Sun Management Center 3.5 software. Do *not* manually add packages or manually change configuration files.

Your Sun Management Center 3.5 installation and setup scripts or GUI panels 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/12K System-Specific Packages

The Sun Fire 15K/12K system-specific packages received with the Sun Management Center 3.5 basic functionality, and the minimum size required for installation in kilobytes (KB) are listed in TABLE 2-1. Refer to the *Sun Management Center 3.5 Installation and Configuration 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/12K Systems

| Package | Description | Size (KB) |
|----------------|---|------------------|
| SUNWesscp | Sun Management Center Sun Fire 15K/12K Platform Agent Support | 2558 KB |
| SUNWesscd | Sun Management Center Sun Fire 15K/12K Domain Agent Support | 1838 KB |
| SUNWscsca | Sun Management Center Sun Fire 15K/12K System Controller Agent Support | 1500 KB |
| SUNWesscs | Sun Management Center Sun Fire 15K/12K Server Support | 1500 KB |
| SUNWscscs | Sun Management Center Sun Fire 15K/12K System Controller Server Support | 128 KB |
| SUNWesscg | Sun Management Center Sun Fire 15K/12K Common Support (Master Setup and Uninstall Scripts) | 15 KB |
| SUNWesadf | Sun Management Center Agent Support for Dynamic Reconfiguration on Sun Fire 15K/12K/6800/4810/4800/3800 systems | 176 KB |
| SUNWescdf | Sun Management Center Console Support for Dynamic Reconfiguration on Sun Fire 15K/12K/6800/4810/4800/3800 systems | 160 KB |
| SUNWessdf | Sun Management Center Server Support for Dynamic Reconfiguration on Sun Fire 15K/12K/6800/4810/4800/3800 systems | 140 KB |
| SUNWensca | Sun Management Center Sun Fire 15K/12K Message Files | 88 KB |
| SUNWescdd | Sun Manage Center Sun Fire Support - Console Component for Dynamic Reconfiguration | 64 KB |

Preparing for Installation

Your Sun Fire 15K/12K system must meet certain requirements before you install Sun Management Center 3.5 software. 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 3.5 Installation and Configuration Guide* for more information about server machine requirements.

Required Software Versions

TABLE 2-2 lists the software versions required for Sun Fire 15K/12K platform support.

TABLE 2-2 Required Software Versions

| Host | Required Software | Version |
|----------------------------------|----------------------------------|----------------|
| Server machine | Solaris Operating System | 8, 9 |
| | Sun Management Center | 3.5 |
| System controllers | Solaris Operating System | 8, 9 |
| | System Management Services (SMS) | 1.3 |
| | Sun Management Center | 3.5 |
| Sun Fire 15K/12K domains | Solaris Operating System | 8, 9 |
| | Sun Management Center | 3.5 |
| Workstations (for console layer) | Solaris Operating System | 2.6, 2.7, 8, 9 |
| | Sun Management Center | 3.5 |



Caution – Sun Management Center software may terminate or print error messages if a new version of the SMS software is installed on the system controller, but the Sun Management Center software is not upgraded to a compatible release. Be sure that you restart the Sun Management Center software on the system controller after you upgrade the SMS software. If need be, upgrade your Sun Management Center software to a compatible release. For example, Sun Management Center 3.5 software is compatible with SMS 1.3 software *only*.

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/12K 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 3.5 Installation and Configuration Guide* for further information about solving port conflicts.

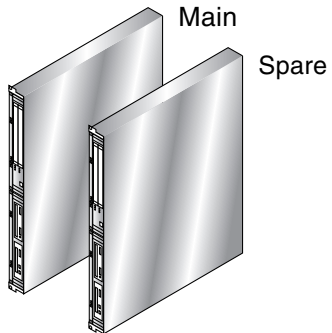
To create and access topology objects, the Sun Management Center agent layer software uses port 161 by default. If you configure an agent to use an alternate port, you must specify that port when the topology object is created or discovered. To simplify your Sun Management Center network configuration 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/12K 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/12K systems. 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 3.5 software on Sun Fire 15K/12K systems. FIGURE 2-1 illustrates the Sun Management Center software that needs to be installed on the Sun Fire 15K/12K system controllers and other hosts.

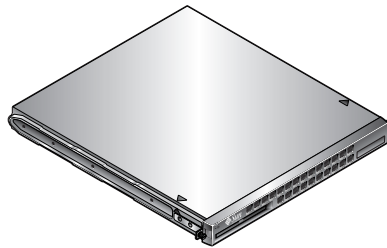
Sun Fire 15K/12K System Controllers



- Base Sun Management Center agent layer
- Sun Fire 15K/12K platform agent, system controller, agent DR, and common support

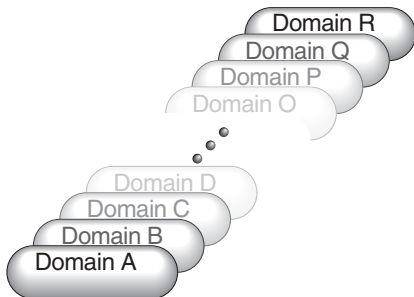
Sun Management Center Server

(can be any host with 256 MB of RAM)



- Base Sun Management Center server layer and *optional* agent layer
- Sun Fire 15K/12K server and system controller server, server DR, and common support

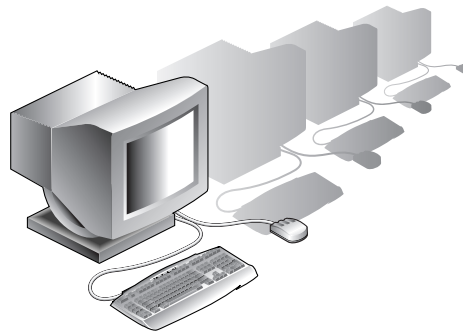
Sun Fire 15K/12K Domains



- Base Sun Management Center agent layer
- Sun Fire 15K/12K domain agent and common support

Workstations

(or a common network location)



- Base Sun Management Center console layer and basic help component
- Sun Fire 15K/12K console DR support

FIGURE 2-1 Installation and Setup on Sun Fire 15K/12K Systems

Server Layers on Server Machine

Following is a summary of the procedures for installing Sun Management Center 3.5 software on the server machine.

- Install and set up the Sun Management Center 3.5 base server layer and Sun Fire 15K/12K and system controller server add-on components on the designated Sun Management Center server machine.
- *(Optional)* Install and set up the Sun Management Center 3.5 base agent layer on the Sun Management Center 3.5 server machine if you want to monitor the server machine itself.

Agent Layers on System Controllers and Sun Fire 15K/12K Domains

Following is a summary of the procedures for installing and setting up Sun Management Center 3.5 software on the system controllers and Sun Fire 15K/12K domains:

1. Install and set up the Sun Management Center 3.5 base agent layer and Sun Fire 15K/12K domain agent add-on component for each Sun Fire 15K/12K domain you want to monitor.
2. Install and set up the Sun Management Center 3.5 base agent layer and the Sun Fire 15K/12K 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 3.5 software on workstations or the network:

- Install and set up the Sun Management Center 3.5 base console layer, basic help component, and console DR support on a common network location or on each workstation from which you want to monitor by using the GUI.

What You Can Do

With Sun Management Center 3.5 software, you can install, set up, uninstall, and update in several different ways. TABLE 2-4 lists the various methods with a cross-reference to the information in this chapter.

TABLE 2-4 Installation, Setup, Uninstallation, and Update Procedures

| To Perform This Task | Described in |
|--|---|
| Installing base software using the CLI | “To Install Base Software on Server Machine” on page 16 “To Install Base Software on Sun Fire 15K/12K Domains” on page 23 “To Install Base Agent on System Controllers” on page 30 “To Install and Set Up Console Software on a Workstation or Network” on page 38 |
| Installing Sun Fire 15K/12K add-on packages using the CLI | “To Install Sun Fire 15K/12K Server Support on Server Machine” on page 18 “To Install Sun Fire 15K/12K Domain Agents” on page 25 “To Install Sun Fire 15K/12K Platform Agent on System Controllers” on page 32 |
| Setting up Sun Fire 15K/12K add-on packages using the CLI | “To Set Up Software on the Server Machine” on page 19 “To Set up Domain Agents” on page 26 “To Set Up Software on System Controllers” on page 33 |
| Updating multiple hosts using Agent Update | “To Create the Agent Update Configuration File on the Target Hosts” on page 41 “To Update From Sun Management Center 3.5 Add-on Software” on page 42 |
| Uninstalling one module, several modules, or all Sun Fire 15K/12K software using the CLI | “To Uninstall All Sun Management Center Software” on page 47 “To Uninstall Individual Add-on Modules” on page 49 |
| Starting software using the CLI | “Starting Sun Management Center Software Using the CLI” on page 50 |
| Stopping software using the CLI | “Stopping and Exiting Sun Management Center Software Using the CLI” on page 52 |
| Installing software using the Sun Management Center Installation 3.5 Wizard | Refer to the <i>Sun Management Center 3.5 Installation and Configuration Guide</i> |
| Setting up using the Sun Management Center 3.5 Setup Wizard | “To Set Up Sun Fire 15K/12K Add-on Software on the System Controllers” on page 54 |

TABLE 2-4 Installation, Setup, Uninstallation, and Update Procedures (*Continued*)

| To Perform This Task | Described in |
|---------------------------|---|
| Starting Using Wizard | “Starting Sun Management Center Software Using the Sun Management Center 3.5 Start Wizard” on page 63 |
| Stopping Using Wizard | “Stopping Sun Management Center Software Using the Sun Management Center 3.5 Stop Wizard” on page 64 |
| Uninstalling Using Wizard | “Uninstalling Sun Management Center Software Using the Sun Management Center 3.5 Uninstall Wizard” on page 64 |

Installing and Setting Up Sun Management Center 3.5 Software Using the CLI

For Sun Fire 15K/12K system support, install and set up the Sun Management Center 3.5 software on the Sun Fire 15K/12K system hosts as shown in TABLE 2-5. The *Sun Management Center 3.5 Installation and Configuration Guide* provides information about installing and setting up the base software. It also provides instructions for starting and stopping Sun Management Center 3.5 software.

TABLE 2-5 Sun Fire 15K/12K System Hosts and Installed Layers

| Host | Layer | Installed Software |
|--------------------------------------|--------|--|
| Sun Management Center server machine | Server | Base Sun Management Center server layer Base Sun Management Center agent layer (<i>optional</i>) Sun Fire 15K/12K server add-on component Sun Fire 15K/12K system controller server add-on component Sun Fire 15K/12K/6800/4810/4800/3800 server DR support Sun Fire 15K/12K common support Sun Fire 15K/12K message files |
| Sun Fire 15K/12K domains | Agent | Base Sun Management Center agent layer Sun Fire 15K/12K domain agent add-on component Sun Fire 15K/12K common support Sun Fire 15K/12K message files |

TABLE 2-5 Sun Fire 15K/12K System Hosts and Installed Layers (Continued)

| Host | Layer | Installed Software |
|---|------------|--|
| Main SC | Base Agent | Base Sun Management Center agent layer Sun Fire 15K/12K platform agent add-on component Sun Fire 15K/12K system controller add-on component Sun Fire 15K/12K/6800/4810/4800/3800 agent DR support Sun Fire 15K/12K common support Sun Fire 15K/12K message files No other Sun Management Center layers should be installed here. |
| Spare SC | Agent | Base Sun Management Center agent layer Sun Fire 15K/12K platform agent add-on component Sun Fire 15K/12K system controller add-on component Sun Fire 15K/12K/6800/4810/4800/3800 agent DR support Sun Fire 15K/12K common support Sun Fire 15K/12K message files No other Sun Management Center layers should be installed here. |
| Workstations or common network location | Console | Base Sun Management Center console layer and basic help component Sun Fire 15K/12K/6800/4810/4800/3800 console DR support |

Installing From Installation CDs

TABLE 2-6 lists the three installation CDs supplied with your system. These CDs contain all software and documentation necessary for installing and using Sun Management Center 3.5 software with the Sun Fire 15K/12K systems. The contents of the CDs are:

- Sun Management Center 3.5 files containing base functionality and official patches
- *Sun Management Center 3.5 User's Guide, Installation and Configuration Guide, and Release Notes*
- Sun Fire 15K/12K add-on components
- *Sun Management Center 3.5 Supplement for Sun Fire 15K/12K Systems*
- Localized versions of code and documentation
- Other platforms' code and documentation

Note – Two methods of installing the Sun Management Center 3.5 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 2-6 Sun Management Center 3.5 Installation CDs

| CD Label Name | Directory Name |
|------------------------------------|-----------------------------|
| Sun Management Center 3.5 (1 of 3) | Sun_Management_Center_3_5 |
| Sun Management Center 3.5 (2 of 3) | Sun_Management_Center_3_5#1 |
| Sun Management Center 3.5 (3 of 3) | Sun_Management_Center_3_5#2 |

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 3.5 Sun Fire 15K/12K 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 3.5 Sun Fire 15K/12K 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_5xx
```

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_5xx
```

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/Sun_Management_Center_3.5_Sun-Fire-15000  
/cdrom/Sun_Management_Center_3_5xx
```

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

Note – The CD-ROM directory in the preceding example (**Sun_Management_Center_3.5_Sun-Fire-15000**) applies to both Sun Fire 15K and 12K systems.

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

```
# cd /cdrom/Sun_Management_Center_3_5xx
```

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_5xx
```

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_5xx
```

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 Using the CLI” on page 52).

Installing and Setting Up Server Machine

This section describes how to install and set up Sun Management Center 3.5 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 Base Software on Server Machine

1. Log in as superuser on the server machine.
2. Change the directory to the *path/sbin* directory, where *path* is the location of the Sun Management Center 3.5 (1 of 3) CD or the disk copy of the CD.

```
# cd path/sbin
```

3. To start the installation, type:

```
# ./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 3.5 base 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 this 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 base software, the system displays a similar message to this, depending on your system configuration.

```
=====
Sun Management Center 3.5 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 15K/12K 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/12K systems is Sun Fire 15K/12K 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/12K add-on products now, go to Step 5 in the next procedure "To Install Sun Fire 15K/12K Server Support on Server Machine" on page 18.

If you choose not to install Sun Fire 15K/12K 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/12K packages, it is more efficient to type n to not run setup now.

▼ To Install Sun Fire 15K/12K Server Support on Server Machine

If you are installing only Sun Fire 15K/12K server support now and have not already installed base server software, perform Steps 1 through 4. If the base 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. To start the installation, type:

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

The system displays this message.

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

4. Type the source directory where the Sun Fire 15K/12K server add-on packages (SUNWesscs and SUNWscscs) reside.

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

```
Please enter the source directory: /cdrom/Sun_Management_Center_3_5xx/image
```

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

```
=====  
Sun Management Center 3.5 Addons Product Selection:  
=====  
  
Do you want to install the product: Sun Fire 15K/12K Monitoring? [y|n|q]
```

5. Type `y` to install the Sun Fire 15K/12K server add-on packages (SUNWesscs and SUNWscscs) now.

6. The Sun Fire 15K/12K 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 3.5 software on the server machine.

▼ To Set Up Software on the Server Machine

After you have successfully installed the Sun Management Center 3.5 base software and Sun Fire 15K/12K 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:
 - Type `n` for no to *not* run the setup now. The setup script ends.
 - 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:

- 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/12K Server setup in Step 5.

- 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 15K/12K Server Setup  
-----  
  
Would you like to setup this Sun Management Center package? [y|n|q]
```

- Type `y` to set up the Sun Fire 15K/12K server support now. Type `n` to *not* set up the Sun Fire 15K/12K server support now.**

Either way, the system displays this message.

```
-----  
Starting Sun Management Center Sun Fire 15K/12K System Controller Server Setup  
-----  
  
Would you like to setup this Sun Management Center package? [y|n|q]
```

- Type `y` to set up the Sun Fire 15K/12K system controller server support now. Type `n` to *not* set up the Sun Fire 15K/12K 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/12K 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.

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

- Type `y` to start the Sun Management Center base agent, server, and Sun Fire 15K/12K server support now. Type `n` to *not* start this software now.**

Installing and Setting Up Sun Fire 15K/12K Domains

This section describes how to install and set up the Sun Management Center 3.5 base software and Sun Fire 15K/12K domain agents. Install and set up this software for each Sun Fire 15K/12K 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 3.5 software on a domain, before you reinstall (see “Starting Sun Management Center Software Using the Sun Management Center 3.5 Start Wizard” on page 63).

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

▼ To Install Base Software on Sun Fire 15K/12K Domains

1. Log in as superuser on the Sun Fire 15K/12K 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 3.5 Platform Update *n*(1 of 3) CD or the disk copy of the CD.

```
# cd PUn_path/sbin
```

3. To start the installation, type:

```
# ./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 3.5 base 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 this 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 base software, the system displays a similar message to this, depending on your system configuration.

```
=====
Sun Management Center 3.5 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 15K/12K 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/12K systems is Sun Fire 15K/12K 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/12K domain agents now, go to Step 5 in the next procedure “To Install Sun Fire 15K/12K Domain Agents” on page 25.

If you choose not to install Sun Fire 15K/12K 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 need to install the Sun Fire 15K/12K packages. Otherwise, type `y` to run setup now.

▼ To Install Sun Fire 15K/12K Domain Agents

Install the Sun Fire 15K/12K domain agent software for each domain to be monitored using the Sun Management Center software. If you are only installing Sun Fire 15K/12K domain agents and have not installed base software already, perform Steps 1 through 4. If you have installed base software already, continue with Step 5.

1. Log in as superuser on the Sun Fire 15K/12K 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. To start the installation, type:

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

The system displays this message.

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

4. **Type the source directory where the Sun Fire 15K/12K domain agent package (SUNWesscd) resides.**

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

```
Please enter the source directory: /cdrom/Sun_Management_Center_3_5xx/image
```

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

```
=====  
Sun Management Center 3.5 Addons Product Selection:  
=====  
  
Do you want to install the product: Sun Fire 15K/12K Monitoring? [y|n|q]
```

5. **Type *y* for yes to install the Sun Fire 15K/12K domain agent package (SUNWesscd) now.**

The system installs the Sun Fire 15K/12K 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/12K 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:**

- **Type *n* for no to *not* set up the Sun Fire 15K/12K domain agent now.**

The setup script ends.

■ **Type `y` for yes to set up the Sun Fire 15K/12K 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 this 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:

- 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/12K domain setup in Step 6.

- 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/12K domains. Otherwise, the Sun Fire 15K/12K composite will *not* work. See also Steps 4 and 5 in the procedure “To Set Up Software on System Controllers” on page 33.

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/12K 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 15K/12K 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/12K domain now. Type **n** to *not* set up the Sun Fire 15K/12K 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 base agent and Sun Fire 15K/12K 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 3.5 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 the system controller, before you reinstall (see “Starting Sun Management Center Software Using the Sun Management Center 3.5 Start Wizard” on page 63).

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

▼ To Install Base 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 3.5 Platform Update *n*(1 of 3) CD or the disk copy of the CD.

```
# cd PUn_path/sbin
```

3. To start the installation, type:

```
# ./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 3.5 base 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 this 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 3.5 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 15K/12K 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/12K systems is Sun Fire 15K/12K 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/12K add-on products now, go to Step 5 in the next procedure “To Install Sun Fire 15K/12K Platform Agent on System Controllers” on page 32.

If you choose not to install Sun Fire 15K/12K 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/12K Platform Agent. Otherwise, type y to run setup now.

▼ To Install Sun Fire 15K/12K Platform Agent on System Controllers

If you are installing only the Sun Fire 15K/12K platform agent now and have not installed the base software already, perform Steps 1 through 4. If you have installed the base 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. To start the installation, type:

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

The system displays this message.

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

4. Type the source directory where the Sun Fire 15K/12K platform agent add-ons (SUNWesscp and SUNWscsca) reside.

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

```
Please enter the source directory: /cdrom/Sun_Management_Center_3_5xx/image
```

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

```
=====
Sun Management Center 3.5 Addons Product Selection:
=====

Do you want to install the product: Sun Fire 15K/12K Monitoring? [y|n|q]
```

5. Type `y` for yes to install the Sun Fire 15K/12K platform agent add-ons (SUNWesscp and SUNWscsca) now.

The Sun Fire 15K/12K 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/12K 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:

- Type `n` for no to *not* run the setup now.

The setup script ends.

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

The system sets up the base 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 this 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:

- 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/12K Platform setup in Step 6.

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

The system displays this 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/12K 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 15K/12K 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/12K platform agent now.

The system displays this message.

```
Is this Sun Fire 15K/12K platform configured with a spare SC?  
[y|n|q]
```

8. Type `y` for yes if your Sun Fire 15K/12K 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 15K/12K domains.  
  
The default port to be checked for Sun Fire 15K/12K 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/12K domains. Otherwise, the Sun Fire 15K/12K composite will *not* work. See also Steps 4 and 5 of the procedure “To Set up Domain Agents” on page 26. 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 15K/12K domain agent ports: port_number
...
...
-----
Starting Sun Management Center Sun Fire 15K/12K 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 this message.

```
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]
```

Note – The `es-startup` script loads the drivers automatically on the CP1500 if you type *y* for yes to continue.

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 base agent, Sun Fire 15K/12K platform agent, and Sun Fire 15K/12K 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 3.5 base console software. There is no Sun Fire 15K/12K system-specific console software. You need to install and set up the base console software on a common network location or for each workstation where you want to monitor the Sun Fire 15K/12K 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 3.5 software on the common network location or a workstation, before you reinstall (see “Starting Sun Management Center Software Using the Sun Management Center 3.5 Start Wizard” on page 63).

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 a Workstation or Network

1. Log in as superuser on the workstation or network where the Sun Management Center 3.5 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 3.5 Platform Update *n*(1 of 3) CD or the disk copy of the CD.

```
# cd PUn_path/sbin
```

3. To start the installation, type:

```
# ./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 3.5 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 this 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 3.5 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 15K/12K 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/12K systems. 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/12K 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

Updating Multiple Hosts Using Agent Update

This section describes how to update multiple hosts at once using Agent Update. The Agent Update process itself must be run on the Sun Management Center server machine. You also need to ensure that Sun Management Center 3.5 agents are running on all the target hosts.

Before You Start the Agent Update Process

To use Agent Update to fully install and set up the Sun Fire 15K/12K platform agent modules, you must create an Agent Update configuration file for the module on the target hosts, *before* you run the Agent Update Process on the Sun Management Center server machine.

Note – Be sure you click Store Response Data during the Sun Management Center 3.5 base software setup process if you want to use the `setup-responses-file` to duplicate the setup on the current machine on other machines. That way all of your responses will be stored in `/var/opt/SUNWsymon/install/setup-responses-file`. For more information, refer to “Setting Up Base Products and Add-ons on the Solaris Platform” in the *Sun Management Center 3.5 Installation and Configuration Guide*.

▼ To Create the Agent Update Configuration File on the Target Hosts

1. Ensure the Sun Fire 15K/12K platform agent modules are installed on the target hosts.
2. Ensure that the Sun Fire 15K/12K platform agent modules are set up on the target hosts using either the `es-setup` script or the `es-guisetup` Wizard.

After this has been done, subsequent platform agent setup operations using Agent Update will work automatically, using the host-specific information provided initially.

Using the Agent Update Process

Using the Agent Update process, create an Image File of the add-on components to be distributed to the target machines, and then add a New Job to Manage Jobs Task list to be run when you specify.

Supported Update Configurations

Using Agent Update you can update the following configurations:

- “To Update From Sun Management Center 3.5 Add-on Software” on page 42

- “To Update From No Add-on Software or Sun Management Center 3.0 Platform Update 4 Add-on Software” on page 46

▼ To Update From Sun Management Center 3.5 Add-on Software

This procedure applies *only* to updating from Sun Management Center 3.5 add-on software.

- 1. Create an Image File of the desired Sun Fire 15K/12K add-on components to be distributed to the desired agent machines using one of the base Sun Management Center scripts `es-gui-imagetool` or `es-imagetool`.**

Refer to Chapter 8, “Post-Installation Tasks,” in the *Sun Management Center 3.5 Installation and Configuration Guide* for detailed instructions about using either the Wizard or the CLI Image Tool.

- 2. From your main Sun Management Center console window, select the Manage Jobs... option from the Tools menu.**

The system displays the Manage Jobs panel (FIGURE 2-2), which allows you to distribute the Image File.

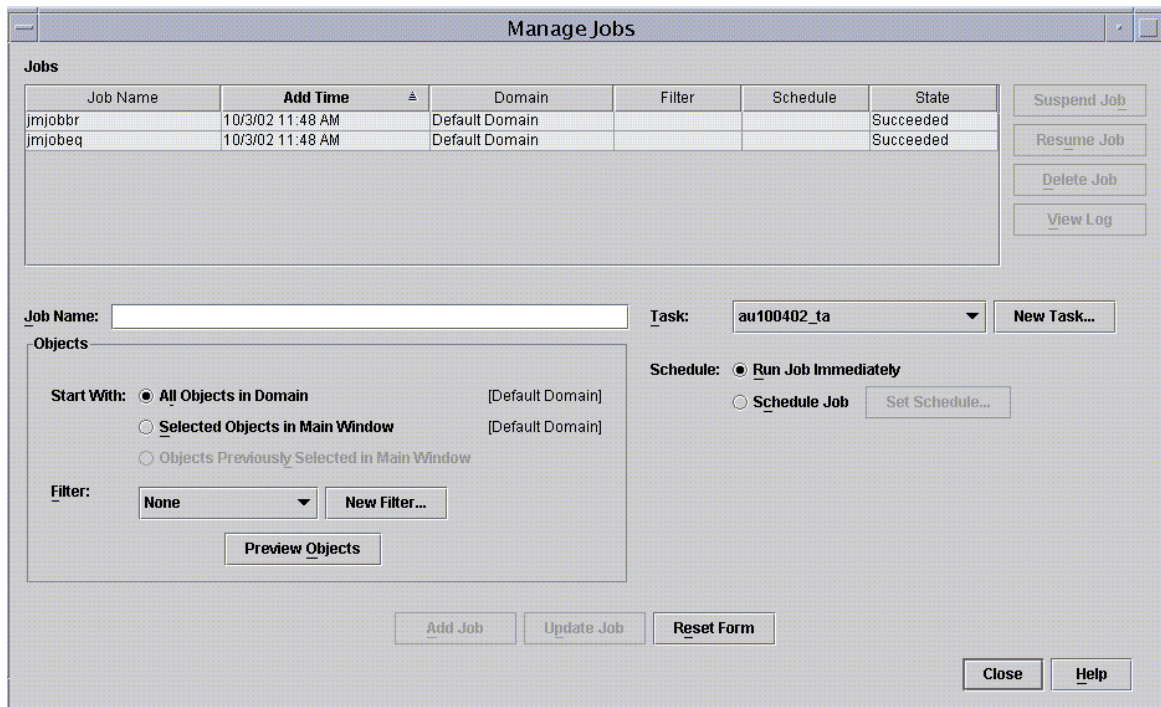


FIGURE 2-2 Manage Jobs Panel

3. In the Manage Jobs panel, select the New Task... button.

The system displays the New Task panel (FIGURE 2-3), which allows you to specify the Agent Update Image File to distribute.

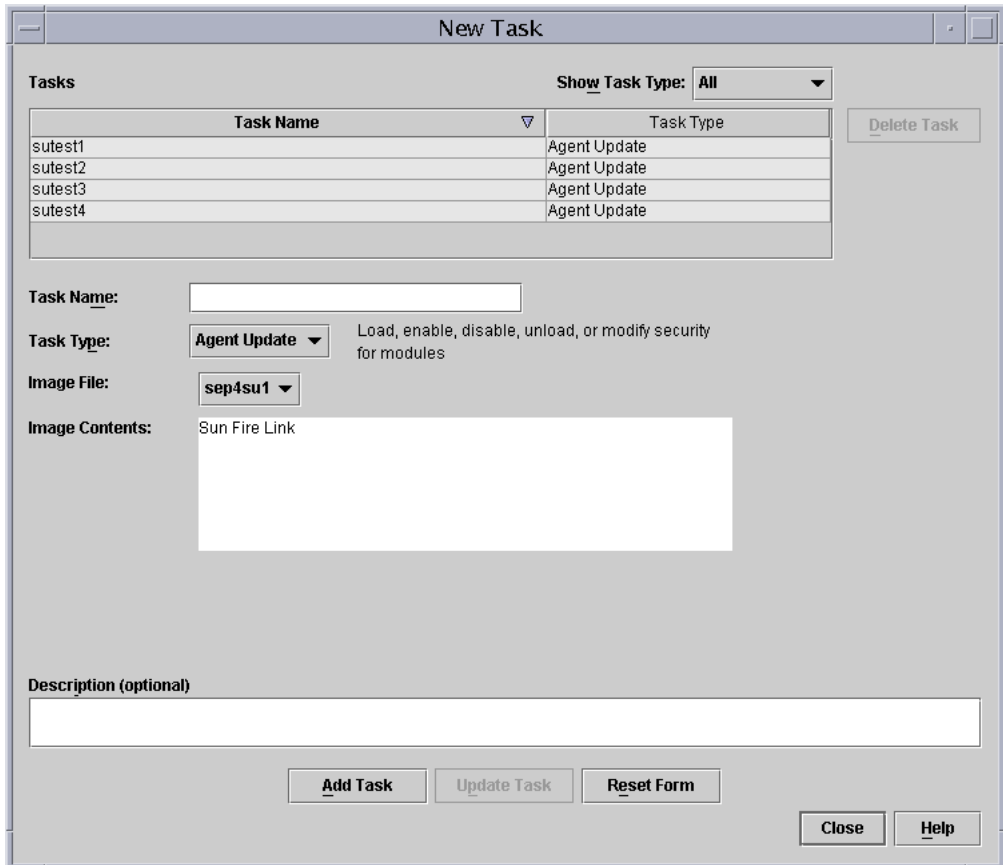


FIGURE 2-3 New Task Panel

4. In the New Task panel (FIGURE 2-3), do the following:
 - a. Select Agent Update for the Task Type.
 - b. Select the Image File you created in Step 1.
 - c. Enter the Task Name.
 - d. Click the Add Task button.
 - e. Click the Close button.
5. In the Manage Jobs panel (FIGURE 2-2), do the following:
 - a. Enter a Job Name.
 - b. Select the Task you created in Step 4.

- c. Do one of the following to schedule when you want the Task to run.
- If you want the Task to run immediately, click the radio button to the left of Run Immediately.
 - If you want to set a schedule for when the Task is to run, click the radio button to the left of Schedule Job, and set the schedule.
-

Note – Before you select objects (agent machines) where you want the Image File, you can create a group object containing all your agent machines. That way you do not have to select one agent machine at a time. Refer to Chapter 3, “To Create a Group,” in the Sun Management Center 3.5 User’s Guide for more information about creating object groups.

- d. Do one of the following to select the objects (agent machines) to which you want to distribute the Image File.
- Click the radio button to the left of All Objects in Domain to select all objects, and specify any filter you want to use to further select objects.
 - Click the radio button to the left of Selected Objects in Main Window to select one object at a time.
- e. Preview the objects (agent machines) you have selected and redo your selections if necessary.
- f. Click the Add Job button.

The job starts and distributes the Image File to the objects (agent machines) you selected. When the job is running, it appears in the Job list of the Manage Jobs panel. The panel shows the status of the job when running and when complete.

Note – When updating multiple hosts, any failure of a host results in a Failed status even though the majority of the hosts might have been updated successfully. Click on View Log to the right of the Jobs list on the Manage Jobs panel to see an individual list of the updates that succeeded and the updates that failed. If the Agent Update process did succeed, the Sun Management Center agents should restart automatically. You can open a host Details window on the Sun Management center console to each of the targeted hosts, and verify that the expected modules are present and working.

▼ To Update From No Add-on Software or Sun Management Center 3.0 Platform Update 4 Add-on Software

This procedure applies to either:

- Updating from no add-on software to Sun Management Center 3.5 add-on software
- Updating from Sun Management Center 3.0 Platform Update 4 add-on software to Sun Management Center 3.5 add-on software

1. Log in as root on the Sun Management Center server machine.

2. Create an agent-update image using either of the image tools.

- To create an agent-update image using `es-gui-imagetool`, follow the instructions in “To Create an Agent-Update Image Using `es-gui-imagetool`” in the *Sun Management Center 3.5 Installation and Configuration Guide*.
- To create an agent-update image using `es-imagetool`, follow the instructions in “To Create an Agent-Update Image Using `es-imagetool`” in the *Sun Management Center 3.5 Installation and Configuration Guide*.

3. Download the file `/opt/SUNWsymon/base/bin/agent-update.bin` to each target machine’s root directory.

If you installed Sun Management Center in a different directory than `/opt`, download `/installdir/SUNWsymon/base/bin/agent-update.bin`, where *installdir* is the install directory you specified.

4. Log in as root on the target machine.

5. Go to the directory where you downloaded `agent-update.bin`.

6. Type `./agent-update.bin -s server -r http-port -p image-name`, where

- *server* is the server that you logged into in Step 1.
- *http-port* is the Sun Management Center Web server port.
- *image-name* is the name of the agent-only image you created in Step 2.

7. Provide the security seed and the SNMPv1 community string.

The agent-update process prompts you for the security seed and the SNMPv1 community string.

- The security seed must be the same seed that you provided when you sent up the Sun Management Center server and agent.
- The SNMPv1 community string must be the same community string you provided when you set up the Sun Management Center server and agent.

The update process applies the update to the machine without prompting for further information.

When the update process completes, check the update status by viewing the log file `/var/opt/SUNWsymon/log/agent-update.log` on the server host.

Note – You need to re-run `./es-setup -F` to set up the platform agent.

Uninstalling Software Using the CLI

You can uninstall:

- All the Sun Management Center software (see “To Uninstall All Sun Management Center Software” on page 47)
- One, two, or all three modules of the Sun Fire 15K/12K add-on software (see “To Uninstall Individual Add-on Modules” on page 49)

▼ To Uninstall All Sun Management Center Software

1. As superuser, type:

```
# ./es-uninst
```

The system displays this message.

```
This script will help you to uninstall the Sun Management Center software.

Following Sun Management Center Products are installed:
-----

PRODUCT                                DEPENDENT PRODUCTS
-----

Production Environment                  All Addons
Sun Fire Domain Administration          None
Dynamic Reconfiguration for Sun Fire 15K-3800 p1  None
Sun Fire Platform Administration        None

Do you want to uninstall Production Environment? [y|n|q]
```

2. Type *y* to uninstall Production Environment, which uninstalls all Sun Management Center software.

The system displays this message.

```
This will uninstall ALL Sun Management Center Products. !!!

Do you want to change selection? [y|n|q]
```

3. Do one of the following

- **Type *y* to change your selection.**

The system displays your selection; go to the beginning of Step 2.

- **Type *n* to *not* change your selection.**

The system displays this message.

```
Do you want to preserve database? [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.

4. Type **y** to keep any existing topology and event data; or type **n** to discard the data.
The system displays this message.

```
Proceed with uninstall? [y|n|q]
```

5. Type **y** to proceed with the uninstall; or type **n** to *not* proceed with the uninstall.
If you type **y** to proceed, the system displays the list of packages to be uninstalled, the packages as they are uninstalled, the status of the uninstallation, and the location of the log file.

▼ To Uninstall Individual Add-on Modules

1. As superuser, type:

```
# ./es-uninst
```

The system displays this message.

```
This script will help you to uninstall the Sun Management Center software.  
Following Sun Management Center Products are installed:  
-----  
PRODUCT                                DEPENDENT PRODUCTS  
-----  
Production Environment                  All Addons  
Sun Fire Domain Administration          None  
Dynamic Reconfiguration for Sun Fire 15K-3800 p1  None  
Sun Fire Platform Administration        None  
  
Do you want to uninstall Production Environment? [y|n|q]
```

2. Type **n** to *not* uninstall the Production Environment; in other words, type **n** to uninstall individual modules.

The system displays this message.

```
Do you want to uninstall Sun Fire Domain Administration? [y|n|q]
Do you want to uninstall Dynamic Reconfiguration for Sun Fire 15K-3800
platforms? [y|n|q]
Do you want to uninstall Sun Fire Platform Administration? [y|n|q]
```

3. Type **y** beside each module you do want to uninstall and **n** beside each module you do *not* want to uninstall.

The system displays the modules that will be uninstalled and this message.

```
Do you want to change selection? [y|n|q]
```

4. Do one of the following:

- Type **y** to change the selections.

The system displays your selections; go to the beginning of Step 3.

- Type **n** to *not* change your selections.

The system displays this message.

```
Proceed with uninstall? [y|n|q]
```

5. Type **y** to proceed with the uninstall; or type **n** to *not* proceed with the uninstall.

If you type **y** to proceed, the system displays the list of packages to be uninstalled, the packages as they are uninstalled, the status of the uninstallation, and the location of the log file.

Starting Sun Management Center Software Using the CLI

The `es-start` command requires different command arguments, depending on which component you are starting. Refer to the *Sun Management Center 3.5 Installation and Configuration 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 2-5 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 base and platform agents. The platform agent provides all the Sun Fire 15K/12K system information to Sun Management Center software.

3. **To start the Sun Management Center agent on a Sun Fire 15K/12K 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 69.

Stopping and Exiting Sun Management Center Software Using the CLI

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 3.5 Installation and Configuration 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 2-5 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, type:

```
# ./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 panel.

Installing the Sun Fire 15K/12K Add-on Software Using the Sun Management Center 3.5 Installation Wizard

Chapter 6, “Installation and Setup”, of the *Sun Management Center 3.5 Installation and Configuration Guide*, describes in detail how to install all the software. An overview of the process follows.

1. As superuser, run the Sun Management Center 3.5 Installation Wizard, `es-guiinst`, as described in Chapter 6, “Installation and Setup,” of the *Sun Management Center 3.5 Installation and Configuration Guide*.
2. After the base software is installed, the Select Add-on Product screen provides a selectable list of add-on products that you can install. Select those add-ons that apply to Sun Fire 15K/12K systems, and click Next.
3. The Sun Management Center Setup Wizard starts automatically after all the software is installed.

Setting Up the Sun Fire 15K/12K Add-on Software Using the Sun Management Center 3.5 Setup Wizard

This section describes how to set up the Sun Fire 15K/12K add-on software using the Sun Management Center 3.5 Setup Wizard.

Note – When the Back button at the bottom of a panel is enabled (not grayed out), you can click on it to take you back to the previous operation. When the back button is grayed out (not enabled), you cannot go back to the previous operation.

Note – Be sure you click Store Response Data during the Sun Management Center 3.5 base software setup process if you want to use the `setup-responses-file` to duplicate the setup on the current machine on other machines. That way all of your responses will be stored in `/var/opt/SUNWsymon/install/setup-responses-file`. For more information, refer to “Setting Up Base Products and Add-ons on the Solaris Platform” in the *Sun Management Center 3.5 Installation and Configuration Guide*.

▼ To Set Up Sun Fire 15K/12K Add-on Software on the System Controllers

1. **On a system controller, type `es-guisetup` to start the Sun Management Center 3.5 Setup Wizard.**

Once the Sun Management Center base software setup is complete, the Select Add-on Products panel appears with a list of add-on products by platform installed on your system. In this example, Sun Fire 15/12K Monitoring is the product and platform.

The following add-on products are newly installed on this system and will be set up.

- Sun Fire 15K/12K Monitoring

2. Click Next to start the Platform Setup.

The Sun Fire 15K/12K Platform Setup panel displays the following.

```
Checking configuration files...

Status:

Set the platform server: <SChostname>
Checking for default platform agent port...

Checking of configuration files complete.
```

3. Click Next to continue.

If the default platform port was not set previously, the Sun Fire 15K/12K Platform Setup panel displays the following.

```
The default port for the Sun Management Center platform agent is 166

Would you like to use the default Sun Management Center platform agent port?
O Yes
O No
```

- Click the radio button to the left of Yes to set the displayed port as the default.
- Click the radio button to the left of No to not set the displayed port as the default.

4. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel displays the following.



FIGURE 2-4 Set Platform Agent Port Number

- If the default port number is displayed, accept it as is or change it.
- If the default port number is not displayed, enter a port number.

5. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel confirms the port number that you chose.

```
Confirmation of the platform agent port.  
  
Platform agent port: 166
```

6. Click Next to continue.

If you have added or changed the port number, the Sun Fire 15K/12K Platform Setup panel displays this message.

```
The Sun Management Center security keys must be regenerated because  
the platform agent port number has been changed.  
  
Would you like to regenerate the security keys now?  
O Yes  
O No
```

- **Click the radio button to the left of Yes to regenerate the security keys now.**

If you click yes, the Sun Fire 15K/12K Platform Setup panel displays this message.

This part of setup generates security keys used for communications between processes. A seed must be provided to initialize the keys. Make sure you use the same seed for all the machines you install. You may like to keep record of this seed for future use.

Enter the seed to generate keys:

Re-enter the seed to confirm:

Note – Ensure you store the seed password securely. It will be needed if you perform any modifications to your Sun Management Center installation.

- Enter a unique password for the seed if this is a first-time installation. If not, enter the seed used in previous versions of Sun Management Center.**
 - Reenter the seed to confirm.**
- **Click the radio button to the left of No to *not* regenerate the security keys now.**
If you click no, the Sun Fire 15K/12K Platform Setup panel displays this message.

The Sun Management Center security keys have not been regenerated. Remember to regenerate them prior to starting Sun Management Center.

7. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel displays the following.



FIGURE 2-5 Spare System Controller Query

- If the Sun Fire 15K/12K system is configured with a spare SC:
 - i. Click the radio button to the left of Yes.
 - ii. Enter the spare SC hostname.
 - If the Sun Fire 15K/12K system is *not* configured with a spare SC, click the radio button to the left of No.
8. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel displays this message.

The Platform Agent will create a composite object that includes Sun Management Center agents loaded on Sun Fire 15K/12K domains.

9. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel displays the default Sun Fire 15K/12K domains port.

```
The default port to check for Sun Fire 15K/12K domains is 161.

Would you like to change the port to be checked?
O Yes
O No

Domain port number:                               (leave empty for none)
```

- **If you want to change the Sun Fire 15K/12K domains port to be checked:**
 - i. **Click the radio button to the left of Yes**
 - ii. **Enter the port number or leave blank for no ports to be checked.**
- **If you do *not* want to change the port to be checked, click the radio button to the left of No.**

10. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel displays this message.

```
Updating configuration files...

Status:

Updated Discovery Table information via es-dt
Creating Smart Update configuration file.

Update of configuration files complete.
```

11. Click Next to continue.

The Sun Fire 15K/12K Platform Setup panel displays this message.

```
Sun Fire 15K/12K platform setup is complete.
```

12. Click Next to continue.

The Sun Fire 15K/12K System Controller Agent Setup panel displays the following.

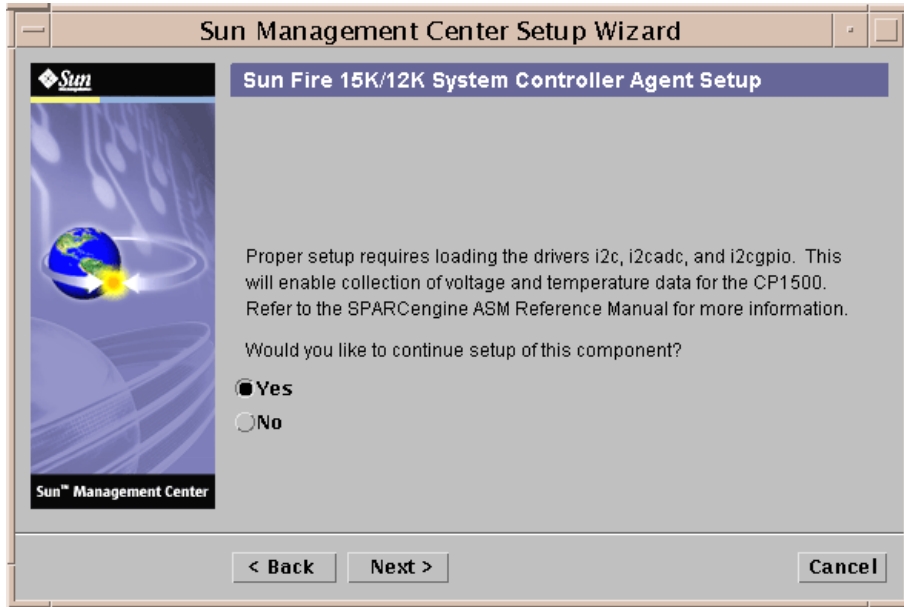


FIGURE 2-6 System Controller Agent Setup

- Click the radio button to the left of **Yes** to load the drivers `i2c`, `i2cadc`, and `i2cgpio` and continue setup of the System Controller agent.
- Click the radio button to the left of **No** to *not* continue setup of the System Controller agent.

13. Click Next to continue.

The Sun Fire 15K/12K System Controller Agent Setup panel displays this message.

```
Updating configuration files...

Status:

Created deviceinfo.conf file
Loading drivers: i2c i2cadc i2cgpio

Update of configuration files complete.
```

14. Click Next to continue.

The Sun Fire 15K/12K System Controller Agent Setup panel displays this message.

```
Sun Fire 15K/12K SC agent setup is complete.
```

▼ To Set Up Sun Fire 15K/12K Add-on Software on the Domains

1. On a Sun Fire 15K/2K domain, type `es-guisetup` to start the Sun Management Center 3.5 Setup Wizard.

Once the Sun Management Center base software setup is complete, the Select Add-on Products panel appears with a list of add-on products by platform installed on your system. In this example, Sun Fire 15/12K Monitoring is the product and platform.

The following add-on products are newly installed on this system and will be set up.

- Sun Fire 15K/12K Monitoring

2. Click Next to start the Domain Setup.

The Sun Fire 15K/12K Domain Setup panel displays the following:

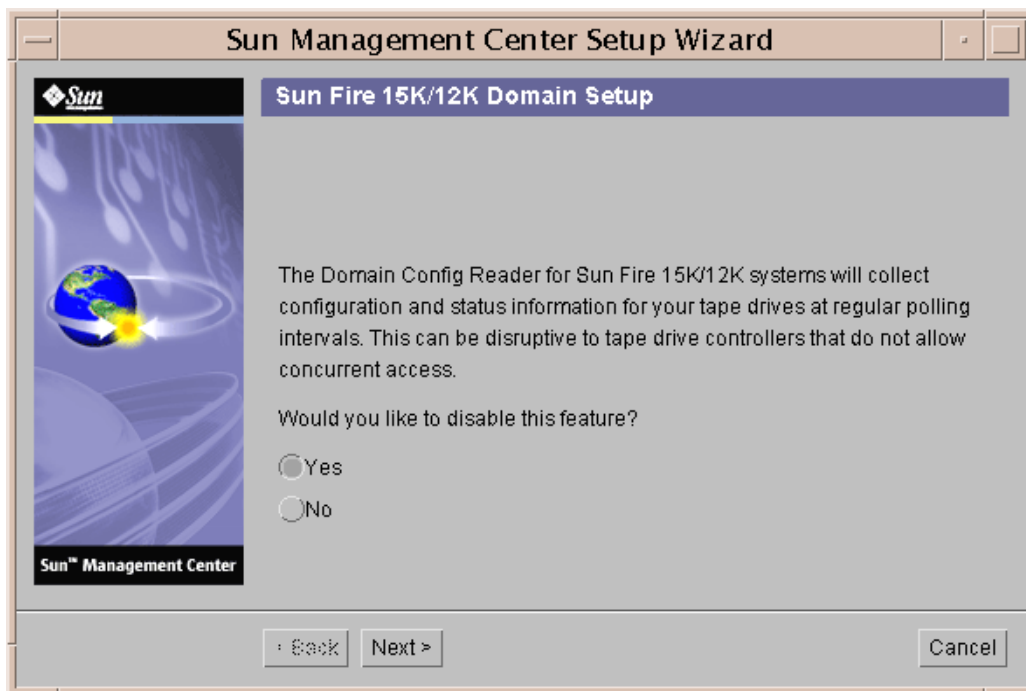


FIGURE 2-7 Domain Tape Disable Query

- **Click the radio button to the left of Yes to disable polling for your tape drives.**
if your tape drive controllers do not allow concurrent access, you will want to disable this feature.
- **Click the radio button to the left of No to *not* disable tape drive polling.**

3. Click Next to continue.

The Sun Fire 15K/12K Domain Setup panel displays the status of updating configuration files.

```
Updating configuration files...

Status
....
....

Update of configuration files complete.
```

4. Click Next to continue.

The Sun Fire 15K/12K Domain Setup panel displays this message.

```
Sun Fire 15K/12K domain setup is complete.
```

▼ To Set Up Sun Fire 15K/12K Add-on Software on the Server Machine

1. On the Sun Management Center server machine, type `es-guisetup` to start the Sun Management Center 3.5 Setup Wizard.

Once the Sun Management Center base software setup is complete, the Select Add-on Products panel appears with a list of add-on products by platform installed on your system. In this example, Sun Fire 15/12K Monitoring is the product and platform.

```
The following add-on products are newly installed on this system
and will be set up.

- Sun Fire 15K/12K Monitoring
```

2. Click Next to continue.

The Sun Fire 15K/12K Server Setup panel displays this message.

```
Updating configuration files...
```

When the update is complete, the Sun Fire 15K/12K Server Setup panel displays this message.

```
Sun Fire 15K/12K server setup is complete.
```

3. Click Next to continue.

The Sun Fire 15K/12K System Controller Server Setup panel displays this message.

```
Updating configuration files...
```

When the update is complete, the Sun Fire 15K/12K System Controller Server Setup panel displays this message.

```
Sun Fire 15K/12K SC server setup is complete.
```

Starting Sun Management Center Software Using the Sun Management Center 3.5 Start Wizard

You can use the Sun Management Center 3.5 Start Wizard, `es-guistart`, to start Sun Management Center software. Refer to Chapter 7, “Starting and Stopping Sun Management Center Software,” in the *Sun Management Center 3.5 Installation and Configuration Guide* for detailed options and instructions.

Stopping Sun Management Center Software Using the Sun Management Center 3.5 Stop Wizard

You can use the Sun Management Center 3.5 Stop Wizard, `es-guistop`, to stop Sun Management Center software. Refer to Chapter 7, “Starting and Stopping Sun Management Center Software,” in the *Sun Management Center 3.5 Installation and Configuration Guide* for detailed options and instructions.

Uninstalling Sun Management Center Software Using the Sun Management Center 3.5 Uninstall Wizard

You can use the Sun Management Center 3.5 Stop Wizard, `es-guistop`, to uninstall Sun Management Center software. Refer to Chapter 5, “Uninstalling Previous Versions of Sun Management Center Software,” in the *Sun Management Center 3.5 Installation and Configuration Guide* for detailed options and instructions. See “To Uninstall Individual Add-on Modules” on page 49 in this guide if you want to uninstall only one or two modules.

Reconfiguring Sun Fire 15K/12K Setup Parameters

You can reconfigure the Sun Fire 15K/12K setup parameters at any time by running the setup script (`es-setup`) again. You must reconfigure the appropriate Sun Fire 15K/12K setup parameters if certain changes occur, including:

- If the Sun Fire 15K/12K system name is changed, reconfigure the Sun Fire 15K/12K domain and platform components.
- If the Sun Management Center agent port configuration changes for the Sun Fire 15K/12K domain agents, reconfigure the Sun Fire 15K/12K platform component.
- If a spare system controller is added or removed from the platform configuration, reconfigure the Sun Fire 15K/12K platform component.
- If the Sun Management Center server host or trap agent port configuration changes, reconfigure the Sun Fire 15K/12K 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 2-5.

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 2-5 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.

- To stop the Sun Fire 15K/12K server and agent components if they are currently running on the server machine, type:

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

- To stop a Sun Fire 15K/12K domain agent currently running in a domain, type:

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

- To stop the host agent, which monitors the SC and platform agent if they are currently running on the SC, type:

```
# ./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.

- In the Sun Management Center server setup, 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.

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

- In the Sun Fire 15K/12K domain agent setup, the system displays this message.

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

a. 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.

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 the *Sun Management Center 3.5 User's Guide*.

Note – Be aware that the Web Interface provides no physical or logical views of the Sun Fire 15K/12K 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 *nnnnnnnnnnnnnnnnnn* is the identifying number of the installation log.

```
Log file: /var/opt/SUNWsymon/install/install.nnnnnnnnnnnnnnnnnnn
```

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

```
Log file: /var/opt/SUNWsymon/install/setup.nnnnnnnnnnnnnnnnnnn
```


Security Access Setup

This chapter describes how to set up user privileges to perform Sun Management Center administrative tasks on Sun Fire 15K/12K systems. 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 18, “Sun Management Center Security,” in the *Sun Management Center 3.5 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/12K 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/12K platform and domains from the system controller. Refer to Chapter 2, “SMS Security,” in the *System Management Services (SMS) 1.3 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/12K 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/12K 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/12K 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/12K 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/12K 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/12K 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/12K system controller to read:

```
group files
```

Network Name Service

If you have more than one Sun Fire 15K/12K 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/12K 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/12K 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 |
|-----------------------|------------------------------|---|
| platadm | Platform administrator group | Has all platform administrative privileges including controlling boards and components power and assigning system boards to Sun Fire 15K/12K 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. |
| platooper | Platform operator group | Has a subset of platadm privileges. Can view platform status. |
| dmnxadm ¹ | Domain administrator group | Can access the Sun Fire 15K/12K domain's console and perform Sun Fire 15K/12K 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. |
| dmnxrcfg ² | Domain reconfiguration group | Has a subset of dmnxadm privileges. Can reconfigure and control power to system boards in the Sun Fire 15K/12K domain. |

¹Where *x* is a letter from *a* through *r* indicating a specific Sun Fire 15K/12K domain. For example, `dmnbadm` is the administrative group for domain B.

²Where *x* is a letter from *a* through *r* indicating a specific Sun Fire 15K/12K domain. For example, `dmnbrcfg` is the reconfiguration group for domain B.

You need to add user IDs to SMS groups, whose capabilities you want the user to have, using one of the following:

- Central name service such as Network Information Service (NIS), which both the Sun Management Center server and the Sun Fire 15K/12K can access. Refer to NIS documentation for more information.
- `/etc/group` file on the Sun Management Center server host *and* the Sun Fire 15K/12K system controller. This method is described in the procedure that follows.

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

▼ To Add Users Into SMS Groups Using the `/etc/group` File

1. **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.**

Note – The group IDs are automatically created in the `/etc/group` file during SMS installation on the system controllers.

Refer to the *System Management Services (SMS) 1.3 Reference Manual* for more information about using the `smsconfig(1M)` command.

2. 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
platadm::118:root,guest,user1,user2
platoper::119:root,guest,user4
dmnaadm::121:user1, user3
dmnarcfg::122:user3
dmnbadm::123:user1, user5
dmnbrcfg::124:user5
....
....
....
dmnradm::155:
dmnrrcfg::156:
```

Using Sun Fire 15K/12K Modules

Administrative group requirements for using Sun Fire 15K/12K modules are summarized in TABLE 3-3.

TABLE 3-3 Sun Fire 15K/12K Modules and Administrative Groups

| Module Name | Sun Management Center Groups | System Management Services Groups |
|---|-------------------------------------|--|
| Platform Config Reader | Any | platadm, 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 *System Management Services (SMS) 1.3 Administrator Guide*. For more information about setting up, changing, or further access privileges of Sun Management Center groups, refer to *Sun Management Center 3.5 User's Guide*.

SMS Groups Required for PDSM Operations

To perform Sun Fire 15K/12K 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 (`platadm`) 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/12K Platform View Management Operations and Access

| Platform View Operation | Access |
|---|--|
| System controller power | <code>platadm</code> , <code>platoper</code> |
| Power supply power | <code>platadm</code> , <code>platoper</code> |
| Fan tray speed | <code>platadm</code> , <code>platoper</code> |
| Slot 0 and slot 1 board power | <code>platadm</code> , <code>platoper</code> |
| Addboard for slot 0 and 1 boards and empty slots | <code>platadm</code> |
| Deleteboard for slot 0 and 1 boards and empty slots | <code>platadm</code> |
| Moveboard for slot 0 and 1 boards and empty slots | <code>platadm</code> |
| Show status | <code>platadm</code> , <code>platoper</code> |

Domain View Access Permissions

The 18 Sun Fire 15K domains (a through r) and 9 Sun Fire 12K domains are readable only by their respective Sun Fire 15K/12K domain administrator (`dmnxadm`) and Sun Fire 15K/12K domain reconfigurer (`dmnxrcfg`), and for some tasks performed by the platform administrator (`platadm`) and platform operator (`platoper`). TABLE 3-5 describes the management operations available in the Sun Fire 15K/12K domain view and the access privileges required for each operation.

TABLE 3-5 Sun Fire 15K/12K Domain View Management Operations and Access

| Domain View Operation | Access |
|-------------------------------|--|
| Domain tag | <code>platadm</code> |
| Keyswitch | <code>dmnxadm</code> |
| Domain ACL | <code>platadm</code> |
| Reset | <code>dmnxadm</code> |
| Slot 0 and slot 1 board power | <code>dmnxadm</code> , <code>dmnxrcfg</code> , <code>platadm</code> , <code>platoper</code> |
| Slot 0 and slot 1 board test | <code>dmnxadm</code> |

TABLE 3-5 Sun Fire 15K/12K Domain View Management Operations and Access
(Continued)

| Domain View Operation | Access |
|---|--------------------------------------|
| Addboard for slot 0 and slot 1 boards and empty slots | dmnxadm, dmnxrcfg, platadm |
| Deleteboard for slot 0 and 1 boards and empty slots | dmnxadm, dmnxrcfg, platadm |
| Moveboard for slot 0 and 1 boards and empty slots | dmnxadm, dmnxrcfg, platadm |
| Show status | dmnxadm, dmnxrcfg, platadm, 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 229.

Sun Fire 15K/12K Topology Objects

This chapter describes how to create, modify, and discover Sun Fire 15K/12K topology objects. Refer to the *Sun Management Center 3.5 User's Guide* for general information about creating and monitoring Sun Management Center objects.

Sun Fire 15K/12K Platform Composites

A Sun Fire 15K/12K composite is a Sun Management Center group object that contains all hosts associated with a Sun Fire 15K/12K platform. This composite includes these icons:

- Sun Fire 15K/12K group
- Main Sun Fire 15K/12K platform
- Spare Sun Fire 15K/12K platform, designated with a circled X on the lower-right corner
- Each Sun Fire 15K/12K domain
- Main Sun Fire 15K/12K system controller (CP 1500)
- Spare Sun Fire 15K/12K system controller (CP 1500), designated with a circled X on the lower-right corner

The Sun Fire 15K/12K composite groups these objects together to enable easier management of components of the Sun Fire 15K/12K platform. TABLE 4-1 shows the Sun Fire 15K/12K icons.

TABLE 4-1 Sun Fire 15K/12K Icons









| Icon | Description |
|---|--|
|  | Sun Fire 15K/12K Group Icon |
|  | Main Sun Fire 15K/12K Platform Icon |
|  | Spare Sun Fire 15K/12K Platform Icon or required SMS daemon(s) is stopped |
|  | Sun Fire 15K/12K Platform Icon (when Sun Management Center agent is not running) |
|  | Sun Fire 15K/12K Domain Icon |

TABLE 4-1 Sun Fire 15K/12K Icons (Continued)

| Icon | Description |
|---|--|
|  | Sun Fire 15K/12K Domain Icon (when Sun Management Center agent is not running) |
|  | Main Sun Fire 15K/12K System Controller (CP 1500) |
|  | Spare Sun Fire 15K/12K System Controller (CP 1500) |

Note – Icons for the hosts monitored by Sun Management Center agents include a tag with the machine model, such as F15K/F12K. The icons for hosts that are not monitored by Sun Management Center agents display no tags.

The Sun Fire 15K/12K system controller and domain hosts are independent hosts running their own Solaris Operating System, so they also can be created and discovered independently from the Sun Fire 15K/12K platform composite. The Sun Fire 15K/12K system controller and domains can be created individually without having to create a Sun Fire 15K/12K platform composite.

The Sun Fire 15K/12K system controller and domain hosts in a Sun Fire 15K/12K 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/12K platform association as well as by their network grouping. When Sun Fire 15K/12K hosts are found by a discovery request, they are placed in the topology according to their network groupings.

A Sun Fire 15K platform can have up to 18 domain hosts, and the Sun Fire 12K platform can have up to 9 domain hosts. Only domains that are active and running the Solaris Operating System are included in the composite object.

To monitor Sun Fire 15K/12K domains and platforms, create a Sun Management Center Sun Fire 15K/12K composite from the Create Topology Object window, or use a Sun Management Center discovery request.

▼ To Create a Sun Fire 15K/12K Composite Object

For more information about this procedure, refer to the *Sun Management Center 3.5 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/12K 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/12K domains are running.

You can see the Sun Fire 15K/12K folder added to the current location in the Sun Management Center domain topology. If the Sun Fire 15K/12K composite is not created, follow the steps in “To Troubleshoot Composite Failure” on page 88.

7. **Open the composite folder to see all the objects associated with the Sun Fire 15K/12K platform.**

See FIGURE 4-1 for an example of a Sun Fire 15K/12K composite.

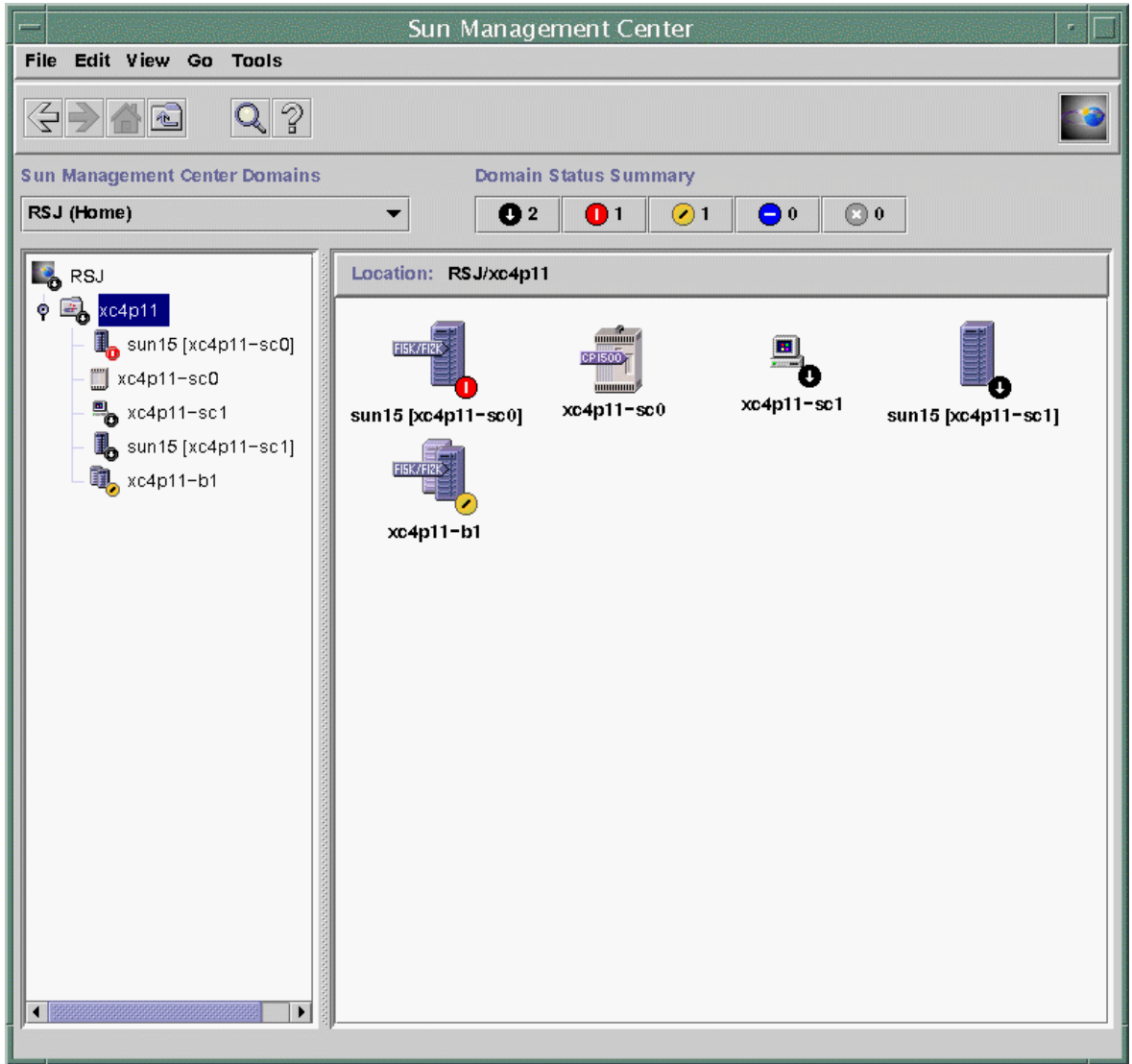


FIGURE 4-1 Example of a Sun Fire 15K/12K Composite

▼ To Discover a Sun Fire 15K/12K Composite

For more information about this procedure, refer to Chapter 4 of the *Sun Management Center 3.5 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/12K composite object.
2. Select Discover from the Tools menu.
3. In the Discovery Requests panel, click Add.
4. Type information in the New Discover Request panel.
5. If the Sun Fire 15K/12K composite is not created, follow the steps in “To Troubleshoot Composite Failure” on page 88.

Note – If the system controller was busy at the time the discovery request was made, run the discovery request again or increase the discovery request SNMP time-out value.

You can use the following Discovery Request filter options to customize your Sun Fire 15K/12K composite discovery request.

- The Platform Type filter criteria enable you to include or exclude Sun Fire 15K/12K domain and platform types.
- Sun Fire 15K/12K 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/12K platform objects.
- If the system controller is excluded by a filter criterion, the Sun Fire 15K/12K composite objects are still examined by the Discovery Manager for inclusion in the Sun Management Center domain.

Updating a Sun Fire 15K/12K Platform Composite

After you have created the Sun Fire 15K/12K 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/12K domains become active (running the Solaris Operating System).
- 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/12K domain at the time the composite was created, an Internet Control Message Protocol (ICMP) Ping monitoring type host object is created for the Sun Fire 15K/12K domain. After the Sun Management Center

agent is running again, the Sun Fire 15K/12K domain host object needs to be updated so that it can be monitored as a Sun Management Center Agent—Host type.

Note – If Sun Fire 15K/12K domain hosts running the Sun Management Center agent are monitored as a type other than a Sun Management Center Agent—Host, verify that you have specified the correct Sun Fire 15K/12K domain ports during system controller platform setup.

▼ To Update Composite Created by Create Topology Object

- **If the Sun Fire 15K/12K platform composite was created using the Create Topology Object window, perform all updates to the composite manually.**
 - If Sun Fire 15K/12K composite objects have been added or deleted, delete or create the objects as described in Chapter 3 of the *Sun Management Center 3.5 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 3.5 User's Guide*.

Note – If the changes are numerous, it may be easier to delete the current Sun Fire 15K/12K composite object from the topology and recreate it. See “To Create a Sun Fire 15K/12K Composite Object” for instructions.

▼ To Update Composite Created by Discovery

1. **If the Sun Fire 15K/12K platform composite was created by the Discovery Manager, you can make many of the updates 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/12K 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/12K platform composite from the topology and running a discovery request.

▼ To Troubleshoot Composite Failure

If you are unable to create a Sun Fire 15K/12K 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/12K platform object directly by creating a node as described in “To Create a Sun Fire 15K/12K Platform Object” on page 90.

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/12K 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-15K-12K |
| Host | <host name> |
| Port | <port number> |
| OID | 1.3.6.1.4.1.42.2.85.1.1.22 |
| Node Object Type | Sun-Fire-15K-12K-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/12K Platform Objects

Sun Fire 15K/12K 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/12K platform objects are present in the Sun Fire 15K/12K platform composite. Sun Fire 15K/12K 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/12K 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/12K 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/12K 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/12K Platform Object

Sun Fire 15K/12K platform objects are created as part of the Sun Fire 15K/12K 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 3.5 User’s Guide* to create a Sun Fire 15K/12K 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/12K 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 Sun Fire 15K/12K systems. TABLE 5-1 lists the Sun Management Center agent modules for the Sun Fire 15K/12K systems that are viewable from the Sun Fire 15K/12K system Details windows:

TABLE 5-1 Sun Fire 15K/12K Agent Modules Viewable from the Details Windows

| Module Name | Details Window |
|---|------------------------------------|
| Platform Config Reader (PCR) | Sun Fire 15K/12K platform |
| Platform/Domain State Management (PDSM) | Sun Fire 15K/12K platform |
| SC Monitoring Module (SCM) | Sun Fire 15K/12K platform |
| Domain Config Reader (DCR) | Sun Fire 15K/12K domain |
| Dynamic Reconfiguration (DR) | Sun Fire 15K/12K domain |
| SC Config Reader | Sun Fire 15K/12K system controller |
| SC Status | Sun Fire 15K/12K system controller |

These modules provide Sun Fire 15K/12K hardware monitoring and management capabilities and provide information about the Sun Fire 15K/12K 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/12K platform and domain dynamic reconfiguration and other management operations.

This chapter provides details about the Sun Fire 15K/12K platform, system controller, and domain information shown in the Details window. Three related chapters in the *Sun Management Center 3.5 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/12K 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/12K domain Details window for each domain whose I/O devices you want to check.

Views Under the Hardware Tab

For the Sun Fire 15K/12K 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/12K 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/12K Platform Details Window

The Sun Management Center Details window for a Sun Fire 15K/12K 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 3.5 User's Guide*:

- Info
- Browser
- Alarms
- Hardware

Note – If your Sun Fire 15K/12K Platform Details window does not include the preceding four tabs, Sun Fire 15K/12K support has not been correctly installed on your Sun Management Center server machine. Confirm that the add-on Sun Fire 15K/12K 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/12K 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/12K platform Details window.

This section describes using the Hardware tab to display information provided by the Sun Fire 15K/12K 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/12K Platform

To find a summary of the Sun Fire 15K/12K platform's hardware resources (FIGURE 5-1):

1. **Open the Sun Fire 15K/12K platform Details window.**
2. **Click on the Hardware tab.**
3. **In the Views pull-down menu, select Hardware Summary.**

sun15 [xc4p11-sc0] Details

sun15 [xc4p11-sc0]

Info Browser Alarms Hardware

Views Hardware Summary

Sun Fire 15K/12K Platform Information:

| Property | Value |
|----------------------------------|------------|
| Platform Name | sun15 |
| Main System Controller Hostname | xc4p11-sc0 |
| Spare System Controller Hostname | xc4p11-sc1 |
| Main System Controller | SC0 |
| Number of Active Domains | 1 |

Sun Fire 15K/12K Platform Hardware Resources:

| Property | Value |
|---|-------|
| Number of Expander Boards | 8 |
| Number of Slot0 System Boards | 8 |
| Number of Slot1 System Boards | 7 |
| Number of System Controllers | 2 |
| Number of System Controller Peripherals | 2 |
| Number of Centerplanes | 1 |
| Number of Centerplane Support Boards | 2 |
| Number of Fan Trays | 8 |
| Number of Bulk Power Supplies | 6 |
| Total Memory (MB) | 8192 |
| Total Processors | 8 |

Close Help

Loading Hardware Resource failed.

FIGURE 5-1 Hardware Summary for a Sun Fire 15K/12K Platform

The Sun Fire 15K/12K Platform Information table shown in FIGURE 5-1 includes these properties (TABLE 5-2):

TABLE 5-2 Sun Fire 15K/12K 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 for Sun Fire 15K platform (up to 18) or Sun Fire 12K platform (up to 9) |

The Sun Fire 15K/12K Platform Hardware Resources table shown in FIGURE 5-1 includes these properties (TABLE 5-3):

TABLE 5-3 Sun Fire 15K/12K 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/12K Platform

To find a photo-realistic view of the Sun Fire 15K/12K platform (FIGURE 5-2):

1. **Open the Sun Fire 15K/12K 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/12K platform from the front. For more information about navigating the Physical Views, refer to the *Sun Management Center 3.5 User's Guide*.

Note – The Physical View of the Sun Fire 15K/12K platform shows *only* processors that are known to be present. The Physical View of the Sun Fire 15K/12K 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/12K Platform Physical View—Front

5. Click on one of the CPU boards in the top slots of the Sun Fire 15K/12K platform to display a Physical View of the top of a CPU board (FIGURE 5-3).

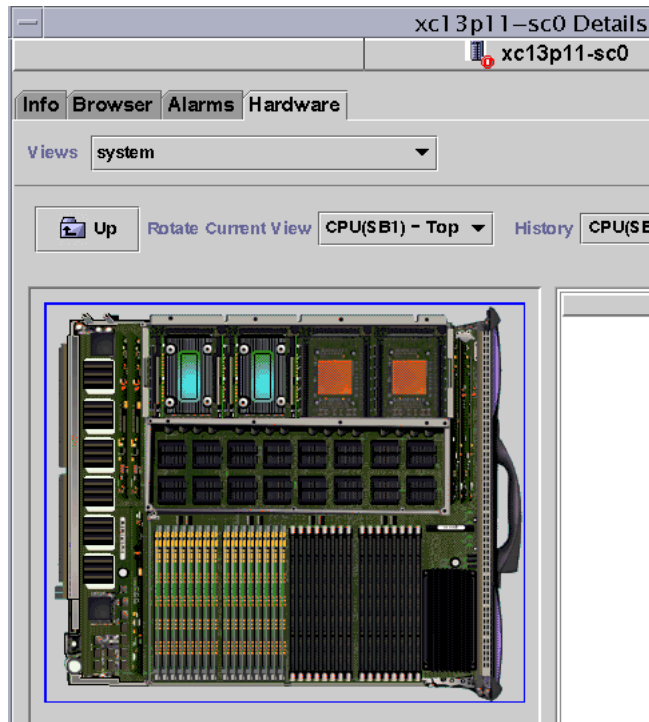


FIGURE 5-3 Top of CPU Board in Platform Physical View

▼ To Find the Logical View of the Sun Fire 15K/12K Platform

The platform Logical View shows the hierarchy of all boards and components attached to the entire Sun Fire 15K/12K system. To find a hierarchical view of a Sun Fire 15K/12K platform:

1. Open the Sun Fire 15K/12K 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.

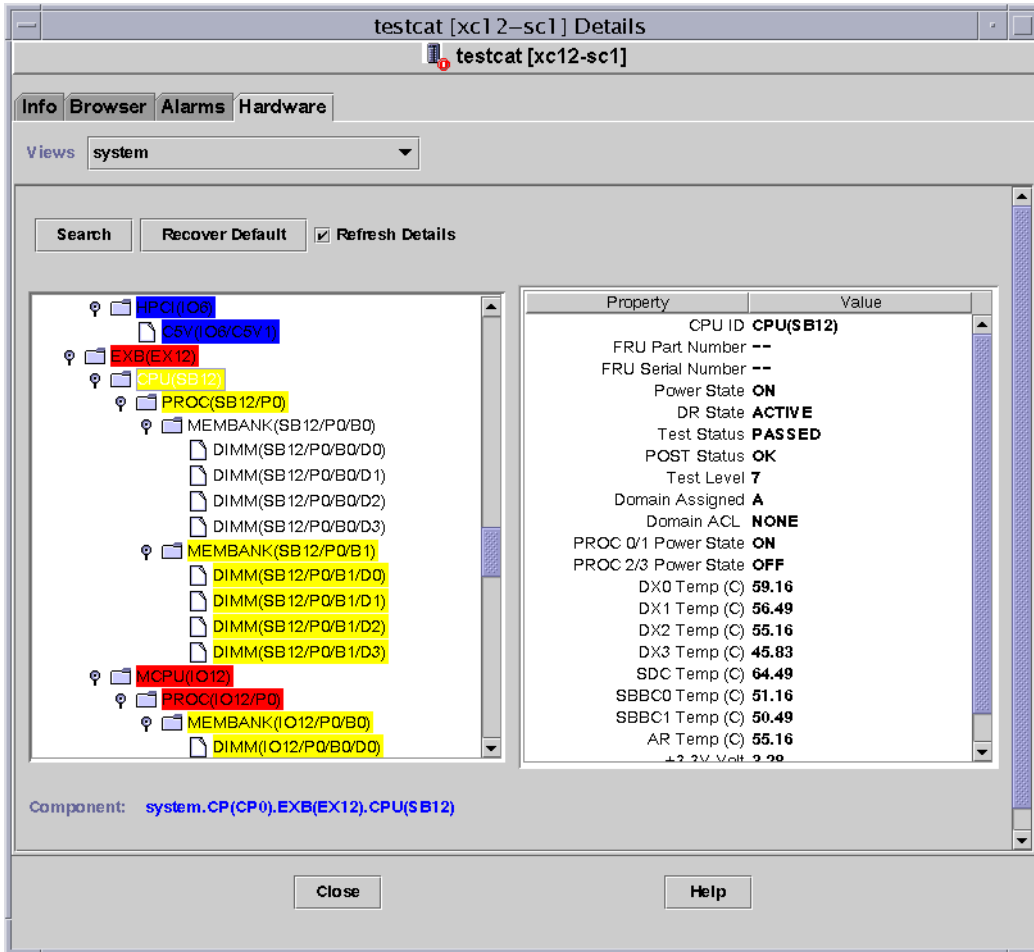


FIGURE 5-4 Sun Fire 15K/12K Platform Logical View

For more information about navigating Logical Views, refer to the *Sun Management Center 3.5 User's Guide*

Sun Fire 15K/12K Domain Details Window

The Sun Management Center Details window for a Sun Fire 15K/12K domain displays information about that domain's hardware. The Sun Fire 15K/12K domain Details window resembles the host Details window described in Chapter 13 of the *Sun Management Center 3.5 User's Guide*.

Only the boards and components allocated to the Sun Fire 15K/12K domain are included in this information. Information about the hardware configuration of the entire platform can be viewed from the Sun Fire 15K/12K platform Details window. See "Sun Fire 15K/12K Platform Details Window" on page 93 for more information.

The domain Details window includes the following tabs, which are explained in Chapter 13 of the *Sun Management Center 3.5 User's Guide*:

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

Note – If your Sun Fire 15K/12K domain Details window does not include the preceding six tabs, Sun Fire 15K/12K support has not been installed correctly on your Sun Management Center server machine. Confirm that the add-on Sun Fire 15K/12K components have been installed and set up correctly, and that the Sun Management Center server process has been restarted following installation.

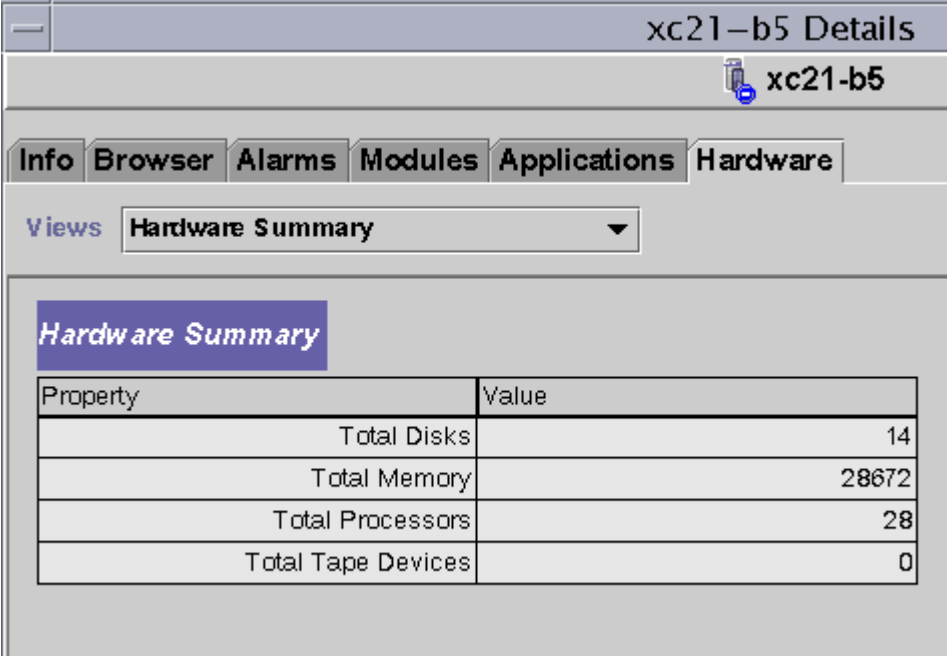
This section describes using the Hardware tab to display information provided by the Sun Fire 15K/12K Domain Config Reader module. This module provides up-to-date information about system boards and components that reside on those boards including:

- Processors
- Memory
- Attached I/O devices

▼ To Find the Hardware Summary for a Sun Fire 15K/12K Domain

To find a summary of a Sun Fire 15K/12K domain's hardware resources (FIGURE 5-5):

1. Open the Sun Fire 15K/12K domain Details window.
2. Click on the Hardware tab.
3. In the Views pull-down menu, select Hardware Summary.



The screenshot shows a window titled "xc21-b5 Details". Below the title bar, there is a sub-header "xc21-b5" with a small icon. A navigation bar contains tabs for "Info", "Browser", "Alarms", "Modules", "Applications", and "Hardware". The "Hardware" tab is selected. Below the tabs, there is a "Views" pull-down menu with "Hardware Summary" selected. The main content area displays a "Hardware Summary" section with a table of hardware resources.

| Property | Value |
|--------------------|-------|
| Total Disks | 14 |
| Total Memory | 28672 |
| Total Processors | 28 |
| Total Tape Devices | 0 |

FIGURE 5-5 Hardware Summary for a Sun Fire 15K/12K Domain

The Sun Fire 15K/12K domain information shown in FIGURE 5-5 includes these properties (TABLE 5-4):

TABLE 5-4 Sun Fire 15K/12K 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/12K Domain

In the Physical View of a Sun Fire 15K/12K 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/12K domain.

To find a photo-realistic view of system board information for a Sun Fire 15K/12K domain (FIGURE 5-6):

1. **Open the Sun Fire 15K/12K 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/12K platform. For more information about navigating Physical Views, refer to the *Sun Management Center 3.5 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.

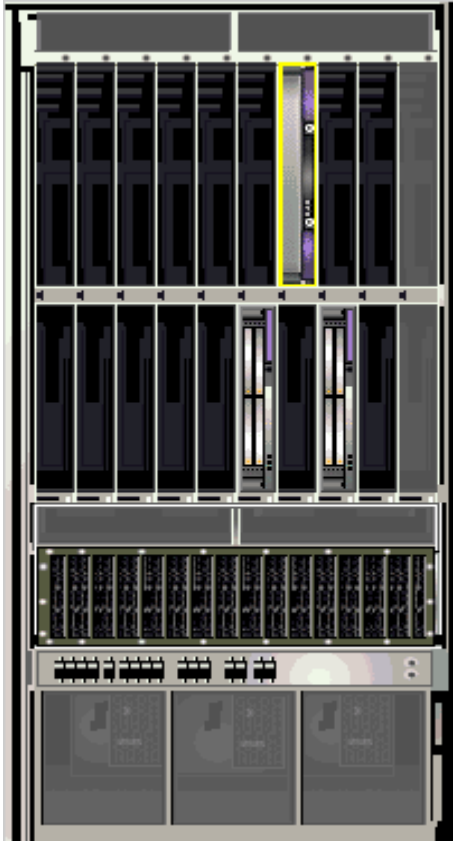


FIGURE 5-6 Sun Fire 15K/12K Domain Physical View—Front

5. Click on one of the HPCI boards in the bottom slots of the Sun Fire 15K/12K domain to display a Physical View of the top of a HPCI board (FIGURE 5-7).

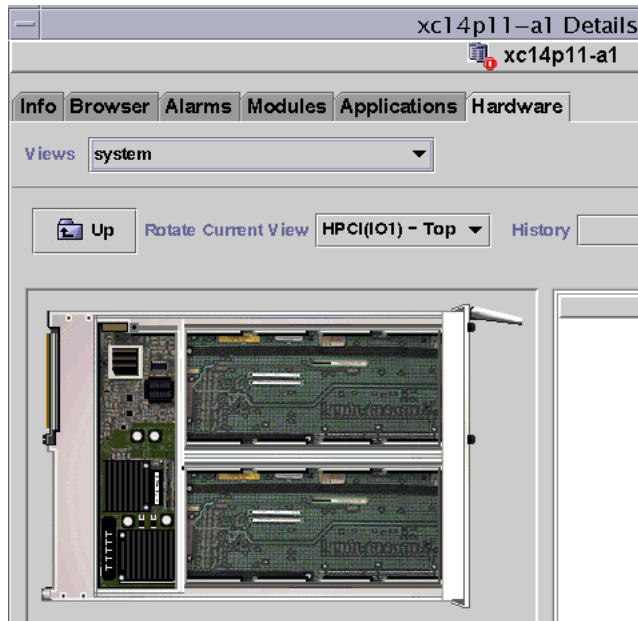


FIGURE 5-7 Top of HPCI Board in Domain Physical View

▼ To Find the Logical View of a Sun Fire 15K/12K Domain

The domain Logical View shows the hierarchy of all boards and components attached to a Sun Fire 15K/12K domain. To find the hierarchical view of a Sun Fire 15K/12K domain:

1. Open the Sun Fire 15K/12K 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.

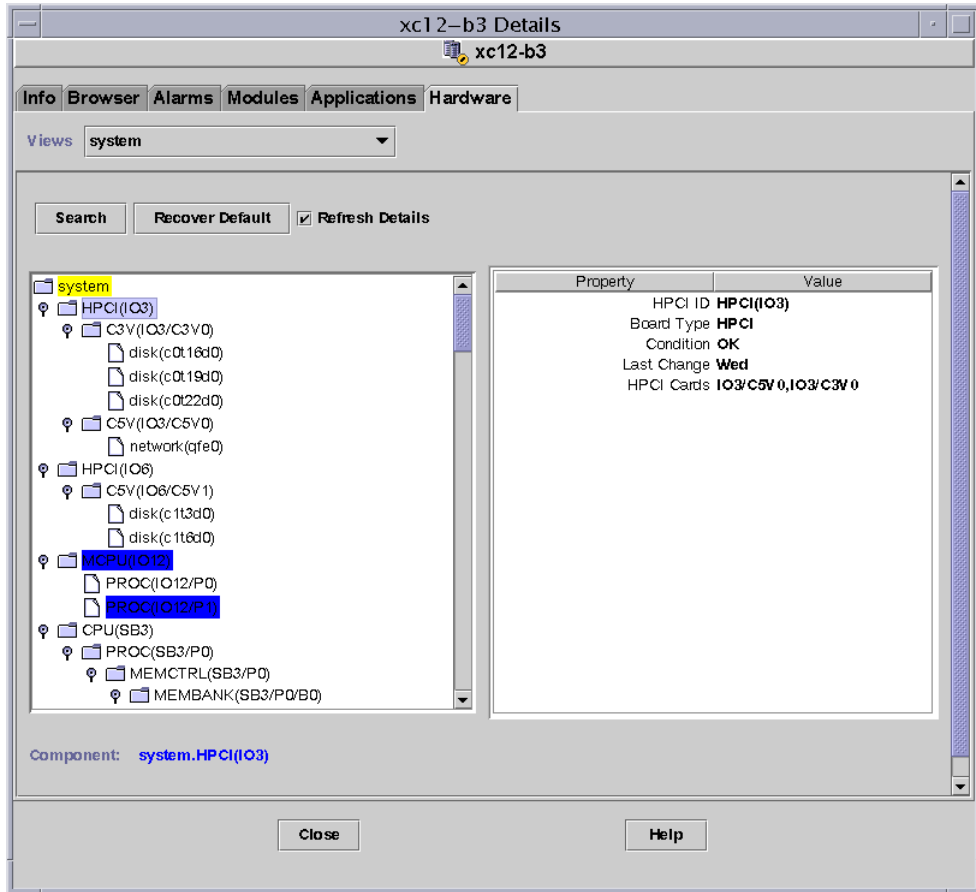


FIGURE 5-8 Sun Fire 15K/12K Domain Logical View

For more information about navigating Logical Views, refer to the *Sun Management Center 3.5 User's Guide*

Sun Fire 15K/12K SC Details Window

The Sun Management Center Details window for a Sun Fire 15K/12K SC displays information about the system controller's hardware. The Sun Fire 15K/12K SC Details window resembles the host Details window described in the *Sun Management Center 3.5 User's Guide*.

Only boards and components allocated to the Sun Fire 15K/12K system controller are included in this information. Information about the hardware configuration of the entire platform can be viewed from the Sun Fire 15K/12K platform Details window. See “Sun Fire 15K/12K Platform Details Window” on page 93 for more information.

The SC Details window includes the following tabs, which are explained in the *Sun Management Center 3.5 User's Guide*:

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

Note – If your Sun Fire 15K/12K SC Details window does not include each of the preceding six tabs, the Sun Fire 15K/12K support has not been installed correctly on your Sun Management Center server machine. Confirm that the add-on Sun Fire 15K/12K 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/12K 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/12K System Controller

To find a summary of the hardware resources for a Sun Fire 15K/12K system controller (FIGURE 5-9):

1. **Open the Sun Fire 15K/12K SC Details window.**
2. **Click on the Hardware tab.**
3. **In the Views pull-down menu, select Hardware Summary.**

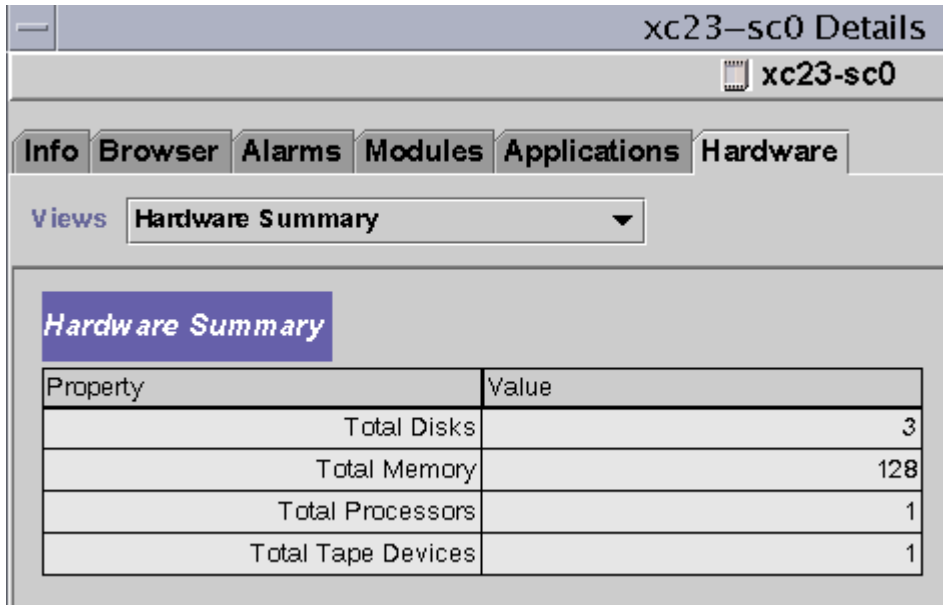


FIGURE 5-9 Hardware Summary for a Sun Fire 15K/12K System Controller

The Sun Fire 15K/12K SC information shown in FIGURE 5-9 includes these properties (TABLE 5-5):

TABLE 5-5 Sun Fire 15K/12K 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/12K System Controller

The system controller is in the upper-right corner of the Sun Fire 15K/12K platform. To find a photo-realistic view of a Sun Fire 15K/12K system controller (FIGURE 5-10):

1. Open the Sun Fire 15K/12K 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/12K System Controller Physical View—Front

5. Click on the system controller in the upper right of the Sun Fire 15K/12K 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 the *Sun Management Center 3.5 User's Guide*.

▼ To Find the Logical View of a Sun Fire 15K/12K 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/12K system controller (FIGURE 5-12):

1. **Open the Sun Fire 15K/12K 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.**

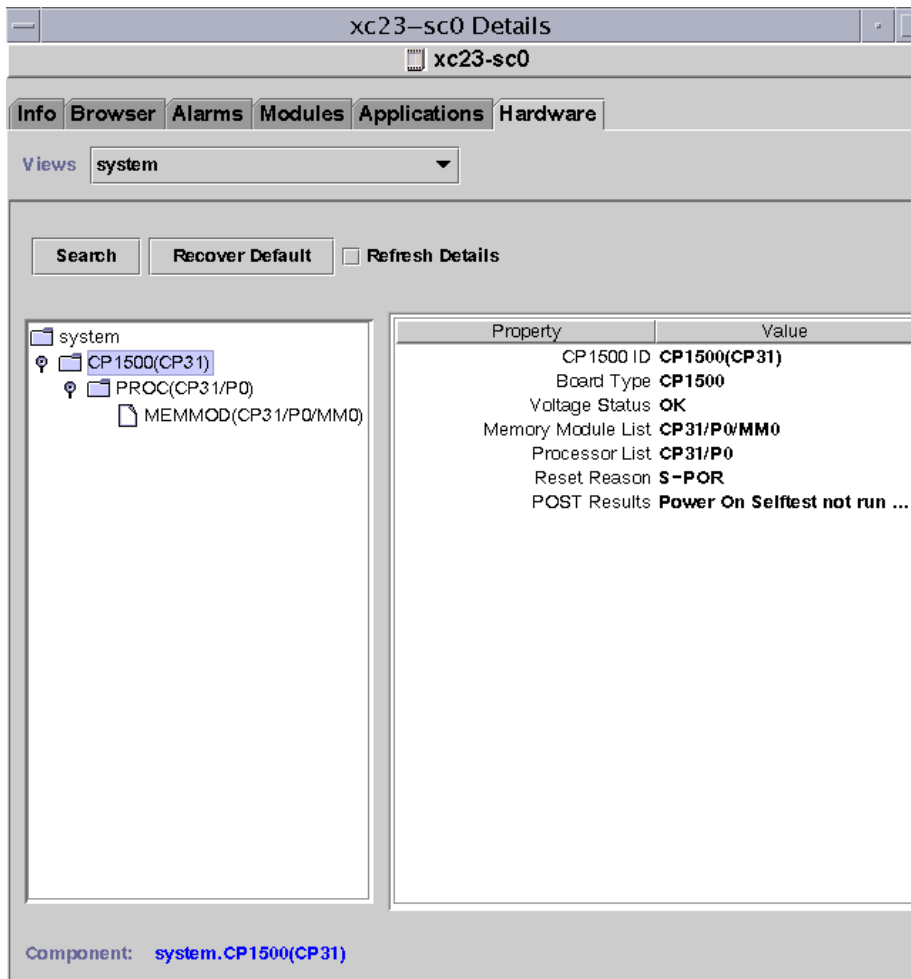


FIGURE 5-12 Sun Fire 15K/12K System Controller Logical View

For more information about navigating Logical Views, refer to the *Sun Management Center 3.5 User's Guide*

Sun Fire 15K/12K Agent Modules

This chapter describes how to open each of the Sun Fire 15K/12K system-specific agent modules and describes the tables, properties, and alarm rules for each module.

TABLE 6-1 shows each Sun Fire 15K/12K 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 the *Sun Management Center 3.5 User's Guide*.

TABLE 6-1 Summary of Sun Fire 15K/12K Agent Modules

| Module | Description | Where Loaded ¹ | Loaded by Default? | Loadable? | Unloadable? |
|------------------------|--|---------------------------|--------------------|-----------|-------------|
| Platform Config Reader | Provides information about the hardware configuration for the entire Sun Fire 15K/12K platform | Platform Agent on SC | yes | no | no |
| Domain Config Reader | Provides the hardware configuration for a Sun Fire 15K/12K domain | Domain | yes | yes | yes |
| SC Config Reader | Provides the hardware configuration for Sun Fire 15K/12K system controllers (SCs) | Base Agent on SC | yes | yes | yes |
| SC Status | Determines whether a Sun Fire 15K/12K system controller is the main or spare system controller | Base Agent on SC | yes | yes | yes |
| SC Monitoring | Monitors the System Management Services (SMS) daemons on the active Sun Fire 15K/12K system controller | Platform Agent on SC | yes | yes | yes |

TABLE 6-1 Summary of Sun Fire 15K/12K Agent Modules (Continued)

| Module | Description | Where Loaded ¹ | 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 | Platform Agent on SC | no | yes | yes |
| Dynamic Reconfiguration | Enables an administrator to perform dynamic reconfiguration of boards on one Sun Fire 15K/12K domain at a time from the domain | Domain | no | yes | yes |

¹ Pay particular attention to which modules are loaded on which agents on the SC. If you do not load the correct modules on the correct agent on the SC, you will get a core dump.

Appendix D of the *Sun Management Center 3.5 User's Guide* describes the base 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/12K 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 9 of the *Sun Management Center 3.5 User's Guide* for more information about graphing properties.

Sun Fire 15K/12K Module Alarm Rules

Each module section contained in the Sun Fire 15K/12K 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 151
- “Domain Config Reader Alarm Rules” on page 179
- “SC Config Reader Alarm Rules” on page 190
- “SC Monitoring Alarm Rule—Process Down Rule (rDownProc)” on page 205

Appendix E of the *Sun Management Center 3.5 User's Guide* lists the Sun Management Center alarm rules for base 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/12K platform. During Sun Fire 15K/12K 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 15K/12K)—as it is displayed in the platform Details window under the Browser tab and Hardware icon.

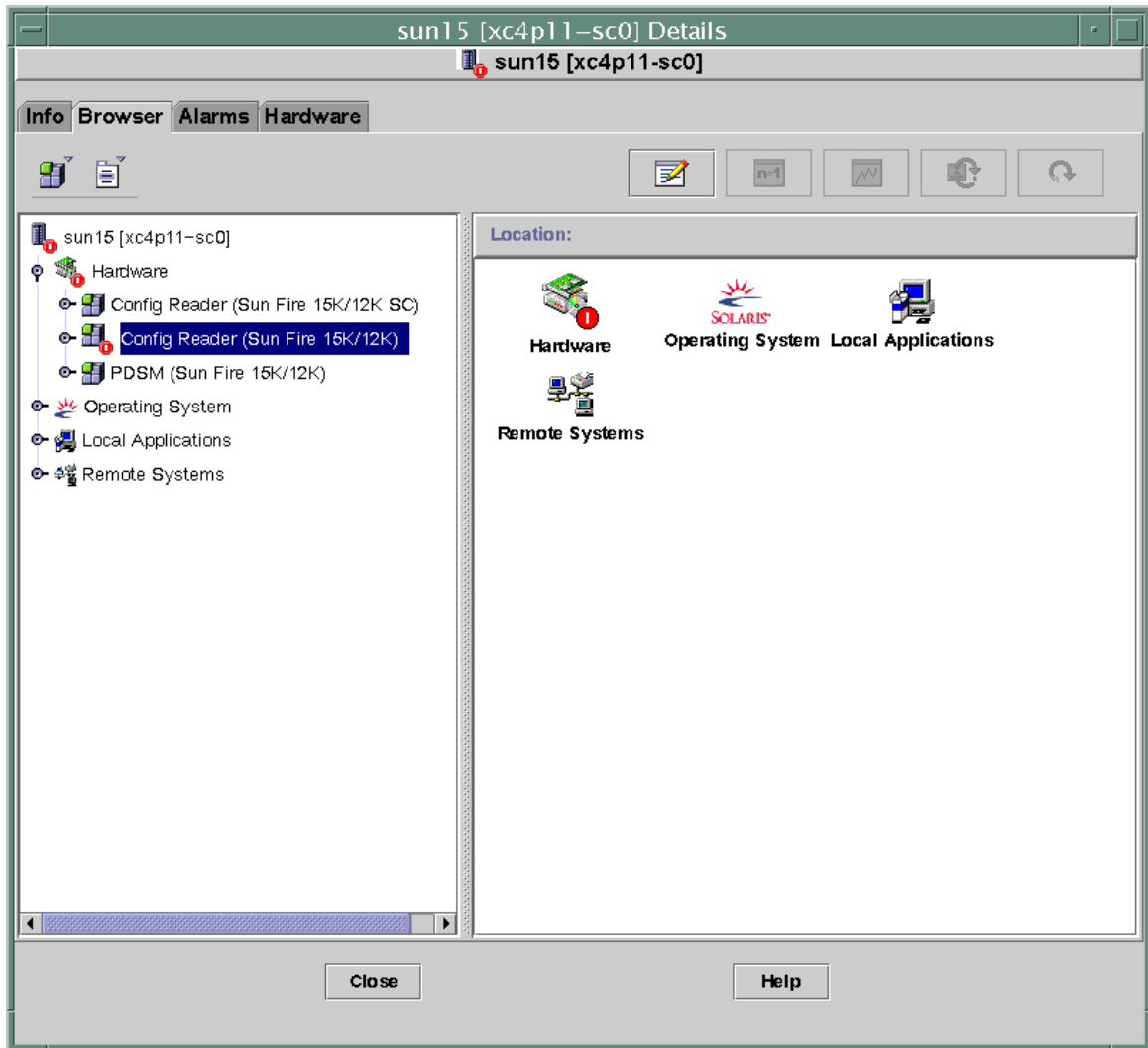


FIGURE 6-1 Platform Config Reader Module

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/12K 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/12K Platform Config Reader system (TABLE 6-3):

TABLE 6-3 Sun Fire 15K/12K 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/12K platform during SMS software configuration |
| Chassis Host ID | | Chassis host identifier |
| Failover State | scFoStat | Current failover state: ACTIVATING, ACTIVE, DISABLED, or FAILED |
| Admin Group | | Administrative group identifier, such as platadm |
| Operator Group | | Operator group identifier, such as platoper |
| Service Group | | Service group identifier, such as platsvc |

TABLE 6-3 Sun Fire 15K/12K Platform Config Reader System (*Continued*)

| Property | Rule (if any) | Description |
|--|----------------------|---|
| 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 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 for Sun Fire 15K platform (1–18) or Sun Fire 12K platform (1–9) |
| Number of Expander Boards | | Number of expander boards for Sun Fire 15K platform (1–18) or Sun Fire 12K platform (1–9) |
| 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/12K Platform Config Reader Sun Fireplane interconnect—also known as the centerplane (TABLE 6-4):

TABLE 6-4 Sun Fire 15K/12K 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/12K 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/12K Platform Config Reader expander board (TABLE 6-5).

TABLE 6-5 Sun Fire 15K/12K 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 | scOBURu1 | Status of power supply 0: OK, BAD, or UNKNOWN |
| PS1 State | scOBURu1 | 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 |

TABLE 6-5 Sun Fire 15K/12K Platform Config Reader Expander Board (Continued)

| 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/12K Platform Config Reader centerplane support board (TABLE 6-6).

TABLE 6-6 Sun Fire 15K/12K 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/12K 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 | scOBURu1 | Status of power supply 0: OK, BAD, or UNKNOWN |
| PS1 State | scOBURu1 | 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/12K Platform Config Reader system controller (TABLE 6-7).

TABLE 6-7 Sun Fire 15K/12K 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/12K 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 | scBCurr | (graphable) Current level 0 for the +5 VDC power |
| +5V Current 1 | scBCurr | (graphable) Current level 1 for the +5 VDC power |
| +3.3V Current 0 | scBCurr | (graphable) Current level 0 for the +3.3 VDC power |
| +3.3V Current 1 | scBCurr | (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/12K Platform Config Reader system controller peripheral (TABLE 6-8).

TABLE 6-8 Sun Fire 15K/12K Platform Config Reader System Controller Peripheral

| Property | Rule (if any) | Description |
|--------------------------|-----------------------|--|
| SCPER ID | | System controller peripheral identifier containing FRU ID(Slot ID): <code>SCPER(SCPER0)</code> or <code>SCPER(SCPER1)</code> |
| 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 | <code>scBPower</code> | 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) | <code>scBTemp</code> | (graphable) Average ambient temperature for the three probe points |
| +12V Volt | <code>scBVolt</code> | (graphable) Voltage level for the board +12 VDC power |
| +5.0V Volt | <code>scBVolt</code> | (graphable) Voltage level for the board +5 VDC power |
| +3.3HK Volt | <code>scBVolt</code> | (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/12K Platform Config Reader fan tray (TABLE 6-9):

TABLE 6-9 Sun Fire 15K/12K 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/12K Platform Config Reader power supply (TABLE 6-10):

TABLE 6-10 Sun Fire 15K/12K 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/12K 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/12K Platform Config Reader CPU board (TABLE 6-11):

TABLE 6-11 Sun Fire 15K/12K Platform Config Reader CPU Board

| Property | Rule (if any) | Description |
|-----------------------|---------------|--|
| CPU ID | | CPU board identifier containing FRU ID(Slot ID): CPU (SBx), 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/12K 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-OBE, 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 |
| COD Enable | | Indicates whether board is a COD board (COD), not a COD board (NONCOD), or unable to be determined (UNKNOWN) if SMS is in the initialization process. |
| 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/12K Platform Config Reader hot-swap PCI (HPCI) board (TABLE 6-12):

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

| Property | Rule (if any) | Description |
|-----------------------|---------------|---|
| HPCI ID | | HPCI board identifier containing FRU ID(Slot ID): HPCI (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 |
| 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/12K 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 | scBCurr | (graphable) Voltage level for the +1.5 VDC converter 0 |
| +1.5V Converter 1 | scBCurr | (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 | scBCurr | (graphable) Current level 0 for the +5 VDC power |
| +5V Current 1 | scBCurr | (graphable) Current level 1 for the +5 VDC power |
| +3.3V Current 0 | scBCurr | (graphable) Current level 0 for the +3.3 VDC power |
| +3.3V Current 1 | scBCurr | (graphable) Current level 1 for the +3.3 VDC power |

HPCI+ Board

The following table provides a brief description of the properties for a Sun Fire 15K/12K Platform Config Reader hot-swap PCI plus (HPCI+) board (TABLE 6-13):

TABLE 6-13 Sun Fire 15K/12K Platform Config Reader HPCI+ Board

| Property | Rule (if any) | Description |
|-----------------------|---------------|--|
| HPCI+ ID | | HPCI+ board identifier containing FRU ID(Slot ID): HPCI+ (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 |
| 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 6-13 Sun Fire 15K/12K Platform Config Reader HPCI+ Board *(Continued)*

| Property | Rule (if any) | Description |
|-----------------|----------------------|---|
| PS0 Temp0 (C) | scBTemp | (graphable) Temperature 0 of power supply 0 |
| PS0 Temp1 (C) | scBTemp | (graphable) Temperature 1 of power supply 0 |
| PS0 Temp2 (C) | scBTemp | (graphable) Temperature 2 of power supply 0 |
| PS1 Temp0 (C) | scBTemp | (graphable) Temperature 0 of power supply 1 |
| PS1 Temp1 (C) | scBTemp | (graphable) Temperature 1 of power supply 1 |
| PS1 Temp2 (C) | scBTemp | (graphable) Temperature 2 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 PS0 | scBVolt | (graphable) Voltage level for the +12 VDC on power supply 0 |
| +12V Volt PS1 | scBVolt | (graphable) Voltage level for the +12 VDC on power supply 1 |
| -12V Volt PS0 | scBVolt | (graphable) Voltage level for the -12 VDC on power supply 0 |
| -12V Volt PS1 | scBVolt | (graphable) Voltage level for the -12 VDC on power supply 1 |
| -12V Volt PS2 | scBVolt | (graphable) Voltage level for the -12 VDC on power supply 2 |
| +3.3V Volt PS0 | scBVolt | (graphable) Voltage level for the +3.3 VDC on power supply 0 |
| +3.3V Volt PS1 | scBVolt | (graphable) Voltage level for the +3.3 VDC on power supply 1 |
| +3.3HK Volt PS0 | scBVolt | (graphable) Voltage level for the +3.3 VDC housekeeping on power supply 0 |

TABLE 6-13 Sun Fire 15K/12K Platform Config Reader HPCI+ Board (Continued)

| Property | Rule (if any) | Description |
|-----------------------|---------------|---|
| +3.3HK Volt PS1 | scBVolt | (graphable) Voltage level for the +3.3 VDC housekeeping on power supply 1 |
| +1.5V Volt PS0 | scBVolt | (graphable) Voltage level for the +1.5 VDC on power supply 0 |
| +1.5V Volt PS1 | scBVolt | (graphable) Voltage level for the +1.5 VDC on power supply 1 |
| +5.0 Volt PS0 | scBVolt | (graphable) Voltage level for the +5 VDC on power supply 0 |
| +5.0 Volt PS1 | scBVolt | (graphable) Voltage level for the +5 VDC on power supply 1 |
| +1.5 or +2.5 Volt PS0 | scBVolt | (graphable) Voltage level for the +1.5 or +2.5 VDC on power supply 0 |
| +1.5 or +2.5 Volt PS1 | scBVolt | (graphable) Voltage level for the +1.5 or +2.5 VDC on power supply 1 |
| +12 Volt PS0 OK | scOkFail | Power supply 0 to +12 Volt is OK or FAIL |
| +12 Volt PS1 OK | scOkFail | Power supply 1 to +12 Volt is OK or FAIL |
| -12 Volt PS0 OK | scOkFail | Power supply 0 to -12 Volt is OK or FAIL |
| -12 Volt PS1 OK | scOkFail | Power supply 1 to -12 Volt is OK or FAIL |
| +5 Volt PS0 OK | scOkFail | Power supply 0 to +5 Volt is OK or FAIL |
| +5 Volt PS1 OK | scOkFail | Power supply 1 to +5 Volt is OK or FAIL |
| +3.3 Volt PS0 OK | scOkFail | Power supply 0 to +3.3 Volt is OK or FAIL |
| +3.3 Volt PS1 OK | scOkFail | Power supply 1 to +3.3 Volt is OK or FAIL |
| +1-2.5 Volt PS0 OK | scOkFail | Power supply 0 to +1-2.5 Volt is OK or FAIL |
| +1-2.5 Volt PS1 OK | scOkFail | Power supply 1 to +1-2.5 Volt is OK or FAIL |
| +1.5 Volt PS0 OK | scOkFail | Power supply 0 to +1.5 Volt is OK or FAIL |
| +1.5 Volt PS1 OK | scOkFail | Power supply 1 to +1.5 Volt is OK or FAIL |
| +3.3HK Volt PS0 OK | scOkFail | Power supply 0 to +3.3HK Volt is OK or FAIL |
| +3.3HK Volt PS1 OK | scOkFail | Power supply 1 to +3.3HK Volt is OK or FAIL |
| PS0 OK | scOkFail | Power supply 0 is OK or FAIL |
| PS1 OK | scOkFail | Power supply 1 is OK or FAIL |

WPCI Board

The following table provides a brief description of the properties for a Sun Fire 15K/12K Platform Config Reader Sun Fire Link PCI (WPCI) board (TABLE 6-14). Refer to the *Sun Fire Link Fabric Administrator's Guide* for more information about Sun Fire Link systems.

TABLE 6-14 Sun Fire 15K/12K 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 6-14 Sun Fire 15K/12K 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 6-14 Sun Fire 15K/12K 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/12K Platform Config Reader MaxCPU board (TABLE 6-15):

TABLE 6-15 Sun Fire 15K/12K Platform 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 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 6-15 Sun Fire 15K/12K 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 |
| COD Enable | | Indicates whether board is a COD board (COD), not a COD board (NONCOD), or unable to be determined (UNKNOWN) if SMS is in the initialization process. |
| 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 |

TABLE 6-15 Sun Fire 15K/12K Platform Config Reader MaxCPU Board (Continued)

| Property | Rule (if any) | Description |
|----------------------|---------------|---|
| +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 |
| 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/12K Platform Config Reader hot-swap PCI (HPCI) cassette, which can contain two HPCI cards (TABLE 6-16).

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 6-16 Sun Fire 15K/12K 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 <i>x</i> is the number of the centerplane slot containing the card (0–17), <i>y</i> is the card voltage (3 or 5), and <i>z</i> 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 | scHPCId | 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/12K Platform Config Reader parallel optical link (Paroli) card (TABLE 6-17). Refer to the *Sun Fire Link Fabric Administrator's Guide* 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 6-17 Sun Fire 15K/12K Platform Config Reader Paroli Card

| Property | Rule (if any) | Description |
|-----------------------|----------------------|--|
| Paroli ID | | Paroli card identifier containing FRU ID(Slot ID): <code>PARS (IOx/PARy)</code> , where <i>x</i> is the number of the centerplane slot containing the card (0–17), and <i>y</i> 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 | <code>scOnOff</code> | Indicates whether the Paroli card power is ON or OFF |
| +1.5V Volt | <code>scBVolt</code> | (graphable) Voltage level for the +1.5 VDC power |
| +3.3V Volt | <code>scBVolt</code> | (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/12K Platform Config Reader processor (TABLE 6-18).

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

TABLE 6-18 Sun Fire 15K/12K 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, REDLISTED, or NO_LICENSE |
| 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/12K Platform Config Reader memory bank (TABLE 6-19).

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

TABLE 6-19 Sun Fire 15K/12K 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 <i>x</i> is the number of the centerplane slot containing the board (0–17), <i>y</i> is the processor number (0–3), and <i>z</i> 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/12K Platform Config Reader Dual Inline Memory Module (DIMM) (TABLE 6-20).

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

TABLE 6-20 Sun Fire 15K/12K Platform Config Reader DIMM

| Property | Rule (if any) | Description |
|-----------------------|---------------|---|
| DIMM ID | | DIMM identifier containing FRU ID(Slot ID): DIMM(SBw/Px/By/Dz), where <i>w</i> is the number of the centerplane slot containing the board (0–17), <i>x</i> is the processor number (0–3), <i>y</i> is the physical memory bank number (0 or 1), and <i>z</i> 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/12K Platform Config Reader domain (TABLE 6-21):

TABLE 6-21 Sun Fire 15K/12K Platform Config Reader Domain

| Property | Rule (if any) | Description |
|------------------------|---------------|--|
| DOMAIN ID | | Sun Fire 15K/12K domain identifier: A-R |
| Status | scDmnSt | Domain status as output from the SMS <code>showplatform</code> command, such as <code>Running Solaris</code> , <code>Running Domain POST</code> , or <code>Powered Off</code> . Refer to <code>showplatform(1M)</code> in the <i>System Management Services SMS 1.3 Reference Manual</i> 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 <code>Solaris 2.8</code> |
| OS Type | | Type of operating environment running in this domain, such as <code>Solaris</code> , <code>Trusted</code> |
| Domain Tag | | Tag name of the domain, such as <code>domainA</code> through <code>domainR</code> |
| 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 <code>NONE</code> |
| Slot1 Available Boards | | Comma-separated list of slot 1 boards available to this domain (0-17) or <code>NONE</code> |
| Slot0 Assigned Boards | | Comma-separated list of slot 0 boards assigned to this domain (0-17) or <code>NONE</code> |
| Slot1 Assigned Boards | | Comma-separated list of slot 1 boards assigned to this domain (0-17) or <code>NONE</code> |
| Slot0 Active Boards | | Comma-separated list of slot 0 boards active on this domain (0-17) or <code>NONE</code> |

TABLE 6-21 Sun Fire 15K/12K 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 (IOx), 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 | scBusCfg | 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 | scBusCfg | 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 | scBusCfg | 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 (IOx), where x is the number of the centerplane slot containing the board (0-17) |
| Admin Group | | Administrative group identifier for the domain, such as dmnxadm, where x is a-r |
| Reconfigure Group | | Reconfigure group identifier for the domain, such as dmnxrcfg, where x is a-r |
| Creation Time | | Date and time the domain was created or UNKNOWN |

Unknown Component

The following table indicates that there is a component that the Sun Fire 15K/12K Platform Config Reader does not recognize in a specific slot (TABLE 6-22).

TABLE 6-22 Sun Fire 15K/12K Platform Config Reader Unknown Component

Slot ID

Slot identifier of unknown system board (`EXBx.SLOTy`), where x is the expander board number (0-17) and y is the slot number (0-1).

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/12K 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/12K 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/12K Platform Config Reader Discovery Object table (TABLE 6-23):

TABLE 6-23 Sun Fire 15K/12K 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 6-24). SMS software will take appropriate automatic system recovery (ASR) actions. Refer to the *System Management Services (SMS) 1.3 Administrator Guide*, Chapter 9, Section “Environmental Events”.

TABLE 6-24 Sun Fire 15K/12K 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 <i>not</i> 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 6-25). A caution alarm is for information only and is not an error.

TABLE 6-25 Sun Fire 15K/12K 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 6-26. Temperature alarms are *not* generated when the board is powered off.

TABLE 6-26 Sun Fire 15K/12K 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 *System Management Services (SMS) 1.3 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 6-27. The voltage alarms are *not* generated when the board is powered off.

TABLE 6-27 Sun Fire 15K/12K 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 *System Management Services (SMS) 1.3 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 6-28). The domain stop and record stop counts are set to zero when the platform agent is restarted or when the alarm is acknowledged.

TABLE 6-28 Sun Fire 15K/12K Platform Config Reader Domain Stop and Record Stop 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/SUNWSMS/adm/[A-R]/dump`. Refer to the *System Management Services (SMS) 1.3 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/SUNWSMS/adm/[A-R]/dump`. Refer to the *System Management Services (SMS) 1.3 Administrator Guide*, Chapter 9, Section “Hardware Error Events”.

HPCI Cassette Rule (`scHPCId`)

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 6-29). Alarms are *not* generated if the HPCI cassette is powered off.

TABLE 6-29 Sun Fire 15K/12K 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 6-30).

TABLE 6-30 Sun Fire 15K/12K Platform Config Reader Failover State Rule

| Failover State | Alarm Level | Meaning |
|----------------|-------------|---|
| ACTIVATING | | Failover is starting to become enabled. |

TABLE 6-30 Sun Fire 15K/12K Platform Config Reader Failover State Rule (*Continued*)

| 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 (`sCOBURu1`)

The OK/BAD/UNKNOWN state rule generates a critical or caution alarm when a component is in a BAD or UNKNOWN state (TABLE 6-31). Alarms are *not* generated if the containing component is powered off.

TABLE 6-31 Sun Fire 15K/12K 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 6-32). Alarms are *not* generated if the containing component is either powered off or in a FAIL state.

TABLE 6-32 Sun Fire 15K/12K 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 6-33). Alarms are not generated if the containing component is either powered off or in the FAIL state.

TABLE 6-33 Sun Fire 15K/12K 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 tray 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 6-34).

TABLE 6-34 Sun Fire 15K/12K 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. |
| NO_LICENSE | Caution | Component does not have a COD license. |
| 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 *System Management Services (SMS) 1.3 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 6-35). The caution alarm is for information only and is not an error.

TABLE 6-35 Sun Fire 15K/12K 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 6-36).

TABLE 6-36 Sun Fire 15K/12K 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 6-37). The caution alarm is for information only and is not an error.

TABLE 6-37 Sun Fire 15K/12K 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 Status Alarm Rule (scDmnSt)

The domain status alarm rule generates an alarm depending on the domain's status during domain boot, normal operations, and error recovery (TABLE 6-38).

TABLE 6-38 Sun Fire 15K/12K Platform Config Reader Domain Status Alarm Rule

| Domain Status | Alarm Level | Meaning |
|-------------------|-------------|--|
| Booting OBP | | OpenBoot PROM for the domain is booting. |
| Booting Solaris | | Domain is booting Solaris software. |
| Keyswitch Standby | | Keyswitch for the domain is in STANDBY position. |

TABLE 6-38 Sun Fire 15K/12K Platform Config Reader Domain Status Alarm Rule
(Continued)

| Domain Status | Alarm Level | Meaning |
|-----------------------------|-------------|---|
| Loading OBP | | OpenBoot PROM for the domain is being loaded. |
| Loading Solaris | | OpenBoot PROM is loading Solaris software. |
| Powered Off | | Domain is powered off. |
| Running Domain POST | | Domain power-on self-test is running. |
| Running OBP | | OpenBoot PROM for the domain is running. |
| Running Solaris | | Solaris software is running on the domain. |
| Solaris Quiesce In-progress | | Solaris software quiesce is in progress. |
| Solaris Quiesced | | Solaris software has quiesced. |
| Debugging Solaris | Caution | Debugging Solaris software; this is not a hung condition. |
| Domain Exited OBP | Caution | Domain OpenBoot PROM exited. |
| Exited OBP | Caution | OpenBoot PROM has exited. |
| In OBP Callback | Caution | Domain has been halted and has returned to the OpenBoot PROM. |
| OBP Debugging | Caution | OpenBoot PROM is being used as a debugger. |
| OBP in sync Callback to OS | Caution | OpenBoot PROM is in sync callback to the Solaris software. |
| Solaris Halt | Caution | Solaris software is halted. |
| Solaris Halted, in OBP | Caution | Solaris software is halted and the domain is in OpenBoot PROM. |
| Solaris Resume In-progress | Caution | Solaris software resume is in progress. |
| Domain Down | Alert | Domain is down, and <code>setkeyswitch</code> is in the ON, DIAG, or SECURE position. |
| In Recovery | Alert | Domain is in the midst of an automatic system recovery. |
| Solaris Exited | Alert | Solaris software has exited. |
| Solaris Panic | Alert | Solaris software has panicked; panic flow has started. |
| Solaris Panic Continue | Alert | Exited debugger mode and continuing panic flow. |
| Solaris Panic Debug | Alert | Solaris software panicked, and is entering debugger mode. |

TABLE 6-38 Sun Fire 15K/12K Platform Config Reader Domain Status Alarm Rule
(Continued)

| Domain Status | Alarm Level | Meaning |
|---------------------------|-------------|--|
| Solaris Panic Dump | Alert | Panic dump has started. |
| Solaris Panic Exit | Alert | Solaris software exited as a result of a panic. |
| Booting Solaris Failed | Critical | OpenBoot PROM running; boot attempt failed |
| Environmental Domain Halt | Critical | Domain was shut down due to an environmental emergency. |
| Environmental Emergency | Critical | Environmental emergency has been detected. |
| In OBP Error Reset | Critical | Domain is in Open Boot PROM due to an error reset condition. |
| Loading Solaris Failed | Critical | OpenBoot PROM running; loading attempt failed. |
| OBP Failed | Critical | Domain OpenBoot PROM failed. |
| Unknown | Critical | Domain state could not be determined, or for Ethernet addresses, it indicates the domain idprom image file does not exist. Contact your Sun service personnel. |

Actions: When an error occurs and an alarm is generated, SMS software takes appropriate automatic system recovery (ASR) actions. However, sometimes the domain hardware does not meet the requirements for safe and correct operation and is unable to recover. In this event, refer to the Domain Events chapter of the *System Management Services (SMS) 1.3 Administrator Guide*. This details the immediate actions to take and where to obtain the event log file. Then contact your Sun service personnel and provide the needed log file information.

Domain Bus Configuration Rule (scBusCfg)

The domain bus configuration rule generates an alert alarm when the address, data, or response bus is unconfigured (UNCONFIGURED) or in a degraded mode (CSB0 or CSB1). In other words, the rule generates an alarm when the bus is not configured to use both CSBs (TABLE 6-39).

TABLE 6-39 Sun Fire 15K/12K Platform Config Reader Domain Bus Configuration Rule

| Bus Configuration | Alarm Level | Meaning |
|-------------------|-------------|----------------------------|
| BOTH | | Bus is using both CSBs. |
| CSB0 | Alert | Bus is in a degraded mode. |
| CSB1 | Alert | Bus is in a degraded mode. |
| UNCONFIGURED | Alert | Bus is unconfigured. |

Action: Contact your Sun service personnel to properly configure the bus.

Domain Config Reader Module

The Domain Config Reader module provides the hardware configuration for a Sun Fire 15K/12K domain. During Sun Fire 15K/12K 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 15K/12K Domain)—as it is displayed in the host Details window on a domain under the Browser tab and Hardware icon.

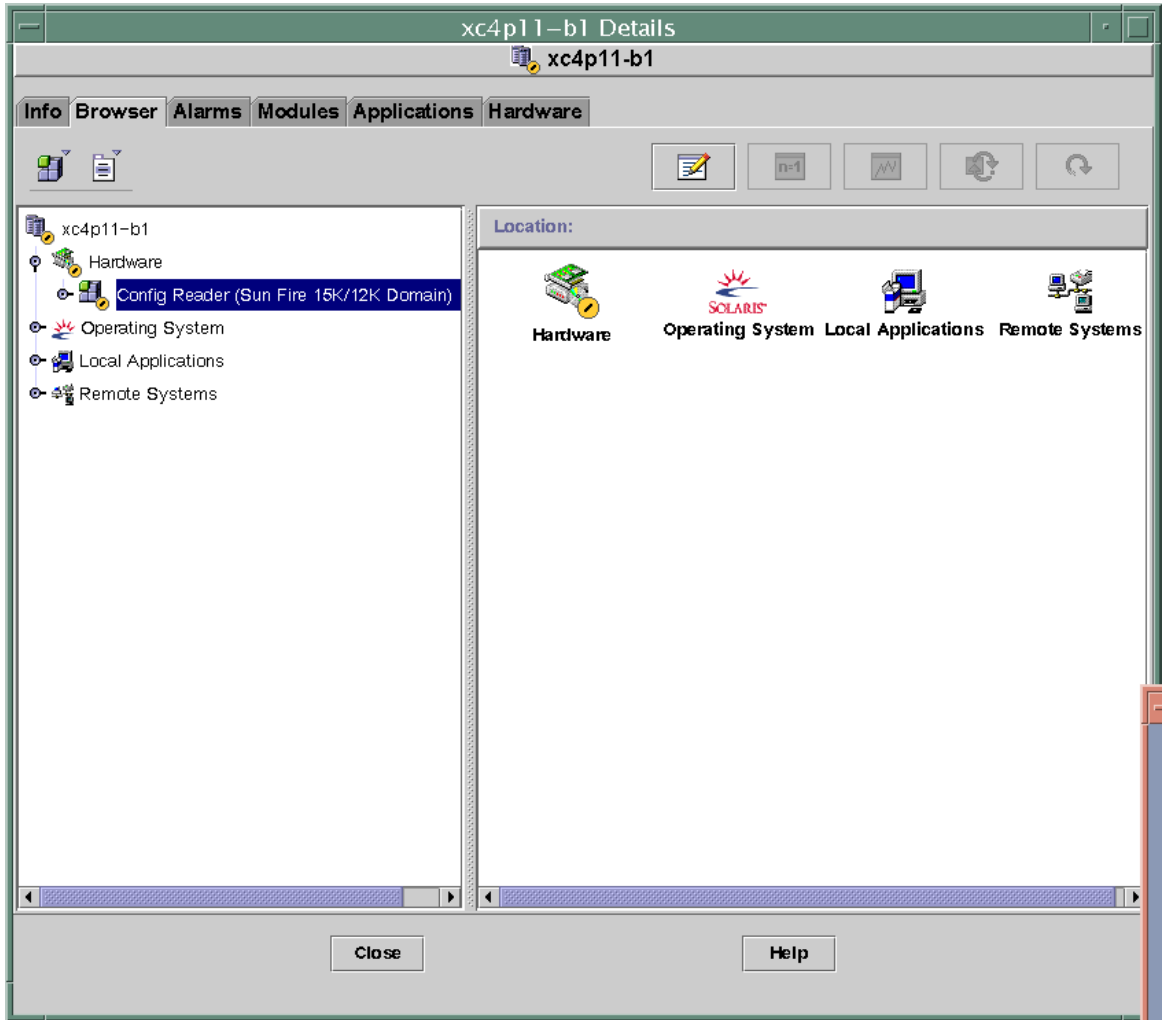


FIGURE 6-2 Domain Config Reader Module

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.

Two procedures are then required on the Sun Fire 15K/12K domain:

1. Modifying the `agent-stats-d.def` file
2. Modifying two alarm attributes in the Sun Management Center 3.5 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 3.5 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/12K 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/12K 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/12K Domain Config Reader system (TABLE 6-40):

TABLE 6-40 Sun Fire 15K/12K Domain Config Reader System

| Property | Rule (if any) | Description |
|--------------------|---------------|---|
| Node Name | | system |
| Hostname | | Sun Fire 15K/12K domain host name |
| Host ID | | Host identification number |
| Operating System | | Operating system running in the Sun Fire 15K/12K 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/12K Domain Config Reader CPU/memory board (TABLE 6-41):

TABLE 6-41 Sun Fire 15K/12K 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 6-41 Sun Fire 15K/12K 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 <code>cfgadm</code> : OK, FAIL, or UNKNOWN |
| Last Change | | Date and time of the last change or UNKNOWN |

HPCI/HPCI+ Board

The following table provides a brief description of the properties for a Sun Fire 15K/12K Domain Config Reader hot-swap PCI (HPCI) board or hot-swap PCI+ (HPCI+) board (TABLE 6-42):

TABLE 6-42 Sun Fire 15K/12K Domain Config Reader HPCI/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 or HPCI+ |

TABLE 6-42 Sun Fire 15K/12K Domain Config Reader HPCI/HPCI+ Board (Continued)

| Property | Rule (if any) | Description |
|-------------|---------------|--|
| Condition | scStateCheck | Attachment point condition of the HPCI board from <code>cfgadm</code> : 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: <code>IOx/CyVz</code> , where <i>x</i> is the number of the expander slot containing the board (0–17), <i>y</i> is the card voltage (3 or 5), and <i>z</i> 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/12K Domain Config Reader Sun Fire Link PCI (WPCI) board (TABLE 6-43). Refer to the *Sun Fire Link Fabric Administrator's Guide* for more information about the Sun Fire Link system.

TABLE 6-43 Sun Fire 15K/12K Domain Config Reader WPCI Board

| Property | Rule (if any) | Description |
|-------------------|---------------|--|
| WPCI ID | | WPCI board identifier containing FRU ID(Slot ID): <code>WPCI (IOx)</code> , where <i>x</i> is the number of the expander slot containing the board (0–17) |
| Board Type | | WPCI board type identifier: <code>WPCI</code> |
| Condition | scStateCheck | Attachment point condition of the WPCI board from <code>cfgadm</code> : 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 <code>IOx/CyVz</code> , where <i>x</i> is the number of the expander slot containing the board (0–17), <i>y</i> is the card voltage (3 or 5), and <i>z</i> is the PCI controller number (0 or 1). The Paroli card identifier is <code>IOx/PARY</code> , where <i>x</i> is the number of the expander slot containing the board (0–17) and <i>y</i> 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/12K Domain Config Reader MaxCPU board (TABLE 6-44):

TABLE 6-44 Sun Fire 15K/12K 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 |
| 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 <code>cfgadm</code> : OK, FAIL, or UNKNOWN |
| Last Change | | Date and time of the last change or UNKNOWN |

HPCI Cassette

The following table provides a brief description of the properties for a Sun Fire 15K/12K Domain Config Reader hot-swap PCI (HPCI) card (TABLE 6-45). An HPCI cassette can contain two HPCI cards.

TABLE 6-45 Sun Fire 15K/12K Domain Config Reader HPCI Cassette

| 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 <code>network</code> , <code>scsi-fcp</code> , or <code>fcal</code> |
| Device Class | | Device class for the HPCI card, such as <code>Mass Storage Controller</code> , <code>SCSI</code> ; <code>Network Controller</code> , <code>Ethernet</code> ; <code>Network Controller</code> , <code>FDDI</code> ; or <code>Network Controller</code> , <code>ATM</code> |
| Condition | scStateCheck | Attachment point condition of the HPCI card from <code>cfgadm</code> : OK, FAIL, or UNKNOWN |

TABLE 6-45 Sun Fire 15K/12K Domain Config Reader HPCI Cassette (*Continued*)

| Property | Rule (if any) | Description |
|-----------------|----------------------|--|
| Last Change | | Date and time of the last change or UNKNOWN |
| Name | | Sun name for this HPCI card, such as SUNW, q1c; SUNW, qfe; SUNW, hme; or network |
| Manufacturer | | Manufacturer of this HPCI card |
| Model | | Model identifier of this HPCI card |
| 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/12K Domain Config Reader parallel optical link (Paroli) card (TABLE 6-46). Refer to the *Sun Fire Link Fabric Administrator's Guide* 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 6-46 Sun Fire 15K/12K Domain Config Reader Paroli Card

| Property | Rule (if any) | Description |
|-----------------------|---------------|--|
| CARD ID | | Paroli card identifier containing FRU ID(Slot ID): PARS (IO x /PAR y), 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/12K Domain Config Reader Processor (TABLE 6-47):

TABLE 6-47 Sun Fire 15K/12K Domain Config Reader Processor

| Property | Rule (if any) | Description |
|-----------------------|---------------|--|
| PROC ID | | Processor identifier containing ID(Slot ID): PROC (SBx/Py), where <i>x</i> is the number of the expander slot containing the board (0–17) and <i>y</i> 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/12K Domain Config Reader memory controller (TABLE 6-48):

TABLE 6-48 Sun Fire 15K/12K Domain Config Reader Memory Controller

| Property | Rule (if any) | Description |
|----------------------|---------------|---|
| Memory Controller ID | | Memory controller identifier containing ID(Slot ID): MEMCTRL (SBx/Py), where <i>x</i> is the number of the expander slot containing the board (0–17) and <i>y</i> is the processor number (0–3) |
| Memory Bank List | | Comma-separated list of slot IDs for the memory banks: SBx/Py/Bz, where <i>x</i> is the number of the expander slot containing the board (0–17), <i>y</i> is the processor number (0–3), and <i>z</i> is the physical memory bank number (0 or 1) |
| Condition | scStateCheck | Attachment point condition of the memory controller from <code>cfgadm</code> : 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/12K Domain Config Reader memory bank (TABLE 6-49).

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 6-49 Sun Fire 15K/12K Domain Config Reader Memory Bank

| Property | Rule (if any) | Description |
|----------------------------|---------------------------|--|
| Memory Bank ID | | Memory bank identifier containing ID(Slot ID): <code>MEMBANK(SBx/Py/Bz)</code> , 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: <code>SEw/Px/By/Dz</code> , 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 | <code>scPOSTStatus</code> | Indicates whether the POST status of logical memory bank 0 is <code>UNKNOWN</code> , <code>OKAY</code> , <code>DISABLED</code> , <code>UNDEFINED</code> , <code>MISCONFIGURED</code> , <code>FAIL-OBP</code> , <code>FAIL</code> , <code>BLACKLISTED</code> , or <code>REDLISTED</code> |
| Logical Bank 1 POST Status | <code>scPOSTStatus</code> | Indicates whether the POST status of logical memory bank 1 is <code>UNKNOWN</code> , <code>OKAY</code> , <code>DISABLED</code> , <code>UNDEFINED</code> , <code>MISCONFIGURED</code> , <code>FAIL-OBP</code> , <code>FAIL</code> , <code>BLACKLISTED</code> , or <code>REDLISTED</code> |
| Processor ID | | Processor identifier for this memory bank: <code>SBx/Py</code> , 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/12K Domain Config Reader dual inline memory module (DIMM) (TABLE 6-50).

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 6-50 Sun Fire 15K/12K Domain Config Reader DIMM

| Property | Rule (if any) | Description |
|-------------------|---------------------------|---|
| DIMM ID | | DIMM identifier containing FRU ID(Slot ID): <code>DIMM(SBw/Px/By/Dz)</code> , where <i>w</i> is the number of the expander slot containing the board (0–17), <i>x</i> is the processor number (0–3), <i>y</i> is the physical memory bank number (0 or 1), and <i>z</i> 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 | <code>scPOSTStatus</code> | Indicates whether the POST status of the DIMM is UNKNOWN, OKAY, DISABLED, UNDEFINED, MISCONFIGURED, FAIL-OBP, FAIL, BLACKLISTED, or REDLISTED |
| ECC Memory Errors | <code>scDimmErrCnt</code> | 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/12K Domain Config Reader disk devices (TABLE 6-51):

TABLE 6-51 Sun Fire 15K/12K Domain Config Reader Disk Devices

| Property | Rule (if any) | Description |
|------------------|--------------------------|---|
| Disk ID | | Disk device identifier: <code>disk(cxydz)</code> where <i>x</i> is the PCI controller number (0 or 1), <i>y</i> is the target number, and <i>z</i> is the logical unit number; such as <code>c0t64d0</code> . If the disk is dual-ported, two disk device identifiers will be separated by a comma. |
| Card ID | | Card identifier: <code>IOx/CyVz</code> , where <i>x</i> is the number of the expander slot containing the board (0–17), <i>y</i> is the card voltage (3 or 5), and <i>z</i> is the PCI controller number (0 or 1) |
| Enclosure Name | | Enclosure identifier from <code>luxadm</code> or <code>--</code> . Refer to <i>Platform Notes: Using luxadm Software</i> 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 | <code>scDskErrCnt</code> | Number of hardware-related errors |
| Software Errors | <code>scDskErrCnt</code> | Number of software-related errors |
| Transport Errors | <code>scDskErrCnt</code> | Number of transport-related errors |

Tape Devices

The following table provides a brief description of the properties for Sun Fire 15K/12K Domain Config Reader tape devices (TABLE 6-52).

TABLE 6-52 Sun Fire 15K/12K 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: IOx/CyVz, where <i>x</i> is the number of the expander slot containing the board (0–17), <i>y</i> is the card voltage (3 or 5), and <i>z</i> 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 <code>syslog</code> file |

Network Interfaces

The following table provides a brief description of the properties for Sun Fire 15K/12K Domain Config Reader network interfaces (TABLE 6-53):

TABLE 6-53 Sun Fire 15K/12K Domain Config Reader Network Interfaces

| Property | Rule (if any) | Description |
|------------------|---------------|---|
| Network ID | | Network interface identifier, such as <code>network(dman0)</code> or <code>network(qfe0)</code> |
| Card ID | | Card identifier: IOx/CyVz, where <i>x</i> is the number of the expander slot containing the board (0–17), <i>y</i> is the card voltage (3 or 5), and <i>z</i> 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 6-53 Sun Fire 15K/12K 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/12K Domain Config Reader Sun Fire Link interface (WCI) (TABLE 6-54). Refer to the *Sun Fire Link Fabric Administrator's Guide* for more information about the Sun Fire Link system.

TABLE 6-54 Sun Fire 15K/12K 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 6-55). This alarm is for information only and is not an error.

TABLE 6-55 Sun Fire 15K/12K 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 6-56).

TABLE 6-56 Sun Fire 15K/12K 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 6-57).

TABLE 6-57 Sun Fire 15K/12K 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 6-58).

TABLE 6-58 Sun Fire 15K/12K 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 *System Management Services (SMS) 1.3 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 6-59).

TABLE 6-59 Sun Fire 15K/12K Domain Config Reader State Check Rule

| State | Alarm Level | Meaning |
|---------|-------------|---|
| OK | | Attachment point condition from <code>cfgadm</code> is okay. |
| UNKNOWN | Caution | Attachment point condition from <code>cfgadm</code> is unknown. |
| FAIL | Caution | Attachment point condition from <code>cfgadm</code> 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 6-60).

TABLE 6-60 Sun Fire 15K/12K 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 6-61).

TABLE 6-61 Sun Fire 15K/12K 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 6-62).

TABLE 6-62 Sun Fire 15K/12K 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/12K SC Config Reader module provides the hardware configuration for a Sun Fire 15K/12K system controller, which is a Sun CP 1500 machine. During Sun Fire 15K/12K 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 15K/12K SC)—as it is displayed in the host (SC) Details window under the Browser tab and Hardware icon.

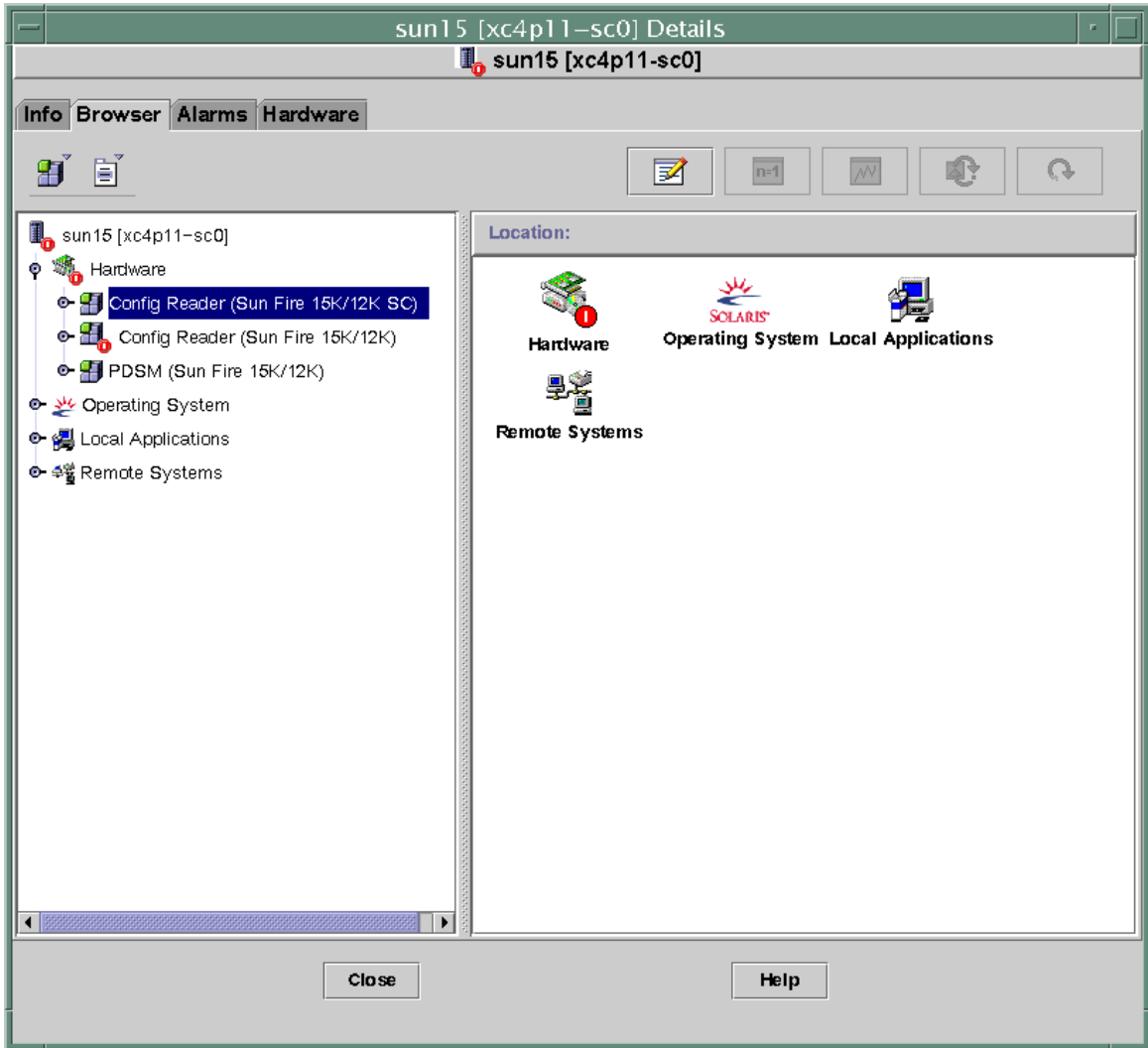


FIGURE 6-3 SC Config Reader Module

SC Config Reader Properties

The tables in this section describe each of the visible properties for each Sun Fire 15K/12K 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/12K SC Config Reader system (TABLE 6-63):

TABLE 6-63 Sun Fire 15K/12K SC Config Reader System

| Property | Rule (if any) | Description |
|------------------------------|---------------|--|
| Node Name | | system |
| Hostname | | Sun Fire 15K/12K system controller host name |
| Host ID | | Sun Fire 15K/12K system controller serial number |
| Operating System | | Operating system running on the Sun Fire 15K/12K 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/12K SC Config Reader CP 1500 board, which is a system controller (TABLE 6-64):

TABLE 6-64 Sun Fire 15K/12K 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 6-64 Sun Fire 15K/12K 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/12K SC Config Reader processor (TABLE 6-65):

TABLE 6-65 Sun Fire 15K/12K 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/12K SC Config Reader memory module (TABLE 6-66):

TABLE 6-66 Sun Fire 15K/12K 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/12K SC Config Reader PCI device (TABLE 6-67):

TABLE 6-67 Sun Fire 15K/12K SC Config Reader PCI Device

| Property | Rule (if any) | Description |
|-----------------------|---------------|--|
| DEVICE ID | | Identifier of the PCI device containing FRU ID(Device Driver ID): PCI(<i>xxx</i>), where <i>xxx</i> is <i>eri</i> , <i>glm</i> , <i>hci</i> 1394, <i>hme</i> , or <i>usb</i> |
| Device Type | | Device I/O protocol type used, such as <i>pci</i> , <i>sbus</i> , <i>network</i> , or <i>scsi-2</i> |
| Device Class | | Required PCI class code, such as <i>Network Controller</i> , <i>Ethernet</i> ; <i>Mass Storage Controller</i> , <i>SCSI</i> ; <i>Serial Bus Controller</i> |
| Clock Frequency (MHz) | | Clock frequency in megahertz (MHz) |
| Name | | Device driver common or symbolic name, such as <i>network</i> , <i>scsi</i> , <i>firewire</i> , or <i>usb</i> |
| Manufacturer | | Manufacturer number |
| Model | | Device driver model number, such as <i>SUNW</i> , <i>pci-eri</i> ; or <i>Symbios</i> , <i>53C875</i> |
| 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/12K SC Config Reader disk device (TABLE 6-68):

TABLE 6-68 Sun Fire 15K/12K SC Config Reader Disk Device

| Property | Rule (if any) | Description |
|------------------|--------------------------|--|
| Disk ID | | Disk device identifier: <code>disk(xtydz)</code> where <i>x</i> is the PCI controller number (0 or 1), <i>y</i> is the target number, and <i>z</i> is the logical unit number; such as <code>c0t4d0</code> . 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 <code>/pci@1f,0/pci@1,1/scsi@2/sd@0,0;...1,0</code> ; or <code>6,0</code> |
| 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 | <code>cpDskErrCnt</code> | Number of hardware-related errors |
| Software Errors | <code>cpDskErrCnt</code> | Number of software-related errors |
| Transport Errors | <code>cpDskErrCnt</code> | Number of transport-related errors |

Tape Device

The following table provides a brief description of the properties for a Sun Fire 15K/12K SC Config Reader tape device (TABLE 6-69):

TABLE 6-69 Sun Fire 15K/12K 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 <code>tape (0)</code> |
| Path | | Physical path to the tape device, such as <code>/devices/pci@1f,0/pci@1,1/scsi@2/st@4,0</code> |
| 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 | <code>cpTpeErrCnt</code> | Number of tape errors as recorded in the <code>syslog</code> file |

Network Interface

The following table provides a brief description of the properties for a Sun Fire 15K/12K SC Config Reader network interface (TABLE 6-70):

TABLE 6-70 Sun Fire 15K/12K SC Config Reader Network Interface

| Property | Rule (if any) | Description |
|------------------|---------------|---|
| Network ID | | Network interface identifier, such as <code>network(hme0)</code> , <code>network(scman1)</code> , or <code>network(scman1:1)</code> |
| 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 6-71). A voltage alarm is *not* generated when the board is powered off.

TABLE 6-71 Sun Fire 15K/12K 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 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 33 for more information.

CPU Status Rule (cpCPUStatus)

The CPU status rule generates a caution alarm if the processor is OFFLINE (TABLE 6-72).

TABLE 6-72 Sun Fire 15K/12K 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 6-73). A temperature alarm is *not* generated when the board is powered off.

TABLE 6-73 Sun Fire 15K/12K 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 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 6-74).

TABLE 6-74 Sun Fire 15K/12K 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 6-75).

TABLE 6-75 Sun Fire 15K/12K 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 3.5 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 the *Sun Management Center 3.5 User's Guide*.

FIGURE 6-4 shows the icon for the module—PDSM (Sun Fire 15K/12K)—as it is displayed in the platform Details window under the Browser tab and Hardware icon.

Note – The PDSM module does *not* show any unknown board slots. However, the Platform Config Reader (PCR) module does show unknown board slots (see “Unknown Component” on page 149).

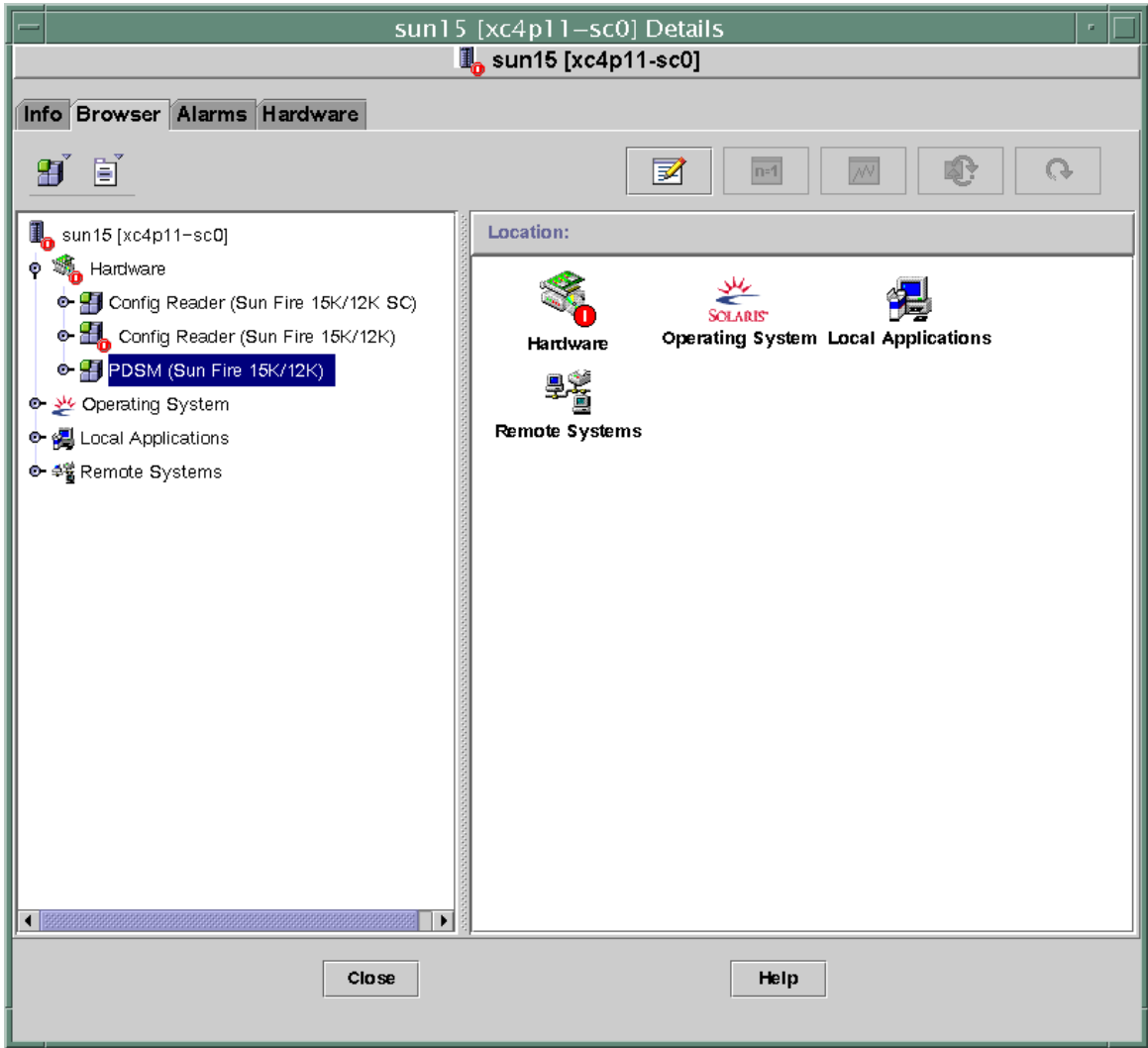


FIGURE 6-4 Platform/Domain State Management (PDSM) Module

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/12K PDSM module platform info (TABLE 6-76):

TABLE 6-76 Sun Fire 15K/12K PDSM Module Platform Info

| Property | Rule (if any) | Description |
|----------------|---------------|--|
| Platform ID | | Platform identifier |
| Platform Type | | Platform type |
| Max Domains | | Maximum number of domains (18) |
| Active Domains | | Number of active domains on this Sun Fire 15K/12K 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/12K PDSM module platform slot 0 boards (TABLE 6-77):

TABLE 6-77 Sun Fire 15K/12K PDSM Module Platform Slot 0 Boards

| Property | Rule (if any) | Description |
|-------------|---------------|--|
| Board ID | | Board identifier in slot 0 containing FRU ID(Slot ID): 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 |

Platform Slot 1 Boards

The following table provides a brief description of the properties for the Sun Fire 15K/12K PDSM module platform slot 1 boards (TABLE 6-78):

TABLE 6-78 Sun Fire 15K/12K PDSM Module Platform Slot 1 Boards

| Property | Rule (if any) | Description |
|-------------|---------------|---|
| Board ID | | Board identifier in slot 1 containing FRU ID(Slot ID): 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, or FREE |
| Power State | | Indicates whether the power state of the board in slot 1 is ON or OFF |

TABLE 6-78 Sun Fire 15K/12K 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/12K PDSM module platform empty slots (TABLE 6-79):

TABLE 6-79 Sun Fire 15K/12K PDSM Module Platform Empty Slots

| Property | Rule (if any) | Description |
|-------------|---------------|---|
| Board ID | | Available board identifier: Input/output card number (IOx) or system board number (SBx), 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/12K PDSM module platform power supplies (TABLE 6-80):

TABLE 6-80 Sun Fire 15K/12K PDSM Module Platform Power Supplies

| Property | Rule (if any) | Description |
|-----------------|---------------|---|
| Power Supply ID | | Power supply identifier containing FRU ID(SlotID): PS(PSx), 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/12K PDSM module platform fan trays (TABLE 6-81):

TABLE 6-81 Sun Fire 15K/12K PDSM Module Platform Fan Trays

| Property | Rule (if any) | Description |
|-------------|---------------|--|
| Fan Tray ID | | Fan tray identifier containing FRU ID(SlotID): FT(FTx), 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/12K PDSM domain X info (TABLE 6-82):

TABLE 6-82 Sun Fire 15K/12K PDSM Module Domain X Info

| Property | Rule (if any) | Description |
|-------------------------|---------------|--|
| Domain ID | | Domain identifier: A–R |
| Domain Tag | | Domain tag: domainX, 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 <i>System Management Services SMS 1.3 Reference Manual</i> for more information. |
| Solaris Node Name | | Host name of the Solaris Operating System node |
| Keyswitch | | Virtual keyswitch position: ON, STANDBY, OFF, DIAG, SECURE, or UNKNOWN |
| Domain ACL | | Domain access control list—space-separated input/output card numbers (IOx) and system board numbers (SBx), 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 (IOx), 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 (IOx), 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/12K PDSM domain X slot 0 boards (TABLE 6-83):

TABLE 6-83 Sun Fire 15K/12K 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/12K PDSM domain X slot 1 boards (TABLE 6-84):

TABLE 6-84 Sun Fire 15K/12K 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 6-84 Sun Fire 15K/12K 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/12K PDSM domain X empty slots (TABLE 6-85):

TABLE 6-85 Sun Fire 15K/12K 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

See Chapter 8 for all information about the Dynamic Reconfiguration module.

SC Monitoring Module

The SC Monitoring module monitors the System Management Services (SMS) daemons on the active, or main, Sun Fire 15K/12K system controller. The Sun Fire 15K/12K SC Monitoring Module table is automatically loaded when the agent is installed on the system controller, and you *can* unload it.

FIGURE 6-5 shows the icon for the module—SC Monitoring (Sun Fire 15K/12K)—as it is displayed in the platform host Details window under the Browser tab and Local Applications icon.

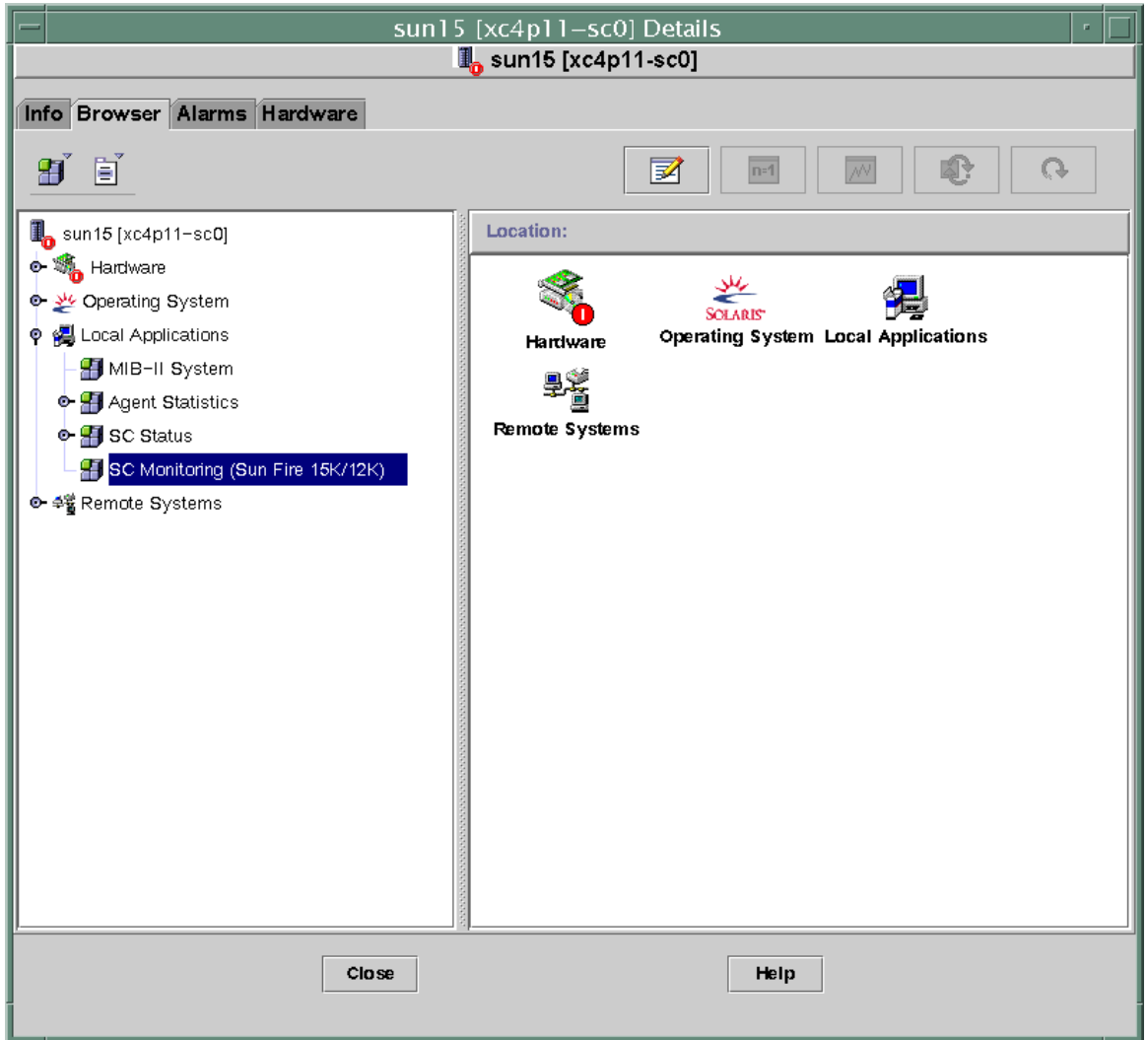


FIGURE 6-5 SC Monitoring Module

Many of the SMS daemons are critical to the operation of the Sun Fire 15K/12K 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) 1.3 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/12K SC daemon process (TABLE 6-86):

TABLE 6-86 Sun Fire 15K/12K 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 6-86 Sun Fire 15K/12K 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: <ul style="list-style-type: none"> • 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/12K 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 183.)

FIGURE 6-6 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 6-6 also shows the SC Information icon, under the SC Status icon, which you click to view the SC Information table.

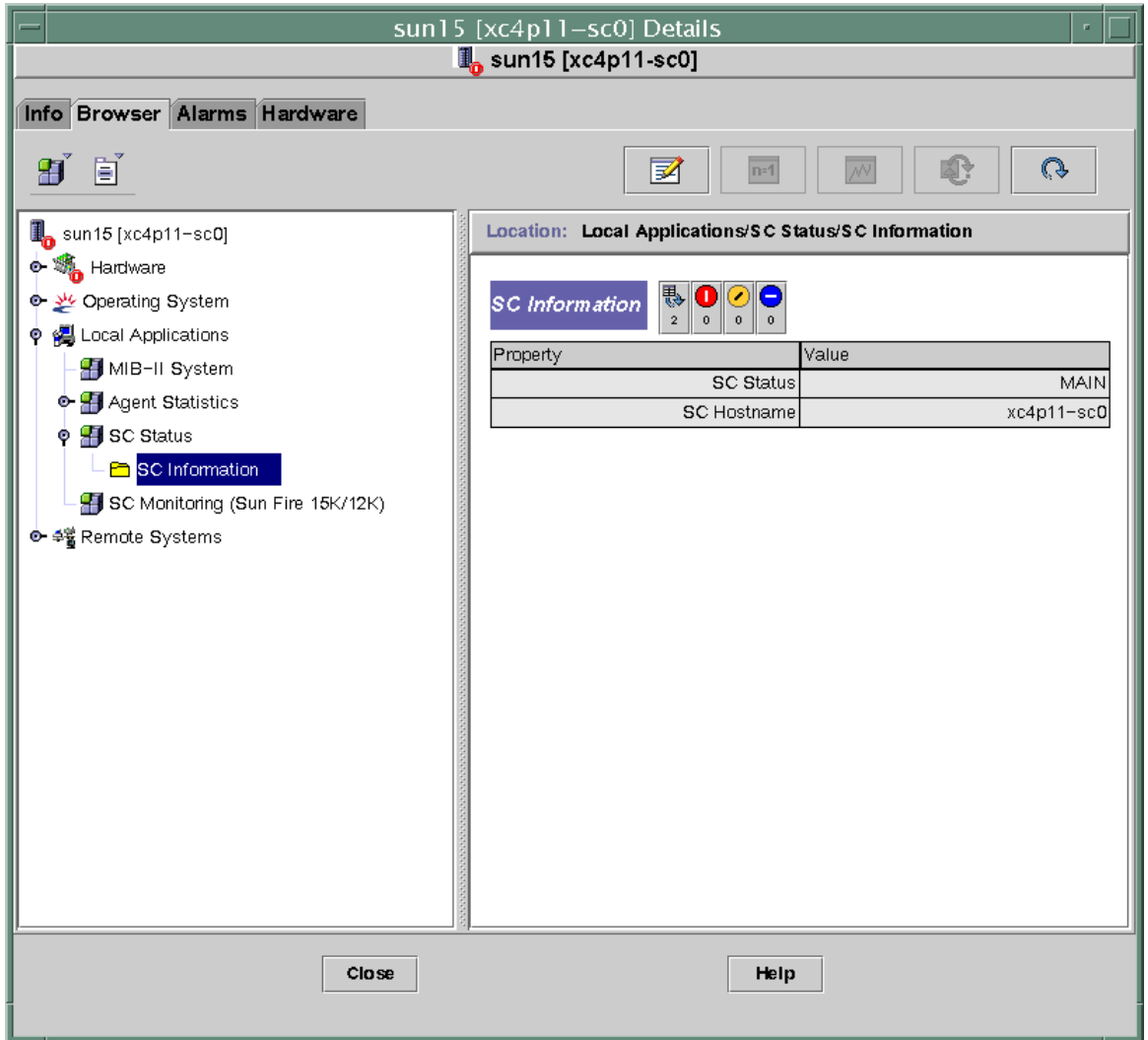


FIGURE 6-6 SC Information Showing MAIN Status

SC Status Properties

The SC Status property has three possible values:

- **MAIN** – This system controller is acting as the main system controller (FIGURE 6-6).
- **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 Sun Fire 15K/12K systems using the Sun Management Center 3.5 GUI and the PDSM module. The dynamic reconfiguration operations include such operations as adding a board to a Sun Fire 15K/12K domain, removing a board from a Sun Fire 15K/12K domain, and moving a board between Sun Fire 15K/12K 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/12K system-specific modules contain functionality for managing the Sun Fire 15K/12K 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/12K 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 up to 18 domain views. See “Platform/Domain State Management Module” on page 193 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 3.5 GUI to perform DR operations. Refer to the following documents to learn more about dynamic reconfiguration operations on Sun Fire 15K/12K systems:

- *System Management Services (SMS) 1.3 Dynamic Reconfiguration User Guide* (underlying operations for the PDSM module, which is discussed in this chapter)
- *Sun Fire 15K/12K 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) 1.3 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) 1.3 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 |
|--------------------------|-------------------------------------|---|
| <code>addboard</code> | Add Board | Assign, connect, and configure a board to a domain |
| <code>addtag</code> | Add Tag | Assign a domain name (tag) to a domain |
| <code>deleteboard</code> | Delete Board | Unconfigure, disconnect, and unassign a board from a domain |
| <code>deletetag</code> | 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 |
|----------------------------------|-------------------------------------|---|
| <code>moveboard</code> | Move Board | Move a board from one domain to another |
| <code>poweroff</code> | Power Off | Control power off |
| <code>poweron</code> | Power On | Control power on |
| <code>rcfgadm -t</code> | Test Board | Test a board |
| <code>reset</code> | Reset Domain | Send reset to all CPU ports of a specified domain |
| <code>setkeyswitch</code> | Keyswitch | Change the position of the virtual keyswitch |
| <code>setupplatform -a -r</code> | 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 195 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 *System Management Services (SMS) 1.3 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 `platadm` 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 panel.
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 panel.
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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm` 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 panel.

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 panel.

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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm` 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 panel.

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 panel.

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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm` or `platooper` 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 panel.
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 *System Management Services (SMS) 1.3 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 `platadm` or `platooper` 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 panel.
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 *System Management Services (SMS) 1.3 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 `platadm` or `platooper` 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/12K 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/12K 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 199 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 *System Management Services (SMS) 1.3 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 `platadm`, `dmnxadm`, or `dmnxrcfg` 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 panel.

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 panel.

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 panel.

Deleting a Board

This operation unconfigures, disconnects, and unassigns a system board from a specific domain. Refer to the `deleteboard(1M)` command in the *System Management Services (SMS) 1.3 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 `platadm`, `dmnxadm`, or `dmnxrcfg` 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 panel.
- 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 panel.
- 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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm` group, you do not need additional access privileges. If you log in as a member of the `dmnxadm` or `dmnxrcfg` 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 panel.

- 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 panel.

- 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 panel.

Powering on a Board

This operation powers on a board for a specific domain. Refer to the `poweron(1M)` command in the *System Management Services (SMS) 1.3 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 `platadm`, `platooper`, `dmnxadm`, or `dmnxrcfg` 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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm`, `platooper`, `dmnxadm`, or `dmnxrcfg` 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 panel.

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 *System Management Services (SMS) 1.3 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 `dmnxadmin` 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 panel.
- 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 panel.
- 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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm` 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 panel.
- 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 *System Management Services (SMS) 1.3 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 `platadmin` 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 panel.
- 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 *System Management Services (SMS) 1.3 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 `dmnxadmin` 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 panel.
4. **Left-click on the radio button next to the position you want to set for the domain.**



Caution – If you attempt to change a keyswitch position directly from On to Off, the operation fails, and you do *not* receive a message that it fails. If you want to change a keyswitch position from On to Off, go through Standby first. In other words, go from On to Standby and Standby to Off.

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 *System Management Services (SMS) 1.3 Reference Manual* for more information about setting up or changing the ACL.

Note – The Access Control List in the Sun Management Center 3.5 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 `platadmin` 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 panel.
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 *System Management Services (SMS) 1.3 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 226 for instructions on changing the keyswitch position.

1. **Log in to the Sun Management Center console as a member of the `dmnxadmin` 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 panel.

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 *System Management Services (SMS) 1.3 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 `platadm`, `platoper`, `dmnxadm`, or `dmnxrcfg` 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 79 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 `SMS1.3`

Dynamic Reconfiguration From the Domain

This chapter describes how to perform dynamic reconfiguration (DR) operations from a Sun Fire 15K/12K or 6800/4810/4800/3800 domain using the Sun Management Center 3.5 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 3.5 GUI to perform DR operations. Refer to the following documents to learn more about dynamic reconfiguration operations on Sun Fire systems:

- *Sun Fire 15K/12K Dynamic Reconfiguration User Guide*, which describes the underlying Sun Fire 15K/12K operations for the DR module. For the latest general issues, known limitations, and known bugs about dynamic reconfiguration operations for Sun Fire 15K/12K systems, refer to the *System Management Services (SMS) 1.3 Installation Guide and Release Notes*.
- *Sun Fire 6800/4810/4800/3800 Systems Dynamic Reconfiguration User's Guide*, which describes the underlying Sun Fire 6800/4810/4800/3800 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 on the attachment points in the tables. You can perform the operations in the same manner that you would with the `cfgadm(1M)` command only using the Sun Management Center 3.5 GUI. This module works on Sun Fire 15K/12K or 6800/4810/4800/3800 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 the *Sun Management Center 3.5 User's Guide*.

FIGURE 8-1 shows the icon for the module—Dynamic Reconfiguration Sun Fire (3800-15K)—as it is displayed in the host Details window on a domain under the Browser tab and Hardware icon.

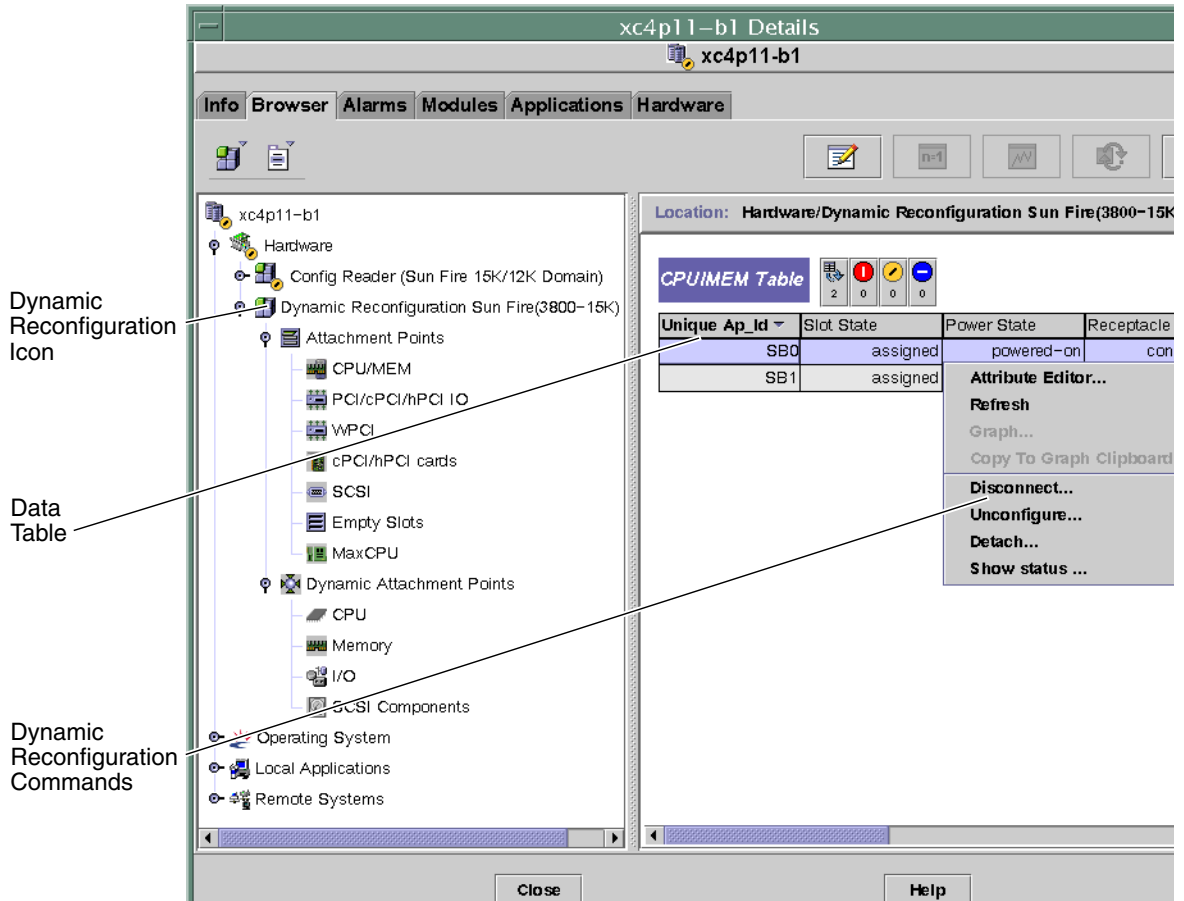


FIGURE 8-1 Dynamic Reconfiguration Features

Dynamic Reconfiguration Properties

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.

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 I/O
- WPCI
- cPCI/hPCI Cards
- SCSI
- Empty Slots
- MaxCPU (Sun Fire 15K/12K systems only)

CPU/MEM

The following table provides a brief description of the attachment point properties for a CPU/memory board (TABLE 8-1):

TABLE 8-1 Attachment Point Properties for a CPU/MEM Board

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point ID from <code>cfgadm: SBx</code> , where <i>x</i> is the number of the centerplane slot containing the board (0–17) |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> , <code>disconnected</code> , or <code>empty</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Board type: <code>CPU</code> |
| Condition | | Board condition: <code>ok</code> , <code>unknown</code> , <code>failed</code> , or <code>unusable</code> |
| Information | | General board type information; for example, <code>powered-on</code> , <code>assigned</code> |

TABLE 8-1 Attachment Point Properties for a CPU/MEM Board (*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 <i>no</i> 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 I/O

The following table provides a brief description of the attachment point properties for a PCI/cPCI/hPCI I/O board (TABLE 8-2). For a Sun Fire 3800, 4800, 4810, or 6800 system, the table shows properties *only* for PCI and cPCI I/O boards. For a Sun Fire 15K/12K system, the table shows properties *only* for hPCI I/O boards.

TABLE 8-2 Attachment Point Properties for a PCI/cPCI/hPCI I/O Board

| Property | Rule (if any) | Description |
|--------------|---------------|--|
| Unique Ap_Id | | Unique logical attachment point ID from <code>cfgadm: IOx</code> , where x is the number of the centerplane slot containing the board (0–17) |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> , <code>disconnected</code> , or <code>empty</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Board type, such as <code>PCI</code> , <code>CPI</code> , <code>HPCI</code> , or <code>HPCI+</code> |
| Condition | | Board condition: <code>ok</code> , <code>unknown</code> , <code>failed</code> , or <code>unusable</code> |
| Information | | General board type information; for example, <code>powered-on</code> , <code>assigned</code> |

TABLE 8-2 Attachment Point Properties for a PCI/cPCI/hPCI I/O Board (*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 <i>no</i> 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) |

WPCI

The following table provides a brief description of the attachment point properties for a WPCI board (TABLE 8-3). Refer to the *Sun Fire Link Fabric Administrator's Guide* for more information about the Sun Fire Link system.

TABLE 8-3 Attachment Point Properties for a WPCI Board

| Property | Rule (if any) | Description |
|--------------|---------------|--|
| Unique Ap_Id | | Unique logical attachment point ID from <code>cfgadm: IOx</code> , 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 |
| Information | | General board type information; for example, powered-on, assigned |

TABLE 8-3 Attachment Point Properties for a WPCI Board (*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 <i>no</i> 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 8-4). For a Sun Fire 3800, 4800, 4810, or 6800 system, the table shows properties *only* for cPCI cards. For a Sun Fire 15K/12K system, the table shows properties *only* for hPCI cards.

TABLE 8-4 Attachment Point Properties for a cPCI/hPCI Card

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point ID from <code>cfgadm</code> , such as <code>pcisch2:e04b1slot3</code> |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> , <code>disconnected</code> , or <code>empty</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Type, such as <code>pci-pci/hp</code> |
| Condition | | Board condition: <code>ok</code> , <code>unknown</code> , <code>failed</code> , or <code>unusable</code> |
| Information | | General information; for example, <code>unknown</code> |

TABLE 8-4 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 <i>no</i> 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 8-5):

TABLE 8-5 Attachment Point Properties for a SCSI

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point ID from <code>cfgadm</code> , such as <code>pcisch3:e04b1slot2</code> |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> , <code>disconnected</code> , or <code>empty</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Type, such as <code>scsi/hp</code> |
| Condition | | Component condition: <code>ok</code> , <code>unknown</code> , <code>failed</code> , or <code>unusable</code> |
| Information | | General component information, such as <code>unknown</code> |

TABLE 8-5 Attachment Point Properties for a SCSI (*Continued*)

| 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 <i>no</i> 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 8-6):

TABLE 8-6 Attachment Point Properties for Empty Slots

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point ID from <i>cfgadm</i> , such as <i>pcisch0:e17b1slot1</i> |
| Slot State | | Slot availability state: <i>assigned</i> or <i>unassigned</i> |
| Power State | | Power state: <i>powered-on</i> or <i>powered-off</i> |
| Receptacle | | Receptacle state: <i>connected</i> , <i>disconnected</i> , or <i>empty</i> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <i>configured</i> or <i>unconfigured</i> |
| Type | | Board type: <i>unknown</i> |
| Condition | | Component condition: <i>ok</i> , <i>unknown</i> , <i>failed</i> , or <i>unusable</i> |
| Information | | General board type information: <i>assigned</i> or <i>unknown</i> |
| When | | Date and time when the slot was configured into the domain |
| Busy | | n (no) indicates <i>no</i> 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 8-7). This table appears *only* for a Sun Fire 15K/12K system.

TABLE 8-7 Sun Fire 15K/12K Attachment Point Properties for a MaxCPU Board

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point ID from <code>cfgadm</code> for the MaxCPU board |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> , <code>disconnected</code> , or <code>empty</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Board type: <code>MCPU</code> |
| Condition | | Board condition: <code>ok</code> , <code>unknown</code> , <code>failed</code> , or <code>unusable</code> |
| Information | | General board type information; for example, <code>powered-on</code> , <code>assigned</code> |
| When | | Date and time when the board was configured into the domain |
| Busy | | <code>y</code> (yes) indicates a state, availability, or condition change operation is in progress; <code>n</code> (no) indicates <i>no</i> 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 or 9 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

CPU Components

The following table provides a brief description of the dynamic attachment point properties for CPU components (TABLE 8-8):

TABLE 8-8 Dynamic Attachment Point Properties for CPU Components

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point identifier from <code>cfgadm: SBx : :cpuy</code> , 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: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Component type: <code>cpu</code> |
| Condition | | Component condition: <code>ok</code> , <code>unknown</code> , or <code>failed</code> |
| Information | | General CPU type information: for example, <code>cpuid 2</code> , <code>speed 750 MHz</code> , <code>ecache 8 MBytes</code> . Refer to the <code>cfgadm_sbd(1M)</code> man page in the Solaris 8 or 9 Reference Manual Collection for descriptions of the fields. |
| 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 <i>no</i> state, availability, or condition change operation is in progress |
| Phys_Id | | Physical attachment point ID: <code>/devices/pseudo/dr@0:SBx : :cpuy</code> , 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 8-9):

TABLE 8-9 Dynamic Attachment Point Properties for Memory Components

| Property | Rule (if any) | Description |
|--------------|---------------|--|
| Unique Ap_Id | | Unique logical attachment point identifier from <code>cfgadm</code> : such as <code>SBx::memory</code> , where <i>x</i> is the number of the centerplane slot containing the board (0–17) |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>unconfigured</code> or <code>configured</code> |
| Type | | Component type: <code>memory</code> |
| Condition | | Component condition: <code>ok</code> , <code>unknown</code> , or <code>failed</code> |
| Information | | General information for the memory type, as appropriate; for example, <code>base address 0x0, 2097152 KBytes total, 420920 KBytes permanent</code> . Refer to the <code>cfgadm_sbd(1M)</code> man page in the Solaris 8 or 9 Reference Manual Collection for descriptions of the fields. |
| When | | Date and time when the components were configured into the domain |
| Busy | | <code>y</code> (yes) indicates a state, availability, or condition change operation is in progress; <code>n</code> (no) indicates <i>no</i> state, availability, or condition change operation is in progress |
| Phys_Id | | Physical attachment point ID: <code>/devices/pseudo/dr@0:SBx::memory</code> , where <i>x</i> 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 8-10):

TABLE 8-10 Dynamic Attachment Point Properties for I/O Components

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point identifier from <code>cfgadm: IOx: :pciy</code> , 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: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Component type: <code>io</code> |
| Condition | | Component condition: <code>ok</code> , <code>unknown</code> , or <code>failed</code> |
| Information | | General information for the <code>io</code> type; for example, <code>device/pci@23d,700000</code> referenced. Refer to the <code>cfgadm_sbd(1M)</code> man page in the Solaris 8 or 9 Reference Manual Collection for descriptions of the fields. |
| 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 <i>no</i> state, availability, or condition change operation is in progress |
| Phys_Id | | Physical attachment point ID: <code>/devices/pseudo/dr@0:IOx: :pciy</code> , 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 8-11):

TABLE 8-11 Dynamic Attachment Point Properties for SCSI Components

| Property | Rule (if any) | Description |
|--------------|---------------|---|
| Unique Ap_Id | | Unique logical attachment point identifier from <code>cfgadm</code> for the SCSI component |
| Slot State | | Slot availability state: <code>assigned</code> or <code>unassigned</code> |
| Power State | | Power state: <code>powered-on</code> or <code>powered-off</code> |
| Receptacle | | Receptacle state: <code>connected</code> |
| Occupant | | State of the occupant, which is the combination of the board and its attached devices: <code>configured</code> or <code>unconfigured</code> |
| Type | | Component type: <code>disk</code> , <code>CD-ROM</code> , or <code>tape</code> |
| Condition | | Component condition: <code>ok</code> , <code>unknown</code> , or <code>failed</code> |
| Information | | General information for the type |
| When | | Date and time when the components were configured into the domain |
| Busy | | <code>y</code> (yes) indicates a state, availability, or condition change operation is in progress; <code>n</code> (no) indicates <i>no</i> state, availability, or condition change operation is in progress |
| Phys_Id | | Physical attachment point ID for the SCSI component |

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 3.5 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 or 9 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 System 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:

- Assigning a board
- Unassigning a board
- Attaching a board
- Detaching 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
- Showing status

cfgadm Options Supported

TABLE 8-12 describes the `cfgadm(1M)` options that are supported by the Dynamic Reconfiguration module. Refer to the `cfgadm(1M)` command in the Sun Solaris 8 or 9 Reference Manual Collection for more information about the various `cfgadm` options.

TABLE 8-12 `cfgadm` Options Supported by Dynamic Reconfiguration

| <code>cfgadm</code> Option | Sun Management Center GUI Menu Item | Description |
|--|-------------------------------------|--|
| <code>-c configure</code> | Attach | Attach a board |
| <code>-c disconnect</code> | Detach | Detach a board |
| <code>-x assign</code> | Assign | Assign a board |
| <code>-c disconnect</code> <code>-x unassign</code> | Unassign | Unassign a board |
| <code>-c connect</code> | Connect | Connect a board |
| <code>-c disconnect</code> | Disconnect | Disconnect a board |
| <code>-c configure</code> | Configure | Configure a board or another component |
| <code>-c unconfigure</code> | Unconfigure | Unconfigure a board or another component |
| <code>-x poweron</code> | Power On | Power on a board |
| <code>-x poweroff</code> | Power Off | Power off a board |
| <code>-t</code> | 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 System 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 System 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 System 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 System 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 8-2).

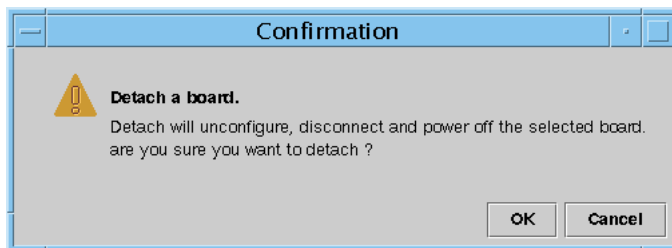


FIGURE 8-2 Detach Confirmation Box

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 – Sun Fire 15K/12K systems allow 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 panel (FIGURE 8-3).

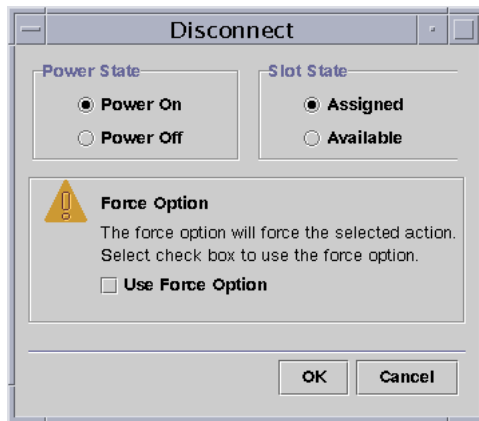


FIGURE 8-3 Disconnect Panel

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 – Sun Fire 15K/12K systems allow 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 panel 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 System 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 – Sun Fire 15K/12K systems allow 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 panel 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 – Sun Fire 15K/12K systems allow 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 panel (FIGURE 8-4).



FIGURE 8-4 Unconfigure Memory Panel

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.

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 panel (FIGURE 8-5).

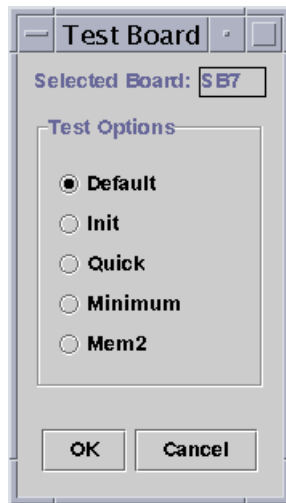


FIGURE 8-5 Test Board Panel

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 – Sun Fire 15K/12K systems allow 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):

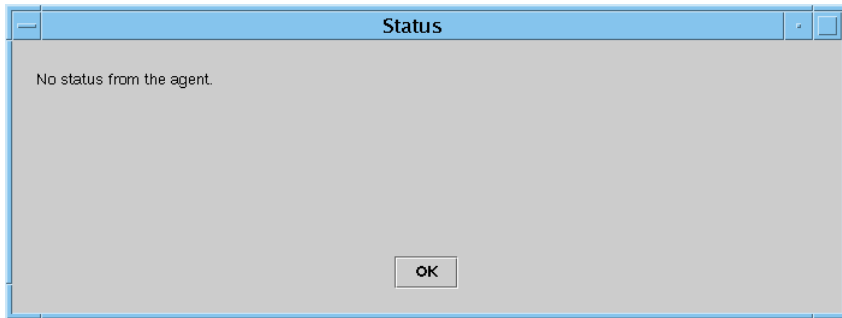


FIGURE 8-7 Successful Operation in Show Status for Domain DR Operation

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 3.5 Supplement for Sun Fire 15K/12K Systems* and in the Sun Management Center graphical user interface (GUI) for Sun Fire 15K/12K system-specific modules.

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 System 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 |
| COD | Capacity on Demand option |
| 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 |
| dsmmd | Domain Service Monitoring Daemon |
| DX | data extract ASIC |
| x/dxs | Domain X Server, where <i>x</i> 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 |
| HPCI+, hPCI+, or hsPCI+ | hot-swap PCI plus 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

WcApp Sun Fire Link and Sun Fire 15K/12K SMS interface daemon

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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