Sun™ Management Center 3.5 Version 6 Supplement for Sun Fire™ Midrange Systems

Sun Microsystems, Inc.
www.sun.com

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Preface

This *Sun™ Management Center 3.5 Version 6 Supplement for Sun Fire™ Midrange Systems* provides instructions on how to install, configure, and use Sun Management Center software on these Sun Fire midrange systems:

- Sun Fire E6900
- Sun Fire E4900
- Sun Fire 6800
- Sun Fire 4800
- Sun Fire 4810
- Sun Fire 3800

Systems containing UltraSPARC® IV and UltraSPARC® IV+ CPU/Memory boards are supported.

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

Before You Read This Book

Read this supplement after reading the *Sun Management Center Installation and Configuration Guide*, which provides detailed instructions for installing and configuring Sun Management Center software, and the *Sun Management Center User's Guide*, which provides detailed 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 midrange systems.

Chapter 2 describes how to install, set up, update multiple hosts, start, and stop Sun Management Center software on the Sun Fire midrange systems using the graphical user interface (GUI). Use this chapter with the *Sun Management Center Installation and Configuration Guide*. This chapter includes pre-installation steps, such as enabling system controller (SC) failover. The chapter also includes post-installation steps, such as assigning users to administrator and operator groups and setting up domains.

Chapter 3 describes how to administer and monitor the Sun Fire midrange systems platform and domains using the Platform Agent. This chapter also briefly describes each property and the alarm rules used by the Platform Agent.

Chapter 4 describes how to administer a Sun Fire midrange systems domain using the Domain Agent. This chapter also briefly describes each property and the alarm rules used by the Domain Agent.

Chapter 5 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.

Appendix A describes how to use the command-line interface (CLI) to install, set up, uninstall, start, and stop Sun Management Center software.

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

A comprehensive Index helps you find information quickly in this supplement.

Localized Documentation

The Sun Management Center 3.5 documents for Sun Fire midrange 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.

Open Source Information

The Sun Management Center 3.5 product includes open source software. Refer to the *Sun Management Center Installation and Configuration Guide* for information about license terms, attribution, and copyright statements for open source software included in this release.

Using UNIX Commands

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

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

  `http://docs.sun.com`

Shell Prompts

Shell	Prompt
C shell	*machine-name*%
C shell superuser	*machine-name*#
Bourne shell and Korn shell	$
Bourne shell and Korn shell superuser	#

Typographic Conventions

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

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

Related Documentation

Always use the latest version of documents pertaining to the version of software installed in your system.

Application	Title
Issues, limitations, and bugs for Sun Fire midrange systems add-on software	*Sun Management Center 3.5 Version 6 Release Notes for Sun Fire Midrange Systems* (819-0794)
Issues, limitations, and bugs for core software	*Sun Management Center Release Notes*
New functionality in Sun Management Center 3.5 Update 1	Sun Management Center 3.5 Update 1 Supplement
Installing and configuring Sun Management Center core software	*Sun Management Center Installation and Configuration Guide*
Using Sun Management Center core software	*Sun Management Center User's Guide*
Changes, limitations, and bugs for Sun Fire midrange systems	*Sun Fire Midrange Systems Firmware Release Notes*
Platform administration	*Sun Fire Midrange Systems Platform Administration Manual*
Command reference	*Sun Fire Midrange System Controller Command Reference Manual*
Dynamic reconfiguration, command-line interface	*Sun Fire High-End and Midrange Systems Dynamic Reconfiguration User Guide*
Hardware service	*Sun Fire E6900/E4900 Systems Service Manual* *Sun Fire 6800/4810/4800/3800 Systems Service Manual*

Documentation, Support, and Training

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

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

Sun Management Center 3.5 Version 6 Supplement for Sun Fire Midrange Systems, part number 819-0418-10

CHAPTER 1

Introduction

This chapter introduces Sun™ Management Center software platform and domain administration on Sun Fire™ midrange systems.

Sun Fire Midrange Systems Add-On Software

Sun Management Center software allows you to monitor Sun systems from a platform such as a workstation or server. You can also use Sun Management Center software to manage various remote operations and applications through the network. The Sun Fire midrange systems add-on software adapts the basic Sun Management Center software to function with Sun Fire midrange systems. The following Sun Fire midrange systems models are supported with this release of the software:

- Sun Fire E6900
- Sun Fire E4900
- Sun Fire 6800
- Sun Fire 4810
- Sun Fire 4800
- Sun Fire 3800

Systems containing UltraSPARC-IV and UltraSPARC-IV+ CPU/Memory boards are supported.

To use the dynamic reconfiguration features described in Chapter 5, you need a thorough understanding of dynamic reconfiguration operations. This supplement describes using Sun Management Center software to perform dynamic reconfiguration operations. For an overall description of dynamic reconfiguration operations that apply to the Sun Fire midrange systems, refer to the *Sun Fire High-End and Midrange Systems Dynamic Reconfiguration User Guide*.

Sun Fire midrange systems are divided into hardware domains, with each domain running a separate copy of the Solaris™ Operating System. Depending on the capability and the number of hardware resources, Sun Fire midrange systems can support up to four domains. (The minimum is one domain.) Because domains are used, the Sun Fire midrange systems add-on software has two modes of operation (FIGURE 1-1):

- **Domain administrators** can access Solaris Operating System domain views only through the Sun Management Center agent running on a Sun Fire midrange systems domain, or through the Sun Management Center platform agent that is doing proxy management for the Simple Network Management Protocol (SNMP) agent running on the Sun Fire Midrange system controller.
- **Platform administrators** can access platform views from the system controller console through the Sun Management Center platform agent.

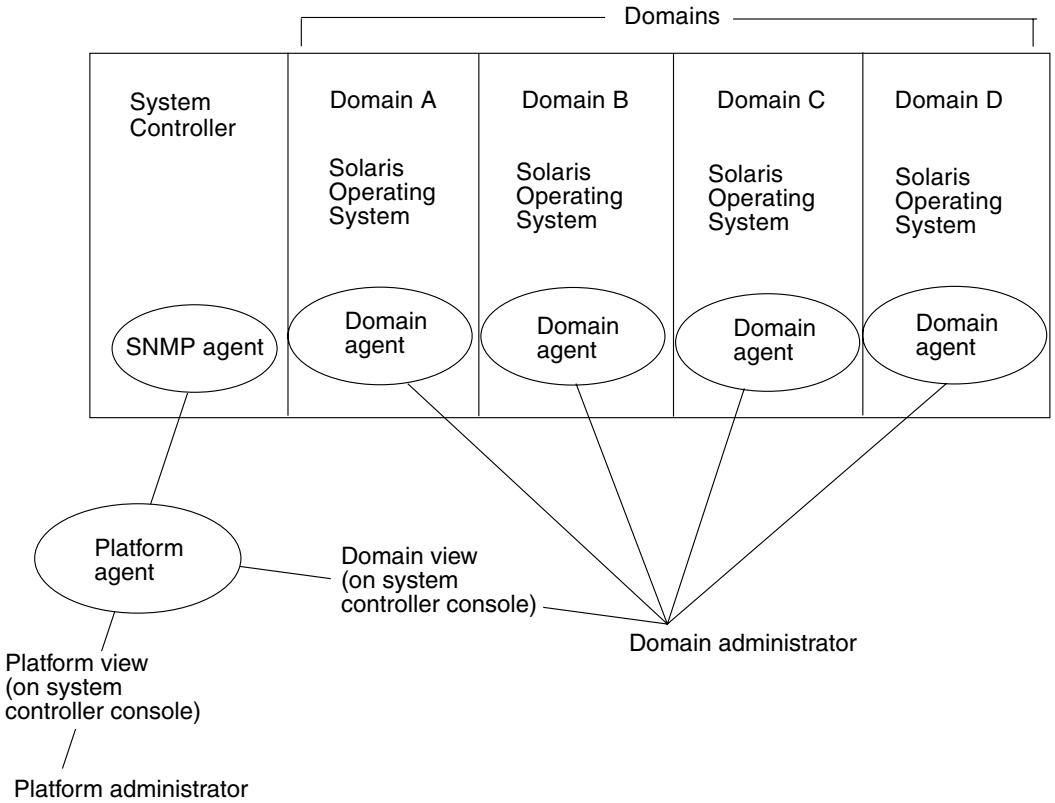


FIGURE 1-1 Platform and Domain Administration Views

After the add-on software has been installed on a host machine (workstation or server), you can run Sun Management Center software on that host machine to access the system controller in Sun Fire midrange systems.

The initial software supplement setup creates one platform agent, which provides access to one system controller. To access additional system controllers on other Sun Fire midrange systems, install an agent instance for each system controller (FIGURE 1-2).

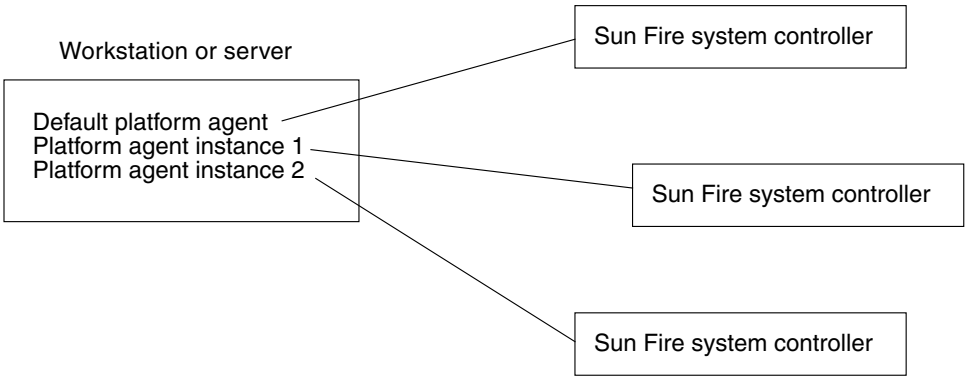


FIGURE 1-2 Platform Agents Provide Access to Sun Fire Midrange System Controllers

Terms Used in This Book

Note – In this document, "administrative domain" refers to a Sun Management Center administrative domain, and should not be confused with other uses of the term "domain" related to other Sun products or documentation.

Administrative domain — An administrative domain consists of one or more host systems.

Dynamic reconfiguration — The Sun Fire midrange systems add-on software provides a graphical user interface to facilitate dynamic reconfiguration operations. Dynamic reconfiguration software is a part of the Solaris Operating System and provides the ability to safely remove or install system boards or compact PCI I/O cards into a system while the Solaris Operating System is running. Dynamic reconfiguration software also provides the ability to transfer system boards or compact PCI I/O cards from one domain to another, while the Solaris Operating System is running.

Platform — An alternative term for a complete system. A Sun Fire E6900 system is an example of a platform, as described in this book.

Domain or **hardware domain** — Within a Sun Fire Midrange platform, a domain can consist of logically independent multiple sections within a partition, with each domain running a separate copy of the operating environment. This type of domain consists of system boards and other devices, as opposed to an administrative domain, which can consist of multiple hardware domains and entire platforms. For clarity, this type of domain is referred to as a "hardware domain" in this book.

FIGURE 1-3 shows an example of an administrative domain. Note that the administrative domain includes complete systems and hardware domains.

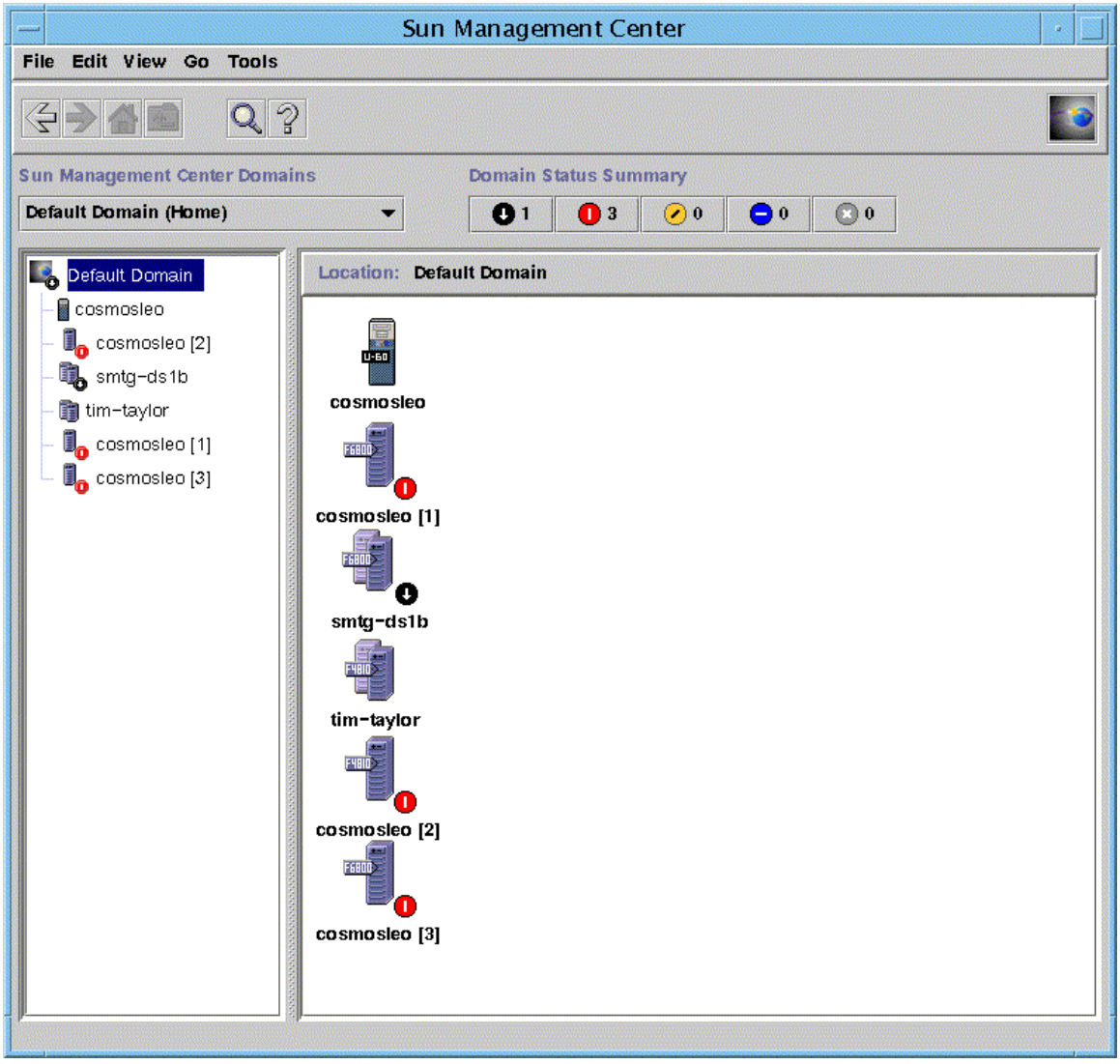


FIGURE 1-3 Main Console Window Showing an Administrative Domain Containing Multiple Hosts

For contrast, FIGURE 1-4 shows hardware domains in a host.

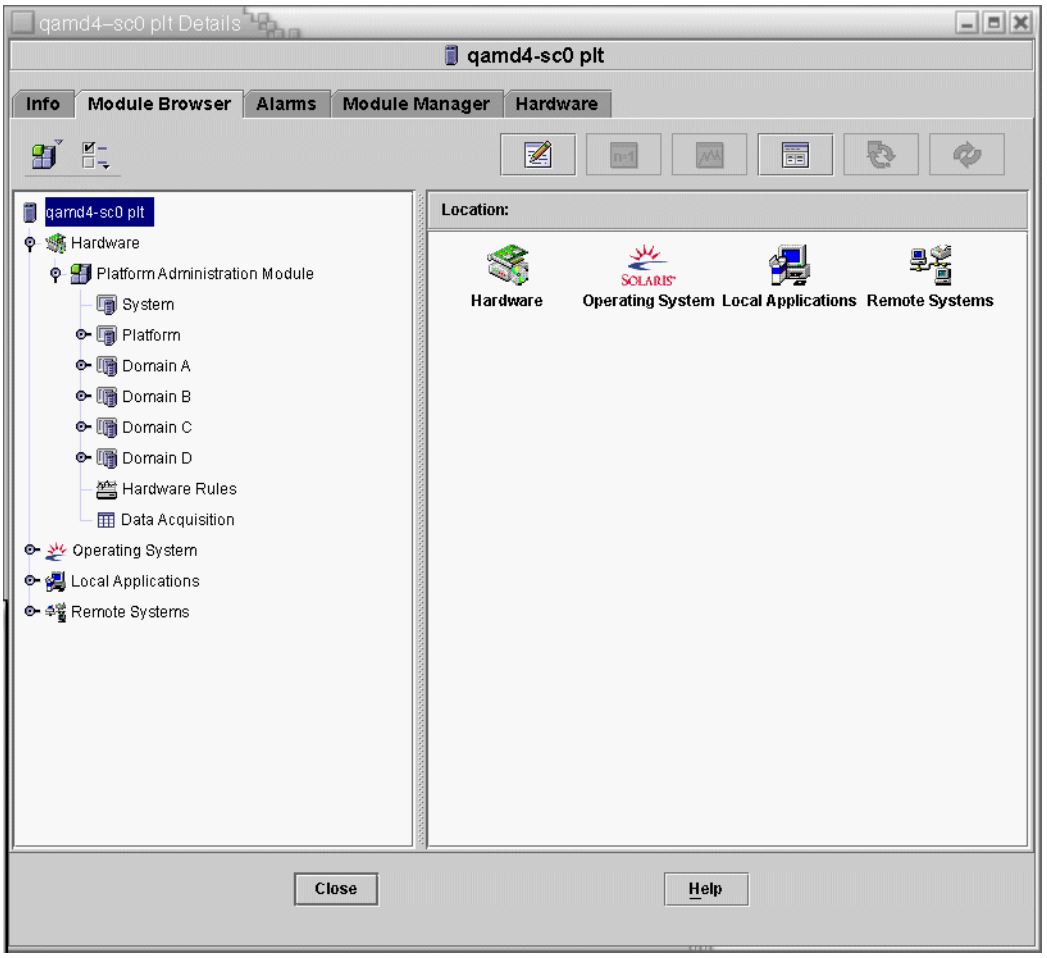


FIGURE 1-4 Details View of a Sun Fire Midrange Platform With Multiple Hardware Domains

TABLE 1-1 shows typical icons for Sun Fire midrange systems. Icons for other types of Sun Fire systems display corresponding model numbers.

TABLE 1-1 Sun Fire Midrange Systems Icons

Icon	Description
	Sun Fire E6900 Group Icon
	Sun Fire E6900 Platform Icon
	Sun Fire E6900 Domain Icon
	Sun Fire 6800 Platform Icon
	Sun Fire 6800 Domain Icon
	Sun Fire E6900/6800 Platform Icon (when Sun Management Center agent is not running)

TABLE 1-1 Sun Fire Midrange Systems Icons *(Continued)*

Icon	Description
	Sun Fire E6900/6800 Domain Icon (when Sun Management Center agent is not running)
	Sun Fire E4900 Group Icon
	Sun Fire E4900 Platform Icon
	Sun Fire E4900 Domain Icon
	Sun Fire E4900/4800 Platform Icon (when Sun Management Center agent is not running)
	Sun Fire E4900/4800 Domain Icon (when Sun Management Center agent is not running)

Identifying Platforms and Hardware Domains

The platform and hardware domain Details windows are very similar when they are first displayed. By default, both windows open to the Module Browser tab. FIGURE 1-5 compares the Details windows for a typical platform and a typical hardware domain.

- **Platform:** To identify a platform Details window, look for a platform icon (FIGURE 1-5) and five tabs (Info, Module Browser, Alarms, Module Manager, and Hardware).
- **Hardware domain:** To identify a hardware domain Details window, look for a hardware domain icon (FIGURE 1-5) and six tabs (Info, Module Browser, Alarms, Module Manager, Applications, and Hardware).

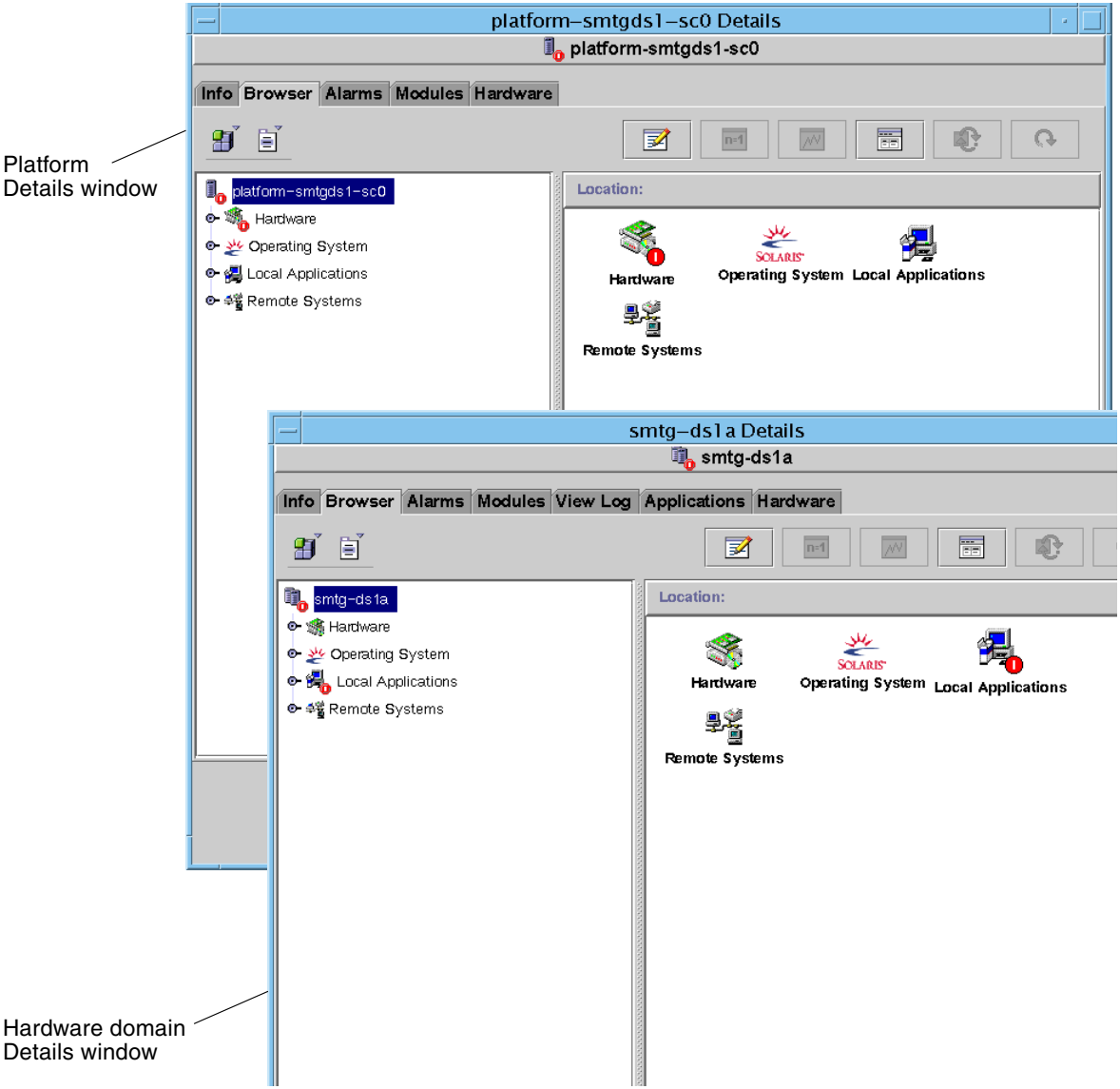


FIGURE 1-5 Details Windows for Platform (Upper) and Hardware Domain (Lower)

About the Examples Used in This Book

Many steps or operations shown in this book can be accomplished in more than one way. For the sake of brevity, only one way is shown in an operation, usually the easiest or quickest way.

For example, in the main console window (FIGURE 1-3), you can choose from four possible ways to open a Details view of Sun Fire midrange systems:

- Single-click the Sun Fire midrange icon in the hierarchy view (left side of the window), then click the Tools menu in the top bar, and choose Details.
- Do the same as above in the topology view (right side of the window).
- Double-click the Sun Fire midrange icon in the hierarchy view.
- Double-click the Sun Fire midrange icon in the topology view.

Similarly, there are multiple ways to expand (or uncompress) an icon. As shown in FIGURE 1-6, you can:

- Click the Expand All button (not available in some windows).
- Click the Uncompress symbol next to the icon.
- Double-click the icon in the hierarchy or topology views.

Note – Some of the figures in this supplement have tabs on the Details window that say Browser and Manager. The correct and current tabs are Module Browser and Module Manager.

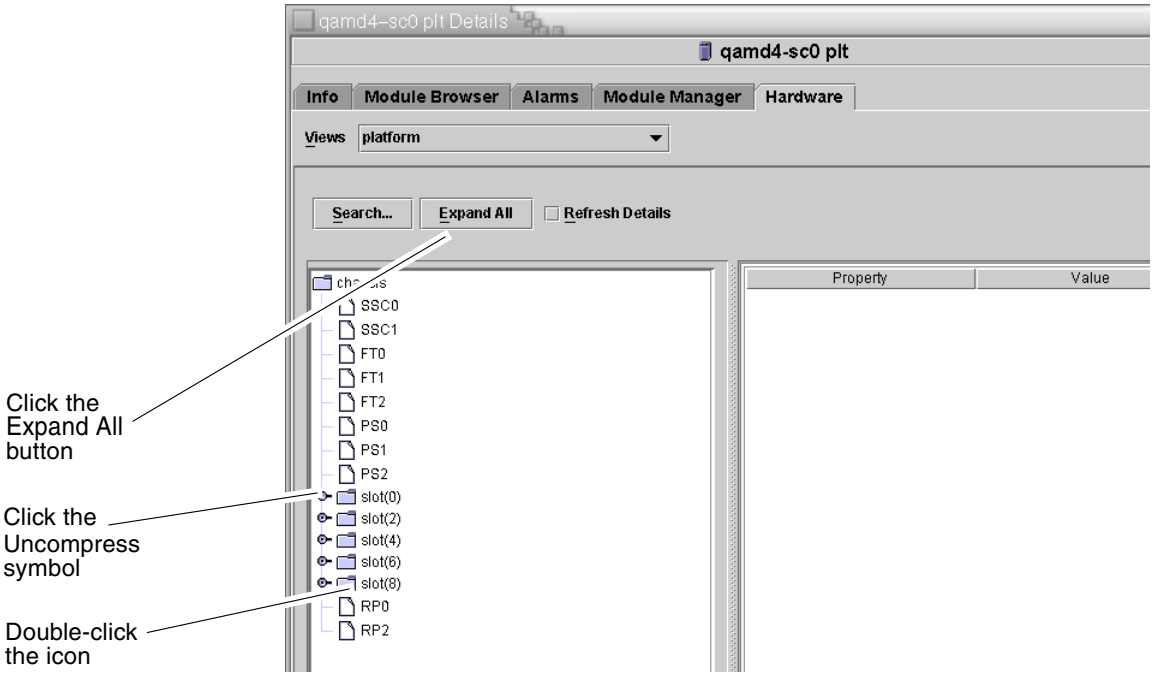


FIGURE 1-6 Choices for Expanding or Uncompressing Icons

CHAPTER 2

Installation and Setup

This chapter contains instructions for installing, setting up, and uninstalling Sun Fire midrange systems add-on software using the Sun Management Center Wizards. Refer to the *Sun Management Center Installation and Configuration Guide* for information about installing, setting up, uninstalling, starting, and stopping base Sun Management Center software.

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

Your Sun Management Center installation and setup scripts or Wizard panels may not display exactly the same messages in exactly the same sequence as the examples shown in this supplement. 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.

See "Using the CLI to Install, Set Up, Uninstall, Start, and Stop Sun Management Center Software" on page 169 for more information about how to perform these functions using the command-line interface (CLI).

Sun Fire Midrange System–Specific Packages

TABLE 2-1 lists the Sun Fire midrange system-specific packages with the host they should be installed on, and the base layer they belong to.

TABLE 2-1 Sun Management Center Packages for Sun Fire Midrange Systems

Package	Description	Host	Layer
SUNWesspa	Sun Management Center - Sun Fire midrange systems platform agent	Sun Fire midrange systems platform machine	Agent
SUNWesadf	Sun Management Center agent support for dynamic reconfiguration on Sun Fire high-end and midrange systems	Sun Fire midrange systems platform machine	Agent
SUNWessda	Sun Management Center - Sun Fire high-end and midrange systems domain agent	Sun Fire midrange systems domains	Agent
SUNWessdc	Sun Management Center Sun Fire midrange systems domain administration	Sun Fire midrange systems domains	Agent
SUNWedacs	Sun Management Center Sun Fire midrange systems Domain Admin module setup for agent and server	Sun Fire midrange systems domains, Sun Management Center server machine	Agent, Server
SUNWensda	Sun Management Center Sun Fire midrange systems English domain message files	Sun Management Center Server, Workstations, or common network location	Agent, Server
SUNWenspa	Sun Management Center Sun Fire midrange systems English platform message files	Sun Management Center Server, Workstations, or common network location	Agent, Server, Console
SUNWessps	Sun Management Center - Sun Fire midrange systems platform support	Sun Fire midrange systems platform machine	Server
SUNWessco	Sun Management Center Sun Fire midrange systems support - server component for Domain Admin module	Sun Management Center server machine	Server
SUNWespsc	Sun Management Center Sun Fire midrange systems support - server component for Platform Admin module	Sun Management Center Server	Server

TABLE 2-1 Sun Management Center Packages for Sun Fire Midrange Systems *(Continued)*

Package	Description	Host	Layer
SUNWessdf	Sun Management Center server support for dynamic reconfiguration on Sun Fire high-end and midrange systems	Sun Management Center server machine	Server
SUNWesssd	Sun Management Center server for Sun Fire midrange systems domain	Sun Management Center server machine	Server
SUNWesspc	Sun Management Center console for Sun Fire midrange systems platform administration	Sun Fire midrange systems platform machine	Server, Console
SUNWensdr	Sun Management Center Sun Fire high-end and midrange systems English DR message files	Sun Management Center Server, Workstations, or common network location	Server, Console
SUNWesccd	Sun Management Center Sun Fire Support - console component for Dynamic Reconfiguration	Workstations or common network location	Server, Console
SUNWesccp	Sun Management Center Sun Fire Support - console component for Platform Admin module	Workstations or common network location	Server, Console
SUNWescdf	Sun Management Center console support for dynamic reconfiguration on high-end and midrange systems	Workstations or common network location	Server, Console

What You Can Do

You can install, set up, uninstall, and update Sun Management Center software in different ways, primarily using the Sun Management Center Wizards or the command-line interface (CLI). You might also need to perform certain other procedures if you want to use certain features. TABLE 2-2 lists the various procedures with a cross-reference to the information about them in this supplement.

TABLE 2-2 Pre-Installation, Installation, Setup, Uninstallation, Upgrade, and Post-Installation Procedures

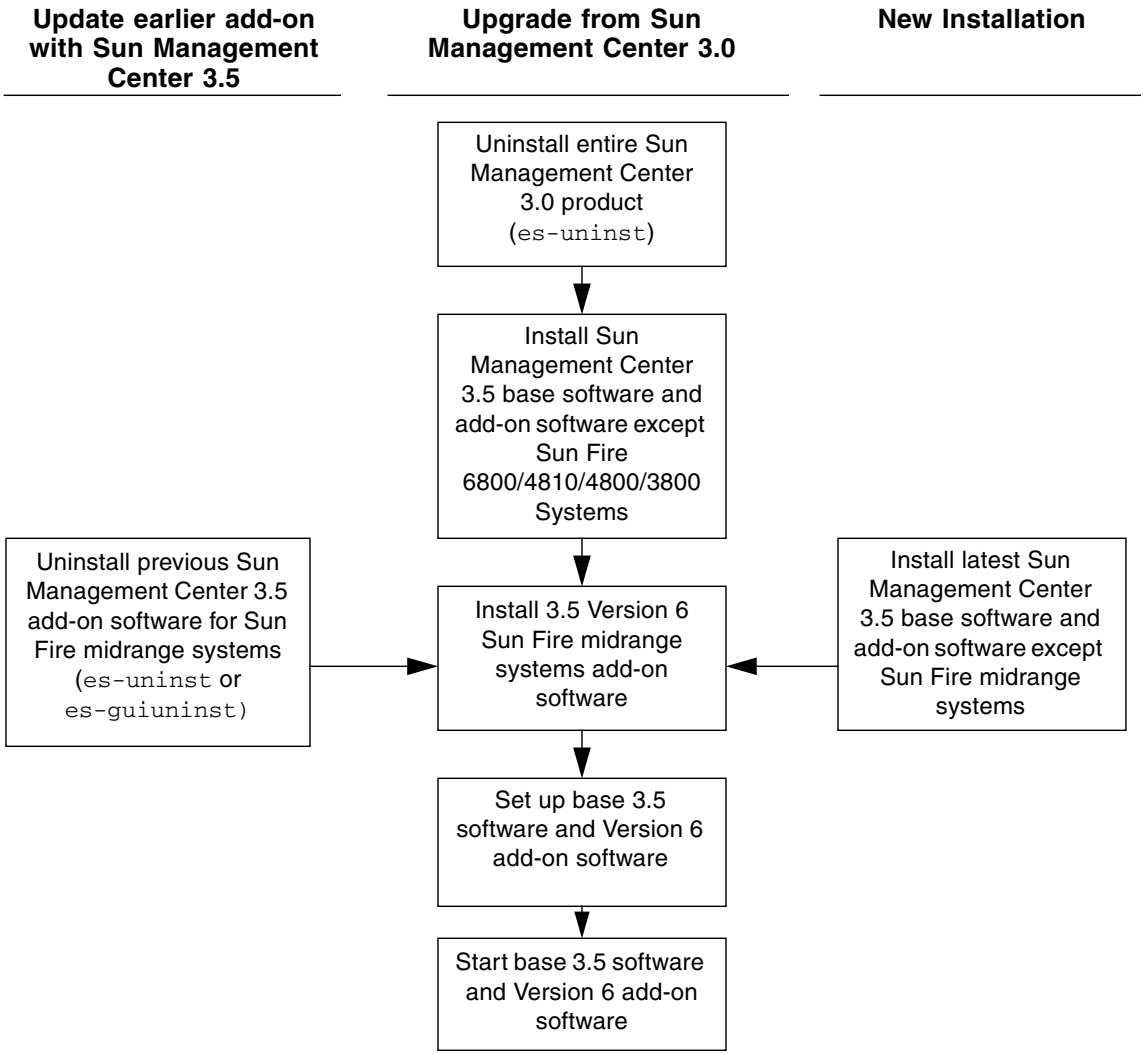
To Perform This Task	Follow This Procedure
Enable SC failover and find logical IP address	"Enabling the SC Failover Capability" on page 22
Set up SNMP on the system controller	"Setting Up SNMP on the System Controller" on page 23
Install software using the Sun Management Center Installation Wizard	"Installing Sun Management Center on the Solaris Platform" in Chapter 6 of the *Sun Management Center Installation and Configuration Guide*
Set up the Sun Fire midrange systems add-on software using the Setup Wizard	"Setting Up the Sun Fire Midrange Systems Add-On Software Using the Setup Wizard" on page 27 "Using Advanced Wizard Setup Options" on page 40 "Setting Up Base Products and Add-ons on the Solaris Platform" in Chapter 6 of the *Sun Management Center Installation and Configuration Guide*
Update multiple hosts using Agent Update	"Updating Multiple Hosts Using Agent Update" on page 41 Creating Agent Installation and Update Images" in Chapter 6 of the *Sun Management Center Installation and Configuration Guide*
Create and set up a platform agent	"Creating and Setting Up a Sun Fire Midrange Systems Platform Agent Instance" on page 47
Start software using the Start Wizard	"Starting Components Using `es-guistart`" in Chapter 8 of the *Sun Management Center Installation and Configuration Guide*
Stop software using the Stop Wizard	"Stopping Components Using `es-guistop`" in Chapter 8 of the *Sun Management Center Installation and Configuration Guide*
Uninstall software using Uninstall Wizard	"Uninstalling Sun Management Center" in Appendix A of the *Sun Management Center Installation and Configuration Guide*
Assign users	"Assigning Users to Groups" on page 50
Undo setups and delete platform agents	"Undoing Setups and Deleting Platform Agents" on page 51
Set up domains	"Setting Up Domains" on page 53

TABLE 2-2 Pre-Installation, Installation, Setup, Uninstallation, Upgrade, and Post-Installation Procedures *(Continued)*

To Perform This Task	Follow This Procedure
Install Sun Management Center base software using the CLI	Appendix B of the *Sun Management Center Installation and Configuration Guide*
Install Sun Fire midrange systems add-on packages using the CLI	"To Install the Supplement Software Using the CLI" on page 169
Set up Sun Fire midrange systems add-on packages using the CLI	"Setting Up the Sun Fire Midrange Systems Add-On Software Using the CLI" on page 177
Uninstall using the CLI	"Uninstalling Software Using the CLI" on page 179
Start software using the CLI	"Starting Sun Management Center Software Using the CLI" on page 182
Stop software using the CLI	"Stopping Sun Management Center Components" on page 184

Installation Process Overview

FIGURE 2-1 shows a high-level view of the installation process.



Note - You can use Agent Update to install software on multiple agent hosts.

FIGURE 2-1 Installation Process Flow

Updating Existing Sun Management Center 3.5 Add-On Software

If you are updating existing Sun Management Center 3.5 add-on software for Sun Fire midrange systems, you must:

- Remove the existing add-on software from the server and domains on your Sun Fire midrange system.
- Install and set up the new add-on software on the server and domains on your Sun Fire midrange system.

Uninstalling the Sun Management Center 3.5 Add-On Software for Sun Fire Midrange Systems

- To use the CLI command `es-uninst` to uninstall the Sun Management Center 3.5 add-on software for Sun Fire midrange systems, see "Uninstalling Software Using the CLI" on page 179.
- To use the Sun Management Center Uninstall Wizard, `es-guiuninst`, to uninstall the Sun Management Center add-on software for Sun Fire midrange systems, refer to "Uninstalling Sun Management Center" in Appendix A of the *Sun Management Center Installation and Configuration Guide* for detailed options and instructions.

Installing and Setting Up the Sun Management Center 3.5 Add-On Software for Sun Fire Midrange Systems

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Note – Before you start, be aware that you can use Agent Update to install Sun Management Center software on multiple agent hosts. For instructions about updating multiple hosts using agent update, see "Updating Multiple Hosts Using Agent Update" on page 41.

See the following references depending on whether you are installing and setting up using the CLI or GUI:

- Installing and setting up using the GUI Wizards, see "Installing and Setting Up the Sun Management Center 3.5 Add-On Software for Sun Fire Midrange Systems" on page 19.
- Installing and setting up using the CLI, see Appendix A.

Upgrading From Sun Management Center 3.0 Software

Refer to Chapter 5 of the *Sun Management Center Installation and Configuration Guide* for detailed information about upgrading from Sun Management Center 3.0 software.

Installing and Setting Up New Sun Management Center 3.5 Add-On Software

This section summarizes new installation and setup procedures for Sun Management Center 3.5 software on Sun Fire midrange systems:

Installing Separately Released Add-On Products

For a new installation for this release:

1. **Log in as superuser on the host machine.**
2. **Change the directory to the** *path*`/sbin` **directory, where** *path* **is the location of the Sun Management Center 3.5 CD or the disk copy of the CD.**
3. **Install the Sun Management Center base software using** `es-guiinst`**.**
4. **Change the directory to the path where you installed the base software in Step 3 (***installed_directory*`/SUNWsymon/sbin`**).**

5. **Run the** `es-guiinst` **script again with a pointer to the path where you placed the Sun Fire midrange systems add-on software for Version 6. Use the** `disk1` **image (***addon_path*`/disk1/image`**).**

   You will see a list of add-on products that you can install.

6. **Choose the add-on software that applies to Sun Fire midrange systems, and click Next.**

Note – If you already have installed the Sun Management Center 3.5 base software with an earlier version of the Sun Fire 6800/4810/4800/3800 or Sun Fire midrnage systems add-on software, uninstall the earlier veresion of that add-on software and follow the instructions in Step 5 to install the Sun Fire midrange systems add-on software for Version 6.

Setting a Logical IP Address

Caution – Once you set a logical IP address for the system controller, whether you are going to use the failover feature or not, you must use a logical IP address for the SC whenever you set up a platform administration agent.

▼ To Set a Logical IP Address

1. **From the SC, set up a logical IP address for the SC using the following command.**

```
schostname:SC> setupplatform -p sc
```

   The system displays the following:

```
SC
--
SC POST diag Level [off]:
Enable SC Failover? [no]:
Logical Hostname or IP Address [ ]:
```

2. **Enter the logical IP Address.**

Enabling the SC Failover Capability

If you want to use the SC Failover capability, you must do the following before you install and set up the Sun Fire midrange systems add-on software:

- Enable the SC Failover capability.
- Create a logical IP address that will refer to *both* SCs, rather than pointing to each one by its physical IP address.

Note – If you use the physical IP address of one SC during setup of the add-on software, when failover occurs, the add-on software is no longer communicating with what is now the main SC. To allow the add-on software to communicate with whichever SC is the main SC, you must create a logical IP address that refers to both SCs.

You must then use that logical IP address when you set up the Sun Fire midrange systems add-on software.

▼ To Enable the SC Failover Capability and Set Up a Logical IP Address

1. **Choose an unused IP address that begins with the same subnet address as both SCs.**

   For example, if one SC has an physical IP address of `129.146.235.14` and the other SC has a physical IP address of `129.146.235.41`, the logical IP address would be `129.146.235.`*xxx*, where *xxx* is an unused IP address within that subnet. For the example in Step 2, `129.146.235.251` is used as the logical IP address.

2. **From the SC, set up a logical IP address for the SC using the following command.**

```
schostname:SC> setupplatform -p sc
```

   The system displays the following:

```
SC
--
SC POST diag Level [off]:
Enable SC Failover? [no]:
Logical Hostname or IP Address [ ]:
```

3. **Type `yes` to Enable SC Failover.**

4. **Type the logical IP address you chose in Step 1 (`129.146.235.251` in our example).**

5. **Use this logical IP address to set up the platform agent during `es-setup` or `es-guisetup`.**

Setting Up SNMP on the System Controller

Before you install and set up Sun Fire midrange systems add-on software, you must configure SNMP on the platform and the domain. This section contains both required procedures.

- Configuring SNMP on the platform
- Configuring SNMP on the domain

▼ To Configure SNMP on the Platform

To configure SNMP on the platform, you can use telnet, ssh, or a direct connection to the console. This example uses the `telnet` command.

Note – Do not set up multiple Platform Administration Agents to manage the same Sun Fire midrange system controller. Doing so causes the system to run slowly or even hang.

---

1. **As superuser, access the system controller by using the `telnet`(1) command.**

```
# telnet schostname
System Controller schostname:SC>

Type 0 for Platform Shell

Type 1 for domain A
Type 2 for domain B
Type 3 for domain C
Type 4 for domain D
```

where *schostname* is the system controller host name.

2. **At the system controller main menu, type `0` (or alternatively `P` or `p`) to enter the platform shell.**

```
Input: 0
Password:
schostname:SC>
```

The platform shell prompt, *schostname*:SC, is displayed.

3. **Type** `setupplatform -p snmp`**, and answer the questions.**

```
schostname:SC> setupplatform -p snmp
SNMP
----
Platform Description [description]: your_description
Platform Contact [contactname]: contact_name
Platform Location [location]: your_platform_location
Enable SNMP Agent? [no]: yes
Trap Hosts [hostname]: Sun_Management_Center_server or (IP address of
server)
Public Community String [P-public]: your_string1
Private Community String [P-private]: your_string2
```

Caution – For Trap Hosts, be sure to enter the host name (or IP address) of the Sun Management Center server from which you perform platform administration. For example, your Sun Management Center server might be called `CompA`, and you want to monitor your main SC called `tiger-sc0` among other machines. You would run the `setupplatform` command as shown here on `tiger-sc0`, and enter **`CompA`** as the Trap Host.

Note – You must enter both the platform trap host here and the domain trap host in Step 4 in "To Configure SNMP on a Domain" on page 24 for the platform administration module to monitor the domain state changes. You must also enter both a domain and platform trap host to refresh the data displayed in the Sun Management Center console.

4. **Type** `disconnect` **to disconnect from the platform shell and the telnet session.**

▼ To Configure SNMP on a Domain

To configure SNMP on the platform, you can use telnet, ssh, or a direct connection to the console. This example uses the `telnet` command.

1. **As superuser, access the system controller by typing the** `telnet` **command.**

```
# telnet schostname
System Controller schostname:SC>
```

   where *schostname* is the system controller host name. In this example, domain A is chosen.

2. **Enter a domain. Type** `1`**,** `2`**,** `3`**, or** `4` **(or alternatively** `a`**,** `b`**,** `c`**,** `d`**, or** `A`**,** `B`**,** `C`**,** `D`**) to enter the proper domain shell.**

```
Type 0 for Platform Shell

Type 1 for domain A
Type 2 for domain B
Type 3 for domain C
Type 4 for domain D

Input: 1
Password:
schostname:A>
```

   The domain shell prompt, *schostname*`:`*X*, is displayed, where *X* is the domain that you have chosen.

3. **If the domain is active and the domain keyswitch is set to** `on`**,** `diag`**, or** `secure` **(you are running the Solaris Operating System, you are in OpenBoot PROM mode, or you are running POST), perform the following steps:**

   a. **Press and hold the Control key while pressing the] key, to return to the** `telnet>` **prompt.**

   b. **At the** `telnet>` **prompt type** `send break`**.**

4. **Type** `setupdomain -p snmp`**, and answer the questions.**

```
schostname:A> setupdomain -p snmp
SNMP
----
Domain Description [description]: your_description
Domain Contact [contactname]: contact_name
Trap Hosts [hostname]: Sun_Management_Center_server or (IP address of
server)
Public Community String [P-public]: your_string1
Private Community String [P-private]: your_string2
```

For Trap Hosts, enter the host name (or the IP address) of the Sun Management Center server from which you will perform platform administration.

Note – You must enter both the platform trap host in Step 3 in "To Configure SNMP on the Platform" on page 23 and the domain trap host here for the platform administration module to monitor the domain state changes. You must enter both a domain and platform trap host to refresh the data displayed in the Sun Management Center console, as well.

For Public and Private Community Strings, enter a different string for each domain and platform.

5. **Type `disconnect` to exit the connection to the domain shell and the telnet session.**
6. **Repeat Step 1 through Step 5 for each additional domain, if any.**

Installing the Sun Fire Midrange Systems Add-On Software Using the Install Wizard

This section provides a summary of installing Sun Management Center base software and Sun Fire midrange systems add-on software using the Install Wizard. The *Sun Management Center Installation and Configuration Guide* describes in detail how to install all the software.

- You can install the console, server, and agent layers either separately or in combination.
- You can install the Sun Fire midrange or high-end systems Platform Agents on any machine where you have Sun Management Center software running.

- You can install the Sun Fire midrange systems Domain Agent *only* on Sun Fire midrange systems domains.

Summary of Sun Management Center Software Installation

1. As superuser, run the `es-guiinst` script as described in Chapter 6, "Installation and Setup," of the *Sun Management Center 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. Choose those add-on software items that apply to Sun Fire midrange systems, and click Next.
3. The Sun Management Center Setup Wizard starts automatically after all the software is installed.

Setting Up the Sun Fire Midrange Systems Add-On Software Using the Setup Wizard

This section describes how to set up the platform agent and the domain agent on Sun Fire midrange systems using the Sun Management Center Setup Wizard. For more details about the entire software setup process, refer to Chapter 6, "Installation and Setup," of the *Sun Management Center Installation and Configuration Guide*.

Note – When the Back button at the bottom of a panel is enabled (not grayed out), you can click 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 base software setup process if you want to use the `setup-responses-file` to duplicate the setup of 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 Installation and Configuration Guide*.

▼ To Set Up the Platform Agent Using the Setup Wizard

1. **Set up the Sun Fire midrange systems Platform Agent on any machine where you have installed it.**

   Once the Sun Management Center base software setup is complete, the Wizard displays the following message:

```
Select Add-on Products

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

  - Sun Fire Platform Administration
```

2. **Click Next to continue.**
   - If you are *not* setting up the platform agent on a server machine, go to Step 4.
   - If you are setting up the platform agent on a server machine, the Sun Fire Midrange Systems Platform Agent Setup panel displays this screen.

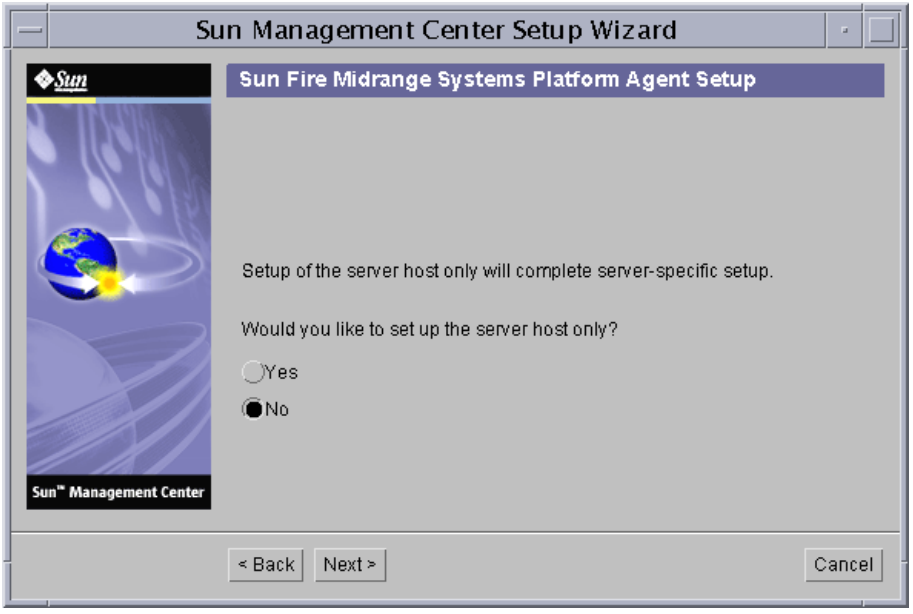


FIGURE 2-2 Server Host-Only Query Panel

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

- **Select the Yes to set up only the server host.**

  The Sun Fire Midrange Systems Platform Agent Setup panel displays the following message. Go to Step 27.

```
Setting up server host...

Status:
Setting up server host...
...
Setup of server host complete.
```

- **Select No to continue and set up all hosts. Go to Step 4.**

4. **Click Next to continue.**

   The Sun Fire Midrange Systems Platform Agent Setup panel displays this screen:

```
To set up the Sun Fire Midrange Systems platform administration
module, you need to provide SC IP address, community strings, port
numbers for domain agent etc.

Would you like to set up the Sun Fire Midrange Systems platform
administration module?
O Yes
O No
```

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

- **If you do not want to set up the Platform Administration module, Select** `No`**, then go to Step 28.**

- **To set up the Platform Administration module, select Yes.**

  The Sun Fire Midrange Systems Platform Agent Setup panel displays the following screen:

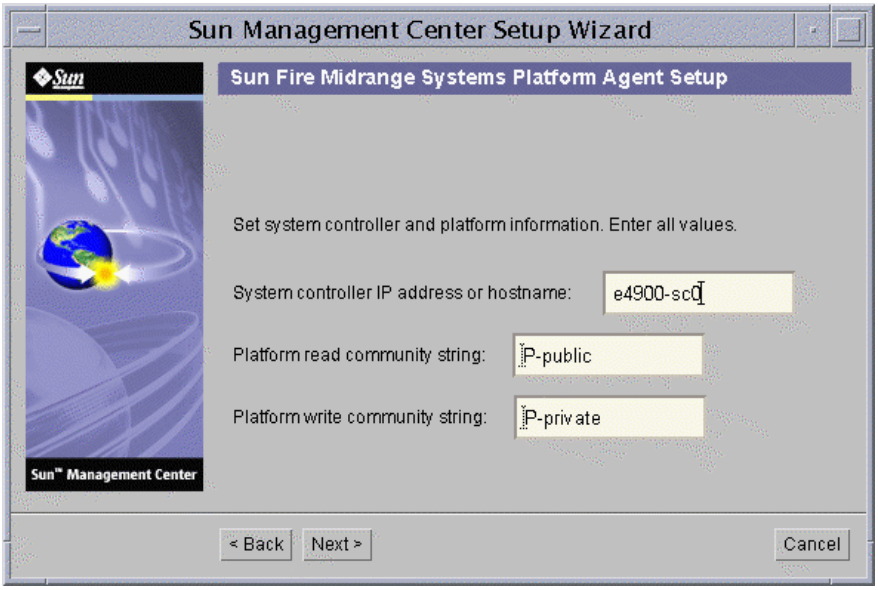


FIGURE 2-3 Platform Administration Platform Configuration Panel

6. **Enter a value for each prompt:**

Note – You must enter a value for each domain.

---

a. **Type the host name or IP address of the System Controller (for example,** `10.8.28.209`**).**

Caution – Only one SC can use a physical IP address. If you want to use the SC failover feature, you must put a logical IP address in this field. Both SCs can then use this logical IP address. If you do not put a logical IP address in this field and if an SC failover occurs, you receive a red alarm that the `SC is not responding`. For information about enabling SC failover and setting up a logical IP address, see "To Enable the SC Failover Capability and Set Up a Logical IP Address" on page 22.

Caution – If you set a logical IP address for the system controller, you must keep using a logical IP address for the SC, whether you are going to use the failover feature or not.

---

b. **Type the read community string for the platform (for example,** `P-public`**).**

c. **Type the write community string for the platform (for example,** `P-private`**).**

7. **Click Next to continue.**

   A `ping` command is sent to the system controller IP address or host name that you entered.

   a. **If the `ping` command fails, you will see a Warning pop-up, with an option to continue:**

```
The system controller at: IPaddress_or_hostname is not responding. The
hostname or address may be invalid. Please press "Cancel" to
change, or "OK" to continue with setup.
```

   b. **If the `ping` command is successful or you choose to continue with setup, the Sun Fire Midrange Systems Platform Agent Setup panel displays the following screen:**

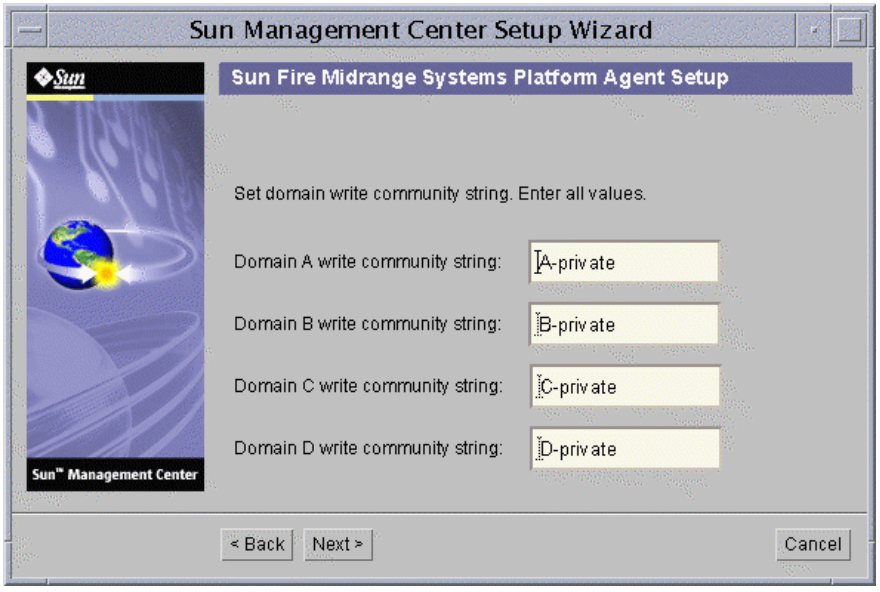


FIGURE 2-4 Platform Administration Domain Community Configuration Panel

8. **Enter the domain write community strings.**

Note – You must enter a value for each domain.

---

   a. **Type the write community string for domain A, such as `A-private`**

   b. **Type the write community string for domain B, such as `B-private`**

c. **Type the write community string for domain C, such as** `C-private`

d. **Type the write community string for domain D, such as** `D-private`

9. **Click Next to continue.**

   The Sun Fire Midrange Systems Platform Agent Setup panel displays the following screen:

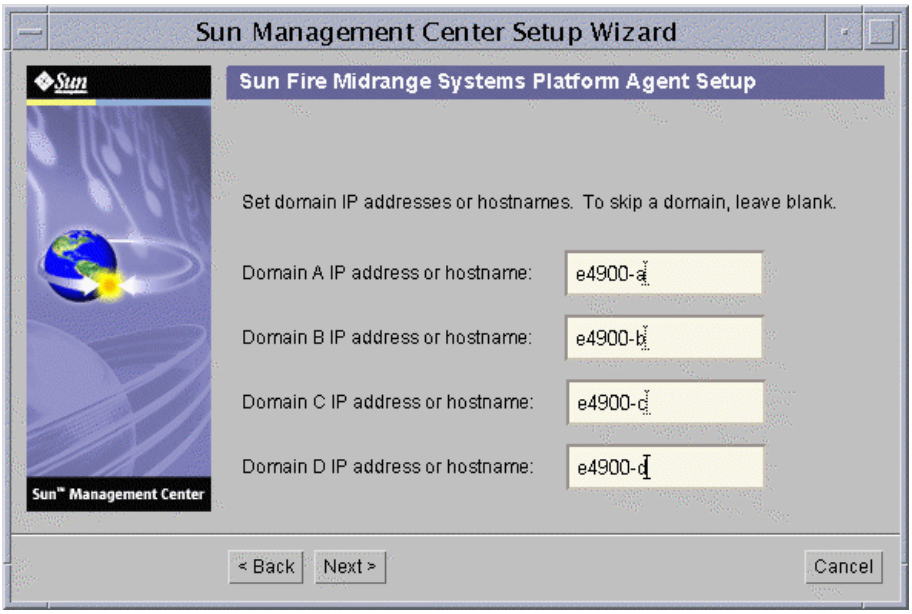


FIGURE 2-5 Platform Administration Domain IP Configuration Panel

10. **(Optional) Enter the domain IP addresses or host names.**

    a. **Type the IP address or host name of domain A, or leave blank.**

    b. **Type the IP address or host name of domain B, or leave blank.**

    c. **Type the IP address or host name of domain C, or leave blank.**

    d. **Type the IP address or host name of domain D, or leave blank.**

11. **Click Next to continue.**

    The Sun Fire Midrange Systems Platform Agent Setup panel displays the following screen:

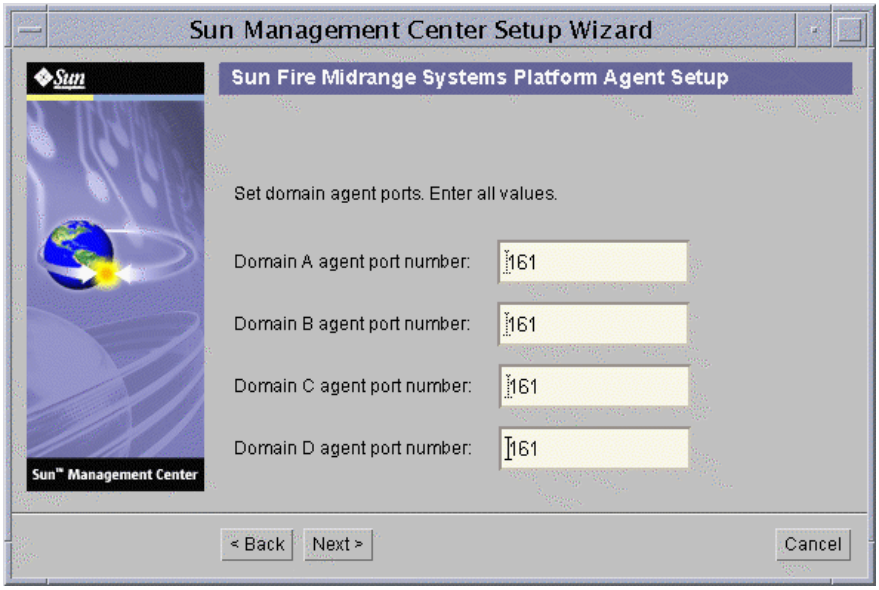


FIGURE 2-6 Platform Administration Domain Port Configuration Panel

12. **Enter the domain agent ports.**

Note – You must enter a value for each domain.

---

   a. **Type the Sun Management Center agent port number on domain A.**

   b. **Type the Sun Management Center agent port number on domain B.**

   c. **Type the Sun Management Center agent port number on domain C.**

   d. **Type the Sun Management Center agent port number on domain D.**

13. **Click Next to continue.**

    The Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Updating configuration files with platform and domain information...

Status:

Updating configuration files...
Update of configuration files complete.
```

14. **Click Next to continue.**

    The Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Setting up server host and chassis model information.

Status:

Setting up server host...
....
Setup of server host complete.
Getting chassis model from system controller...
Retrieval of chassis model from system controller complete.
```

- If there was no error in getting the chassis model, go to Step 16.
- If there was an error in getting the chassis model from the system controller, the system displays the following error message:

```
Error getting chassis model from system controller.
```

15. **Enter the chassis model.**

    a. **Click OK.**

       The Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Either could not find the chassis model from the SC or the SC
returned an unknown chassis model. These are the supported model
types: 3800, 4800, 4810, E4900, 6800, and E6900. The chassis model
needs to be one of these models.

Chassis model:
```

    b. **Enter** `3800`**,** `4800`**,** `4810`**,** `6800`**,** `E4900`**, or** `E6900` **for the chassis model.**

16. **Click Next to continue.**

The Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Checking configuration files...

Status:

Set the platform server: <hostname> or <IPaddress>
platform.snmpPort: 166
Default platform agent port: 166
Checking of configuration files complete.
```

17. **Click Next to continue.**

One of the following occurs:

- If the default port number has been set previously, you will not see the default port panel. Go to Step 19.
- If the default port number was not set previously, the Sun Fire Midrange Systems Platform Agent Setup panel displays the following screen:

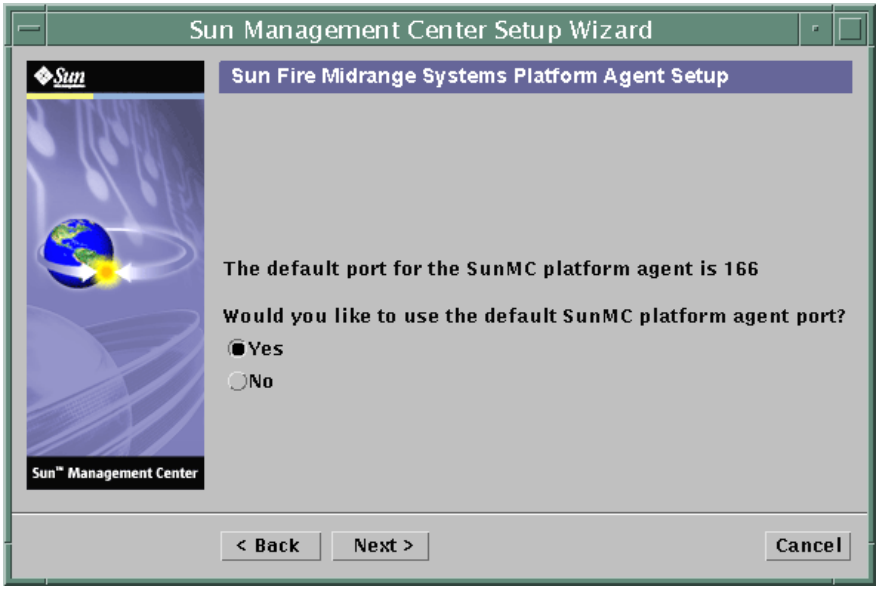


FIGURE 2-7 Platform Administration Default Platform Port Panel

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

- **To use the default Sun Management Center platform agent port, select Yes.**

- **If you do not want to use the default Sun Management Center platform agent port, select No.**

19. **Click Next to continue.**

    The Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Set the platform agent port.

Platform agent port number: 166
```

    One of the following occurs:

    - If you selected Yes to use the default port, the default agent port number is displayed for Platform agent port number. **Go to Step 21.**
    - If you selected No *not* to use the default port, the Platform agent port number is blank for you to enter.

20. **Enter the platform agent port number you want to use.**

21. **Click Next to continue.**

    One of the following occurs.

    - If you do *not* receive a warning message, go to Step 27.
    - If the default port is in use, the Sun Fire Midrange Systems Platform Agent Setup panel displays a warning message.

```
Warning, platform agent port 166 is currently in use. Pick a
different port, or ensure that this port is available when you next
start Sun Management Center.
Would you still like to use this port?
                     Yes    No
```

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

- **If you prefer to choose a different (nondefault) port, select No. Go to Step 19.**
- **To still use the default port, select Yes.**

23. **Click Next to continue.**

    One of the following occurs:

- If there was no port conflict, the Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Confirmation of the platform agent port.

Platform agent port: 166
```

- If there was a port conflict, the Sun Fire Midrange Systems Platform Agent Setup panel displays the following message:

```
Confirmation of the platform agent port.

Platform agent port: 166

Remember to resolve the port conflict prior to starting Sun
Management Center.
```

24. **Click Next to continue.**

    One of the following occurs:

    - If the platform agent port number was not changed, you do not receive the security keys message; go to Step 27.
    - If the platform agent port number was changed, the Sun Fire Midrange Systems Platform Agent Setup panel displays the following screen:

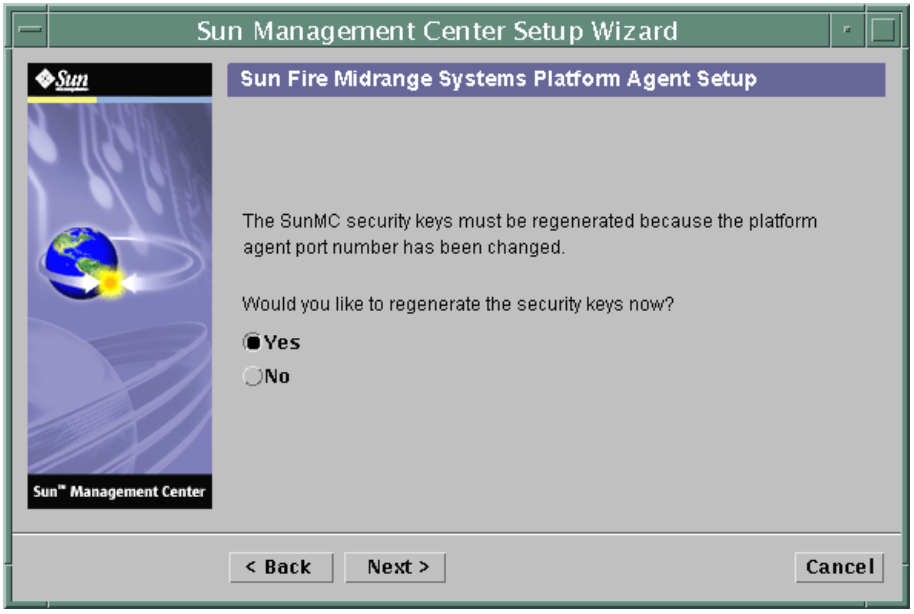


FIGURE 2-8 Platform Administration Generate Security Keys Panel

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

- **To regenerate the security keys now, select Yes; then go to Step 26.**
- **If you prefer not to regenerate the security keys now, select No, then go to Step 27.**

26. **Click Next to continue.**

The Sun Fire Midrange Systems Platform Agent 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.

Seed:

Seed:                    (Re-enter 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.

---

a. **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.**

b. **Re-enter the seed to confirm.**

27. **Click Next to continue.**

The Sun Fire Midrange Systems Platform Agent Setup panel displays this message:

```
Updating configuration files with module and discover table
information...

Status:

Added module....
Added module....
Updated Discovery Table....
Update of configuration files complete.
```

28. **Click Next to continue.**

The Sun Fire Midrange Systems Platform Agent Setup panel displays this message:

```
Sun Fire Midrange Systems Platform Admin setup is complete.
```

29. **Click Next to continue.**

The Sun Fire Midrange Systems Platform Agent Setup panel displays this message:

```
The following products have been set up:

  - Sun Fire Platform Administration

Click Next to invoke the Start Wizard now to the various Sun
Management Center components.
```

▼ To Set Up the Domain Agent Using the Wizard GUI

Set up the Sun Fire midrange systems Domain Agent on any Sun Fire midrange systems Domain where you have installed it.

1. **Type `es-guisetup` on a Sun Fire midrange systems Domain where the domain agent is installed to start the Sun Management Center Setup Wizard.**

   Once the Sun Management Center base software setup is complete, the Wizard displays the following message:

```
Click Next to set up the following products:
Sun Fire Domain Administration
```

2. **Click Next to start the Domain Agent setup.**

   The Sun Fire Midrange Systems Domain Agent Setup panel displays the following message:

```
Updating configuration files...

Status:

Updating configuration files...
Update of configuration files complete.
```

3. **Click Next to continue.**

   The Sun Fire Midrange Systems Domain Agent Setup panel displays the following message:

```
Sun Fire Midrange Systems Domain Agent setup is complete.
```

Using Advanced Wizard Setup Options

The base Sun Management Center Setup Wizard provides these advanced setup options when the current Sun Management Center installation is already configured:

Note – Use the Reconfigure All option instead of the Remove Setup Configuration option at this time.

- Reconfigure All—Removes all current setup configurations and immediately reruns the Setup Wizard.
- Configure Add-on Products—Sets up the add-on products only.

- Recreate the Sun Management Center Database (server only)—Recreates the database. You are given the option to clear all data, or save and use the data in the recreated database.
- Remove Setup Configuration—Returns your Sun Management Center installation to the post-install and pre-setup state. All configuration and database information is removed. This is useful when you must perform other tasks prior to rerunning the Setup Wizard.

Refer to the *Sun Management Center Installation and Configuration Guide* for more information about using these options.

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 must also ensure that Sun Management Center agents are running on all the target hosts.

Before You Start the Agent Update Process

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 select Store Response Data during the Sun Management Center base software setup process if you want to use the `setup-responses-file` to duplicate the setup of 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 Installation and Configuration Guide*.

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

1. **Ensure that the Sun Fire midrange systems Platform Administration module is installed on the target hosts.**
2. **Ensure that the Sun Fire midrange systems Platform Administration module is set up on the target hosts using either the `es-setup` or the `es-guisetup` script.**

   After this has been done, subsequent Platform Administration 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, you will create an Image File of the add-on components to be distributed to the target machines, and then add a New Job to the Manage Jobs Task list to be run at the time you specify.

Supported Update Configurations

Using Agent Update, you can update the configurations created by the following procedures:

- "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 45

▼ 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 midrange systems 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 Installation and Configuration Guide* for detailed instructions about using either the GUI or the CLI Image Tool.

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

   The system displays the Manage Jobs panel (see FIGURE 2-9), which allows you to distribute the Image File.

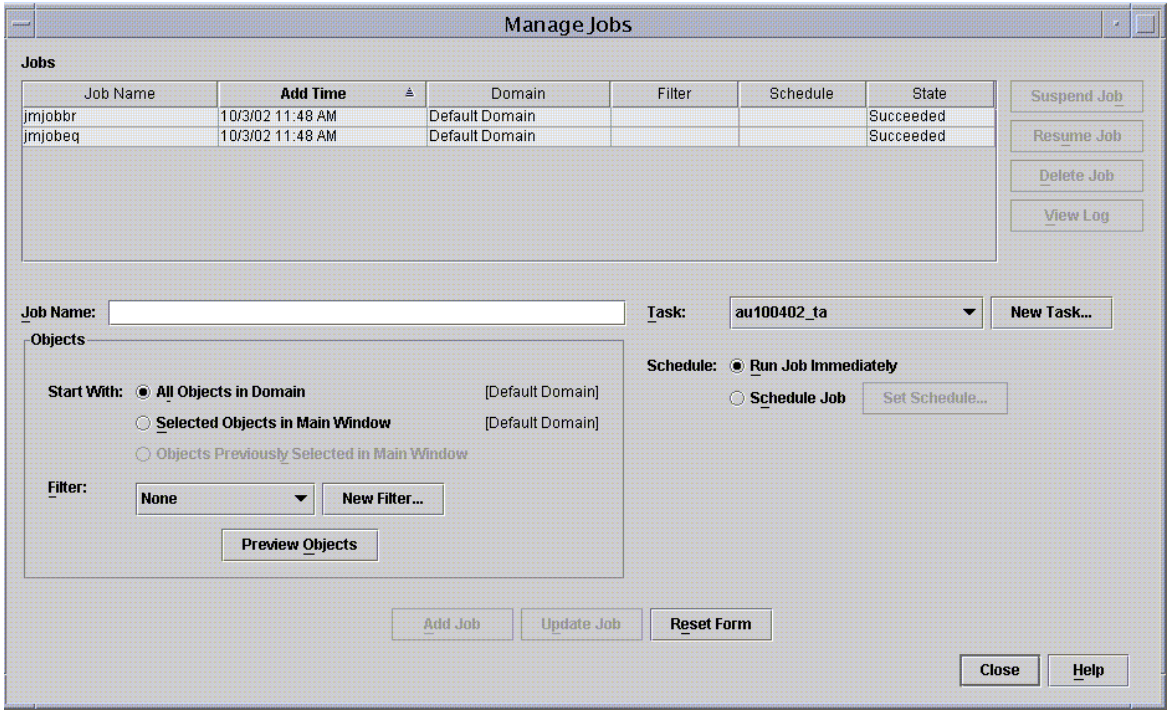


FIGURE 2-9 Manage Jobs Panel

3. **In the Manage Jobs panel, choose the New Task... button.**

   The system displays the New Task panel (see FIGURE 2-10), which allows you to specify the Agent Update Image File to distribute.

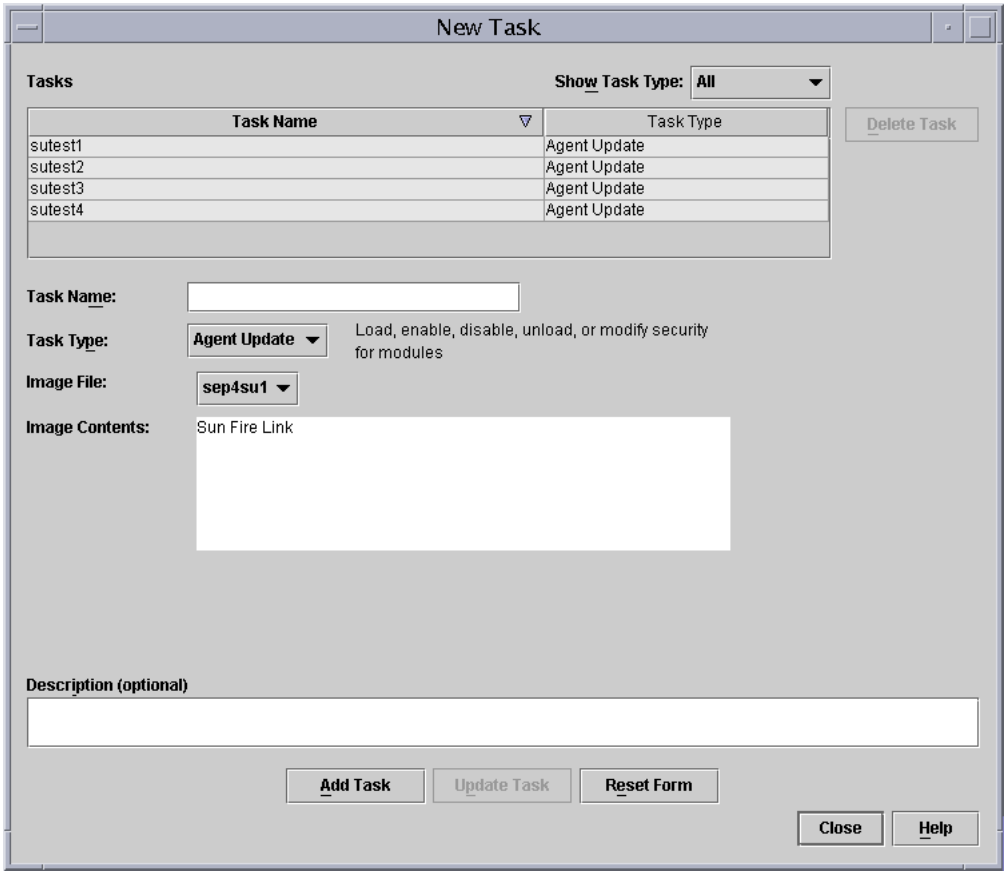


FIGURE 2-10 New Task Panel

4. **In the New Task panel (FIGURE 2-10), do the following:**
   a. **Choose Agent Update for the Task Type.**
   b. **Choose 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 2-9), do the following:**
   a. **Enter a Job Name.**
   b. **Choose 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, select Run Immediately.**
- **If you want to set a schedule for when the Task is to run, select Schedule Job, and set the schedule.**

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

---

d. Do one of the following to choose the objects (agent machines) to which you want to distribute the Image File:

- **To select all objects, choose All Objects in Domain and specify any filter you want to use to choose more objects.**
- **To select one object at a time, choose Selected Objects in Main Window.**

e. Preview the objects (agent machines) you have chosen 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 chose. 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 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 succeeded, 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 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 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 set 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 must re-run `./es-setup -F` to set up the platform agent.

Creating and Setting Up a Sun Fire Midrange Systems Platform Agent Instance

The default platform administration module can monitor one Sun Fire midrange system. To monitor more than one Sun Fire midrange system, you must create one platform agent instance for each additional Sun Fire midrange system.

▼ To Create a Platform Agent Instance

1. **Become superuser by using the `su` command.**
2. **Go to the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/sbin`.

3. **Run the `es-platform` script:**

   ```
   # ./es-platform -a instanceName
   ```

   where *instanceName* is the name of a new platform agent instance.

   This script asks for the port number for the new platform agent and the security seed. If you used a seed other than the default when setting up the Sun Management Center server, provide the same seed for this agent.

4. **To set up this instance, go the Step 3 in the procedure "To Set Up a Sun Fire Midrange Systems Platform Administration Module for a New Platform Agent Instance" on page 48**

▼ To Create Multiple Platform Agent Instances

1. **Become superuser by using the `su` command.**
2. **Go to the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/sbin`.

3. **Run the `es-platform` script:**

```
# ./es-platform -a instanceName
```

where *instanceName* is the name of a new platform agent instance.

This script asks for the port number for the new platform agent.

a. **Enter a new, not previously used port number.**

Note – Be sure you use this port number when you set up this instance and when you create this platform instance object on the Sun Management Center console.

The script asks for the security seed.

b. **If you used a seed other than the default when setting up the Sun Management Center server, provide the same seed for this agent.**

4. **Stop the Sun Management Center agent process.**

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

5. **To set up this instance, go the Step 3 in the procedure** **"To Set Up a Sun Fire Midrange Systems Platform Administration Module for a New Platform Agent Instance" on page 48****.**

▼ To Set Up a Sun Fire Midrange Systems Platform Administration Module for a New Platform Agent Instance

1. **Become superuser by using the `su` command.**
2. **Go to the directory where Sun Management Center software is installed.**

For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.

Note – Before you perform Step 3, be sure you have stopped the Sun Management Center agent layer. To stop the agent layer, run the command `/opt/SUNWsymon/sbin/es-stop -a`.

---

3. **Type:**

```
# ./es-setup.sh -I instanceName
```

where *instanceName* is the name of a new platform agent instance.

The `es-setup.sh` script asks for this information:

- IP Address of the Sun Fire midrange system controller.
- Write community strings for the system controller and all the domains. If the script cannot get the domain address from the system controller, then it asks for the IP address of all the domains.
- Port number of the Sun Management Center agents on all the domains.

This script can be run again to change the information provided in the previous setup.

4. **To start the platform instance, go to the procedure** **"To Start the Platform Instance" on page 49****.**

5. **After starting the platform instance, restart the agent daemon:**

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

▼ To Start the Platform Instance

When the platform instance is set up, you can start it.

- **To start the platform instance, type:**

```
# ./es-start -y instanceName
```

▼ To Stop the Platform Instance

- **If you need to stop the platform instance, type:**

```
# ./es-stop -y instanceName
```

For information about how to undo setups and delete platform agents, see "Undoing Setups and Deleting Platform Agents" on page 51.

Assigning Users to Groups

This section describes how to assign users to administrator and operator groups to give the users the type of access they will require to perform operations that are assigned to them.

▼ To Assign Users to Administrator and Operator Groups

If a user name is listed in the `esusers` file, that user can log onto that Sun Fire midrange system with read-only access for domain administration agents. In order to read and write platform or domain information under the platform agent, the user name must also be listed in the `group` file on the server.

The setup procedure creates up to 10 groups on the Sun Fire midrange system server machine. These groups are:

TABLE 2-3 User Groups

Group Name	User Category	Type of Access
`spltadm`	Administrator	Platform
`sdaadm`	Administrator	Domain A
`sdbadm`	Administrator	Domain B
`sdcadm`	Administrator	Domain C
`sddadm`	Administrator	Domain D
`spltop`	Operator	Platform
`sdaop`	Operator	Domain A
`sdbop`	Operator	Domain B
`sdcop`	Operator	Domain C
`sddop`	Operator	Domain D

1. **Become superuser by using the `su` command.**
2. **Add each user to the appropriate group in the file `/etc/group`.**
   a. **Add Sun Fire midrange systems *platform* administrators to `spltadm`, to allow them to administer the platform through the platform view of a platform agent.**

b. Add Sun Fire midrange systems *domain* administrators to the appropriate domain administrator group.

For example, adding the name of a domain administrator to `sdaadm` allows that domain administrator to administer domain A through the platform agent.

3. **Add each user to the file** `/var/opt/SUNWsymon/cfg/esusers`**.**

Undoing Setups and Deleting Platform Agents

If you a particular Sun Fire midrange system no longer requires monitoring, you can save system resources by undoing the setup for the corresponding platform agent or instance, and then deleting it.

▼ To Undo the Setup of the Sun Fire Midrange Systems Default Platform Administration Module

1. **As superuser, stop the agent daemon.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, the command looks like this:

```
# /opt/SUNWsymon/sbin/es-stop -a
```

2. **Go to the** *path*`/addons/SunFirePltAdmin/sbin` **directory, where** *path* **is the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.

3. **Undo the setup for the default platform agent by typing:**

```
# ./es-setup.sh -u
```

4. **Restart the agent.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, the command looks like this:

```
# /opt/SUNWsymon/sbin/es-start -a
```

▼ To Undo the Setup of a Sun Fire Midrange Systems Platform Administration Instance

1. **As superuser, stop the agent daemon.**
2. **Go to the** *path*`/addons/SunFirePltAdmin/sbin` **directory, where** *path* **is the directory where the Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.
3. **Undo the setup for a specific platform agent instance by typing:**

```
# ./es-setup.sh -u -I instanceName
```

Note – Undoing this setup stops the Sun Management Center agent.

4. **Restart the agent.**

▼ To Delete a Platform Agent

1. **Become superuser by using the** `su` **command.**
2. **Go to the directory** *path*`/sbin`**, where** *path* **is the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/sbin`.
3. **Delete the platform agent instance by typing:**

```
# ./es-platform -d instanceName
```

Setting Up Domains

The instructions in this document deal with two types of domains:

- Sun Management Center administrative domain — A collection of one or more host systems. For example, an administrative domain can include all the servers and workstations in a computer lab.
- Hardware domain — A subset of components in a Sun Fire midrange systems platform. For example, a platform with multiple CPU boards and multiple I/O boards can be divided into multiple domains, each with one or more CPU boards and one or more network connections. Each hardware domain runs a separate copy of the Solaris Operating System.

▼ To Create a Hardware Domain

Sun Fire midrange systems come from the factory configured with one hardware domain, domain A. The system administrator has the option of creating additional hardware domains. A Sun Fire E6900 or 6800 system can have up to four hardware domains. A Sun Fire E4900, 4810, 4800, or 3800 system can have up to two hardware domains.

- **To create additional hardware domains on Sun Fire midrange systems, refer to the** *Sun Fire Midrange Systems Platform Administration Manual***.**

▼ To Create Administrative Domains

- **To create and populate an administrative domain, refer to the** *Sun Management Center User's Guide***.**

CHAPTER 3

Platform and Domain Administration and Monitoring Using the Platform Agent

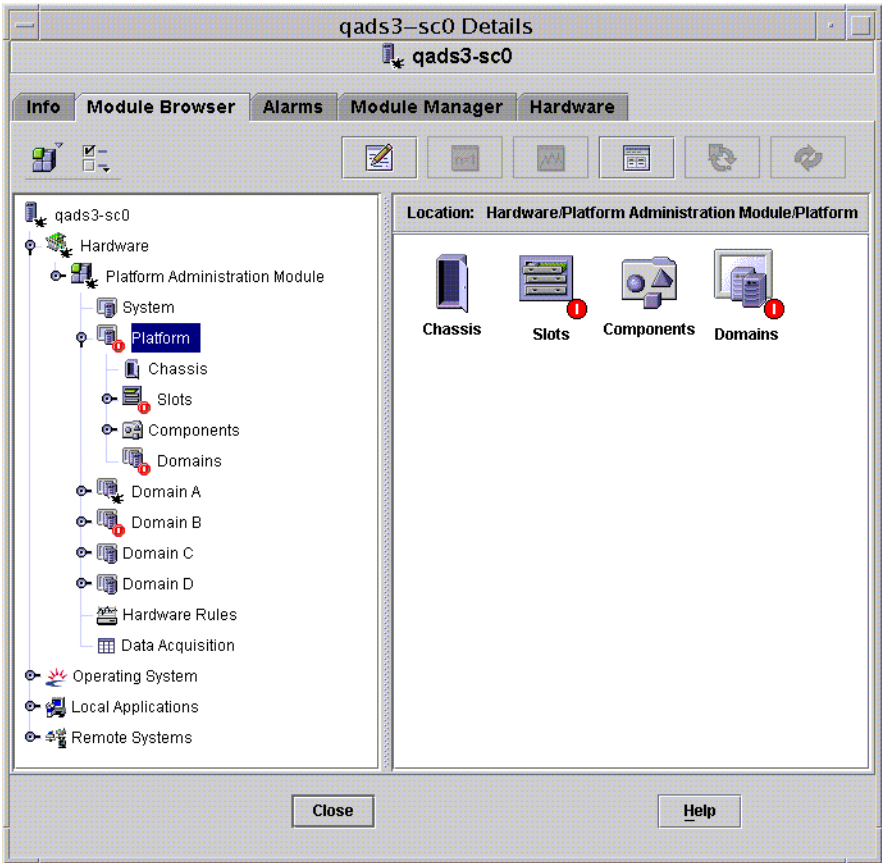
This chapter describes Platform Administration procedures and features for Sun Fire midrange systems.

The following topics are discussed:

Sun Fire Midrange Systems Platform Administration Module

For Sun Fire midrange systems, platform administration procedures use the Sun Fire Midrange Systems Platform Administration Module. This module is loaded under the Hardware category in the Module Browser tab of the Object Details window.

Only users with the correct access privileges can see the data in the corresponding views. For example, a user with access privileges for Platform and Domain A can view data only for Platform and Domain A, but not Domain B, Domain C, or Domain D. FIGURE 3-1 shows which tables a platform administrator can see and which tables a domain administrator can see.



Platform Administrator can see all tables within “Platform”

Domain Administrator can see all tables within a permitted domain, but not within “Platform” or other domains without access permission

FIGURE 3-1 Details Window for a Sun Fire Midrange Systems Platform Object

---

Note – In the examples that follow, the figures show only a Sun Fire midrange systems object. In an actual situation, other types of objects may be present.

▼ To Create a Sun Fire Midrange Systems Domain Object Only

1. **In the main console window menu bar, choose Edit > Create an Object.... > Node > Sun Management Center Agent - Host.**

   The system displays the Create Topology Object window. By default, the window opens to the Node tab and Sun Management Center Agent -Host (FIGURE 3-2).

2. **Do the following:**

   a. **Enter the label name for the object.**

   b. **Enter the description of the object, if desired.**

   c. **Enter the host name where the domain agent is running.**

      The host should be a Sun Fire midrange machine.

   d. **Enter the base agent port number.**

      The default base agent port number is 161.

3. **Complete this procedure with one of the following actions:**

   - Click OK to accept the changes you have made and close this window.
   - Click Apply to apply your changes without closing this window.
   - Click Help to display the help page for this panel in the help browser.
   - Click Cancel to cancel your request.

   If an error occurs, an error message is displayed in the status message field.

Note – Clicking the Help button displays the help page corresponding to object creation in Sun Management Center software.

▼ To Create a Sun Fire Midrange Systems Platform Object Only

1. **In the main console window menu bar, choose Edit > Create an Object.... > Node > Sun Management Center Agent - Platform.**

   The system displays the Create Topology Object window. By default, the window opens to the Node tab and Sun Management Center Agent -Host (FIGURE 3-2).

   Change the object name to Sun Management Center Agent - Platform.

2. **Do the following:**

a. Enter the label name for the object.

b. Enter the description of the object, if desired.

c. Enter the host name where the platform agent is running.

The host can be any machine.

d. Enter port number 166.

3. Complete this procedure with one of the following actions:

- Click OK to accept the changes you have made and close this window.
- Click Apply to apply your changes without closing this window.
- Click Help to display the help page for this panel in the help browser.
- Click Cancel to cancel your request.

If an error occurs, an error message is displayed in the status message field.

Note – Clicking the Help button displays the help page corresponding to object creation in Sun Management Center software.

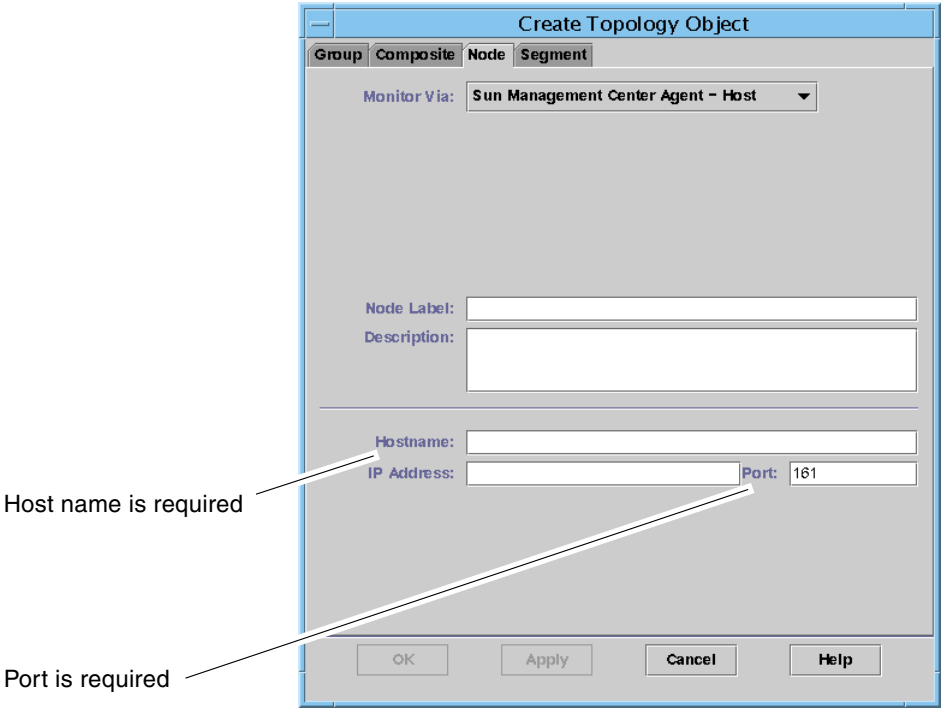


FIGURE 3-2 Node Tab in Create Object Window

▼ To Create a Sun Fire Midrange Systems Composite Object

Normally, a composite object includes a domain agent and a platform agent. This procedure describes how to create a composite object.

Sun Management Center 3.5 software does *not* support the creation of composite objects when the platform agent is running in a different domain than the system controller. This is because the SC firmware does not support domain name detection for Sun Management Center, since the SC can be configured with multiple IP/domain interfaces, and the SC firmware has no way to tell which domain Sun Management Center is monitoring.

Caution – If the platform agent and domain agent are running in different domains, the composite object is created without the domain agent, even though the domain agent is running. You can create a separate domain agent object by choosing Edit > Create an Object.... > Node > Agent-Host.

1. **In the main console window menu bar, choose Edit > Create an Object.... > Composite > Sun Fire *nnnn*, where *nnnn* is the number of the Sun Fire midrange machine.**

   The system displays the Create Object window with the Composite tab (see FIGURE 3-3).

2. **Do the following:**

   a. **Enter the label name for the composite object**

   b. **Enter the description of the composite object, if desired.**

   c. **Enter the host name where the platform agent is running.**

      The host can be any machine.

   d. **Enter the base agent port number.**

3. **Complete this procedure with one of the following actions:**

   - Click OK to accept the changes you have made and close this window.
   - Click Apply to apply your changes without closing this window.
   - Click Help to display the help page for this panel in the help browser.
   - Click Cancel to cancel your request.

   If an error occurs, an error message is displayed in the status message field.

Note – Clicking the Help button displays the help page corresponding to object creation in Sun Management Center software.

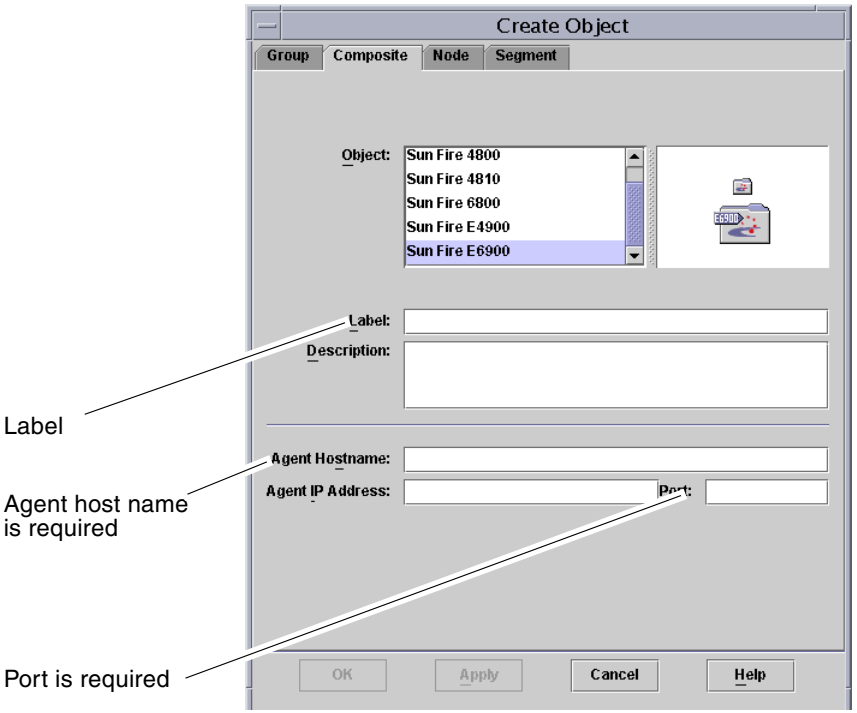


FIGURE 3-3 Composite Tab With Sun Fire Midrange Systems

Accessing the Platform Tables in the Platform Administration Module

The platform administrator can view all the tables under the Platform Administration Module (FIGURE 3-4). The tables and their properties are summarized in this section.

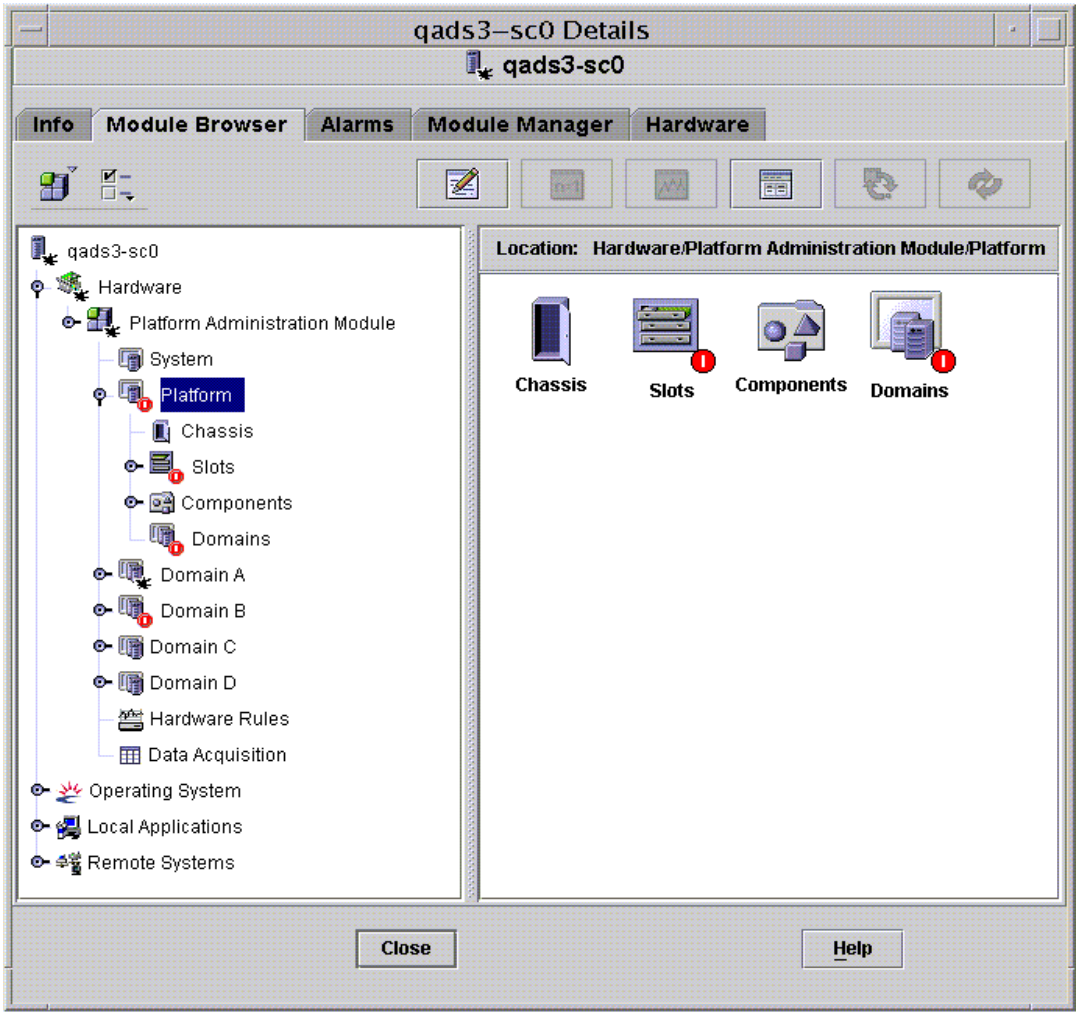


FIGURE 3-4 Platform Tables

Platform System

TABLE 3-1 provides a brief description of the properties for Sun Fire midrange systems.

TABLE 3-1 Sun Fire Midrange Systems

Property	Rule (if any)	Description
Platform		Displays the description of platform, such as `Sun-Fire-6800`

Platform Chassis

TABLE 3-2 provides a brief description of the properties for a chassis on Sun Fire midrange systems.

TABLE 3-2 Platform Chassis

Property	Rule (if any)	Description
Chassis Description		Displays the description of the chassis
Chassis Fru Index		Displays the chassis field-replaceable unit (FRU) index
Chassis SC Name		Displays the SC host name on the chassis
Chassis Location		Displays the location of the chassis
Chassis Contact		Displays the name of the person who is responsible for this chassis
Chassis Log Host	`rspa1006`	Displays the name or IP address of the SNMP log host for the chassis
Chassis Trap Hosts	`rspa1006`	Displays names or IP addresses of the SNMP trap hosts for this chassis. Format is *host*`[:`*port*`]`.
Chassis Slots		Displays the total number of slots on the chassis
Chassis CPU Slots		Displays the number of chassis slots used for CPU boards
Chassis IO Slots		Displays the number of chassis slots used for I/O boards
Chassis Uptime		Displays the time the chassis has been up in milliseconds (ms)
Chassis Model		Displays the chassis model, such as `Sun Fire 6800`
Chassis Domains		Displays the number of domains for which this chassis is available, such as `4`

TABLE 3-2 Platform Chassis *(Continued)*

Property	Rule (if any)	Description
Chassis Partition Mode		Displays the chassis partition mode: `SinglePartition` or `DualPartition`
Chassis DomainA Ethernet Address		Displays the domain A Ethernet address
Chassis DomainB Ethernet Address		Displays the domain B Ethernet address
Chassis DomainC Ethernet Address		Displays the domain C Ethernet address
Chassis DomainD Ethernet Address		Displays the domain D Ethernet address
Chassis MasterSC Ethernet Address		Displays the main SC Ethernet address
Chassis SlaveSC Ethernet Address		Displays the spare SC Ethernet address
Chassis System Serial Number		Displays the serial number of the chassis
Node Name		Displays the Solaris Operating System node name
Machine		Displays the machine name of the chassis
Platform		Displays the platform name, such as `Sun-Fire-6800`

Platform Slot Tables

This section contains slot tables for the platform:

- Empty Slots
- CPU Boards
- I/O Boards
- L2 Repeaters
- Fan Trays
- Power Supply
- SC
- Unknown Boards

Platform – Empty Slots

TABLE 3-3 provides a brief description of the properties for empty slots on Sun Fire midrange systems.

TABLE 3-3 Platform – Empty Slots

Property	Rule (if any)	Description
Slot Name		Displays the names of empty slots, such as `SB2`, `SB4`
Slot Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
Slot Board Type		Displays the board type: `Empty`
Slot State		Displays the slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot
Slot Test Status	`rspa1010`	Displays the slot test status: `Passed`, `NotTested`, `Unknown`, `Under Test`, `Start Test`, `Degraded`, `Failed`, or `Unusable`
Slot Domain		Displays the domain to which the slot is assigned, such as `Isolated` or `DomainA`
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`

Platform Slots – CPU Boards

TABLE 3-4 provides a brief description of the properties for CPU boards on Sun Fire midrange systems.

TABLE 3-4 Platform Slots – CPU Boards

Property	Rule (if any)	Description
CPU Board Name		Displays the identifier of the CPU board: `SB`*x*, where *x* is the slot number containing the CPU board
CPU Board Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
CPU Board Type		Displays the CPU board revision number : `CPU` (default), `CPU_V2`, `CPU_V3`, or `Unknown`.
CPU Board Slot State		Displays the board slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot

TABLE 3-4 Platform Slots – CPU Boards *(Continued)*

Property	Rule (if any)	Description
CPU Board Test Status	rspa1010	Displays the board test status: Passed, NotTested, Unknown, Under Test, Start Test, Degraded, Failed, or Unusable
CPU Board Domain		Displays the domain to which the board is assigned, such as DomainA or DomainB
Slot Status	rspa1000	Displays the slot status: OK, Failed, OverTemp, UnderTemp, or Unknown
CPU Board Fru Index		Displays the field-replaceable unit (FRU) index for the CPU board
CPU Board Total CPU		Displays the total number of CPUs on this CPU board, such as 4
CPU Board Total Dram Memory (MB)		Displays the total amount of dynamic random access memory (DRAM) in megabytes (MB) on the CPU board, such as 4096
CPU Board Total Ecache Memory (MB)		Displays the total amount of external cache (Ecache) memory on the CPU board, such as 32
CPU Board Total WCI		Displays the total number of Sun Fire Link interfaces (WCIs) on the CPU board
CPU Board Temperature		Displays the CPU board temperature and range in the format: *#ofTemp-Values*|*lower-limit*:*actual-temp-value*:*upper-limit*:*token*|..|), where *token* is one of the following: normal, over-heat, under-heat, unknown. An example is 4|0:36:90:normal|0:37:9...
Is Cod Board?		States whether the CPU board is also a Capacity on Demand (COD) board or not (CodBoard or NonCodBoard)

Platform Slots – I/O Boards

TABLE 3-5 provides a brief description of the properties for I/O boards on Sun Fire midrange systems.

TABLE 3-5 Platform Slots – I/O Boards

Property	Rule (if any)	Description
IO Board Name		Displays the name of the I/O board: `IB`*x*, where *x* is the slot number containing the I/O board.
IO Board Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
IO Board Type		Displays the board type: `PCI`, `PCI+`, `CPCI`, or `WPCI`
IO Board Slot State		Displays the board slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot
IO Board Test Status	`rspa1010`	Displays the board test status: `Passed`, `NotTested`, `Unknown`, `Under Test`, `Start Test`, `Degraded`, `Failed`, or `Unusable`
IO Board Domain		Displays the domain to which the board is assigned, such as `DomainA` or `DomainB`
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`
IO Board Fru Index		Displays the field-replaceable unit (FRU) index for the I/O board
IO Board Total WCI		Displays the total number of Sun Fire Link interfaces (WCIs) on this board.
IO Board Total ParoliCpciDca		Displays the total number of parallel optical link (Paroli) cards, compact PCIs (CPCIs), and daughter card assemblies (DCAs) on this board.
IO Board Temperature		Displays the I/O board temperature and range in the format: *#ofTemp-Values*`|`*lower-limit*`:`*actual-temp-value*`:`*upper-limit*`:`*token*`|..|)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`. An example is `2|0:30:90:normal|0:32...`

Platform Slots – L2 Repeaters

TABLE 3-6 provides a brief description of the properties for L2 repeaters on Sun Fire midrange systems.

TABLE 3-6 Platform Slots – L2 Repeaters

Property	Rule (if any)	Description
L2 Repeater Name		Displays the L2 Repeater name: `RP`*x*, where *x* is the slot number containing the repeater
L2 Repeater Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
L2 Repeater Board Type		Displays the board type: `L2`
L2 Repeater Slot State		Displays `--`, which means the board state does not apply to this slot
L2 Repeater Test Status		Displays the repeater test status: `Passed` or `NotTested`
L2 Repeater Domain		Displays `Isolated`, because an L2 repeater cannot be assigned to a domain
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`
L2 Repeater Fru Index		Displays the field-replaceable unit (FRU) index for the L2 repeater
L2 Repeater Domains		Displays the domains to which the repeater is available, such as `A,B`
L2 Repeater Temperature		Displays the L2 repeater temperature and range in the format: *#ofTemp-Values*`|`*lower-limit*`:`*actual-temp-value*`:`*upper-limit*`:`*token*`|..|)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`. An example is `2|0:28:90:normal|0:30:90...`

Platform Slots – Fan Trays

TABLE 3-7 provides a brief description of the properties for fan trays on Sun Fire midrange systems.

TABLE 3-7 Platform Slots – Fan Trays

Property	Rule (if any)	Description
Fan Name		Displays the fan tray name: `FTx`, where *x* is the slot number containing the fan tray
Fan Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
Fan Board Type		Displays the board type: `Fan`
Fan Slot State		Displays `--`, which means the board state does not apply to this slot
Fan Test Status		Displays the fan test status: `Passed` or `NotTested`
Fan Domain		Displays `Isolated`, because a fan tray cannot be assigned to a domain
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`
Fan Fru Index		Displays the field-replaceable unit (FRU) index for the fan tray
Fan Speed		Displays the fan speed: `Off`, `Low`, or `High`

Platform Slots – Power Supply

TABLE 3-8 provides a brief description of the properties for power supplies on Sun Fire midrange systems.

TABLE 3-8 Platform Slots – Power Supply

Property	Rule (if any)	Description
Power Supply Name		Displays the power supply name: `PSx`, where *x* is the slot number containing the power supply
Power Supply Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
Power Supply Board Type		Displays the board type: `PowerSupply`
Power Supply Slot State		Displays `--`, which means the board state does not apply to this slot

TABLE 3-8 Platform Slots – Power Supply *(Continued)*

Property	Rule (if any)	Description
Power Supply Test Status		Displays the power supply test status: `Passed` or `NotTested`
Power Supply Domain		Displays `Isolated`, because a power supply cannot be assigned to a domain
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`
Power Supply Fru Index		Displays the field-replaceable unit (FRU) index for the power supply
Power Supply Readings		Displays the power supply readings, such as `56.59|5.84|33.48`
% Power Supply Used		Displays the percentage of the power supply that is used, such as `20`, `17`, `16`, `37`, or `42`
Power Supply Low/High Input		Displays the power supply input as `High` or `Low`
Power Supply Primary Temperature		Displays the power supply primary temperature and range in the format: *#ofTemp-Values*`|`*lower-limit*`:`*actual-temp-value*`:`*upper-limit*`:`*token*`|..|)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`. An example is `1|-1:23:78:normal|`

Platform Slots – System Controller (SC)

TABLE 3-9 provides a brief description of the properties for an SC on Sun Fire midrange systems.

TABLE 3-9 Platform Slots – SC

Property	Rule (if any)	Description
SC Name		Displays the SC name: `SSC0` or `SSC1`
SC Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
SC Board Type		Displays the board type: `SC`, `SC_V2`, or `Unknown`
SC Slot State		Displays `--`, which means the board state does not apply to this slot.
SC Test Status	`rspa1010`	Displays the SC test status: `Passed`, `Failed`, `OK`, `Under Test`, `NotTested`, `Degraded`, or `Unknown`
SC Domain		Displays `Isolated`, because an SC cannot be assigned to a domain

TABLE 3-9 Platform Slots – SC *(Continued)*

Property	Rule (if any)	Description
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`
SC Master Slave	`rspa1004`	Displays whether the SC is the main SC (`Master`) or the spare SC (`Slave`)
SC Fru Index		Displays the field-replaceable unit (FRU) index for the SC
SC Version	`rspa1009`	Displays the firmware version, such as `5.18.0`; raises an alarm if less than `5.12.5`
SC TimeZone		Displays the standard abbreviation for this SC's time zone, such as `PST` for Pacific Standard Time
SC Date		Displays current date and time for the SC
SC Network Configuration		Displays the network configuration, such as `Fixed` or `Unknown`
SC Hostname		Displays the host name of the SC
SC IP Address	`rspa1005`	Displays the IP address of the SC
SC Netmask		Displays the netmask for the SC
SC Default Routers		Displays the address of the default routers for the SC
SC DNS Domain		Displays the domain name for the SC
SC DNS Resolvers		Displays the resolver addresses for the SC
SC Number Connections		Displays the number of the connections for the SC

Platform Slots – Unknown Boards

TABLE 3-10 provides a brief description of the properties for unknown boards on Sun Fire midrange systems.

TABLE 3-10 Platform Slots – Unknown Boards

Property	Rule (if any)	Description
Unknown Board Name		Displays the unknown board name, such as `SB`*x* or `IB`*x*, where *x* is the slot number containing the board
Unknown Board Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
Unknown Board Type		Displays the board type: `Unknown`

TABLE 3-10 Platform Slots – Unknown Boards *(Continued)*

Property	Rule (if any)	Description
Unknown Board Slot State		Displays the board slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot
Unknown Board Test Status	`rspa1010`	Displays the SC test status: `Passed`, `Failed`, `OK`, `Under Test`, `NotTested`, `Degraded`, or `Unknown`
Unknown Board Domain		Displays the domain to which the board is assigned
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`

Platform Component Tables

This section contains component tables for the platform:

- CPU Module
- DIMM
- Ecache
- WCI
- WCI Port

Platform Components – CPU Module

TABLE 3-11 provides a brief description of the properties for CPU modules on Sun Fire midrange systems.

TABLE 3-11 Platform Components – CPU Modules

Property	Rule (if any)	Description
CPU Module Board Index		Displays the board index for the CPU module
CPU Module Index		Displays the index for the CPU module
CPU Module Description		Displays the description of the CPU module, such as `UltraSPARC-IV`
CPU Module Temperature		Displays the temperature and range of the CPU module in the format: *#ofTemp-Values*`|`*lower-limit*`:`*actual-temp-value*`:`*upper-limit*`:`*token*`|..|`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`. An example is `1|0:62:93:normal`

TABLE 3-11 Platform Components – CPU Modules *(Continued)*

Property	Rule (if any)	Description
CPU Module Status	`rspa1008`	Displays the status of the CPU module: `Online` or `Idle`. Displays `CodDisabled` if the board is disabled by COD.
CPU Module Model		Displays the model of the CPU module, such as `sparcv9`
CPU Module Speed (MHz)		Displays the speed of the CPU module in megahertz (MHz)
CPU Module Icache Size (KB)		Displays the size of the CPU module instruction cache (Icache) in kilobytes (KB)
CPU Module Dcache Size (KB)		Displays the size of the CPU module data cache (Dcache) in kilobytes (KB)
CPU Module Ecache Size (KB)		Displays the size of the CPU module external cache (Ecache) in kilobytes (KB)
CPU Module Wcache Size (KB)		Displays the size of the CPU module write cache (Wcache) in kilobytes (KB)
CPU Module Last Change		Displays the date and time of the last change
CPU Module Errors		Displays the number of error-correcting code (ECC) errors for the CPU module
Node Name		Displays the component node name

Platform Components – DIMM

TABLE 3-12 provides a brief description of the properties for a dual inline memory module (DIMM) on Sun Fire midrange systems.

TABLE 3-12 Platform Components – DIMM

Property	Rule (if any)	Description
DIMM CPU Board Index		Displays the CPU board index for the DIMM
DIMM CPU Module Index		Displays the CPU module index for the DIMM
DIMM Index		Displays the DIMM index
DIMM Fru Index		Displays the field-replaceable unit (FRU) index for the DIMM
Node Name		Displays the component node name

Platform Components – Ecache

TABLE 3-13 provides a brief description of the properties for external cache (Ecache) on Sun Fire midrange systems.

TABLE 3-13 Platform Components – Ecache

Property	Rule (if any)	Description
Ecache CPU Board Index		Displays the CPU board index for the Ecache
Ecache CPU Module Index		Displays the CPU module index for the Ecache
Ecache Index		Displays the Ecache index
Ecache Fru Index		Displays the field-replaceable unit (FRU) index for the Ecache
Node Name		Displays the component node name

Platform Components – WCI

TABLE 3-14 provides a brief description of the properties for Sun Fire Link interface (WCI) on Sun Fire midrange systems.

TABLE 3-14 Platform Components – WCI

Property	Rule (if any)	Description
WCI Module Board Index		Displays the board index for the WCI module
WCI Module Index		Displays the index for the WCI module
WCI Module Description		Displays the description of the WCI module
WCI Module Status	`rspa1008`	Displays the status of the WCI module: `Online` or `Idle`
WCI Module Mode		Displays the mode of the WCI module: `SSM` (scalable shared memory), `RSM` (remote shared memory), and `Unknown`
WCI Module Temperature		Displays the temperature and range of the WCI module in the format: *#ofTemp-Values*|*lower-limit*:*actual-temp-value*:*upper-limit*:*token*|`..)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`.

TABLE 3-14 Platform Components – WCI *(Continued)*

Property	Rule (if any)	Description
WCI Module Total DIMM		Displays the total size of the DIMM on the WCI module
WCI Module Total Memory		Displays the size of total memory on the WCI module
WCI Module Total ParoliDCA		Displays the total number of parallel optical link (Paroli) cards and daughter-card assemblies (DCAs) on the WCI module
WCI Module Total Port		Displays the total number of ports for the WCI module
WCI Module Last Change		Displays the date and time of the last change
WCI Module Errors		Displays the number of error-correcting code (ECC) errors for the WCI module
Node Name		Displays the component node name

Platform Components – WCI Port

TABLE 3-15 provides a brief description of the properties for Sun Fire Link Interface (WCI) port on Sun Fire midrange systems.

TABLE 3-15 Platform Components – WCI Port

Property	Rule (if any)	Description
WCI Port Board Index		Displays the board index for the WCI port
WCI Port Module Index		Displays the module index for the WCI port
WCI Port Index		Displays the index for the WCI port
WCI Port Fru Index		Displays the field-replaceable unit (FRU) index for the WCI port
WCI Port Status		Displays the status for the WCI port: `Unknown`, `Installed`, `Connected`, `Unconfigured`, and `Error`

TABLE 3-15 Platform Components – WCI Port *(Continued)*

Property	Rule (if any)	Description
WCI Port ParoliDCA		Displays the number of parallel optical link (Paroli) cards and daughter-card assemblies using this WCI port (1 or 2)
WCI Port Remote Location		Displays the remote location for the WCI port
Node Name		Displays the component node name

Platform Domains

TABLE 3-16 provides a brief description of the properties for platform domains on Sun Fire midrange systems.

TABLE 3-16 Platform Domains

Property	Rule (if any)	Description
Domain		Displays the domains on this system: DomainA–D
Domain Description		Displays a description of the domain
Domain Log Host	rspa1006	Displays a log host name for the domain
Domain Trap Hosts	rspa1006	Displays names or IP addresses of the SNMP trap hosts for this domain. Format is *host*[:*port*].
Domain ACL Description		Displays the slots in the domain's Access Control List (ACL); for example, SB0 SB1 SB3 SB5 IB6 I...
Domain Status	rspa1002	Displays the domain status; for example, RunningSolaris, PoweredOff, Standby, Running POST, Active, Active - OpenBoot PROM, Active - Booting, Active - Halted, Active - Reset, Active - Panicking, Active - Debugger, Not Responding, Paused due to an error
Domain Node Name		Displays the Solaris Operating System node name
Domain Ssm Mode		Displays the shared scalable memory (SSM) mode for the domain: Master, Slave, Local, and Unknown
Domain Ssm Master		Displays the host name of the scalable shared memory (SSM) master node
Domain Ssm Slave Nodes		Displays the host names of the hosts or nodes with slave shared scalable memory (SSM)

TABLE 3-16 Platform Domains *(Continued)*

Property	Rule (if any)	Description
Domain KeySwitch	`rspa1003`	Displays the virtual keyswitch position for the domain: `Unknown` (default), `Off`, `Standby`, `On`, `Diagnostic`, `Secure`, `OffToStandby`, `OffToOn`, `OffToDiag`, `OffToSecure`, `StandbyToOff`, `ActiveToOff`, `ActiveToStandby`, `RebootToOn`, `RebootToDiag`, `RebootToSecure`, `standbyToOn`, `standbyToDiag`, `standbyToSecure`, `onToOff`, `onToStandby`, `onToDiag`, `onToSecure`, `diagToOff`, `diagToStandby`, `diagToOn`, `diagToSecure`, `secureToOff`, `secureToStandby`, `secureToOn`, `secureToDiag`, `offToOff`, `standbyToStandby`, `onToOn`, `diagToDiag`, and `secureToSecure`
Domain Contact		Displays the name of the person who is responsible for this domain
Slots Not in ACL		Displays the slots *not* in the domain's Access Control List (ACL); for example, `SB2 SB4`

Taking Action on Platform Tables

When you right-click an entry in the table, a set of actions is displayed in a pop-up menu. The list of actions varies, depending on the column values in the row that you selected and the type of entity.

TABLE 3-17 lists the various entries and actions that you can take.

TABLE 3-17 Table Action Menu Items for the Platform View

Table	Action
Chassis	• Set up Loghosts • FRU information
Slots > Empty Slots	• None, if board is unavailable • Assign or unassign, if board is available
Slots > CPU Boards	• Test • FRU information • Power on/off • Assign or unassign, if board is available

TABLE 3-17 Table Action Menu Items for the Platform View *(Continued)*

Table	Action
Slots > I/O Boards	• FRU information • Power on/off • Assign or unassign, if board is available
Slots > L2 Repeater	• FRU information
Slots > Fan Trays	• Power on/off • FRU information
Slots > Power Supply	• Power on • FRU information
Slots > SC	• SC Network Setup • FRU information
Slots > UNKNOWN Boards	• Power on/off • Assign or unassign, if board is available
Domains	• ACL • Host Details
Components > all tables	• FRU information (except CPU Modules table)

TABLE 3-18 lists all of the available actions and their corresponding functions.

TABLE 3-18 Platform Table Actions Menu

Action	Function
Assign.../Unassign	Enables you to Assign or Unassign a board. FIGURE 3-5 shows the panel that is displayed when you choose the Assign... menu item. FIGURE 3-6 shows the panel that is displayed when you choose the Unassign menu item. Depending on the board status, the Assign... or Unassign menu item is available. If the board is already in the assign state, the Assign... action menu item is not available. If the board is in the active state, this option is not available.
Power On/Power Off	Enables you to power the board on and off. FIGURE 3-7 shows the confirmation panel that is displayed to confirm this action. If the board is in the active state, this option is not available.
Test...	Enables you to test a CPU board *only*. FIGURE 3-8 shows the confirmation panel that is displayed to confirm this action. If the CPU board is in the active state, this option is not available.
Host Details	The host Details window of the corresponding domain is displayed.
System Controller Setup...	Enables you to view or modify SC setup information. FIGURE 3-9 shows the panel that is displayed when you choose System Controller Setup...

TABLE 3-18 Platform Table Actions Menu *(Continued)*

Action	Function
Setup Loghosts...	Enables you to set up the loghosts and trap hosts for a chassis. FIGURE 3-10 shows the panel that is displayed when you choose Setup Loghosts...
FRU Information...	Enables you to see the FRU information of the selected component. FIGURE 3-11 shows the panel that is displayed when you choose FRU Information...
ACL...	Enables you to manipulate the Access Control List (ACL). FIGURE 3-12 shows the panel that is displayed.
Table Sorting	Enables you to sort the table rows. Selecting a slot table column header sorts the rows in ascending order of that column. For example, selecting the Power column sorts the table with the powered-off boards at the top and powered-on boards at the bottom. You can toggle the sorting order, ascending and descending, by clicking on the same column header again. The header of the current sorted column is bold face. A down or an up arrow indicate the current sort order of the column. By default, the slot table is ordered in ascending order by slot numbers.

If an error occurs, an error message is displayed in the status message field of the Object Details Module Browser window.

▼ To Assign Available Boards

1. **Right-click a board entry in the data table to display a pop-up menu.**
2. **Choose Assign.**

Note – A board can be assigned to only one domain.

The Assign panel (FIGURE 3-5) is displayed.

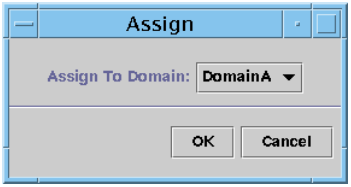


FIGURE 3-5 Assign Panel

3. **Right-click the Assign To Domain button to see a pull-down list of all domains.**
4. **Choose a domain from the domain list, then click the OK button to assign the selected board to that domain.**

5. **Complete this procedure with one of the following actions:**
   - Click OK to assign the selected board to the domain and close this window.
   - Click Cancel to cancel your request.

   If this action fails, an error message is displayed in the status message field of the Assign panel.

▼ To Unassign Boards

1. **Right-click a board entry in the data table to display a pop-up menu.**
2. **Choose Unassign.**

   The Unassign panel (FIGURE 3-6) is displayed.

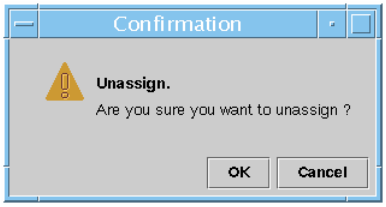


FIGURE 3-6 Unassign Panel

3. **Complete this procedure with one of the following actions:**
   - Click OK to unassign the selected board from the domain and close this window.
   - Click Cancel to cancel your request.

   If this action fails, an error message is displayed in the status message field of the Unassign panel.

▼ To Power On or Off Boards

1. **Right-click a board entry in the data table to display a pop-up menu.**

   The board power status is either Powered On or Powered Off, and can be toggled from one state to the other.

2. **Select Power Off (or Power On).**

   The appropriate panel is displayed. FIGURE 3-7 shows the Power Off panel.

FIGURE 3-7 Power Off Panel

3. **Complete this procedure with one of the following actions:**
   - Click OK to power off (or power on) the selected board for the domain and close this window.
   - Click Cancel to cancel your request.

   If this action fails, an error message is displayed in the status message field of the Power Off (or Power On) panel.

▼ To Test a Board

Note – You can test *only* CPU boards.

1. **Right-click in the data table to display a pop-up menu.**
2. **Choose Test.**

   The Test panel is displayed. FIGURE 3-8 shows the Test Board panel for a selected board and a message about the test time.

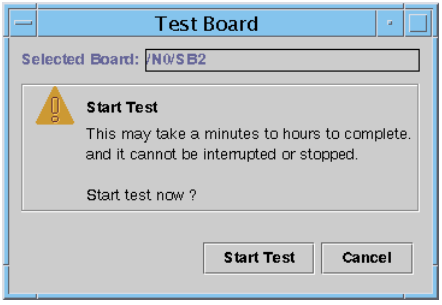


FIGURE 3-8 Test Board Panel

Note – This panel is displayed only for boards that are assigned but disconnected or for boards that are available.

3. **Click the Start Test button to start a test, or click the Cancel button to close the panel without taking any action**.

   The test status is displayed in the status message field at the bottom of the panel. The test may take a long time. While the test is in progress, the panel shows a busy cursor.

   If the test action fails, an error message is displayed in the status message field.

▼ To Set Up the System Controller

1. **Right-click in the data table to display a pop-up menu.**
2. **Choose System Controller Setup.**

   The System Controller Network Setup panel (FIGURE 3-9) is displayed.

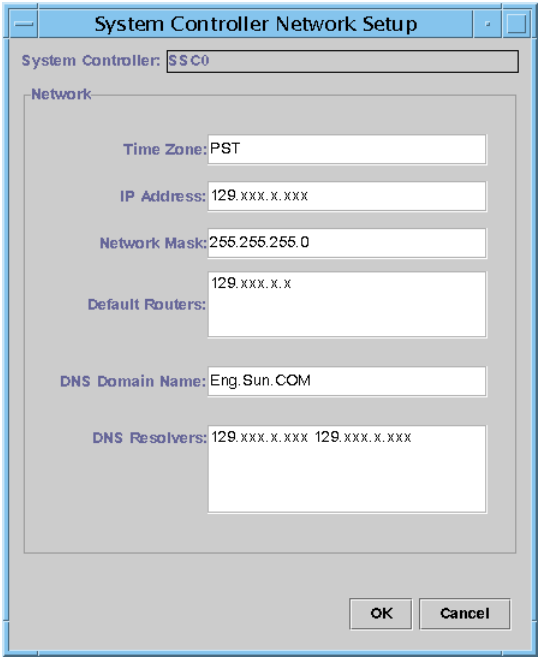


FIGURE 3-9 System Controller Network Setup Panel

3. **Modify the information as needed by editing the individual fields.**

Note – There is no validation of the changes that you make.

4. **Choose one of the following actions:**
   - Click OK to accept the changes you made and close this window.
   - Click Cancel to cancel your request.

   If any error is encountered while retrieving any information, an error message is displayed in the status message field.

5. **If you have changed an IP address:**

   a. **Reboot the system controller.**

      The IP address change does not take effect until the system controller is rebooted.

   b. **Rerun the setup procedure for the Sun Fire Midrange Systems Platform Administration Module on the agent machine.**

      See "To Set Up the Platform Agent Using the Setup Wizard" on page 28.

▼ To Set Up Loghosts and SNMP Trap Hosts

You can use the Setup Loghosts panel to set up SNMP trap and Syslog hosts for a system.

1. **Right-click in the data table to display a pop-up menu.**
2. **Choose Setup Loghosts.**

   The Setup Loghosts panel (FIGURE 3-10) is displayed.

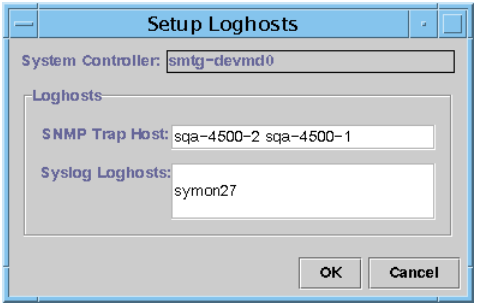


FIGURE 3-10 Setup Loghosts Panel

3. **Right-click the System Controller list box to display a list of system controllers.**

4. **Choose a system controller.**

   Information about the SNMP trap host and Syslog hosts for the selected system controller is displayed.

Caution – Sun Management Center software for Sun Fire midrange systems does not function without an SNMP trap host.

5. **You can add or change the entry for Syslog Loghost.**

   You can enter multiple Syslog hosts, one per line.

6. **You can add or change the entry for SNMP Trap Host.**

   The SNMP trap host must be the Sun Management Center server.

7. **Complete this procedure with one of the following actions:**

   - Click OK to accept the changes you made and close this window.
   - Click Cancel to cancel your request.

   If an action fails, an error message is shown in the status message field at the bottom of the panel.

▼ To Display FRU Information

This panel displays the FRU information of a specific component. This panel is read only, and *no* information can be changed.

1. **Choose FRU Information...**

   The FRU Information panel (FIGURE 3-11) is displayed.

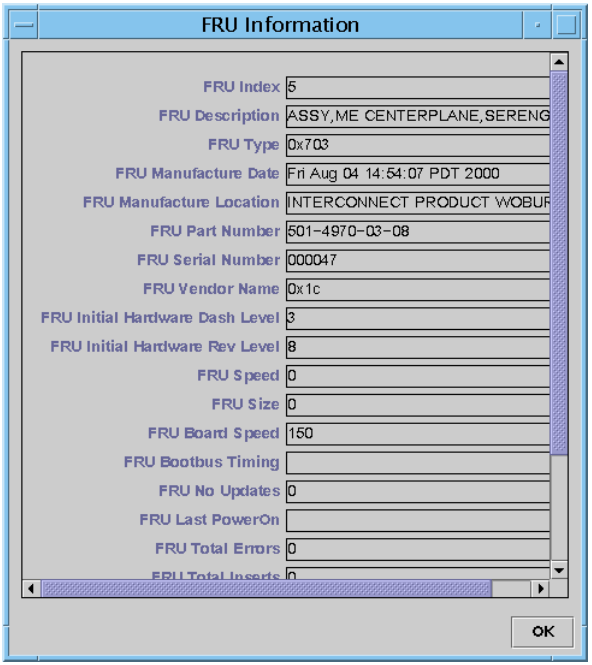


FIGURE 3-11 FRU Information Panel

2. **Click OK to close this window.**

▼ To Display Host Details

1. **Right-click in the data table to display a pop-up menu.**
2. **Choose Host Details.**
   The Host Details window of the corresponding hardware domain is displayed.
3. **Click OK to close this window.**

▼ To Change a Domain Access Control List

1. **Choose ACL...**
   The Access Control List (FIGURE 3-12) panel is displayed.

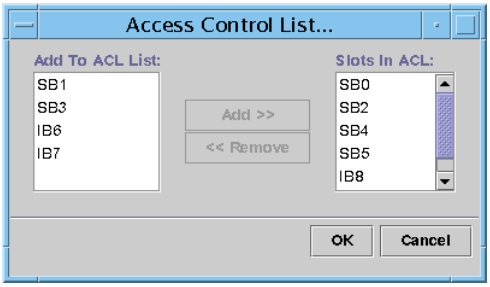


FIGURE 3-12 Access Control List Panel

A list of slots that are not present in the ACL of a selected domain is displayed in the Add to ACL List pane. A list of slots that are present in the ACL of a selected domain is displayed in the Slots in ACL pane.

2. **Choose one or more entries in the Add to ACL List pane and click the Add >> button.**

   The selected boards are added to the Slot in ACL list.

3. **Choose one or more entries in the Slots ACL List pane, and click the << Remove button.**

   The selected boards are removed from the Slot in ACL list.

4. **Complete this procedure with one of the following actions:**

- **Click OK to accept the changes you made and close this window.**
- **Click Cancel to cancel your request.**

If an operation fails, an error message is displayed in the status message field.

Accessing the Domain Tables in the Platform Administration Module

A domain administrator can view all the tables for the corresponding domain node that the administrator administers. For example, the domain administrator for Domain A can view all tables under Domain A (FIGURE 3-13). The domain tables and their properties are summarized in this section.

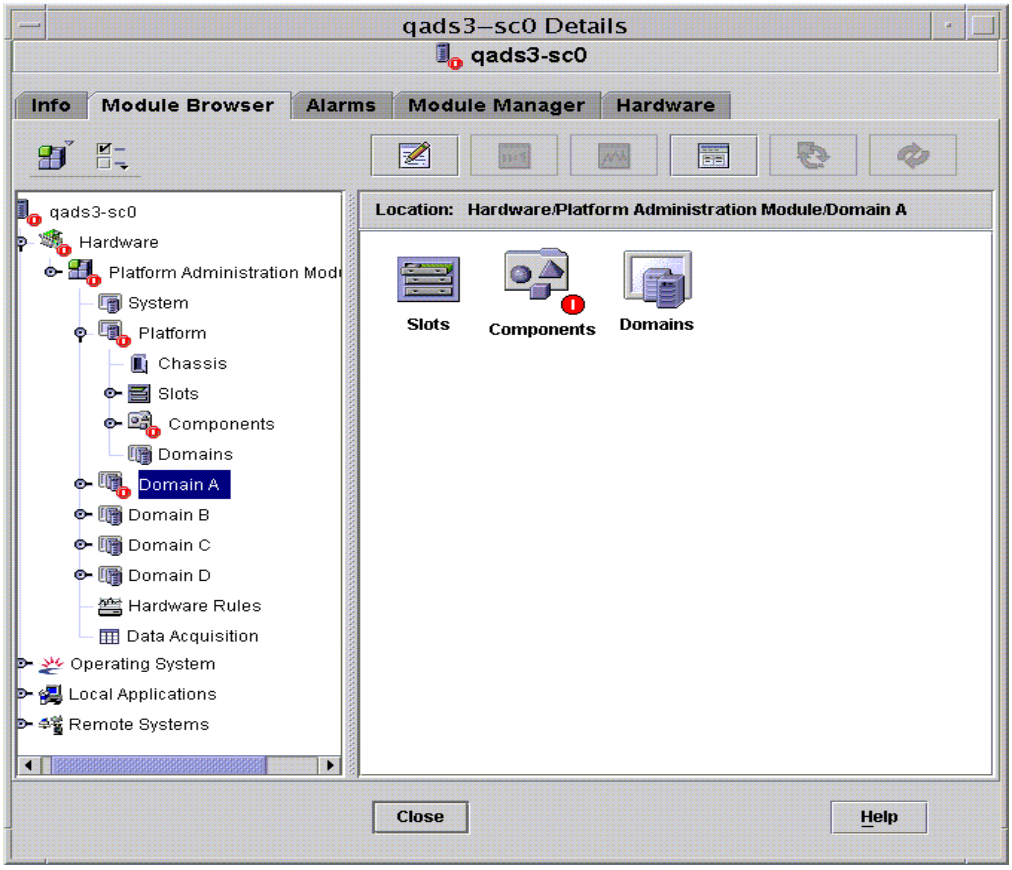


FIGURE 3-13 Domain *X* Tables

Domain *X* Slot Tables

This section contains the slot tables for a specific domain, where *X* is the letter of the domain (A–D):

- Empty Slots
- CPU Boards
- I/O Boards
- Unknown Boards

Domain *X* Empty Slots

TABLE 3-19 provides a brief description of the properties for empty slots on a specific domain for Sun Fire midrange systems.

TABLE 3-19 Domain *X* Empty Slots

Property	Rule (if any)	Description
Slot Name		Displays the names of empty slots, such as `SB`*x*, where *x* is the slot number.
Slot Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
Slot Board Type		Displays the board type: `Empty`
Slot State		Displays the slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot
Slot Test Status	`rspa1010`	Displays the slot test status: `Passed`, `NotTested`, `Unknown`, `Under Test`, `Start Test`, `Degraded`, `Failed`, or `Unusable`
Slot Domain		Displays the domain to which the slot is assigned, such as `Isolated` or `DomainA`
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`

Domain *X* CPU Boards

TABLE 3-20 provides a brief description of the properties for CPU boards on a specific domain for Sun Fire midrange systems.

TABLE 3-20 Domain *X* CPU Boards

Property	Rule (if any)	Description
CPU Board Name		Displays the identifier of the CPU board: `SB`*x*, where *x* is the slot number containing the CPU board
CPU Board Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
CPU Board Type		Displays the CPU board revision number : `CPU` (default), `CPU_V2`, `CPU_V3`, or `Unknown`.
CPU Board Slot State		Displays the slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot

TABLE 3-20 Domain *X* CPU Boards *(Continued)*

Property	Rule (if any)	Description
CPU Board Test Status	rspa1010	Displays the board test status: Passed, NotTested, Unknown, Under Test, Start Test, Degraded, Failed, or Unusable
CPU Board Domain		Displays the domain to which the board is assigned
Slot Status	rspa1000	Displays the slot status: OK, Failed, OverTemp, UnderTemp, or Unknown
CPU Board Fru Index		Displays the field-replaceable unit (FRU) index for the CPU board
CPU Board Total CPU		Displays the total number of CPUs on this board, such as 4
CPU Board Total Dram Memory (MB)		Displays the total amount of dynamic random access memory (DRAM) in megabytes (MB) on this board, such as 4096
CPU Board Total Ecache Memory (MB)		Displays the total amount of external cache (Ecache) in megabytes (MB) on this board, such as 32
CPU Board Total WCI		Displays the total number of Sun Fire Link interfaces (WCIs) on the CPU board
CPU Board Temperature		Displays the CPU board temperature and range in the format: *#ofTemp-Values*|*lower-limit*:*actual-temp-value*:*upper-limit*:*token*|..|), where *token* is one of the following: normal, over-heat, under-heat, unknown. An example is 4|0:32:90:normal|0:33:9...
Is Cod Board?		States whether the CPU board is also a COD board (CodBoard or NonCodBoard)

Domain *X* I/O Boards

TABLE 3-21 provides a brief description of the properties for I/O boards on a specific domain for Sun Fire midrange systems.

TABLE 3-21 Domain *X* I/O Boards

Property	Rule (if any)	Description
IO Board Name		Displays the board identifier: `/N`*n*`/IB`*x*, where *n* is the node number and *x* is the slot number containing the I/O board
IO Board Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
IO Board Type		Displays the board type, such as `PCI`, `PCI+`, or `CPCI`
IO Board Slot State		Displays the slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot
IO Board Test Status	`rspa1010`	Displays the board test status: `Passed`, `NotTested`, `Unknown`, `Under Test`, `Start Test`, `Degraded`, `Failed`, or `Unusable`
IO Board Domain		Displays the domain to which the board is assigned
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`
IO Board Fru Index		Displays the field-replaceable unit (FRU) index for the I/O board
IO Board Total WCI		Displays the total number of Sun Fire Link interfaces (WCIs) on this IO board
IO Board Total ParoliCpciDca		Displays the total number of parallel optical link (Paroli) cards, compact PCI (cPCI) cards, and daughter-card assemblies (DCAs) on this IO board
IO Board Temperature		Displays the temperature and range of the I/O board in the format: *#ofTemp-Values*`|`*lower-limit*`:`*actual-temp-value*`:`*upper-limit*`:`*token*`|...|)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`. An example is `2|0:46:90:normal|0:35...`

Domain *X* Unknown Boards

TABLE 3-22 provides a brief description of the properties for unknown boards on a specific domain for Sun Fire midrange systems.

TABLE 3-22 Domain *X* Unknown Boards

Property	Rule (if any)	Description
Unknown Board Name		Displays the unknown board name, such as `SB`*x* or `IB`*x*, where *x* is the slot number containing the board
Unknown Board Power Status	`rspa1011`	Displays the power status: `PoweredOff` or `PoweredOn`
Unknown Board Type		Displays the board type: `Unknown`
Unknown Board Slot State		Displays the slot state: `Active`, `Assigned`, `Available`, or `--`, which means the board state does not apply to this slot
Unknown Board Test Status	`rspa1010`	Displays the board test status: `Passed`, `NotTested`, `Unknown`, `Under Test`, `Start Test`, `Degraded`, `Failed`, or `Unusable`
Unknown Board Domain		Displays the domain to which the board is assigned
Slot Status	`rspa1000`	Displays the slot status: `OK`, `Failed`, `OverTemp`, `UnderTemp`, or `Unknown`

Domain *X* Component Tables

This section contains the component tables for a specific domain, where *X* is the letter of the domain (`A`–`D`):

- CPU Module
- DIMM
- Ecache
- WCI
- WCI Port

Domain *X* CPU Module

TABLE 3-23 provides a brief description of the properties for CPU modules on a specific domain for Sun Fire midrange systems.

TABLE 3-23 Domain *X* CPU Module

Property	Rule (if any)	Description
CPU Module Board Index		Displays the board index for the CPU module
CPU Module Index		Displays the index for the CPU module
CPU Module Description		Displays the description of the CPU module, such as `UltraSPARC-III`, `UltraSPARC-III+`, `UltraSPARC-IV`, or `UltraSPARC-IV+`
CPU Module Temperature		Displays the temperature and range of the CPU module in the format: *#ofTemp-Values*`|`*lower-limit*`:`*actual-temp-value*`:`*upper-limit*`:`*token*`|..|)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`. An example is `1|0:62:93:normal`
CPU Module Status	`rspa1008`	Displays the status of the CPU module: `Online` or `Idle`. Displays `CodDisabled` if the CPU is disabled by COD.
CPU Module Model		Displays the model of the CPU module, such as `sparcv9`
CPU Module Speed (MHz)		Displays the speed of the CPU module in megahertz (MHz)
CPU Module Icache Size (KB)		Displays the size of the CPU module instruction cache (Icache) in kilobytes (KB)
CPU Module Dcache Size (KB)		Displays the size of the CPU module data cache (Dcache) in kilobytes (KB)
CPU Module Ecache Size (KB)		Displays the size of the CPU module external cache (Ecache) in kilobytes (KB)
CPU Module Wcache Size (KB)		Displays the size of the CPU module write cache (Wcache) in kilobytes (KB)
CPU Module Last Change		Displays the date and time of the last change
CPU Module Errors		Displays the number of error-correcting code (`ECC`) errors for the CPU module

Domain *X* Components – DIMM

TABLE 3-24 provides a brief description of the properties for a dual inline memory module (DIMM) on a specific domain for Sun Fire midrange systems.

TABLE 3-24 Domain *X* Components – DIMM

Property	Rule (if any)	Description
DIMM CPU Board Index		Displays the CPU board index for the DIMM
DIMM CPU Module Index		Displays the CPU module index for the DIMM
DIMM Index		Displays the DIMM index
DIMM Fru Index		Displays the field-replaceable unit (FRU) index for the DIMM

Domain *X* Components – Ecache

TABLE 3-25 provides a brief description of the properties for external cache (Ecache) on a specific domain for Sun Fire midrange systems.

TABLE 3-25 Domain *X* Components – Ecache

Property	Rule (if any)	Description
Ecache CPU Board Index		Displays the CPU board index for the Ecache
Ecache CPU Module Index		Displays the CPU module index for the Ecache
Ecache Index		Displays the Ecache index
Ecache Fru Index		Displays the field-replaceable unit (FRU) index for the Ecache

Domain *X* Components – WCI

TABLE 3-26 provides a brief description of the properties for the Sun Fire Link Interface (WCI) module for a specific domain on Sun Fire midrange systems.

TABLE 3-26 Domain *X* Components – WCI

Property	Rule (if any)	Description
WCI Module Board Index		Displays the board index for the WCI module
WCI Module Index		Displays the index for the WCI module
WCI Module Description		Displays the description of the WCI module
WCI Module Status	`rspa1008`	Displays the status of the WCI module: `Online` or `Idle`
WCI Module Mode		Displays the mode of the WCI module: `SSM` (scalable shared memory), `RSM` (remote shared memory), and `Unknown`
WCI Module Temperature		Displays the temperature and range of the WCI module in the format: *#ofTemp-Values* | *lower-limit* : *actual-temp-value* : *upper-limit* : *token* | `. . |)`, where *token* is one of the following: `normal`, `over-heat`, `under-heat`, `unknown`.
WCI Module Total DIMM		Displays the total size of the DIMM on the WCI module
WCI Module Total MEM		Displays the size of total memory on the WCI module
WCI Module Total ParoliDCA		Displays the total number of parallel optical link (Paroli) cards and daughter-card assemblies (DCAs) on this module.
WCI Module Total Port		Displays the total number of ports for the WCI module
WCI Module Last Change		Displays the date and time of the last change
WCI Module Errors		Displays the number of error-correcting code (`ECC`) errors for the WCI module

Domain *X* Components – WCI Port

TABLE 3-27 provides a brief description of the properties for the Sun Fire Link Interface (WCI) port on a specific domain for Sun Fire midrange systems.

TABLE 3-27 Domain *X* Components – WCI Port

Property	Rule (if any)	Description
WCI Port Board Index		Displays the board index for the WCI port
WCI Port Module Index		Displays the module index for the WCI port
WCI Port Index		Displays the index for the WCI port
WCI Port Fru Index		Displays the field-replaceable unit (FRU) index for the WCI port
WCI Port Status		Displays the status for the WCI port: `Unknown`, `Installed`, `Connected`, `Unconfigured`, and `Error`
WCI Port ParoliDCA		Displays the number of parallel optical link (Paroli) cards and daughter-card assemblies using this WCI port (`1` or `2`)
WCI Port Remote Location		Displays the remote location for the WCI port

Domains

See "Platform Domains" on page 75 for information about properties for a specific domain.

Taking Action on a Domain Table

When you right-click an entry in a data table, a set of actions is displayed in a pop-up menu (FIGURE 3-14). In the menu, the list of actions varies, depending on the column values in the row that you choose and on the type of entry.

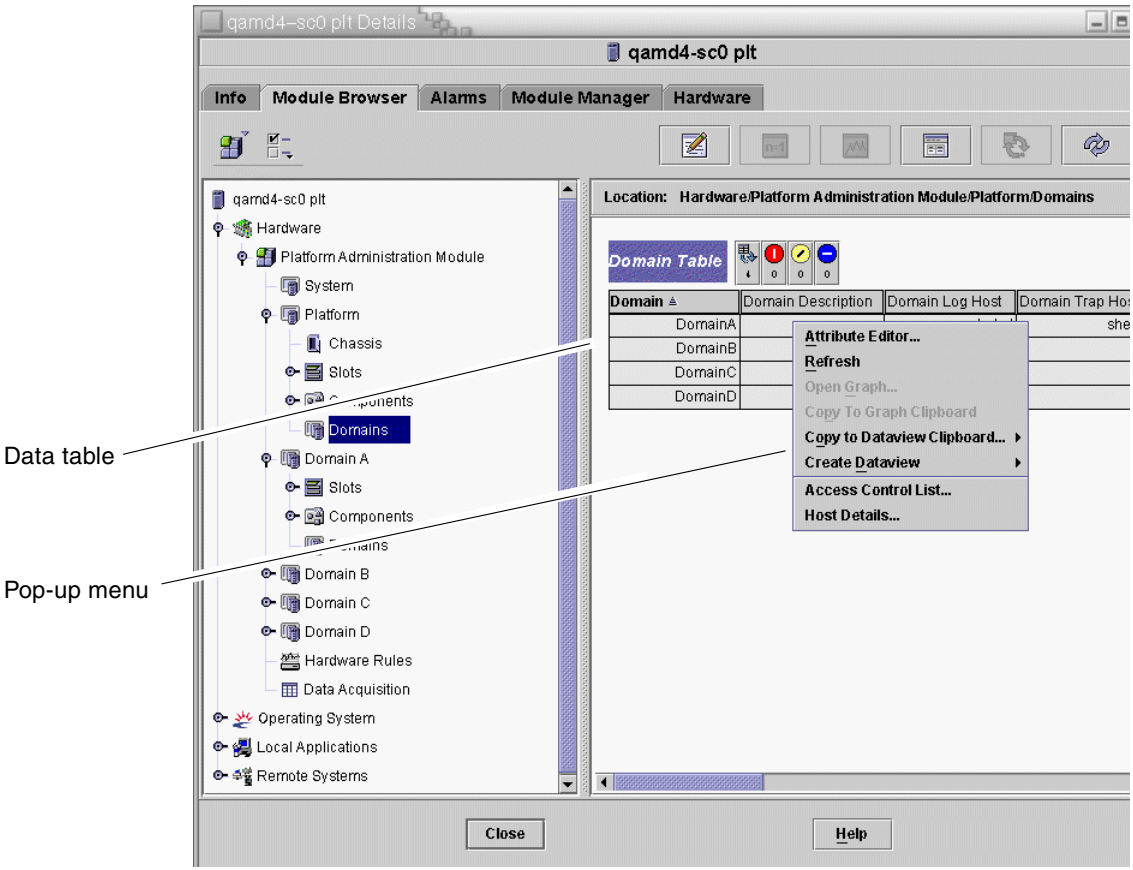


FIGURE 3-14 Module Browser Window Domains Table

TABLE 3-28 lists the types of entries that can appear in the menus, and the type of actions that can be taken.

TABLE 3-28 Table Action Menu Items for the Domain View

Table	Action
Slots and Components tables that have FRU Index entries	View FRU information
Domains	View and manage Keyswitch, Setup Loghost, and Host details

TABLE 3-29 lists some common actions and their corresponding functions.

TABLE 3-29 Domain Table Actions

Action	Function
Keyswitch...	Enables you to change the virtual keyswitch position of a domain. FIGURE 3-15 shows the panel that is displayed when you choose Keyswitch...
Setup Loghosts...	Enables you to set up the SNMP Trap and Syslog hosts for a domain. FIGURE 3-16 shows the panel that is displayed when you choose Setup Loghosts...
FRU Information	Enables you to see the FRU information for the selected component. FIGURE 3-17 shows the panel that is displayed.
Table sorting	Enables you to sort the domain table according to different criteria. When you click on the domain table column headers, the table is sorted according to that criteria. For example, clicking the Status column, sorts the table Status. You can toggle the sort order, ascending and descending, by clicking on the same column header again. The current sorted column header is displayed in bold face and the current sort order is displayed as a down or up arrow. By default the domain table is in ascending order by domain IDs.
Host Details	Displays the host Details window of the corresponding domain.

The following sections explain how to implement these actions.

▼ To Change a Domain Keyswitch Setting

The Keyswitch menu item is available for the individual domains (Domain A, B, C, or D).

1. **Right-click in the data table to display a pop-up menu.**
2. **Choose Keyswitch...**

   In the Hierarchy view, the path to this command is Hardware > Platform Administration Module > Domain *X* > Domains > *data table menu* > Keyswitch....

   The Keyswitch panel (FIGURE 3-15) is displayed. This panel shows the current position of the virtual keyswitch.

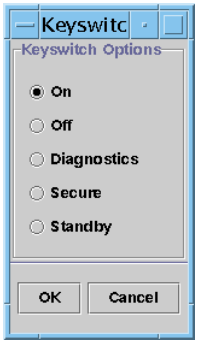


FIGURE 3-15 Keyswitch Panel

If the system controller is networked, you can change the keyswitch position to one of five modes. If the system controller is not networked, you cannot choose an option.

The five modes are:

- **On**

  If the domain is already powered on, selecting On changes only the position on the virtual keyswitch.

- **Off**

  If the domain is running the Solaris Operating System, a confirmation panel is displayed when you choose Off. Choosing this mode changes the board state of all the boards in the selected domain to Off and places the boards in low-power mode, allowing them to be physically removed from the chassis.

- **Diagnostic**

  If the domain is already powered on, selecting Diagnostic changes only the position on the virtual keyswitch.

- **Secure**

  If the domain is already powered on, selecting Secure changes only the position on the virtual keyswitch.

- **Standby**

  If the domain is running the Solaris Operating System, a confirmation panel is displayed when you choose Standby. Choosing this mode changes the state of all boards in the selected domain to Standby, but does not put the boards in the low-power mode.

3. **Complete this procedure with one of the following actions:**
   - Click OK to accept the changes you made and close this window.
   - Click Cancel to cancel your request.

   If an error occurs, it is displayed in the status message field of the panel.

▼ To Set Domain Loghosts

1. **Right-click in the data table to display a pop-up menu.**
2. **Choose Setup Loghosts...**

   In the Hierarchy view:

   - Choose Hardware > Platform Administration Module > Domain *X* > Domains > *data table menu* > Setup Loghosts....
   - Choose Hardware > Platform Administration Module > Platform > Chassis > *data table menu* > Setup Loghosts....

   The Setup Loghosts panel (FIGURE 3-16) is displayed.

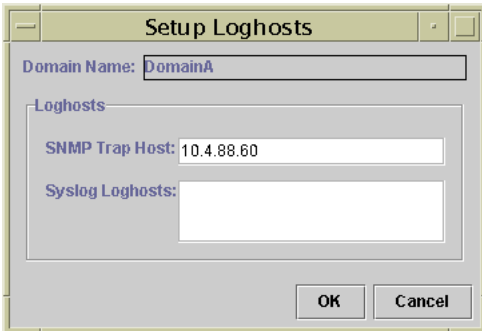


FIGURE 3-16 Setup Loghosts Panel

3. **You can change the values for SNMP Trap Host and Syslog Loghosts.**

   You can specify multiple loghosts by entering one IP address or node name per line.

4. **Complete this procedure with one of the following actions:**

- **Click OK to accept the changes you made and close this window.**
- **Click Cancel to cancel your request.**

If an error occurs, an error message is displayed in the status message field.

▼ To Display FRU Information

This panel displays FRU information for a specific component.

No information can be changed. The panel is read only.

1. **Right-click in the data table to display a pop-up menu.**

2. **Choose FRU Information...**

   In the Hierarchy view, choose Hardware > Platform Administration Module > Platform (or Domain *X*) > Slots (or Components) > *category, data table menu* > FRU Information....

   The FRU Information panel (FIGURE 3-17) is displayed.

3. **Click OK to close this window.**

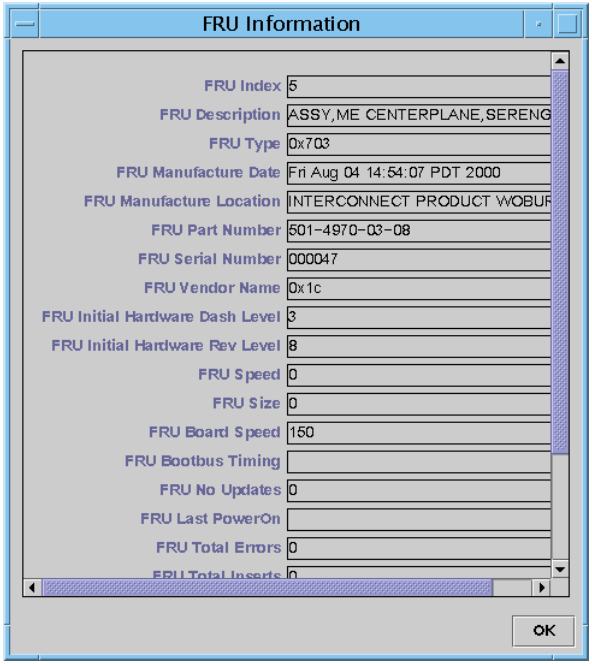


FIGURE 3-17 FRU Information Panel

▼ To Display Host Details

1. **Right-click in the data table to display a pop-up menu.**

2. **Choose Host Details...**

   In the Hierarchy view, choose Hardware > Platform Administration Module > Platform (or Domain *X*) > Domains > *data table menu* > Host Details....

   The Host Details window of the corresponding hardware domain is displayed.

3. **Click OK to close this window.**

Physical View and Logical View of Sun Fire Midrange Systems

These views can be seen by both the platform administrator and the domain administrator. The properties and values shown in the Physical View and the Logical View are produced by the Config-Reader. To view tables of available properties and values, see "Accessing Tables in the Domain Config-Reader Module" on page 122. For a description of platform administration alarm rules, see "Platform Administration Hardware Rules" on page 106.

Note – Not all alarms are displayed in the Physical View and Logical View.

For general information on the physical and logical views, refer to the *Sun Management Center User's Guide*.

▼ To See Physical and Logical Views

1. **In the Sun Management Center console, double-click a Sun Fire midrange systems icon.**

   The Details window is displayed (FIGURE 3-18).

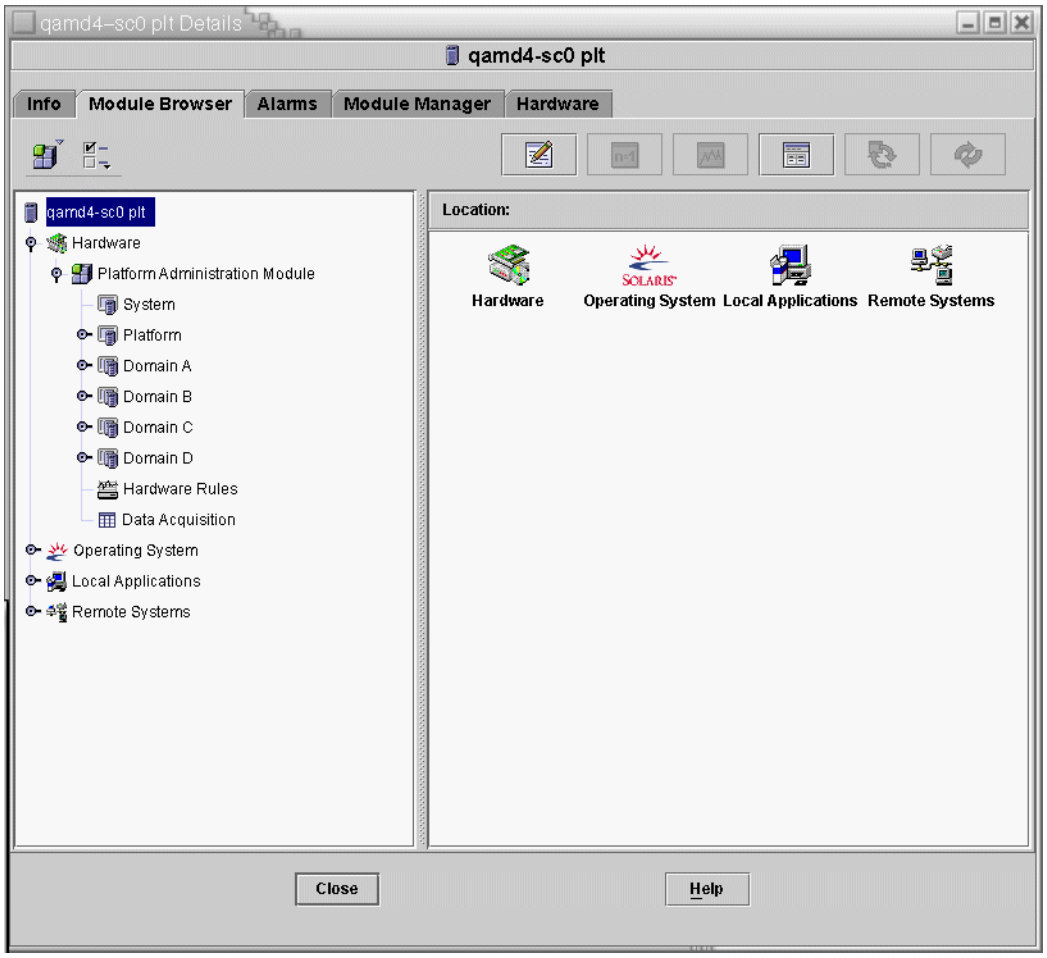


FIGURE 3-18 Platform Details Window

2. **Choose the Hardware tab in the Details window.**

   The following is displayed (FIGURE 3-19).

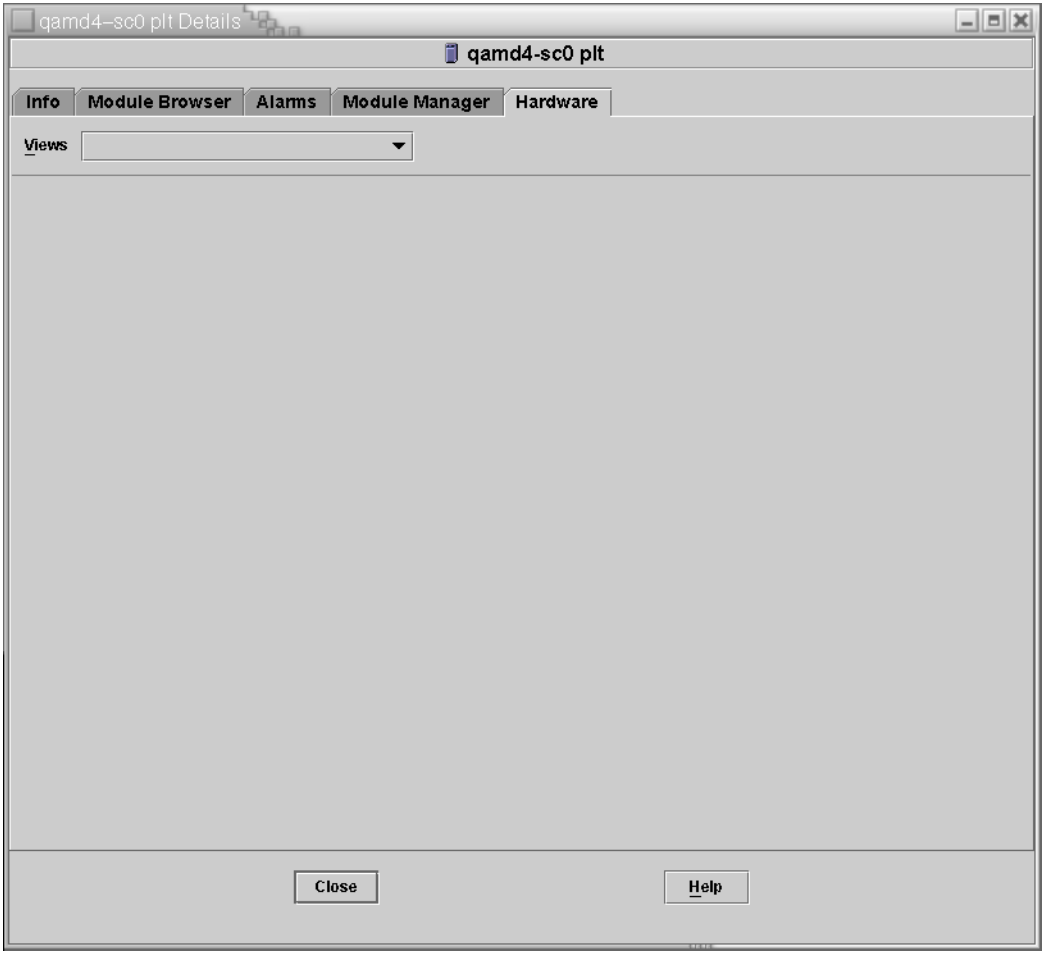


FIGURE 3-19 Hardware Tab

3. **In the Views pull-down menu (FIGURE 3-20), choose "platform" under either "Physical View" or "Logical View."**

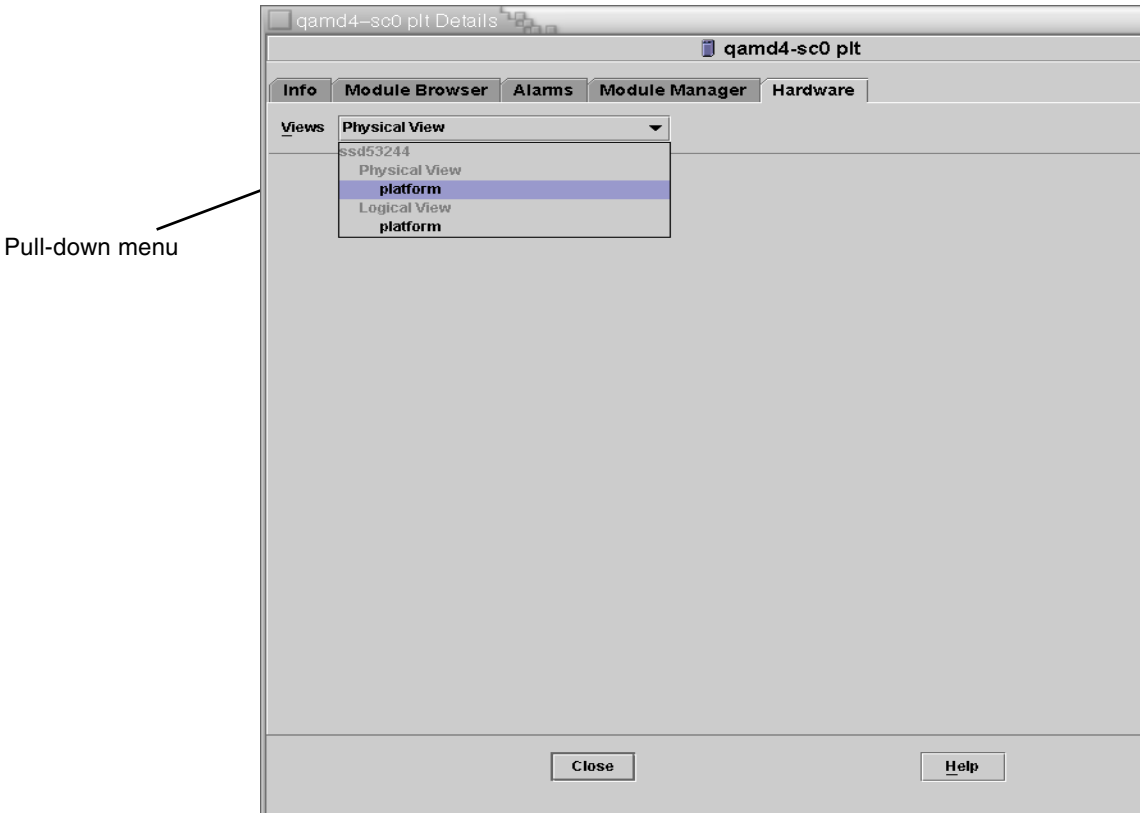


FIGURE 3-20 Views Pull-Down Menu

The chosen view is displayed.

- If you chose the Physical View (FIGURE 3-21), slowly move the cursor over the image of the system. Field-replaceable units (FRUs) are highlighted as the cursor passes over them. If you hold the cursor still for several seconds, the corresponding properties and values are displayed in the Properties window.

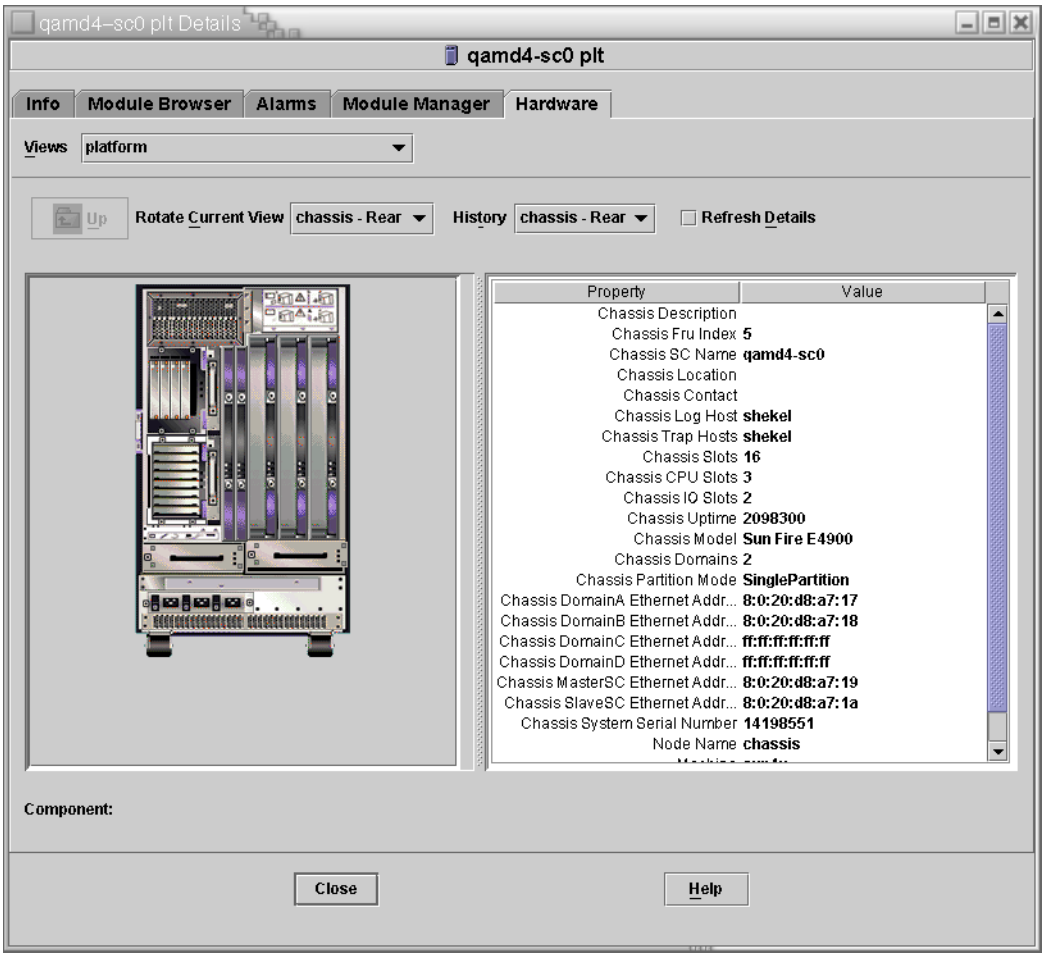


FIGURE 3-21 Physical View (Rear View of Sun Fire E4900 System)

- If you chose the Logical View (FIGURE 3-22), click an icon to display its properties in the Properties window. You can double-click some icons to see various component parts, or click the Expand All button to see all the component parts in the system. Various properties and values are displayed in the Properties window.

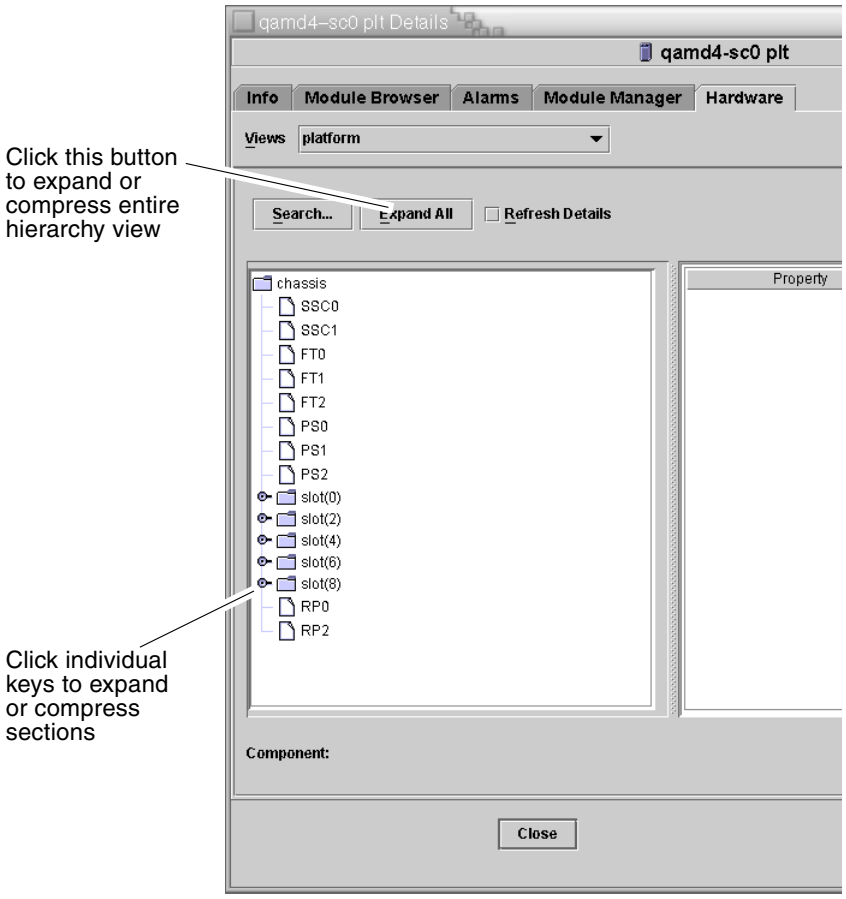


FIGURE 3-22 Logical View

The Logical View has three additional buttons, marked Search, Expand All, and Refresh Details.

- The Search button launches a pop-up Search window (FIGURE 3-23). To use the Search window, enter a component name or path, then click the Find button to find the first instance of the term. The Search feature expands the Logical View if necessary, and highlights the term it has located. To find additional instances of the same term, click the Next button. To close the Search window, click the Cancel button.

FIGURE 3-23 Search Button in the Details Window Logical View

Tip – The Search function is case sensitive. The error message “Node not found” is displayed at the bottom of the Details window if the search does not locate the component in your system.

The Search function stops searching when it reaches the bottom of the Logical View window, and the error message “Node not found” is displayed at the bottom of the Details window.

Tip – You can use the Module Browser tab displays to compare data for all similar components. You can use the Hardware tab Physical and Logical views to see data for an individual component in the system. For example, double-click the DIMM table icon in the Module Browser tab to see a table that lists properties for all DIMMs in the system. To see properties for `dimm(0)`, use the Search Button in the Logical view.

- The Expand All button expands all icons displayed the Logical View, allowing you to see all components and subassemblies, and so forth. The button name toggles to “Recover Default,” and you can click the button to recompress the icon display.
- The Refresh Details button updates the Property/Value table (in the right side of the viewing window).

Platform Administration Hardware Rules

This section describes the alarm rules for the Platform Administration Module. The system provides a message with the alarms telling what the current property is and what the limit is.

Slot Status Rule (rspa1000)

The slot status rule generates an alarm when the slot status of a board is not OK, Unknown, or null. If field-replaceable unit (FRU) information is available, the alarm message includes the FRU information.

TABLE 3-30 Platform Administration Slot Status Rule

Slot Status	Alarm Level	Meaning
OverTemp	Info	Temperature is over the upper limit.
UnderTemp	Info	Temperature is under the lower limit.
Failed	Critical/Error	Board failed.

Action:

Check to see whether the hardware needs replacing. In case of an OverTemp status, ensure that the fans are on.

System Frequency Clock Rule (rspa1001)

The system frequency clock rule generates an alarm if the clock fails over to the spare system controller.

TABLE 3-31 Platform Administration System Frequency Clock Rule

Alarm Level	Meaning
Info	System frequency clock failed over to the spare system controller.

Action:

This alarm is for your information; you may need to check the original clock status.

Domain Status Rule (rspa1002)

The domain status rule generates a critical alarm if the domain status is not either Active or RunningSolaris.

TABLE 3-32 Platform Administration System Domain Status Rule

Alarm Level	Meaning
Critical/Error	Domain is in a critical status.

Action:

When a domain is running the power-on self-test (POST) and is coming up, the alarm is generated. If the alarm does not disappear for a long time, the domain may be hung. In this case, check the domain status and the booting slice.

Domain Keyswitch Rule (`rspa1003`)

The domain keyswitch rule generates an information alarm when the domain keyswitch changes from one state to another.

TABLE 3-33 Platform Administration System Domain Keyswitch Rule

Alarm Level	Meaning
Info	Domain keyswitch changed to a new state.

Action:

This alarm is for your information; no action is necessary.

System Controller Failover Rule (`rspa1004`)

The system controller failover rule generates an information alarm when the SC fails over from the main SC to the spare SC.

TABLE 3-34 Platform Administration System Controller Failover Rule

Alarm Level	Meaning
Info	System controller failed over from the main SC to the spare SC.

Action:

This alarm is for your information only; no action is needed.

System Controller Change Rule (rspa1005)

The system controller change rule generates information alarms for certain changes in the SC.

TABLE 3-35 Platform Administration System Controller Change Rule

Value	Alarm Level	Meaning
1	Info	System controller has come up.
2	Info	System controller's IP address has changed.

Action:

This alarm is for your information only; no action is needed.

Log or Trap Host Change Rule (rspa1006)

The log or trap host change rule generates an information alarm if platform or domain log or trap hosts change.

TABLE 3-36 Platform Administration Log or Trap Host Change Rule

Alarm Level	Meaning
Info	Change has been made to the domain log host (domainloghost), the domain trap host (domaintraphost), the platform log host (chassisloghost), or the platform trap host (chassistraphost).

Action:

This alarm is for your information only; no action is needed.

System Controller Not Responding Rule (rspa1007)

The system controller not responding rule generates a critical alarm if the SC is not responding or if the SNMP agent on the main SC is not responding.

TABLE 3-37 Platform Administration System Controller Not Responding Rule

Value	Alarm Level	Meaning
0	Critical	System controller is not responding.
1	Critical	Main SC's SNMP agent is not responding.

Action:

Contact your Sun service personnel.

CPU Module Status Rule (`rspa1008`)

The CPU module status rule generates a critical alarm when any CPU module is in a state other than `Idle` or `Online`.

TABLE 3-38 Platform Administration Log or Trap Host Change Rule

Alarm Level	Meaning
Critical	Status of the CPU module is critical.

Action:

Contact your Sun service personnel.

System Controller Firmware Version Rule

The system controller firmware (SCApp) version rule generates a critical alarm if the SC firmware is *before* version 5.12.5.

TABLE 3-39 Platform Administration SC Firmware Version Rule

Alarm Level	Meaning
Critical	Version of SCApp firmware is older than 5.12.5.

Action:

Update the system controller firmware (SCApp).

System Board Test Status Rule (`rspa1010`)

The system board test status rule generates alarms if the test status is *not* `Unknown`, `NoTested`, or `Passed` (TABLE 3-40).

TABLE 3-40 Platform Administration System Board Test Status Rule

Test Status	Alarm Level	Meaning
`UnderTest`	Info	POST is testing the board.
`StartTest`	Info	POST is starting to test the board.
`Degraded`	Warning	Board is running in a degraded mode.

TABLE 3-40 Platform Administration System Board Test Status Rule *(Continued)*

Test Status	Alarm Level	Meaning
`Failed`	Critical	Board failed in POST testing.
`Unusable`	Critical	Board is not usable in this system.
`--`	Critical	Test Status is indeterminate.

Action:

- If the board test status is `UnderTest` or `StartTest`, the alarm is for your information only; no action is needed.
- If the board test status is `Degraded`, check the root cause of the degrade. For example, it could be caused by an insufficient COD license.
- If the board test status is `Failed` or `Unusable`, the board needs to be replaced.

Domain or Board Power State Rule (`rspa1011`)

The domain or board power state rule generates an information alarm when any component is powered off (`PoweredOff`) or a caution alarm when the power state of a component is `unknown`.

TABLE 3-41 Platform Administration Domain or Board Power State Rule

Alarm Level	Meaning
Info	Component is powered off.
Caution	Power state of a component is `unknown`.

Action:

These alarms are for your information only; no action is needed.

Data Acquisition Table

The Data Acquisition Table allows you to refresh the table for each property to keep your data current. The Data Acquisition Table has 15 properties, each of which represents one table of data in the SC database:

- Chassis
- Slots
- CPU Board
- I/O Board

- Address Repeater Board
- CPU Module
- DIMM
- Ecache
- WCI
- WCI Port
- Domains
- Fan
- Power Supply
- System Controller
- FRU

You can right-click on a property, and left-click Refresh in the pop-up menu. The values in the table for that property are refreshed. The value for each property in this table is a localized timestamp indicating when the data in the table for that property was last acquired successfully from the SC database (FIGURE 3-24). This allows you to ensure that your data is current.

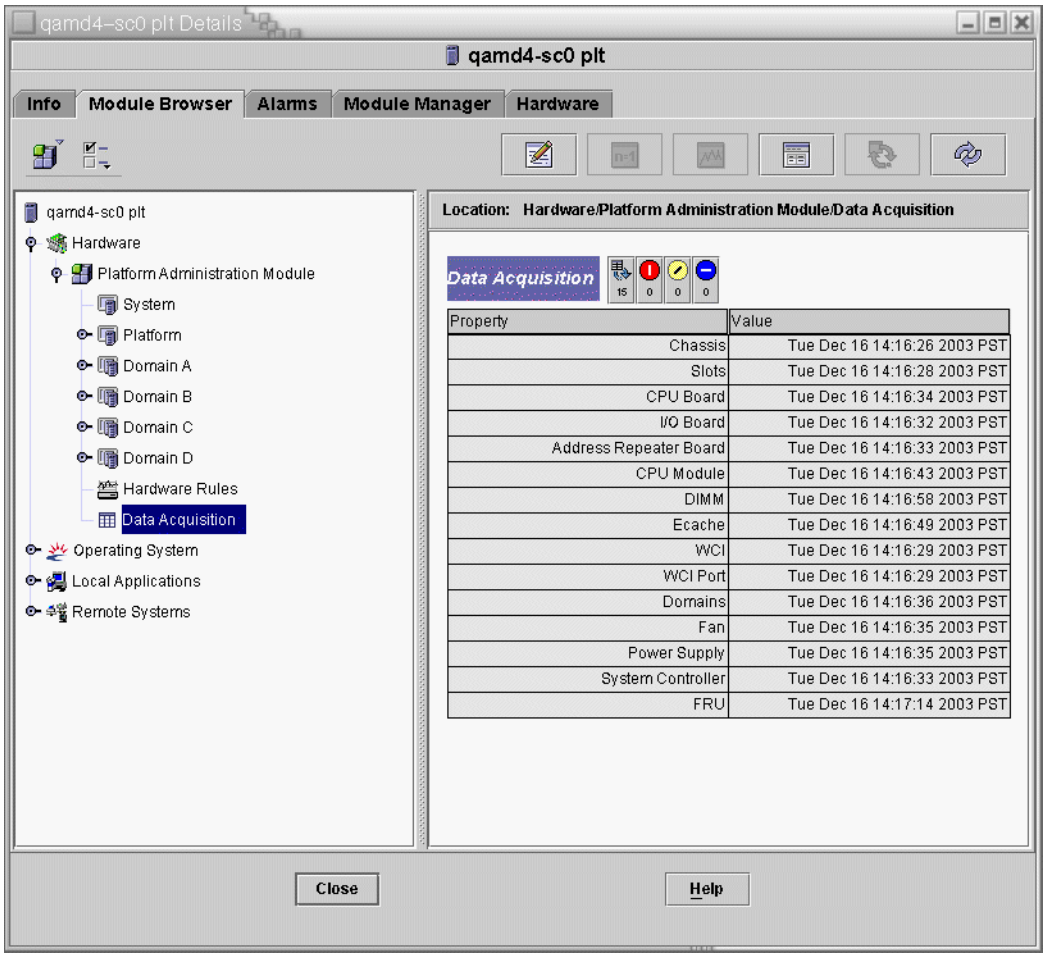


FIGURE 3-24 Data Acquisition Table

The members of the following security access groups may view the contents of the Data Acquisition table:

- `spltop`
- `spltadm`
- `sdaop`
- `sdaadm`
- `sdbop`
- `sdbadm`
- `sdcop`
- `sdcadm`
- `sddop`
- `sddadm`

See TABLE 2-3 for definitions of the User Groups.

CHAPTER 4

Domain Administration Using the Domain Agent

This chapter describes Sun Management Center domain administration through the domain agent for Sun Fire midrange systems.

This chapter contains the following topics.

Setting Up Administrative Domains

This is a general procedure. For instructions, refer to the *Sun Management Center User's Guide*.

Starting and Stopping Agents

Refer to the *Sun Management Center User's Guide*.

Creating a Node

This is a general procedure. For instructions, refer to the *Sun Management Center User's Guide*.

Config-Reader Module

A Config-Reader module, Config-Reader-Sun Fire(3600-6800), is automatically loaded during installation. You can use the Config-Reader module to see the physical view and logical view of your host.

In addition, the Config-Reader module monitors your hardware and alerts you whenever there is a problem. For example, this module checks for dual inline memory module (DIMM) errors.

The Config-Reader icon is located under the Hardware icon in the Details window (see FIGURE 4-3).

▼ To Use the Config-Reader Module

1. **In the Sun Management Center console, double-click a Sun Fire midrange system icon.**

   The Details window is displayed (FIGURE 4-1).

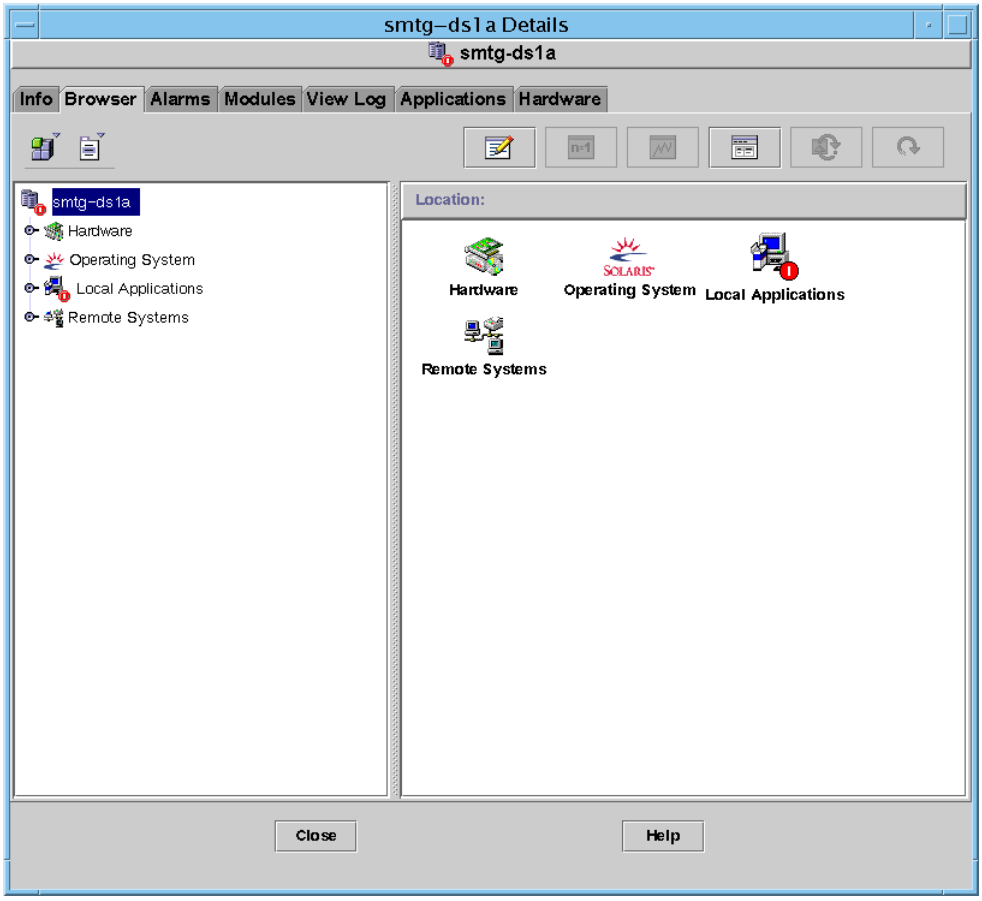


FIGURE 4-1 Domain Details Window

2. **Double-click the Hardware icon in the Details window.**

   The Config-Reader-Sun Fire Midrange Systems and the Sun Fire Midrange Systems Rules icons are displayed (FIGURE 4-2).

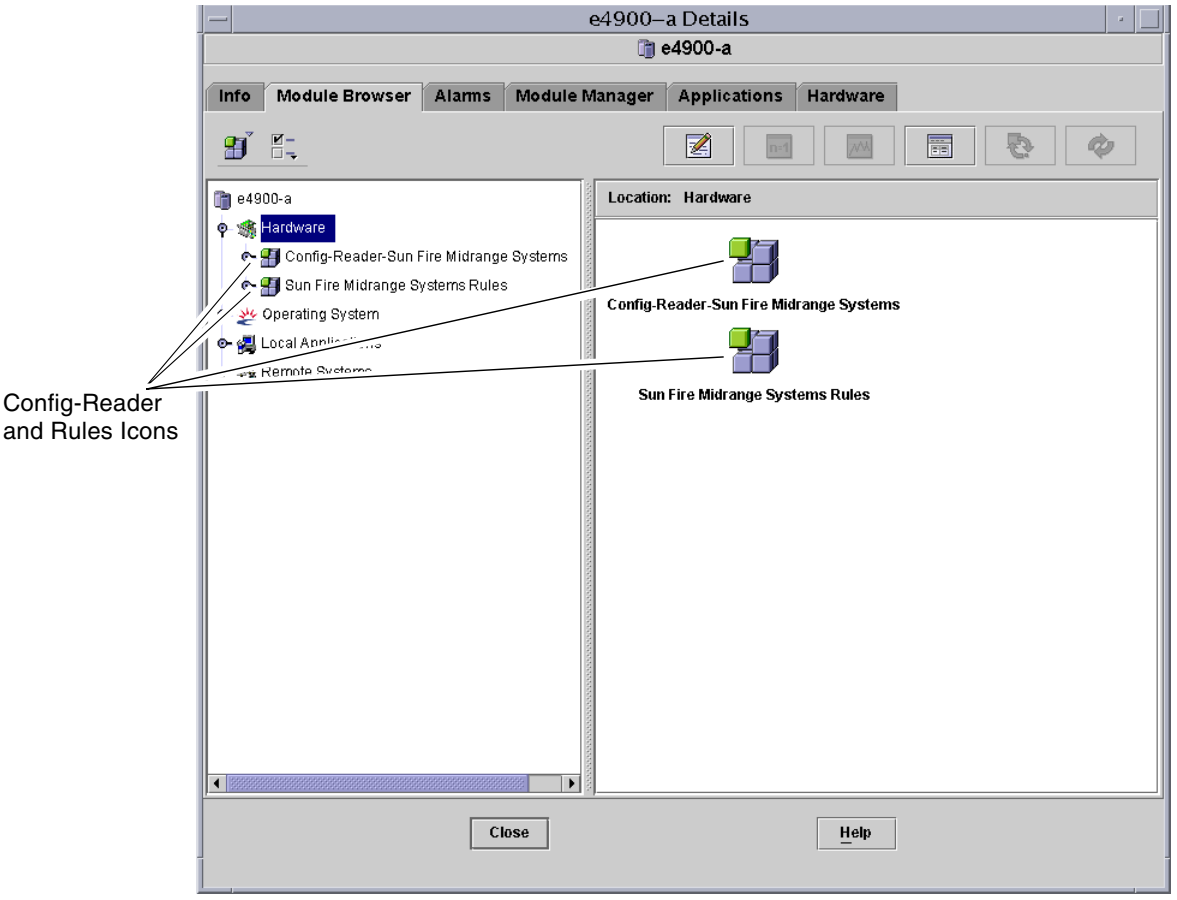


FIGURE 4-2 Config-Reader and Rules Icons

3. **You can now choose either to:**
   - Double-click the Config-Reader-Sun Fire Midrange Systems icon to display all devices in the system (FIGURE 4-3), and then double-click a device icon to display properties and values for that device.
   - Double-click the Sun Fire Midrange Systems Rules icon to display rules icons (FIGURE 4-4), and then double-click a rules icon to display properties and values.

   To see the properties and values that are available, see "Accessing Tables in the Domain Config-Reader Module" on page 122. For a list of failures that trigger Config Reader alarms, see "Sun Fire Midrange Systems Rules" on page 132.

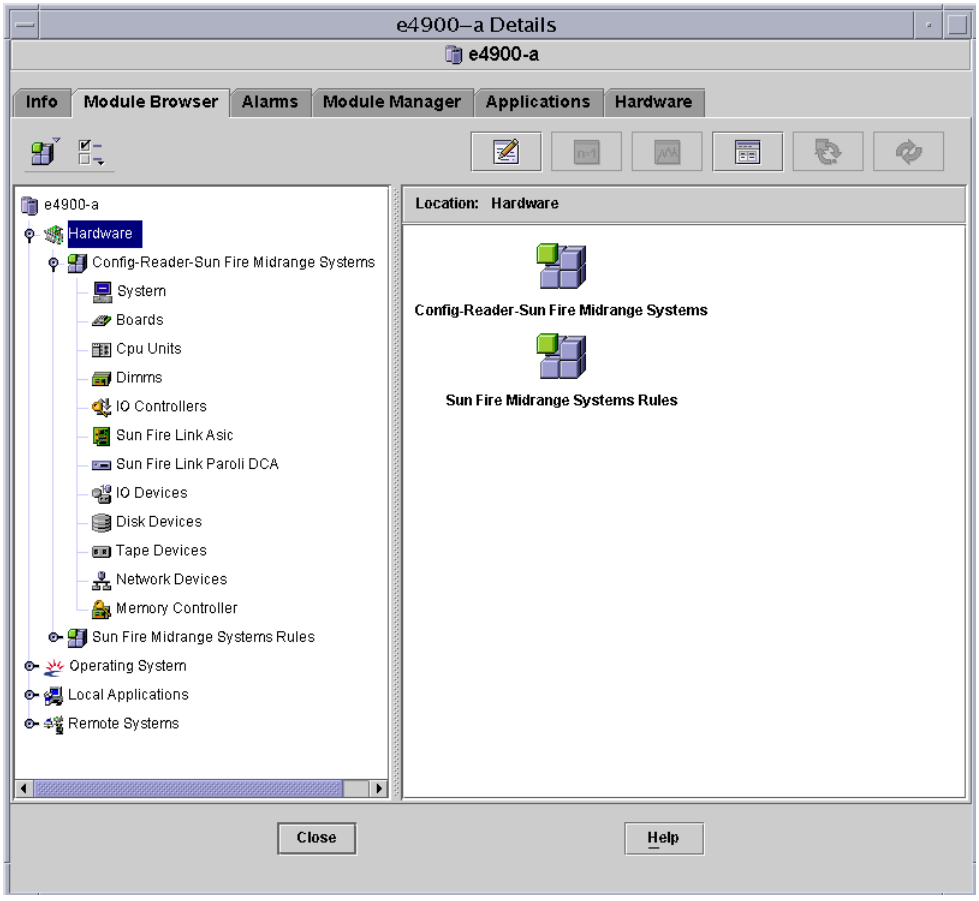


FIGURE 4-3 Config-Reader Devices

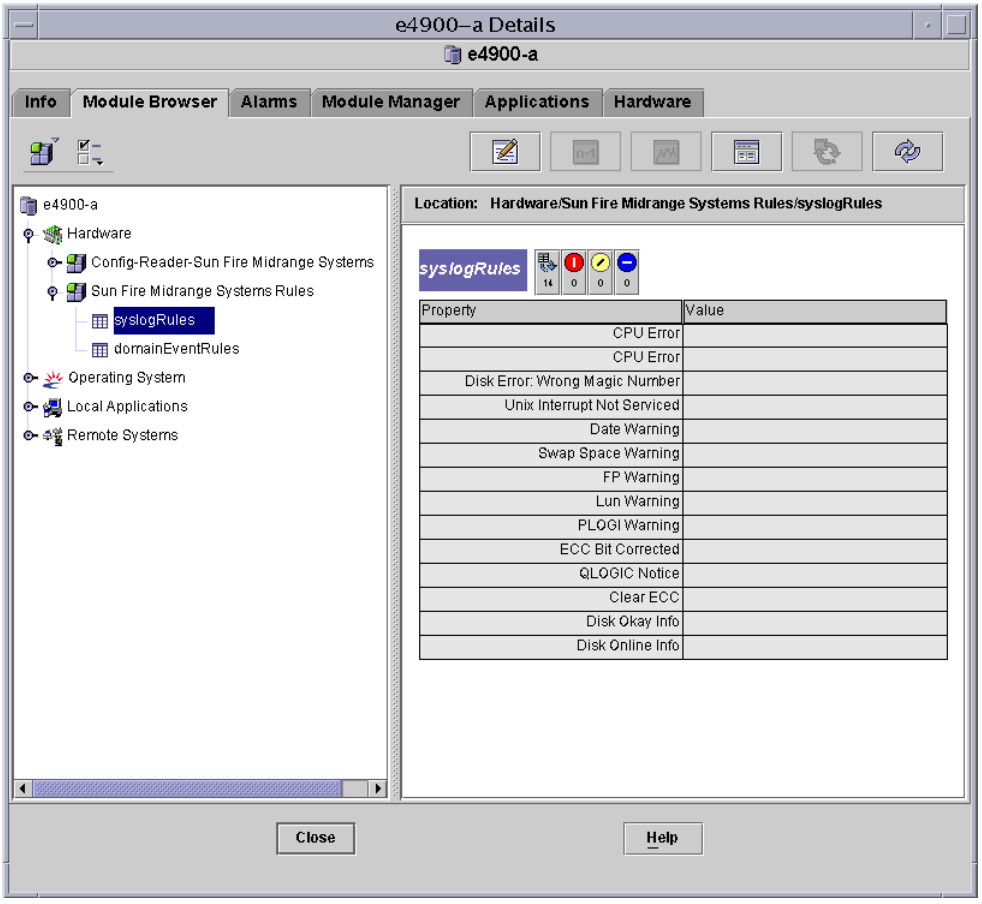


FIGURE 4-4 Sun Fire Midrange Systems Rules Tables

Loading the Config-Reader Module

If the icon for the Config-Reader-Sun Fire Midrange Systems module or the Sun Fire Midrange Systems Rules module is not displayed in the Module Browser tab of the Details window for your Sun Fire midrange systems, the corresponding module is not loaded. In that case, you can manually load one or both modules, as shown below.

▼ To Load a Module

1. **In the Sun Management Center console, double-click the Sun Fire midrange system icon.**

   The Details window is displayed (FIGURE 4-1).

2. **Click the Module Manager tab in the Details window.**

   The Module Manager data is displayed (FIGURE 4-5).

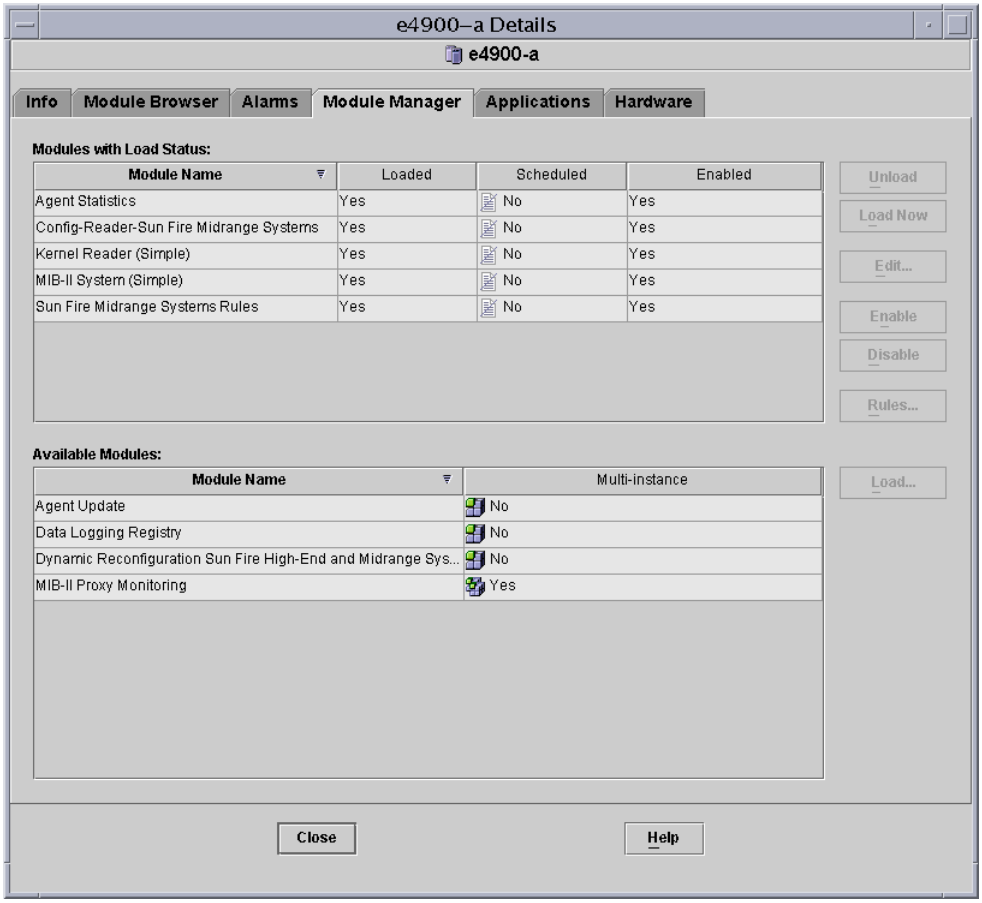


FIGURE 4-5 Module Manager Tab in the Details Window

3. **Select Config-Reader-Sun Fire Midrange Systems or Sun Fire Midrange Systems Rules in the Available Modules list, then click Load.**

   The Module Loader pop-up window is displayed.

4. **Click OK in the Module Loader pop-up window.**

   If you have sufficient access privileges, the pop-up window closes, and the module moves into the Modules with Load Status list.

   If you do not have sufficient access privileges, the pop-up window displays an error message. See "Assigning Users to Groups" on page 50 for information about access privileges.

Accessing Tables in the Domain Config-Reader Module

This section includes the Config-Reader module data property tables:

The following tables describe the data properties contained in each of the domain Config-Reader tables. When selected, the Config-Reader data property tables are displayed in the Module Browser tab of the Details window. For more information, refer to Chapter 7, "Browsing Information About a Managed Object," in the *Sun Management Center User's Guide*.

▼ To Refresh Domain Config-Reader Tables

1. **Be sure you have set up trap hosts on your platform and domains.**

   The trap host is the host name of your Sun Management Center server from which you perform platform administration. See "Setting Up SNMP on the System Controller" on page 23 for more information.

2. **Refresh the System Table (see TABLE 4-1) to refresh all the tables in the Domain Config-Reader module.**

Domain System

TABLE 4-1 provides a brief description of the properties for the Sun Fire midrange system that contains the domain.

TABLE 4-1 Domain System

Property	Rule (if any)	Description
Name		Displays the instance name
Operating System		Displays the operating environment running on the machine
Operating System Version		Displays the operating environment version
System Clock Frequency		Displays the clock frequency in megahertz (MHz)
Architecture		Displays the architecture of the machine
Hostname Of The System		Displays the host name of the system
Machine Name		Displays the machine type
System Platform		Displays the hardware platform of the system
Serial Number		Displays the serial number of the machine
Timestamp		Displays the time stamp value
Raw Timestamp		Displays the raw time stamp value
Total Disks		Displays the total number of disks present in the system
Total Memory		Displays the total memory present in the system in megabytes (MB)
Total Processors		Displays the total processors present in the system
Total Tape Devices		Displays the total tape devices present in the system

Domain Boards

TABLE 4-2 provides a brief description of the properties for boards configured into a Sun Fire midrange systems domain.

TABLE 4-2 Domain Boards

Property	Rule (if any)	Description
Name		Displays the system name and slot number for this board, such as `board(1)`, `board(3)`, or `board(8)`
Label Name		Displays the label name and slot number for this unit, such as system board (`SB1` or `SB3)`, or I/O board (IB8)
Board No		Displays the board slot number, such as `1`, `3`, or `8`
Fru		Indicates whether the unit is a field-replaceable unit (`yes` or `no`)
Hot Plugged		Indicates whether the board has been hot-plugged into the system (`yes` or `no`)
Hot Pluggable		Indicates whether the board is hot-pluggable (`yes` or `no`)
Memory Size		Displays the memory size in megabytes (MB)
Condition	`rcrse301`	Displays the board condition: `OK`, `UNKNOWN`, or `FAILED`
Type		Displays the board type, such as `CPU`, `CPCI_I/O_Bo`, `PCI_I/O_Boa`, `PCI+_I/O_Bo`. Includes whether a CPU board is also a COD board (`COD_CPU`) and whether the board is `unknown`.

Domain CPU Units

TABLE 4-3 provides a brief description of the properties for CPU units on a Sun Fire midrange systems domain.

TABLE 4-3 Domain CPU Units

Property	Rule (if any)	Description
Name		Displays the system name and slot number for this unit, such as `cpu-unit(4)` or `cpu-unit(5)`
Board No.		Displays the number of the board where this processor is located
Clock Frequency		Displays the frequency of the timer in megahertz (MHz)
Cpu Type		Displays the processor machine type

TABLE 4-3 Domain CPU Units *(Continued)*

Property	Rule (if any)	Description
Dcache Size		Displays the size of data cache (Dcache) in kilobytes (KB)
Ecache Size		Displays the size of external cache (Ecache) megabytes (MB)
Fru		Indicates whether the unit is a field-replaceable unit (`yes` or `no`).
Icache Size		Displays the size of instruction cache (Icache) in kilobytes (KB).
Model		Displays the processor model.
Processor Id		Displays the identification number of the processor; or, in the case of a chip multithreading (CMT) processor, displays the processor ID for each core separated by a comma.
Status	`rcrse207`	Displays the CPU unit status: OK, `online`, `--`, `no interrupts`, `poweroff`, , or `offline`. In the case of a chip multithreading (CMT) processor, if none of the cores is online, the status is `offline`. Additionally, if at least one core per processor is online, then the whole processor shows as being `online`.
Unit		Displays the identification number of the unit.

Domain DIMMs

TABLE 4-4 provides a brief description of the properties for dual inline memory modules (DIMMs) on a Sun Fire midrange systems domain.

TABLE 4-4 Domain DIMMs

Property	Rule (if any)	Description
Name		Displays the system name and slot number for this unit, such as `dimm(0)` or `dimm(1)`
Physical Bank No		Displays the physical bank number where this DIMM is located
Bank Size		Displays the bank size in megabytes (MB)
Bank Status		Displays the operating status: `pass`, `unpopulated`, or `fail`

TABLE 4-4 Domain DIMMs *(Continued)*

Property	Rule (if any)	Description
Fru		Indicates whether the unit is a field-replaceable unit (`yes` or `no`)
Dimm Size		Displays the size of the DIMM in megabytes (MB)
Memory Controller		Lists the name of the memory controller for the DIMM (see the property Name in TABLE 4-12)

Domain I/O Controllers

TABLE 4-5 provides a brief description of the properties for I/O controllers on a Sun Fire midrange systems domain.

TABLE 4-5 Domain I/O Controllers

Property	Description
Name	Displays the system name and slot number for this unit, such as `pcisch(8)` or `pcisch(9)`
Device Type	Displays the device type: `pci`
Instance Number	Displays the instance number
Model	Displays the device model
Reg	Displays the register address
Portid	Displays the port identifier
Version Number	Displays the version number

Domain Sun Fire Link ASIC

TABLE 4-6 briefly describes the Sun Fire Link ASIC (WCI) properties for a Sun Fire midrange systems domain. Refer to the *Sun Fire Link Fabric Administrator's Guide* for more information about the Sun Fire Link system.

TABLE 4-6 Domain Sun Fire Link ASIC (WCI)

Property	Description
Name	Displays the system name for this unit, such as `wci(1d)` or `wci(1f)`
Number of Parolis	Displays the number of Paroli daughter-card assembly (DCA) cards

Domain Sun Fire Link Paroli DCA

TABLE 4-7 briefly describes the Sun Fire Link Paroli daughter card assembly (DCA) properties for a Sun Fire midrange systems domain. 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 4-7 Domain Sun Fire Link Paroli DCA

Property	Description
Name	Displays the name of the Paroli card, such as `paroli(0)` or `paroli(1)`
Fru	Indicates whether the unit is a field-replaceable unit (`yes` or `no`)
Link Number	Identifies the port number link to the Paroli card (`0` or `2`)
Link Validity	Indicates whether the link is `VALID` or `INVALID` to the Paroli card

TABLE 4-7 Domain Sun Fire Link Paroli DCA *(Continued)*

Property	Description
Link State	Displays the current state of the 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	Identifies the link to the remote Paroli card (`0-2`)
Remote Cluster Member	Displays the host name of the cluster member at the remote end of the link

Domain I/O Devices

TABLE 4-8 provides a brief description of the properties for I/O devices on a Sun Fire midrange systems domain.

TABLE 4-8 Domain I/O Devices

Property	Description
Name	Displays the system name for this unit
Device Type	Displays the device type
Disk Count	Displays the number of drives attached to this unit
Instance Number	Displays the instance number
Model	Displays the model
Network Count	Displays the number of networks attached to this unit
Reg	Displays the register address
Tape Count	Displays the number of drives attached to this unit

Domain Disk Devices

TABLE 4-9 provides a brief description of the properties for disk devices on a Sun Fire midrange systems domain.

TABLE 4-9 Domain Disk Devices

Property	Description
Name	Displays the system name for this unit, such as `sd(x)`, where *x* is the development index of the disk device
Device Type	Displays the device type, such as `disk` or `CD-ROM`
Disk Name	Displays the disk name with bus controller, such as `c1t0d0` or `c2t0d0`
Fru	Indicates whether the unit is a field-replaceable unit (`yes` or `no`)
Instance Number	Displays the instance number
Disk Target	Displays the disk target

Domain Tape Devices

TABLE 4-10 provides a brief description of the properties for tape devices on a Sun Fire midrange systems domain.

TABLE 4-10 Domain Tape Devices

Property	Rule (if any)	Description
Name		Displays the system name for this unit, such as `st(x)`, where *x* is the development index of the tape device
Device Type		Displays the device type, such as `tape drive`
Fru		Indicates whether the unit is a field-replaceable unit (`yes` or `no`)
Instance Number		Displays the instance number
Model		Displays the model
Tape Name		Displays the tape name
Status	`rcrse225`	Displays the operating status, including `OK`, `ok`, or `drive present, but busy`
Tape Target		Displays the tape target number

Domain Network Devices

TABLE 4-11 provides a brief description of the properties for network devices on a Sun Fire midrange systems domain.

TABLE 4-11 Domain Network Devices

Property	Description
Name	Displays the system name for this unit, such as `hme`(5)
Device Type	Displays the device type: `network`
Ethernet Address	Displays the Ethernet address
Internet Address	Displays the Internet address
Interface Name	Displays the interface name
Symbolic Name	Displays the symbolic name

Domain Memory Controller

TABLE 4-12 provides a brief description of the properties for a memory controller on a Sun Fire midrange systems domain.

TABLE 4-12 Domain Memory Controller

Property	Description
Name	Displays the system name for this unit, such as `memory-controller(14,400000)`
Compatible	Displays compatible software packages
Device Type	Displays the device type: `memory-controller`
Port Id	Displays the port identifier
Reg	Displays the register address

Domain Config-Reader Rules

This section describes the alarm rules for the domain Config-Reader module. The system provides a message with the alarms telling what the current property is and what the limit is.

CPU Unit Status Rule (rcrse207)

The CPU unit status rule generates a critical alarm when the CPU unit status is not OK, online, --, or noncritical.

TABLE 4-13 Domain Config-Reader CPU Unit Status Rule

Alarm Level	Meaning
Critical	CPU unit is in a critical status.

Action:

Contact your Sun service personnel.

Tape Status Rule (rcrse225)

The tape status rule generates a critical alarm when the tape status is not OK, ok, or drive present, but busy.

TABLE 4-14 Domain Config-Reader Tape Status Rule

Alarm Level	Meaning
Critical	Tape is in a critical status.

Action:

Contact your Sun service personnel.

System Board Condition Rule (rcrse301)

The system board condition rule generates an information alarm when the system board condition is not OK.

TABLE 4-15 Domain Config-Reader System Board Condition Rule

Alarm Level	Meaning
Info	System board condition is not OK.

Action:

This alarm is for your information only; no action is needed.

Attachment Point Status Rule (rLnkVld)

The attachment point status rule generates a information alarm if the state is not VALID.

TABLE 4-16 Domain Config-Reader Attachment Point Status Rule

Alarm Level	Meaning
Info	Attachment point state is not VALID.

Action:

This alarm is for your information only; no action is needed.

Sun Fire Midrange Systems Rules

This section describes the alarm rules for the Sun Fire midrange systems. The system provides a message with the alarms telling what the current property is and what the limit is.

CPU Error Message Rule — Solaris 8, 7/01 and Later (rsr1000)

The CPU error message rule generates a critical alarm, when a CPU correctable error is detected. This alarm applies to Solaris 8, 7/01 Operating System and later.

TABLE 4-17 CPU Error Message Rule — Solaris 8, 7/01

Alarm Level	Meaning
Critical	CPU correctable error was detected in the /var/adm/messages file.

Action:

Contact your Sun service personnel.

CPU Error Message Rule — Pre-Solaris 8, 7/01 (rsr1001)

The CPU error message rule generates a critical alarm, when a error-correcting code (ECC) memory error is detected. This alarm applies to Operating Systems earlier than Solaris 8, 7/01.

TABLE 4-18 CPU Error Message Rule — Pre-Solaris 8, 7/01

Alarm Level	Meaning
Critical	ECC memory error was detected in the /var/adm/messages file.

Action:

Contact your Sun service personnel.

SCSI Warning Message Rule (rsr1002)

The Small Computer System Interface (SCSI) warning message rule generates a warning alarm when a warning is detected because of an invalid magic number.

TABLE 4-19 SCSI Warning Message Rule

Alarm Level	Meaning
Warning	SCSI warning was detected in the /var/adm/messages file because of an invalid magic number.

Action:

Contact your Sun service personnel.

UNIX Warning Message Rule (rsr1003)

The UNIX warning message rule generates a warning alarm when a warning is detected, because an interrupt has not been serviced.

TABLE 4-20 UNIX Warning Message Rule

Alarm Level	Meaning
Warning	UNIX warning was detected in the /var/adm/messages file because an interrupt has not been serviced.

Action:

Contact your Sun service personnel.

Genunix Date Warning Message Rule (`rsr1004`)

The Genunix date warning message rule generates a warning alarm when a warning is detected, because the last shutdown time was later than the time on the time-of-day chip.

TABLE 4-21 Genunix Date Warning Message Rule

Alarm Level	Meaning
Warning	Genunix date warning was detected in the `/var/adm/messages` file, because the last shutdown time was later than the time on the time-of-day chip.

Action:

Contact your Sun service personnel.

Genunix Clock Warning Message Rule (`rsr1005`)

The Genunix clock warning message rule generates a warning alarm when a warning is detected, because the maximum swap space is less than the free space.

TABLE 4-22 Genunix Clock Warning Message Rule

Alarm Level	Meaning
Warning	Genunix clock warning was detected in the `/var/adm/messages` file, because the maximum swap space is less than the free space.

Action:

Contact your Sun service personnel.

Fan Plane Warning Message Rule (rsr1006)

The fan plane warning message rule generates a warning alarm when a warning is detected.

TABLE 4-23 Fan Plane Warning Message Rule

Alarm Level	Meaning
Warning	Fan plane warning was detected in the /var/adm/messages file.

Action:

Contact your Sun service personnel.

LUN Failure Rule (rsr1007)

The logical unit number (LUN) failure rule generates a critical alarm when a LUN failure is detected.

TABLE 4-24 LUN Failure Rule

Alarm Level	Meaning
Critical	LUN failure was detected in the /var/adm/messages file.

Action:

Contact your Sun service personnel.

PLOGI Failure Rule (rsr1008)

The PLOGI failure rule generates a critical alarm when a PLOGI failure is detected.

TABLE 4-25 PLOGI Failure Rule

Alarm Level	Meaning
Critical	PLOGI failure was detected in the /var/adm/messages file.

Action:

Contact your Sun service personnel.

ECC Correction Rule (rsr1009)

The ECC correction rule generates an information alarm if the ECC had an error and the ECC data bit has been corrected.

TABLE 4-26 System ECC Correction Rule

Alarm Level	Meaning
Info	ECC data bit is corrected.

Action:

This alarm is for your information only; no action is needed.

Qlogic Error Rule (rsr1010)

The Qlogic error rule generates an alarm when a Qlogic loop error is detected.

TABLE 4-27 Qlogic Error Rule

Value	Alarm Level	Meaning
OFFLINE	Warning	Qlogic loop went offline.
Others	Info	Qlogic loop went online

Action:

- Contact your Sun service personnel if you see the Warning alarm.
- The Info alarm is for your information only; no action is needed.

Kernel Correction Rule (rsr1011)

The kernel correction rule generates a warning if a clear ECC warning is detected.

TABLE 4-28 Kernel Correction Rule

Alarm Level	Meaning
Warning	Clear ECC warning is detected in the /var/adm/messages file, and the kernel cleared an ECC error.

Action:

Contact your Sun service personnel.

SCSI Info Event Rule (rsr1012)

The SCSI information event rule generates an information alarm when a SCSI information event is detected.

TABLE 4-29 SCSI Info Event Rule

Alarm Level	Meaning
Info	SCSI disk okay and related messages were detected in the /var/adm/messages file.

Action:

This alarm is for your information only; no action is needed.

SCSI Disk Online Rule (rsr1013)

The SCSI disk online rule generates a info alarm when a SCSI disk goes online.

TABLE 4-30 SCSI Disk Online Rule

Alarm Level	Meaning
Info	SCSI disk went online.

Action:

This alarm is for your information only; no action is needed.

Temperature State Rule (rsr1014)

The temperature state rule generates an alarm when the temperature state value is not 1.

TABLE 4-31 Temperature State Rule

Value	Alarm Level	Meaning
1		Temperature state is okay.
2	Warning	Component temperature crosses the warning level.
Others	Critical	Component temperature crosses the error level.

Action:

Contact your Sun service personnel.

Power State Rule (`rsr1015`)

The power state rule generates an alarm when the power state value is not 1.

TABLE 4-32 System Power State Rule

Value	Alarm Level	Meaning
1		Power state is okay.
2	Warning	Power supply crosses the warning voltage threshold.
Others	Critical	Power supply fails.

Action:

Contact your Sun service personnel.

Physical and Logical Views of a Domain

The Hardware tab in the Details window allows you to view physical and logical hardware configurations of Sun Fire midrange systems. For instructions, see "Physical View and Logical View of Sun Fire Midrange Systems" on page 100.

If the system is divided into multiple domains, as a domain administrator you can see detailed information only for domains to which you can access. If you attempt to view a domain to which you do not have access privilege, the message "Insufficient security privilege to load console info" is displayed at the bottom of the Console window.

FIGURE 4-6 shows a physical view of Paroli cards in a domain. Access this view by clicking on the Hardware tab, clicking on the Views list box, and clicking system under Domain. Be sure you have system - Rear in the Rotate Current View list box.

FIGURE 4-6 Domain Physical View of Paroli Cards (Rear)

FIGURE 4-7 shows a physical view of a PCI+ board in a domain. Access this view by clicking on the Hardware tab, clicking on the Views list box, and clicking boards under Domain. Be sure you have system - Rear in the Rotate Current View list box.

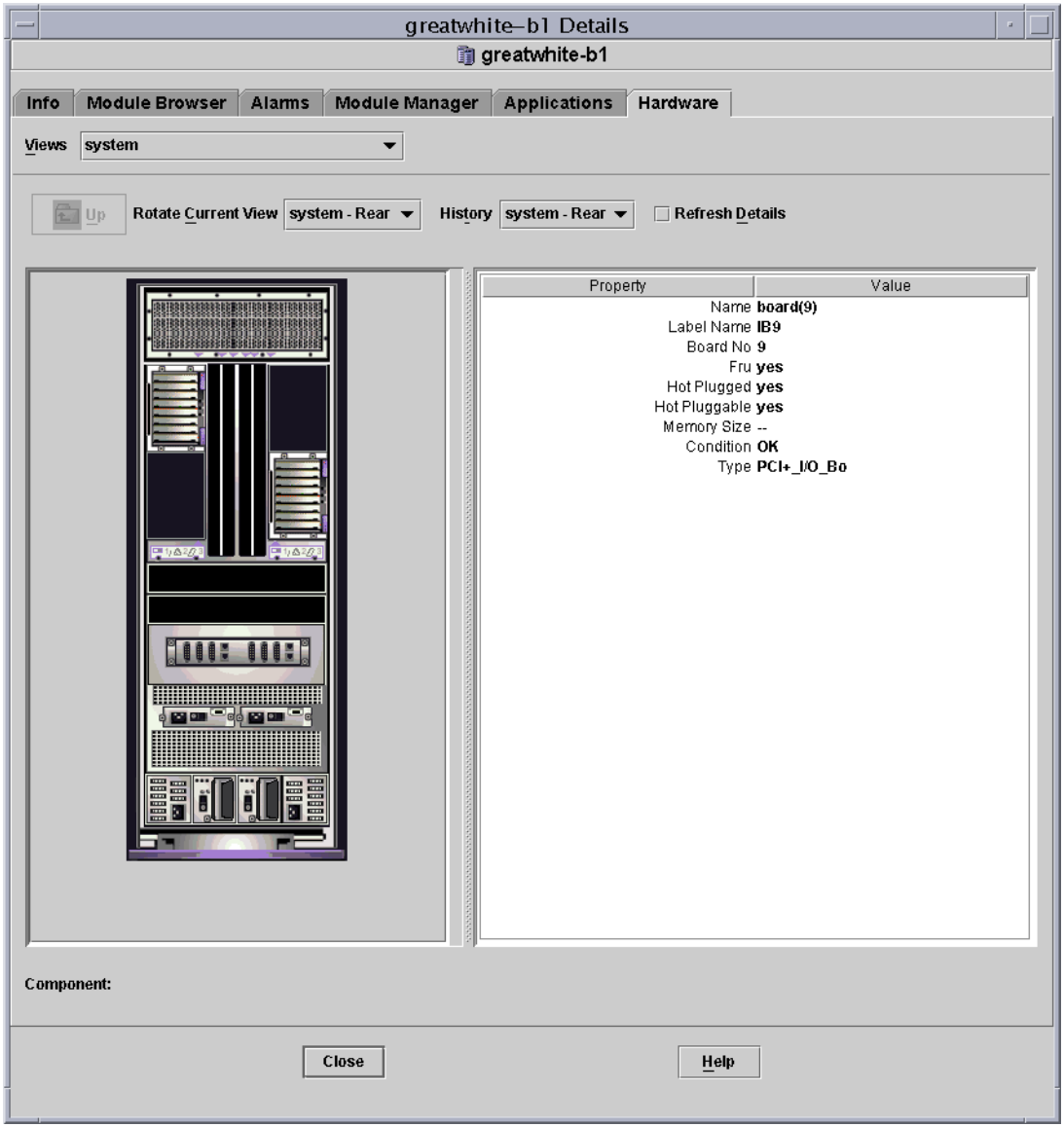


FIGURE 4-7 Domain Physical View of PCI+ Board (Rear)

CHAPTER 5

Dynamic Reconfiguration From the Domain

This chapter describes how to perform dynamic reconfiguration (DR) operations from a Sun Fire high-end or midrange systems domain using the Sun Management Center console 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 GUI to perform DR operations. Refer to the following documents to learn more about dynamic reconfiguration operations on Sun Fire systems:

- *Sun Fire High-End and Midrange Systems Dynamic Reconfiguration User Guide*, which describes the underlying operations for the DR module. For the latest general issues, known limitations, and known bugs about dynamic reconfiguration operations for Sun Fire high-end systems, refer to the *System Management Services (SMS) Release Notes.*
- `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 using the Sun Management Center console in the same manner that you would with the `cfgadm`(1M) command. This module works on Sun Fire high-end and midrange systems.

During the software installation, this module is automatically installed. You must 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 User's Guide*.

FIGURE 5-1 shows the icon for the module—Dynamic Reconfiguration Sun Fire high-end and midrange systems—as it is displayed in the host Details window on a domain under the Module Browser tab and Hardware icon. FIGURE 5-1 also shows a sample of a DR data table and the DR commands you can use.

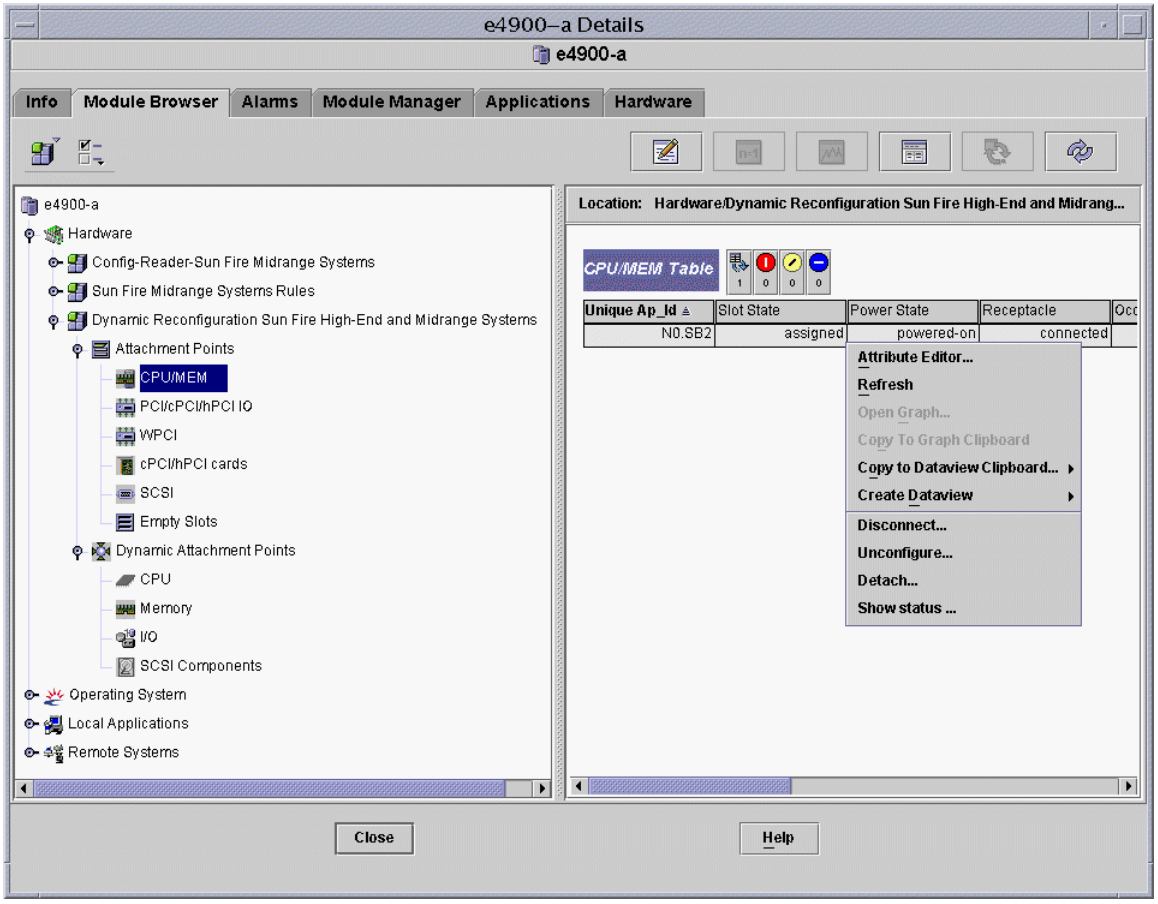


FIGURE 5-1 Dynamic Reconfiguration Features

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
- IO
- WPCI
- cPCI/hPCI Cards
- SCSI
- Empty Slots
- MaxCPU (Sun Fire high-end systems only)

CPU/MEM

TABLE 5-1 provides a brief description of the attachment point properties for a CPU/memory board.

TABLE 5-1 Attachment Point Properties for a CPU/MEM Board

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

TABLE 5-1 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 *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:SB`*x*, where *x* is the number of the centerplane slot containing the board (`0–17`)

I/O Boards

TABLE 5-2 provides a brief description of the attachment point properties for I/O boards. For Sun Fire midrange systems, the table shows properties *only* for PCI, PCI+, and cPCI I/O boards.

TABLE 5-2 Attachment Point Properties for I/O Boards

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

TABLE 5-2 Attachment Point Properties for I/O Boards *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr/@0:IO`*x*, where *x* is the number of the centerplane slot containing the board (`0–17`)

WPCI

TABLE 5-3 provides a brief description of the attachment point properties for a WPCI board. Refer to the *Sun Fire Link Fabric Administrator's Guide* for more information about the Sun Fire Link system.

TABLE 5-3 Attachment Point Properties for a WPCI Board

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

TABLE 5-3 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 *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr/@0:IO`*x*, where *x* is the number of the centerplane slot containing the board (`0`–`17`)

cPCI/hPCI Cards

TABLE 5-4 provides a brief description of the attachment point properties for the cPCI or hPCI card. For Sun Fire midrange systems, the table shows properties *only* for cPCI cards. For Sun Fire high-end systems, the table shows properties *only* for hPCI cards.

Note – A SCSI card is also considered to be a cPCI/hPCI card by the system. Configured SCSI cards appear in two tables in the DR module: the SCSI table and the cPCI/hPCI table. When the SCSI card is unconfigured, it only appears in the cPCI/hPCI table, because at that point the card type is unknown to the system.

TABLE 5-4 Attachment Point Properties for a cPCI/hPCI Card

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`, such as `pci_pci0:e05b1slot0` or `pcisch2:e04b1slot3`
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Type, such as `pci-pci/hp`
Condition		Board condition: `ok`, `unknown`, `failed`, or `unusable`

TABLE 5-4 Attachment Point Properties for a cPCI/hPCI Card *(Continued)*

Property	Rule (if any)	Description
Information		General information; for example, `unknown`
When		Date and time when the board was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID, such as `/devices/pci@9d,7000000:e04b1slot3`

SCSI

TABLE 5-5 provides a brief description of the attachment point properties for a SCSI card.

Note – When you unconfigure a SCSI card from this SCSI table, you no longer see the card entry in the table. A SCSI card is also considered to be a cPCI/hPCI card by the system, and configured SCSI cards appear in two tables in the DR module: the SCSI table and the cPCI/hPCI table. When the card is unconfigured, it only appears in the cPCI/hPCI table, because at that point the card type is unknown to the system.

TABLE 5-5 Attachment Point Properties for a SCS CardI

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

TABLE 5-5 Attachment Point Properties for a SCS CardI *(Continued)*

Property	Rule (if any)	Description
Information		General component information, such as `unknown`
When		Date and time when the component was configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID, such as `/devices/pci@9d,600000:e04b1slot2`

Empty Slots

TABLE 5-6 provides a brief description of the attachment point properties for empty slots.

TABLE 5-6 Attachment Point Properties for Empty Slots

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point ID from `cfgadm`, such as `pcisch0:e17b1slot1`
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`, `disconnected`, or `empty`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Board type: `unknown`
Condition		Component condition: `ok`, `unknown`, `failed`, or `unusable`
Information		General board type information: `assigned` or `unknown`

TABLE 5-6 Attachment Point Properties for Empty Slots *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the slot was configured into the domain
Busy		`n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID, such as `/devices/pci@9d,6000000:e17b1slot1`

MaxCPU

TABLE 5-7 provides a brief description of the attachment point properties for a MaxCPU board. This table appears *only* for Sun Fire high-end systems.

TABLE 5-7 Attachment Point Properties for MaxCPU Board on Sun Fire High-End Systems

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

Dynamic Attachment Points

Dynamic attachment points refer to components on the system boards, such as CPUs, memory, and I/O devices. The dynamic attachment points are created by the DR driver. Refer to the `dr`(7D) man page in the Sun Solaris 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

TABLE 5-7 provides a brief description of the dynamic attachment point properties for CPU components.

TABLE 5-8 Dynamic Attachment Point Properties for CPU Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm`: `SB`*x*`::cpu`*y*, where *x* is the number of the centerplane slot containing the board (`0–17`) and *y* is the CPU number (0–3)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Component type: `cpu`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General CPU type information: for example, `cpuid 2`, `speed 750 MHz`, `ecache 8 MBytes`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris Reference Manual Collection for descriptions of the fields.

TABLE 5-8 Dynamic Attachment Point Properties for CPU Components *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:SB`*x*`::cpu`*y*, where *x* is the number of the centerplane slot containing the board (`0–17`), and *y* is the CPU number (`0–3`)

Memory Components

TABLE 5-9 provides a brief description of the dynamic attachment point properties for memory components.

TABLE 5-9 Dynamic Attachment Point Properties for Memory Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm`: such as `SB`*x*`::memory`, where *x* is the number of the centerplane slot containing the board (`0–17`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `unconfigured` or `configured`
Type		Component type: `memory`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General information for the memory type, as appropriate; for example, `base address 0x0, 2097 152 KBytes total, 420920 KBytes permanent`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris Reference Manual Collection for descriptions of the fields.

TABLE 5-9 Dynamic Attachment Point Properties for Memory Components *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:SB`*x*`::memory`, where *x* is the number of the centerplane slot containing the board (`0–17`)

I/O Components

TABLE 5-10 provides a brief description of the dynamic attachment point properties for I/O components.

TABLE 5-10 Dynamic Attachment Point Properties for I/O Components

Property	Rule (if any)	Description
Unique Ap_Id		Unique logical attachment point identifier from `cfgadm`: `NO.IB`*x*`::pci`*y*, where *x* is the number of the centerplane slot containing the board (`0–17`) and *y* is the PCI number (`0–3`)
Slot State		Slot availability state: `assigned` or `unassigned`
Power State		Power state: `powered-on` or `powered-off`
Receptacle		Receptacle state: `connected`
Occupant		State of the occupant, which is the combination of the board and its attached devices: `configured` or `unconfigured`
Type		Component type: `io`
Condition		Component condition: `ok`, `unknown`, or `failed`
Information		General information for the `io` type; for example, `device/pci@23d,700000 referenced`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris Reference Manual Collection for descriptions of the fields.

TABLE 5-10 Dynamic Attachment Point Properties for I/O Components *(Continued)*

Property	Rule (if any)	Description
When		Date and time when the components were configured into the domain
Busy		`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress
Phys_Id		Physical attachment point ID: `/devices/pseudo/dr@0:IO`*x*`::pci`*y*, where *x* is the number of the centerplane slot containing the board (`0–17`) and *y* is the PCI number (`0–3`)

SCSI Components

TABLE 5-11 provides a brief description of the dynamic attachment point properties for SCSI components,

TABLE 5-11 Dynamic Attachment Point Properties for SCSI Components

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

Dynamic Reconfiguration Operations From the Domain

This section describes how to perform dynamic reconfiguration operations from a Sun Fire domain using the Sun Management Center 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 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 5-12 describes the cfgadm(1M) options that are supported by the Dynamic Reconfiguration module. Refer to the cfgadm(1M) command in the Sun Solaris Reference Manual Collection for more information about the various cfgadm options.

TABLE 5-12 cfgadm Options Supported by Dynamic Reconfiguration

cfgadm Option	Sun Management Center GUI Menu Item	Description
-c configure	Attach	Attach a board
-c disconnect	Detach	Detach a board
-x assign	Assign	Assign a board
-c disconnect -x unassign	Unassign	Unassign a board
-c connect	Connect	Connect a board
-c disconnect	Disconnect	Disconnect a board
-c configure	Configure	Configure a board or another component
-c unconfigure	Unconfigure	Unconfigure a board or another component
-x poweron	Power On	Power on a board
-x poweroff	Power Off	Power off a board
-t	Test	Test a board

Note – 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.

Note – 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. **Choose Assign.**

   The system displays the Assign confirmation box with this message:

```
Assign a slot.
Are you sure you want to assign?
```

4. **Click the OK button to assign the selected board.**

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 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. **Choose Unassign.**

   The system displays the Unassign confirmation box with this message:

```
Unassign.
Are you sure you want to unassign?
```

4. **Click the OK button to unassign the selected board.**

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:

- Assigning the system board to the logical domain
- Powering on the system board
- Testing the system board
- Connecting the system board to the domain physically through the system controller
- Configuring 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

Which of the automatic steps are performed depends on the initial state of the system board and other components, as well as on 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. **Choose Attach .**

   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. **Click the OK button to connect and configure the selected board.**

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:

- Unconfiguring 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.
- Communicating 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.
- Powering off the system board.

Which of the automatic steps are performed depends on the initial state of the system board and other components, as well as on 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. **Choose Detach.**

   The system displays the Detach confirmation box (FIGURE 5-2).

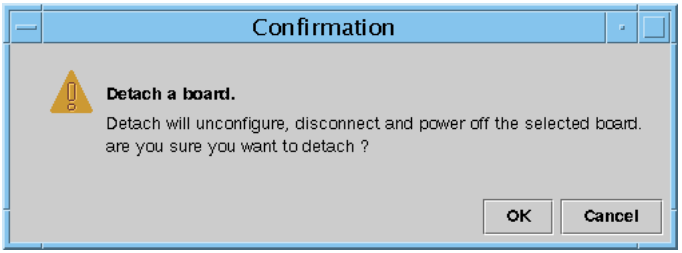


FIGURE 5-2 Detach Confirmation Box

4. **Click the OK button to unconfigure, disconnect, and power off the selected board.**

Connecting a Board

This operation performs the following steps:

- Assigning the system board to a logical domain if the board is available and is not part of the logical domain
- Powering on the system board
- Testing the system board
- Connecting 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. **Choose Connect.**

   The system displays the Connect confirmation box with this message:

   ```
   Connect
   Are you sure you want to connect?
   ```
4. **Click the OK button to connect the selected board.**

Note – Sun Fire high-end systems allow you to click 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. **Choose Disconnect.**

   The system displays the Disconnect panel (FIGURE 5-3).

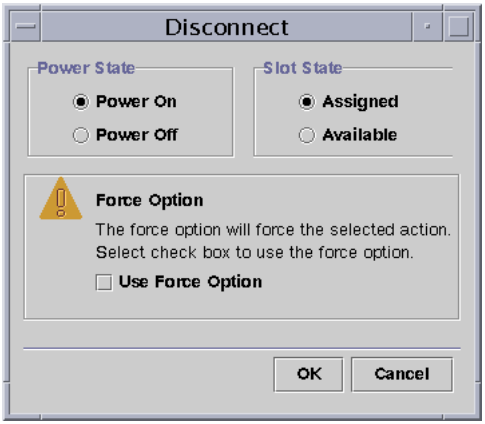


FIGURE 5-3 Disconnect Panel

4. **Select the Power State option you want the board to be in *after* it is disconnected.**
5. **Select the Slot State option you want the board to be in *after* it is disconnected.**
6. **Select the Use Force Option to force the disconnect operation. Otherwise, leave the Use Force Option box blank.**
7. **Click the OK button to disconnect the selected board.**

Note – Sun Fire high-end systems allow you to click 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.

1. **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.

2. **Choose Disconnect.**

   The system displays the Disconnect panel with this message:

```
Disconnect
Are you sure you want to continue?
```

3. **Click the OK button to disconnect the SCSI board.**

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. **Choose Configure.**

   The system displays the Configure confirmation box with this message:

```
Configure
Are you sure you want to configure?
```

4. **Click the OK button to configure the selected board, component, or memory.**

Note – Sun Fire high-end systems allow you to click 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. **Choose Unconfigure.**

   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. **Click Use Force Option check box to force the unconfigure operation. Otherwise, leave the Use Force Option box blank.**
5. **Click the OK button to unconfigure the selected board or component.**

Note – Sun Fire high-end systems allow you to click 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. **Choose Unconfigure.**

   The system displays the Unconfigure Memory panel (FIGURE 5-4).

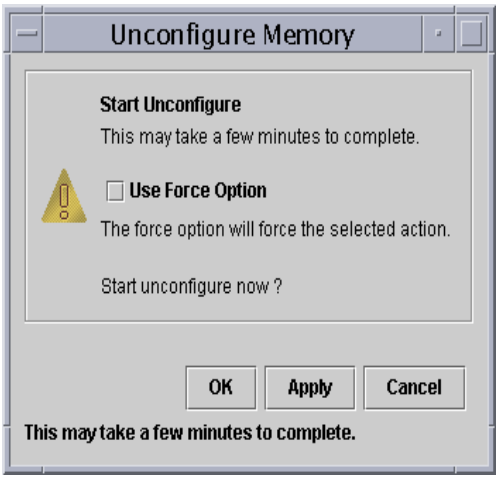


FIGURE 5-4 Unconfigure Memory Panel

4. **(Optional) Click the Use Force Option box to force the unconfigure operation.**
5. **Click the OK button to start unconfiguring memory.**

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. **Choose Power On.**

   The system displays the Power On confirmation box with this message:

```
Power On a board.
Are you sure you want to power on?
```

4. **Click the OK button to power on a system board.**

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. **Choose Power Off.**

   The system displays the Power Off confirmation box with this message:

```
Power Off a board.
Are you sure you want to power off?
```

4. **Click the OK button to power off a system board.**

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. **Choose Test.**

   The system displays the Test Board panel (FIGURE 5-5).

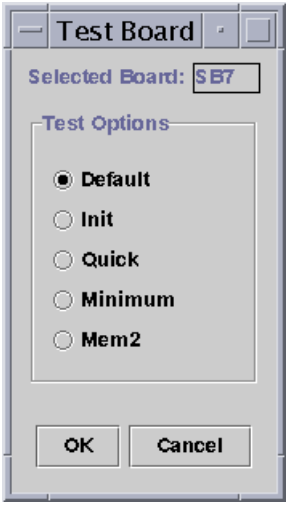


FIGURE 5-5 Test Board Panel

4. **Select 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, click the OK button to start the test.**

Note – Sun Fire high-end systems allow you to click 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. **Choose Show Status.**

   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 5-6):

FIGURE 5-6 Unsuccessful Domain DR Operation in Show Status

The status shows this message after the configure operation finishes successfully or if no command has been executed (FIGURE 5-7):

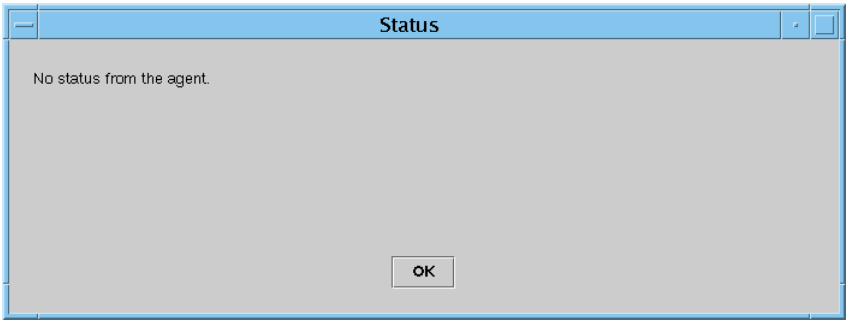


FIGURE 5-7 Successful Domain DR Operation in Show Status

4. **Click the OK button when you are finished looking at the status.**

APPENDIX **A**

Using the CLI to Install, Set Up, Uninstall, Start, and Stop Sun Management Center Software

This appendix describes how to install, set up, uninstall, start, and stop Sun Management Center Software from the command-line interface (CLI). For more details, refer to the *Sun Management Center Installation and Configuration Guide*.

Installing the Software

First ensure that the base Sun Management Center 3.5 software is installed on your system. Refer to the *Sun Management Center Installation and Configuration Guide* for instructions about installing this software.

Also ensure that any required patches are installed on your system.

▼ To Install the Supplement Software Using the CLI

1. **To install only the Sun Fire midrnage add-on software, run the `es-inst` command in the `sbin` directory where the Sun Fire Midrange add-on software was installed.**

   The `es-inst` script prompts you for a source directory.

2. **Enter the source directory.**

   Refer to the *Sun Management Center Installation and Configuration Guide* for more information about the `es-inst` command and its options.

3. **If the general Sun Management Center 3.5 software package is already installed, and you are installing *only* the Sun Fire supplement software, enter `n` (for no) when you are prompted to begin the setup process.**

Caution – Entering **`y`** (for yes) may cause the loss of any customized setup information, such as security keys.

Note – If you are installing the full Sun Management Center 3.5 software package, you have the option of running the setup script at the end of the installation procedure. If you choose not to run the setup script at that time, you can run it later. The setup script (`es-setup`) is in *path*`/sbin`, where *path* is the directory where the Sun Management Center software is installed. This step sets up all Sun Management Center agents, including the platform agent.

4. **Install the Sun Management Center 3.5 software package on any systems (agent machines) that you will use for platform administration on the Sun Fire midrange systems.**

   Read the Caution and Note in Step 2 above. The Domain Administration and Dynamic Reconfiguration add-on software must be installed on the server, console, and agent machines. (Note that you can install the Sun Fire midrange or high-end systems Platform Agents on any machine where you have Sun Management Center software running.)

   The system displays the following message:

```
---------------------------------------------------------------------------
Sun Management Center Product Selection
---------------------------------------------------------------------------
---------------------------------------------------------------------------
The following Add-On Products are available for your selection:
---------------------------------------------------------------------------
Sun Fire Midrange Systems Domain Administration
Sun Fire Midrange Systems Platform Administration
Dynamic Reconfiguration for Sun Fire High-End and Midrange platforms

Do you want to install the product: Sun Fire Midrange Systems Domain
Administration? [y|n|q]
Do you want to install the product: Dynamic Reconfiguration for Sun Fire High-
End and Midrange platforms? [y|n|q]
Do you want to install the product: Sun Fire Midrange Systems Platform
Administration? [y|n|q]
---------------------------------------------------------------------------
```

5. **Type `y` for those products you want to install.**

   If you type **`y`** for all the add-on software, the system displays this message:

```
---------------------------------------------------------------------------
The following Add-On Products will be installed:
Sun Fire Midrange Systems Domain Administration
Dynamic Reconfiguration for Sun Fire High-End and Midrange platforms
Sun Fire Midrange Systems Platform Administration

Do you want to proceed? [y|n|q]
---------------------------------------------------------------------------
```

6. **Type `y` to continue installing the add-on products.**

Setting Up the Sun Fire Midrange Systems Platform Administration Module Using the CLI

The setup has three parts:

- System controller setup — See "Setting Up the System Controller" on page 171.
- Agent layer setup — See "To Set Up the Sun Fire Midrange Systems Platform Administration Module on an Agent Machine" on page 172.
- Server layer setup — See "To Set Up the Sun Fire Midrange Systems Platform Administration Module Server Layer Only on the Server" on page 173.

Setting Up the System Controller

Before setting up the agent and server layers, you must first set up the SC.

▼ To Set Up the System Controller

1. Enable the SC Failover Capability if you want to use it—See "Enabling the SC Failover Capability" on page 22.

2. Set Up SNMP on the System Controller—See "Setting Up SNMP on the System Controller" on page 23.

Setting Up the Agent and Server Layers

This section describes how to set up the agent and server layers.

▼ To Set Up the Sun Fire Midrange Systems Platform Administration Module on an Agent Machine

If the agent machine has both server and agent layers, this procedure automatically sets up both layers.

1. **Become superuser by using the `su` command.**
2. **Go to the *PUn_path*`/addons/SunFirePltAdmin/sbin` directory, where *n* is the number of the Platform Update, and *PUn_path* is the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.
3. **Run the `es-setup.sh` script.**

   To set up this module for the default platform agent instance, type:

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

   The script asks for the following information:

   - The IP Address of the Sun Fire midrange system controller.

     A `ping` command is sent to the system controller IP address or host name that you entered. If the `ping` command fails, you will have the option of providing a different IP address or host name. If you prefer, you can continue without providing a new value:

```
Do you want to setup Sun Fire Midrange Systems platform
administration module (y|n|q) y
Enter the IP address of System Controller 12.3.45.67
Host 12.3.45.67 is not networked.
If you would like to try another IP/Hostname enter it now or enter
n to continue. 23.4.56.78
Host 23.4.56.78 is not networked.
If you would you like to try another IP/hostname enter it now or
enter n to continue. n
Continuing with setup...
```

- The Write community strings for the system controller and all the domains. If the script cannot get the domain address from the system controller, then it asks for the IP address of all the domains.
- The port number of the Sun Management Center agents on all the domains.

Tip – This script can be run again to change the information provided in the previous setup.

The Sun Management Center software ships with one platform agent named "platform."

When the module has been set up, you can start the appropriate agent. For more on how to start platform agents, see "Starting Sun Management Center Software Using the CLI" on page 182.

▼ To Set Up the Sun Fire Midrange Systems Platform Administration Module Server Layer Only on the Server

This procedure sets up *only* the server layer. To set up the server, agent, and console layers on a server, see "To Set Up the Sun Fire Midrange Systems Platform Administration Module on an Agent Machine" on page 172.

Note – If you chose to set up only the server layer (without a console or agent layer), user groups are not automatically added to the `/etc/group` file unless you use the `-S` option, as shown in this procedure. For a list of user groups, see TABLE A-1.

---

1. **Become superuser by using the `su` command.**
2. **Go to the *PUn_path*`/addons/SunFirePltAdmin/sbin` directory, where *n* is the number of the Platform Update, and *PUn_path* is the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.
3. **Run the `es-setup.sh` script with the `-S` option:**

```
# ./es-setup.sh -S
```

When the module has been set up, you can start the appropriate agent. The Sun Management Center software ships with one platform agent named "platform." For more on how to start platform agents, see "Starting Sun Management Center Software Using the CLI" on page 182.

Creating and Setting Up a Sun Fire Midrange Systems Platform Agent Instance

The default platform administration module can monitor one Sun Fire midrange system. To monitor more than one Sun Fire midrange system, you must create one platform agent instance for each additional Sun Fire midrange system.

▼ To Create a Platform Agent Instance

1. **Become superuser by using the `su` command.**
2. **Go to the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/sbin`.

3. **Run the `es-platform` script:**

```
# ./es-platform -a instanceName
```

where *instanceName* is the name of a new platform agent instance.

This script asks for the port number for the new platform agent and the security seed. If you used a seed other than the default when setting up the Sun Management Center server, provide the same seed for this agent.

▼ To Set Up a Sun Fire Midrange Systems Platform Administration Module for a New Platform Agent Instance

1. **Become superuser by using the `su` command.**
2. **Go to the directory where Sun Management Center software is installed.**

   For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, go to the directory `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.

3. **Type:**

```
# ./es-setup.sh -I instanceName
```

where *instanceName* is the name of a new platform agent instance.

The `es-setup.sh` script asks for the following information:

- IP Address of the Sun Fire midrange system controller.
- Write community strings for the system controller and all the domains. If the script cannot get the domain address from the system controller, then it asks for the IP address of all the domains.
- Port number of the Sun Management Center agents on all the domains.

Note – This script can be run again to change the information provided in the previous setup.

When the module has been set up, you can start the appropriate agent. For more on how to start platform agents, see "Starting Sun Management Center Software Using the CLI" on page 182.

▼ To Assign Users to Administrator and Operator Groups

If your user name is listed in the `esusers` file, you can log onto the Sun Fire midrange system with read-only access for domain administration agents. In order to read and/or write platform or domain information under the platform agent, your user name must also be listed in the `group` file on the server.

The setup procedure creates up to 10 groups on the Sun Fire midrange systems server machine. These groups are:

TABLE A-1 User Groups

Group Name	User Category	Type of Access
`spltadm`	Administrator	Platform
`sdaadm`	Administrator	Domain A
`sdbadm`	Administrator	Domain B
`sdcadm`	Administrator	Domain C
`sddadm`	Administrator	Domain D
`spltop`	Operator	Platform
`sdaop`	Operator	Domain A
`sdbop`	Operator	Domain B
`sdcop`	Operator	Domain C
`sddop`	Operator	Domain D

1. **Become superuser by using the `su` command.**
2. **Add each user to the appropriate group in the file `/etc/group`.**
   - Add Sun Fire midrange systems platform administrators to `spltadm`, to allow them to administer the platform through the platform view of a platform agent.
   - Add Sun Fire midrange systems domain administrators to the appropriate domain administrator group. For example, adding the name of a domain administrator to `sdaadm` allows that domain administrator to administer domain A through the platform agent.
3. **Add each user to the file `/var/opt/SUNWsymon/cfg/esusers`.**

Setting Up the Sun Fire Midrange Systems Add-On Software Using the CLI

▼ To Set Up the Domain Administration Module on the Sun Management Center Server

- **As superuser, type:**

```
# ./es-setup -p SunFireDomAdmin
```

The system displays:

```
------------------------------------------------------------
This script will help you to setup Sun (TM) Management Center 3.5.
------------------------------------------------------------

Setting up Addon[s]
```

▼ To Set Up the Platform Administration Module on the Platform

1. **As superuser, type:**

```
# ./es-setup -p SunFirePltAdmin
```

The system displays:

```
--------------------------------------------------------------------------
This script will help you to setup Sun (TM) Management Center 3.5.
--------------------------------------------------------------------------

Setting up Addon[s]

For setting up Sun Fire Midrange Systems platform administration module
you need to provide SC IP address, community strings, port numbers for domain
agent etc.

Do you want to setup Sun Fire Midrange Systems platform administration module
[y|n|q]
```

2. **Type** `y` **to set up the platform administration module, or type** `n` ***not*** **to set up the module now.**

   One of the following occurs:

   - If you type **n**, the setup script ends.
   - If you type **y**, the system displays:

   ```
   Enter the IP address of System Controller
   ```

3. **Type the IP address of the System Controller (for example,** `10.8.28.209`**).**

   The system displays:

   ```
   Enter the read community for platform
   ```

4. **Type the read community for platform (for example,** `P-public`**).**

   The system displays:

   ```
   Enter the write community for platform
   ```

5. **Type the write community for platform (for example,** `P-private`**).**

   The system displays:

   ```
   Enter the write community for domainX
   ```

where *X* is the domain letter (A–D).

6. **Type the write community for each domain (for example, use `A-private` for domainA).**

   When you have finished entering the write community for each domain, the system displays (in our example):

```
Please wait, Pinging the host 10.8.23.209.
Host 10.8.38.209 is networked.
Please wait, getting domain info from system controller
Enter the Sun Management Center agent Port for domainX
```

   where *X* is the domain letter (A–R).

7. **Type the agent port number for each domain (for example, use `161` for each domain).**

   When you have finished entering the agent port number for each domain, the system displays:

```
Updating the configuration, Please Wait...
Done.
....
....
....
Do you want to start Sun Management Center agent and server
components now? [y|n|q]
```

Uninstalling Software Using the CLI

You can uninstall:

- All the Sun Management Center software (see "To Uninstall All Sun Management Center Software" on page 180)
- Sun Fire midrange systems add-on software (see "To Uninstall Add-On Software for Sun Fire Midrange Systems" on page 181)

▼ 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 High-End and Midrange Sys        None
Sun Fire Platform Administration                                      None

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

2. **Type** `y` **to uninstall the 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. **Type** `n` ***not*** **to change your selection.**

The system displays the following 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 the following message:

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

5. **Type `y` to proceed with the uninstall, or type `n` *not* to 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 Add-On Software for Sun Fire Midrange Systems

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 High-End and Midrange Sys   None
Sun Fire Platform Administration                         None

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

2. **Type** `n` ***not*** **to uninstall the Production Environment.**

   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 High-End and
Midrange Systems? [y|n|q]
Do you want to uninstall Sun Fire Platform Administration? [y|n|q]
```

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

   The system displays the modules that will be uninstalled and the following message:

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

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

   a. **Type** `y` **to change your selection.**

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

   b. **Type** `n` ***not*** **to change your selections.**

      The system displays the following message:

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

5. **Type** `y` **to proceed with the uninstall, or type** `n` ***not*** **to 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 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 procedures describe some common `es-start` options.

▼ To Start the Default Platform Agent

1. **Become superuser by using the `su` command.**
2. **Go to the *path*`/sbin` directory, where *path* is the directory where the Sun Management Center software is installed.**
3. **Start the default platform agent by typing:**

```
# ./es-start -l
```

▼ To Start a Platform Agent Instance

1. **Become superuser by using the `su` command.**
2. **Go to the *path*`/sbin` directory, where *path* is the directory where the Sun Management Center software is installed.**
3. **Start a specific platform agent instance by typing:**

```
# ./es-start -y instanceName
```

For example, if P1 is the name of the platform agent instance, type:

```
# ./es-start -y P1
```

▼ To Start All Sun Management Center Components

1. **Become superuser by using the `su` command.**
2. **Go to the *path*`/sbin` directory, where *path* is the directory where the Sun Management Center software is installed.**
3. **Start all Sun Management Center components, except the console, by typing:**

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

Stopping Sun Management Center Components

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

▼ To Stop the Default Platform Agent

1. **Become superuser by using the `su` command.**
2. **Go to the *path*`/sbin` directory, where *path* is the directory where the Sun Management Center software is installed.**
3. **Stop the default platform agent by typing:**

```
# ./es-stop -l
```

▼ To Stop a Platform Agent Instance

1. **Become superuser by using the `su` command.**
2. **Go to the *path*`/sbin` directory, where *path* is the directory where the Sun Management Center software is installed.**
3. **Stop a specific platform agent instance by typing:**

```
# ./es-stop -y instanceName
```

For example, if P1 is the name of the platform agent instance, type:

```
# ./es-stop -y P1
```

▼ To Stop All Sun Management Center Components

1. **Become superuser by using the `su` command.**
2. **Go to the *path*`/sbin` directory, where *path* is the directory where the Sun Management Center software is installed.**
3. **Stop all Sun Management Center components, except the console, by typing:**

```
# ./es-stop -A
```

Glossary

Access Control List List of available boards that can be assigned to a domain.

ACL See *Access Control List*.

administrative domain A Sun Management Center administrative domain consists of one or more host systems. It should not be confused with other uses of the term “domain” in this book. See also *hardware domain*.

ASIC application-specific integrated circuit

path The path to the directory where Sun Management Center software is installed. For example, if Sun Management Center software is installed in `/opt/SUNWsymon`, the directory is `/opt/SUNWsymon/addons/SunFirePltAdmin/sbin`.

CLI command-line interface

CMT chip multithreading

COD Capacity on Demand option

cPCI compact PCI. See also *PCI or PCI+*.

DCA daughter card assembly for *Paroli*

Dcache data cache

default platform agent When the Sun Management Center add-on software is installed, a platform administration module agent is created. This default platform administration module can monitor one Sun Fire midrange system. To monitor more than one Sun Fire midrange system, you must create an additional platform agent instance for each additional Sun Fire midrange system.

DIMM dual inline memory module

domain See *administrative domain* and *hardware domain*.

domain administration In this book, "domain administration" refers to the administration of a hardware domain. (See *hardware domain*.) Domain administration uses procedures that deal with hardware resources *within* a host system, as well as with the software and applications running on those hardware resources. In other documents, such as the *Sun Management Center User's Guide*, the term "domain administration" has a second meaning, which is the administration of a group of multiple host systems. (See *administrative domain*.)

DR See *dynamic reconfiguration*.

DRAM dynamic random access memory

dynamic reconfiguration Dynamic reconfiguration software is a part of the Solaris Operating System and provides the ability to safely remove or install system boards or compact PCI I/O cards into a system while the Solaris Operating System is running. Dynamic reconfiguration software also provides the ability to transfer system boards or compact PCI I/O cards from one domain to another, while the Solaris Operating System is running.

Ecache external cache

ECC error-correcting code

FRU field-replaceable unit

FT fan tray

GUI graphical user interface

hardware domain A Sun Fire midrange systems domain is a logical grouping of system boards and other devices that are contained within a single host system. In this book, this type of domain is called a "hardware domain," not to be confused with an "administrative domain." See also *administrative domain*.

HPCI, hPCI, or hsPCI hot-swap PCI assembly

HPCI+, hPCI+, or hsPCI+ hot-swap PCI plus assembly

IB6 - IB9 I/O assemblies

Icache internal cache

IP Internet Protocol

LUN logical unit number

Paroli parallel optical link

platform administration The management and monitoring of a complete Sun Fire midrange system. Platform administration includes the ability to divide the Sun Fire midrange system components into multiple hardware domains. Individual hardware domains can be managed and monitored by domain administrators, while the platform administrator retains the ability to manage and monitor all individual hardware domains in addition to the entire platform.

platform agent instance The default platform administration module can monitor one Sun Fire midrange system. To monitor more than one Sun Fire midrange system, you must create an additional platform agent instance for each additional Sun Fire midrange system.

PCI or PCI+ peripheral component interconnect or PCI plus

POST power-on self-test

proxy A copy of a default platform agent. The default platform administration module can monitor one Sun Fire midrange system. To monitor more than one Sun Fire midrange system, you must create one platform agent instance or proxy for each additional Sun Fire midrange system.

PS power supply

RP0 - RP3 repeater boards

RSM remote shared memory

SB0 - SB5 CPU/memory boards

SC system controller

ScApp system controller firmware

SCSI small computer system interface

SMS System Management Services

SNMP Simple Network Management Protocol

SSC Sun Fire midrange system controller

SSM scalable shared memory

uncompress To expand an icon to display hidden subsections below the level of that icon.

V volts or voltage

Wcache write cache

WCI Sun Fire Link interface ASIC

WPCI Sun Fire Link PCI

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