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

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Preface

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

■ Sun Fire™ E2900
■ Sun Fire V1280

Note – Sun Management Center 3.5 Version 6 does *not* support Netra™ 1280 systems.

This supplement is intended for system administrators who install and use Sun Management Center 3.5 software to monitor and manage these systems.

Before You Read This Book

Read this supplement after 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 provides an introduction to the Sun Management Center software in relation to the supported platforms.

Chapter 2 describes how to install, set up, update multiple hosts, start, and stop Sun Management Center software on the Sun Fire entry-level midrange systems using the graphical user interface (GUI). Use this chapter with the *Sun Management Center Installation and Configuration Guide*.

Chapter 3 describes how to administer and monitor systems using the domain agent.

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

A **Glossary** defines abbreviations and acronyms used in the document and in the graphical user interface (GUI)

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

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. Refer to the following for this information:

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

  `http://docs.sun.com`

Shell Prompts

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

Typographic Conventions

Typeface*	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*.

* 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 entry-level midrange systems add-on software	*Sun Management Center 3.5 Version 6 Release Notes for Sun Fire Entry-Level Midrange Systems* (819-0795)
Issues, limitations, and bugs for core software	*Sun Management Center Release Notes* for your software
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 entry-level midrange systems	*Sun Fire Entry-Level Midrange Systems Firmware Release Notes*
Sun Fire E2900/V1280 systems platform administration	*Sun Fire Entry-Level Midrange System Administration Guide*
Sun Fire E2900/V1280 systems command reference	*Sun Fire Entry-Level Midrange System Controller Command Reference 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 Entry-Level Midrange Systems, part number 819-0419-10

Introduction

This chapter provides an introduction to the Sun Management Center 3.5 software in relation to the supported platforms.

This chapter contains the following sections:

- "Sun Fire Entry-Level Midrange Systems Add-On Software" on page 1
- "System Icons" on page 2
- "Identifying Hardware Domains" on page 3
- "About the Examples Used in This Document" on page 3

Sun Fire Entry-Level Midrange Systems Add-On Software

Sun Management Center software allows you to monitor Sun systems from a system 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 entry-level midrange systems add-on software allows the Sun Management Center software to function with Sun Fire entry-level midrange systems. The following models are supported with this release of the software:

- Sun Fire E2900
- Sun Fire V1280

Note – This release of Sun Management Center 3.5 Version 6 does *not* support Netra™ 1280 systems.

You can access Solaris Operating System views only through the Sun Management Center agent running on a Sun Fire entry-level midrange systems domain. (*Platform* administration, which is supported in in Sun Management Center for Sun Fire midrange systems, is not supported for entry-level midrange systems.)

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

System Icons

TABLE 1-1 shows typical icons for Sun Fire entry-level midrange systems. Small alarm icons are added to the lower right corner of these icons in the event of an alarm state, such as with the critical alarm icon depicted here.

TABLE 1-1   Sun Fire Entry-Level Midrange Systems Icons

Icon	Description
	Sun Fire E2900 icon
	Sun Fire V1280 icon
	Sun Fire V1280 icon with critical alarm

Identifying Hardware Domains

By default, the hardware domain Details window opens to the Module Browser tab. FIGURE 1-1 illustrates the Details window for a typical domain. The window includes icons for Hardware, Operating System, Local Applications, and Remote Systems domains, as well as six tabs: Info, Module Browser, Alarms, Module Manager, Applications, and Hardware. In the example in FIGURE 1-1, the hardware domain icon is displayed with a critical alarm.

For more information, see Chapter 3.

About the Examples Used in This Document

Many steps or operations shown in this document 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, you can choose from six possible ways to open a Details view of Sun Fire entry-level midrange systems:

■ Click once on the Sun Fire entry-level midrange icon in the hierarchy view (left side of the window), then click the Tools menu in the top bar, and select Details.
■ Do the same as above in the topology view (right side of the window).
■ Double-click the Sun Fire entry-level midrange icon in the hierarchy view.
■ Double-click the Sun Fire entry-level midrange icon in the topology view.
■ Right-click the icon in the hierarchy view and choose Details from the pop-up menu.
■ Do the same in the topology view.

Similarly, there are multiple ways to expand (or uncompress) an icon. As shown in FIGURE 1-2, 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.
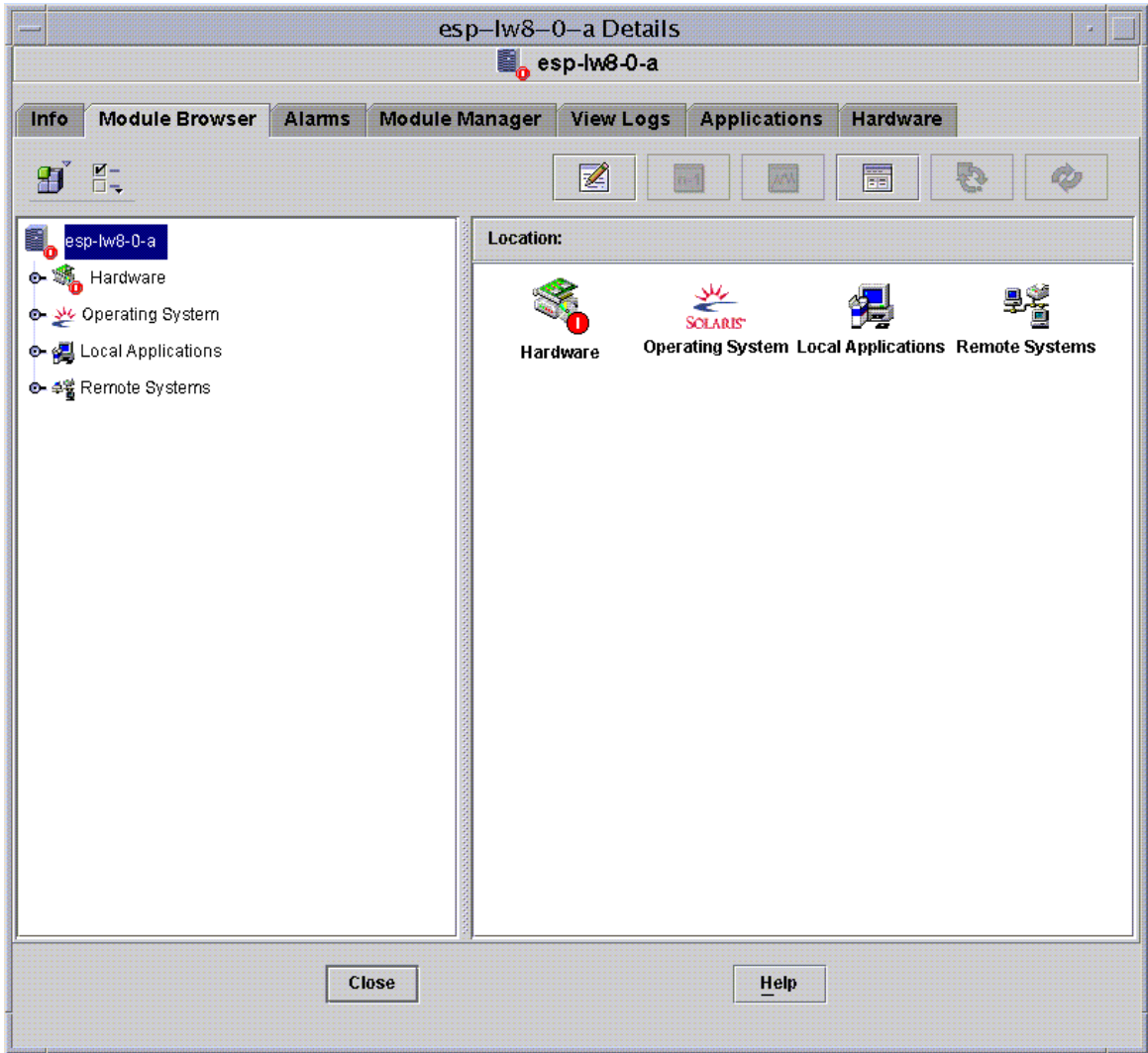
FIGURE 1-1 Hardware Domain Details Window
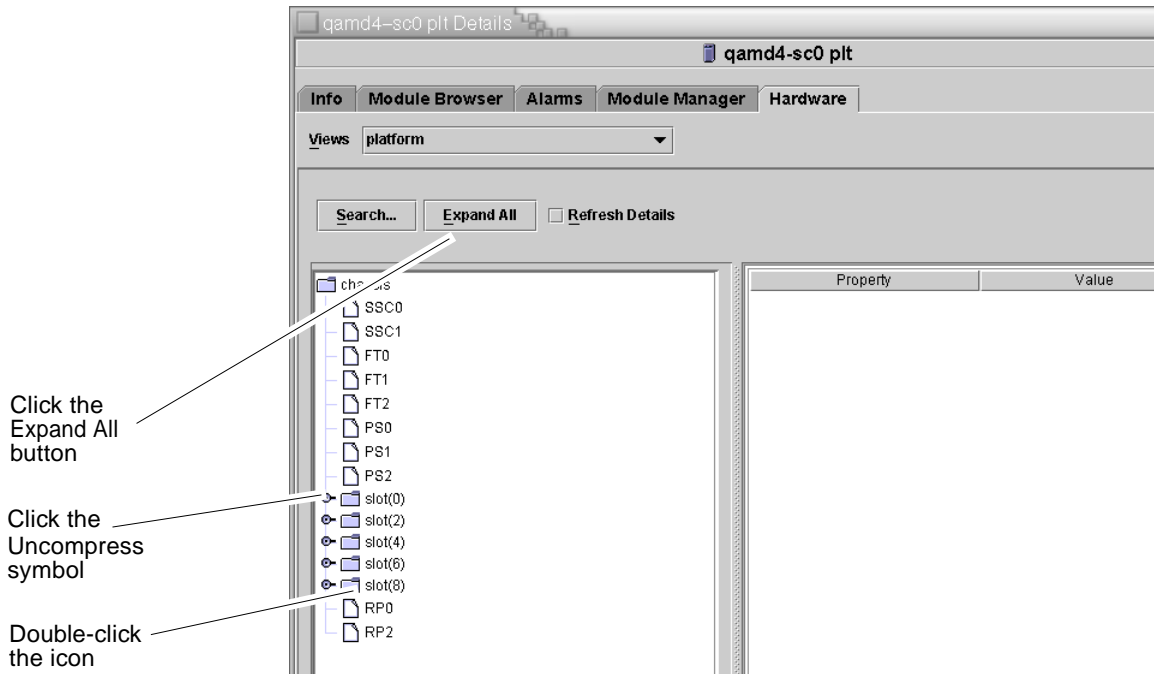
FIGURE 1-2 Choices for Expanding or Uncompressing Icons

Installing and Setting Up the Software

This chapter contains instructions for installing, setting up, uninstalling, starting, and stopping Sun Fire entry-level 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 the base Sun Management Center software.

This chapter contains the following sections:

- "Obtaining the Add-On Software" on page 8
- "Add-On Software Packages" on page 8
- "Supported Systems and Environments" on page 9
- "Dynamic Reconfiguration Add-On" on page 9
- "Preparing for Add-On Software Installation" on page 9
- "Updating Existing Netra Software on the Sun Fire V1280" on page 10
- "Upgrading to Sun Management Center 3.5 Update 1 Software" on page 11
- "Installing and Setting Up New Sun Management Center 3.5 Update 1 Add-On Software Using the Install Wizard" on page 12
- "Setting Up the Sun Fire Entry-Level Midrange Systems Add-On Software Using the Setup Wizard" on page 13
- "Using Advanced Wizard Setup Options" on page 14

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 might 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 Appendix A to perform these functions using the command line interface (CLI).

Obtaining the Add-On Software

Refer to the *Sun Management Center 3.5 Version 6 Release Notes for Sun Fire Entry-Level Midrange Systems* for information about obtaining the Sun Management Center 3.5 Version 6 add-on software.

Add-On Software Packages

The Sun Management Center add-on software packages for Sun Fire entry-level midrange systems correspond to the architectural layers of Sun Management Center. The following is an overview of these packages:

- `SUNWeslw8s` – Server-specific package

  Provides libraries and other files needed by the Sun Management Center server to monitor supported Sun Fire entry-level midrange systems. This software must be installed on all Sun Management Center server systems in addition to the base Sun Management Center server software.

- `SUNWeslw8a` – Agent-specific package

  Provides libraries and other files needed by the Sun Management Center agent to monitor supported Sun Fire entry-level midrange systems. This software must be installed on all Sun Management Center–monitored Sun Fire entry-level midrange systems in addition to the base Sun Management Center agent software.

Note – Your Sun Fire entry-level midrange system domain can serve as a Sun Management Center server. In this case, the agent package, `SUNWeslw8a`, is installed on the Sun Management Center server host.

- `SUNWeslw8c` – Agent and server common installation package

Provides scripts and Java™ class files to support graphical user interface (GUI) setup, Agent update, and add-on installation and removal.

TABLE 2-1   Package Deployment

Host	Packages
Server	`SUNWeslw8s, SUNWeslw8c`
Agent	`SUNWeslw8a, SUNWeslw8c`

Supported Systems and Environments

The minimum Sun Fire entry-level midrange systems firmware and operating systems supported in this release are described in the *Sun Management Center 3.5 Version 6 Release Notes for Sun Fire Entry-Level Midrange Systems*. Refer to that document also to learn about recommended patches for this release.

Dynamic Reconfiguration Add-On

The dynamic reconfiguration (DR) add-on included in the Sun Management Center product does not work with Sun Fire entry-level midrange systems. Therefore, do not load the DR software on Sun Fire agents supported by this add-on.

Preparing for Add-On Software Installation

Before beginning the add-on software installation process, you should know which systems in your network will function as servers and consoles, and which Sun Fire entry-level midrange systems will be monitored by the servers and consoles.

For Sun Management Center software installation instructions, please refer to the *Sun Management Center Software User's Guide* and the *Sun Management Center Software Release Notes*, or consult the Sun Management Center web site for instructions:

`http://www.sun.com/sunmanagementcenter`

Installation Process Overview

The following four steps comprise an overview of the installation process described in the remainder of this chapter.

1. If you have been managing Sun Fire V1280 systems using the Sun Management Center add-on software for Netra systems, you must remove the existing agent software from the Sun Fire V1280 systems. See "Updating Existing Netra Software on the Sun Fire V1280" on page 10.

2. Ensure that you have installed the latest update for Sun Management Center 3.5 base software, plus any other add-on software you require. See "Upgrading to Sun Management Center 3.5 Update 1 Software" on page 11.

3. Install Sun Management Center 3.5 Version 6 Software for Sun Fire entry-level midrange systems. See "Installing and Setting Up New Sun Management Center 3.5 Update 1 Add-On Software Using the Install Wizard" on page 12.

4. Set up all newly installed base and add-on software. See "Setting Up the Sun Fire Entry-Level Midrange Systems Add-On Software Using the Setup Wizard" on page 13.

5. Start the base and add-on software.

Updating Existing Netra Software on the Sun Fire V1280

If you have been managing Sun Fire V1280 systems using the Sun Management Center add-on software for Netra systems, you must remove the existing agent software from the Sun Fire V1280 systems, then install and set up Sun Management Center 3.5 Version 6 add-on software in its place. You do not have to remove the server-specific add-on software for Netra systems from the Sun Management Center server host if it is required to support any other platforms for which you use it.

▼ To Update Existing Sun Management Center 3.5 Add-On Software for Netra Systems

1. **Remove the existing Netra add-on software from the Sun Fire V1280 agent.**

   See the following references depending on whether you are using the CLI or GUI:

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

2. **Install and set up the new add-on software for Sun Fire entry-level midrange systems on the server and domains.**

See the following references depending on whether you are using the CLI or GUI:

- CLI – To install and set up using the CLI, see Appendix A.
- GUI – To install and set up using the Wizards, see "Installing and Setting Up New Sun Management Center 3.5 Update 1 Add-On Software Using the Install Wizard" on page 12.

Note – Installing Netra add-on software *after* SunFire entry-level midrange systems add-ons have been installed is unsupported.

Upgrading to Sun Management Center 3.5 Update 1 Software

Refer to the *Sun Management Center 3.5 Update 1 Supplement* for information about upgrading from Sun Management Center 3.5 software or earlier to 3.5 Update 1 core software. Refer to the *Sun Management Center 3.5 Version 6 Release Notes for Sun Fire Entry-Level Midrange Systems* for information about software requirements for your system and to the latest version of *Sun Management Center Release Notes* for your version of the core software.

Installing and Setting Up New Sun Management Center 3.5 Update 1 Add-On Software Using the Install Wizard

This section provides a summary of installing the latest version of Sun Management Center 3.5 base software and Sun Fire entry-level midrange systems add-on software using the Install Wizard. Chapter 6, Installation and Setup, of the *Sun Management Center Installation and Configuration Guide*, describes in detail how to install all the software. If you prefer to use the command-line interface (CLI), see Appendix A.

▼ To Install the Software

You can install the console, server, and agent layers either separately or in combination.

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 3.5 base software using the** es-guiinst **script.**

   Note – Be sure you click Store Response Data during the Sun Management Center 3.5 base software setup process if you want to use the setup-responses-file to duplicate the current machine's setup 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*.

   ---

4. **Change to the directory 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 entry-level midrange systems add-on software for Version 6. Use the** disk1 **image (***addon_path*/disk1/image**).**

   A list of add-on products you can install is displayed.

6. **Select the Sun Fire Entry-Level Midrange Systems add-on software, and click Next.**

The Setup Wizard is launched.

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

This section describes how to set up the Sun Fire entry-level 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 on it to take you back to the previous operation. When the back button is grayed out (not enabled), you cannot go back to the previous operation.

▼ To Set Up the Add-On Software Using the Wizard GUI

Set up the add-on software both on the Sun Management Center server and on the Sun Fire entry-level midrange systems where you will be running the software.

1. **Type** `es-guisetup` **on the system where the add-on software 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 Entry-Level Midrange Systems
   ```

2. **Click Next to start the setup procedure.**

The Sun Fire entry-level midrange systems 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 entry-level midrange systems Setup panel displays the following message:

```
Sun Fire Entry-Level 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 need to 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.

Using the Domain Agent

This chapter describes using the domain agent for Sun Fire entry-level midrange systems.

To start and stop agents and to create nodes, refer to the *Sun Management Center User's Guide*.

This chapter contains the following topics:

The Config-Reader Module

A Config-Reader module, Entry-Level Midrange Config Reader, 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 (FIGURE 3-1).

▼ To Use the Config-Reader Module

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

   The Details window is displayed (FIGURE 3-1).
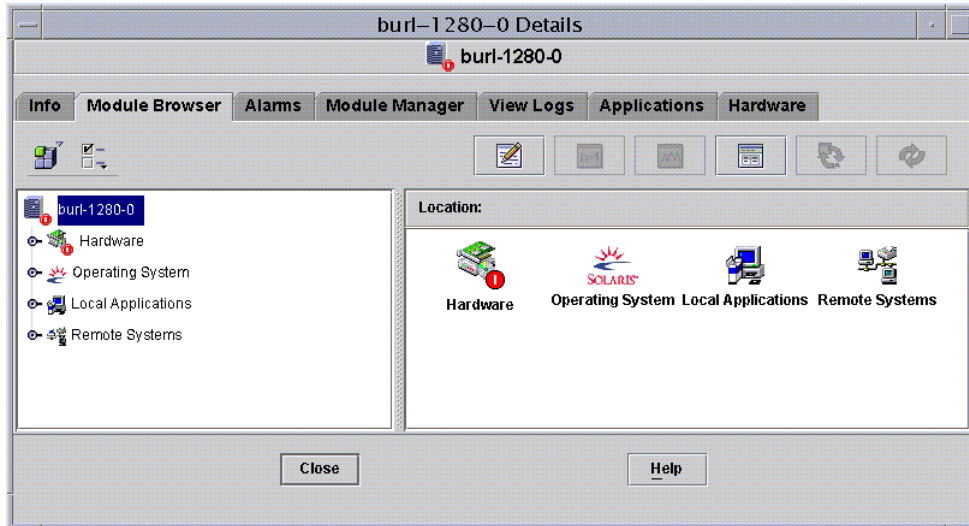
FIGURE 3-1   Details Window

2. Double-click the Hardware icon in the left frame of the Details window.

The Entry-Level Midrange Config Reader icons are displayed. (FIGURE 3-2).

If the icons are not displayed, the Entry-level Midrange Config Reader module is not loaded. See "Loading the Config-Reader Module" on page 18 for information about loading the module.
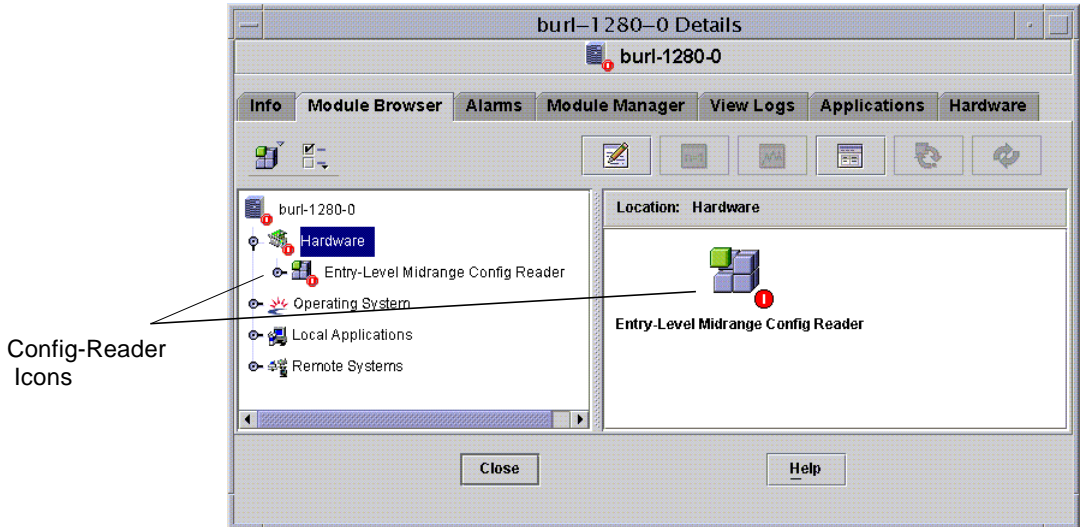
FIGURE 3-2 Config-Reader Icons

3. Double-click the Entry-Level Midrange Config Reader icon.

All devices in the system are displayed (FIGURE 3-3).

4. Double-click a device icon to display properties and values for that device.

To see the properties and values that are available, see "The Config-Reader Tables" on page 20.
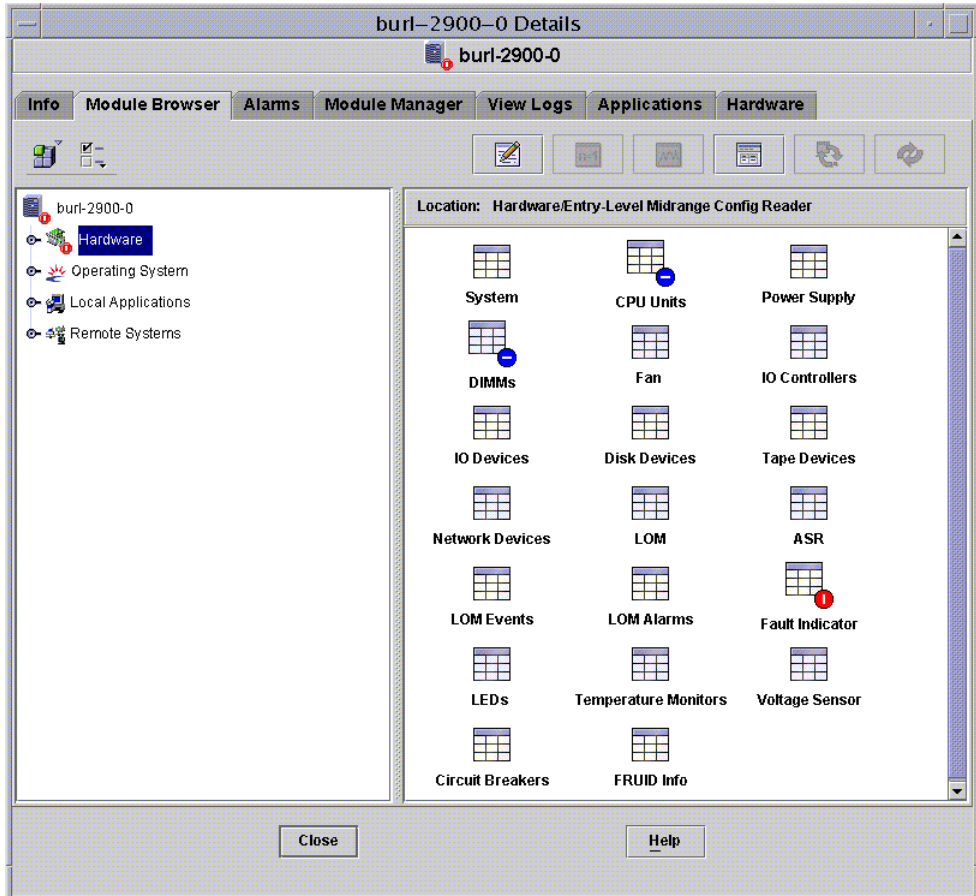
FIGURE 3-3   Config-Reader Devices

Loading the Config-Reader Module

If the icon for the Entry-Level Midrange Config Reader module is not displayed in the Module Browser tab of the Details window for your Sun Fire entry-level midrange systems (as seen in FIGURE 3-2), the corresponding module is not loaded. In that case, you can manually load the module, as shown below.

▼ To Load a Module

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

   The Details window is displayed (FIGURE 3-1).

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

   The Module Manager data is displayed (FIGURE 3-4).
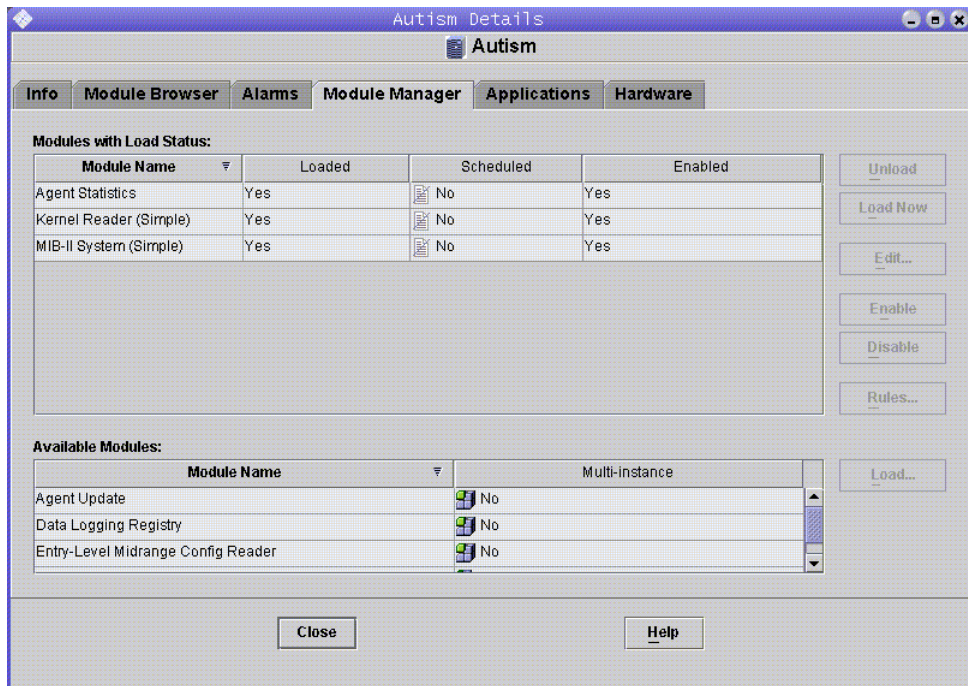
FIGURE 3-4   Module Manager Tab in the Details Window With Config Reader Selected

3. **Select Entry-Level Midrange Config Reader 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 the *Sun Management Center User's Guide* for information about access privileges.

The Config-Reader Tables

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

- "System Properties" on page 21
- "CPU Unit Properties" on page 22
- "DIMM Properties" on page 25
- "Power Supply Properties" on page 24
- "Fan Properties" on page 26
- "I/O Device Properties" on page 26
- "Disk Device Properties" on page 26
- "Tape Device Properties" on page 27
- "Network Device Properties" on page 28
- "LOM Properties" on page 29
- "LOM Event Properties" on page 29
- "LOM Alarm Properties" on page 29
- "Fault Indicator Properties" on page 30
- "LED Properties" on page 30
- "Temperature Monitor Properties" on page 31
- "Voltage Sensor Properties" on page 32
- "FRUID Info" on page 32

The tables in this section describe the data properties contained in each of the domain Config-Reader tables, as well as related alarms.

Caution – The property values in tables are updated at five-minute intervals. Alarms can be generated only when the property values are updated, so an alarm can be delayed by up to five minutes. This delay can be particularly important when monitoriing temperature.

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*.

System Properties

TABLE 3-1 provides a brief description of the properties for the Sun Fire entry-level midrange system that contains the domain.

TABLE 3-1   System Properties

Property	Description
Name	Fixed value: `system`.
Operating System	Displays the operating system running on the machine, such as `SunOS 5.9`.
Operating System Version	Displays the operating system version.
System Clock Frequency	Displays the clock frequency in megahertz (MHz).
Architecture	Displays the architecture of the machine, a fixed value of `sparc`.
Hostname Of The System	Displays the network name of the host.
Machine Name	Displays the machine type, such as `sun4u`.
System Platform	Displays the hardware platform of the system, such as `Sun-Fire-V1280`.
Serial Number	This field is blank (--) for Sun Fire entry-level midrange systems, as they do not display a machine-readable serial number.
Timestamp	Displays the time stamp value for the time when the system information was extracted.
Raw Timestamp	Displays the raw time stamp value for the time when the system information was extracted.
Total Disks	Displays the total number of disks present in the system, including externally attached disks and disk-like devices.
Total Memory	Displays the total memory present in the system in megabytes (MB).
Total Processors	Displays the total number of CPUs present in the system.
Total Tape Devices	Displays the total number of tape devices present in the system, including external tape devices.
Module Status	Displays the status of the config-reader module, including any errors. Example: `OK`.

System Alarms

A *critical alarm* is generated when the value of Module Status is not OK. (rule rcr4u228)

CPU Unit Properties

TABLE 3-2 provides a brief description of the properties for CPUs on a Sun Fire entry-level midrange systems domain.

TABLE 3-2   CPU Unit Properties

Property	Description
Name	Displays the system name and slot number for this unit, such as SB0/P0.
Board No	This field is blank (−−) for Sun Fire entry-level midrange systems.
Clock Frequency	Displays the clock frequency in megahertz (MHz)
CPU Type	Displays the processor type, such as sparcv9.
Dcache Size	Displays the size of data cache (Dcache) in kilobytes (KB)
Ecache Size	Displays the size of external cache (Ecache) in kilobytes (KB)
Fru	Indicates whether the unit is a field-replaceable unit. The value is always no.
Icache Size	Displays the size of instruction cache (Icache) in kilobytes (KB).
Model	Displays the processor model, such as SUNW,UltraSPARCIII+.

TABLE 3-2   CPU Unit Properties

Property	Description
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.
CPU Status	Displays the operational status of the CPU: `online`, `offline`, `power off`, `no interrupts`, or `unknown`. If you set a CPU to `spare` using the `psradm -s` command, its status is `offline`. In the case of a chip multithreading (CMT) processor, if at least one core per processor has a status of either `online` or `no interrupts`, the CMT's status is `online`. When the CMT's status is *not* `online`, it is either `offline` or `power off`. A core is considered `offline` if its state is `P_BAD`, `P_FAULTED`, `P_SPARE`, or `P_OFFLINE`.
Unit	Displays the FRU name, such as `SB0/P0`.

CPU Unit Alarms

A *caution alarm* is generated when the value of CPU Status is `power off`, `offline`, or `unknown`. (rule rcr4u207)

A *critical alarm* is generated when the value of `CPU Status` is not any of the following:

- `online`
- `no interrupts`
- `power off`
- `offline`
- `unknown`

(rule rcr4u207)

Power Supply Properties

TABLE 3-3 provides a brief description of the properties for the power supply on a Sun Fire entry-level midrange systems domain.

TABLE 3-3   Power Supply Properties

Property	Description
Name	Displays the FRU name of the power supply, such as PS0.
PSU Input A	Displays status for a power supply unit fed from the A input, that is, from one of the two *lower* PSU slots.
PSU Input B	Displays status for a power supply unit fed from the B input, that is, from one of the two *upper* PSU slots.
PSU Output	Displays status for the power supply unit output.
PSU Status	Displays operational status for the power supply unit.

Power Supply Alarms

A *critical alarm* is generated in the following situations:

- When the value of PSU Status is *not* either OK or Enabled (rule rcr4u203)
- When the value of PSU Status is *not* either OK or –– (rule rcr4u998)
- When the value of one of the following properties is *not* OK or NA:
    - PSU Input A
    - PSU Input B
    - PSU Output

    (rule rcr4u227)

DIMM Properties

TABLE 3-4 provides a brief description of the properties for dual inline memory modules (DIMMs) on a Sun Fire entry-level midrange systems domain. Each memory module is described in a separate row of the DIMM table.

TABLE 3-4 DIMM Properties

Property	Description
Name	Displays the FRU name of the DIMM, such as `SB0/P0/B0/D0`.
Board Reference Number	Displays the board reference number for the DIMM, such as `SB0/P0/B0/D0`.
Fru	Indicates whether the unit is a field-replaceable unit. The fixed value is `yes`.
size	Displays the size of the DIMM in megabytes (MB).
Slot	Displays the FRU name of the slot for the DIMM, such as `SB2/P0/B0/D0`.
Type	Displays the type of memory. The fixed value is `dimm`.
Memory Status	Displays the operational status for the DIMM, such as `OK`.

DIMM Alarms

A *caution alarm* is generated when the value of Memory Status is `disabled` or `blacklist`.

A *critical alarm* is generated when the value of Memory Status is *not* any of these values:

- `OK`
- `--`
- disabled
- blacklist

(rule rcr4u999)

Fan Properties

TABLE 3-5 provides a brief description of the properties for fans on a Sun Fire entry-level midrange systems domain.

TABLE 3-5   Fan Properties

Property	Description
Name	Displays the unique FRU fan name, such as FT0/FAN0.
Fan Status	Displays the current operational status for the fan, such as OK.

Fan Alarms

A *critical alarm* is generated when the value of Fan Status is *not* OK (rule rcr4u204).

I/O Device Properties

TABLE 3-6 provides a brief description of the properties for I/O devices on a Sun Fire entry-level midrange systems domain.

TABLE 3-6   I/O Device Properties

Property	Description
Name	Displays the system name for this unit, such as PCI0.
Device Type	Displays the device type, such as pci.
Disk Count	Displays the number of disks attached to this unit.
Instance Number	This field is not relevant for Sun Fire entry-level midrange systems.
Model	This field is not relevant for Sun Fire entry-level midrange systems.
Network Count	Displays the number of network interfaces attached to this unit.
Reg	This field is not relevant for Sun Fire entry-level midrange systems.
Tape Count	Displays the number of tapes attached to this unit.

Disk Device Properties

TABLE 3-7 provides a brief description of the properties for internal disk devices on a Sun Fire entry-level midrange systems domain.

Note – Reporting is limited to disks within the chassis. External devices are not monitored.

TABLE 3-7 Disk Device Properties

Property	Description
Name	Displays the FRU name of the disk, such as DISK1.
Device Type	Displays the device type, such as `dvd`.
Disk Name	Displays the disk name, such as `/dev/rdsk/c0t0d0`.
Fru	Indicates whether the unit is a field-replaceable unit. The fixed value is `yes`.
Instance Number	Displays the instance number.
Disk Target	Displays the disk target.

Tape Device Properties

TABLE 3-8 provides a brief description of the properties for tape devices on a Sun Fire entry-level midrange systems domain.

Note – Reporting is limited to devices within the chassis. External devices are not monitored.

TABLE 3-8 Tape Device Properties

Property	Description
Name	Displays the FRU name for this unit, such as `TAPE0`.
Device Type	Displays the device type, such as `tape drive`.
Fru	Indicates whether the unit is a field-replaceable unit. The fixed value is `yes`.
Instance Number	Displays the instance number.
Model	Information for this field is not available for tape drives.

TABLE 3-8   Tape Device Properties   *(Continued)*

Property	Description
Tape Name	Displays the tape name, such as `/dev/mt0`.
Tape Status	Information for this field is not available for tape drives.
Tape Target	Displays the tape target number.

Tape Device Alarms

A *critical alarm* is generated when the value of Tape Status is *not* `OK`, `ok`, or `NA` (rule rcr4u225).

Network Device Properties

TABLE 3-9 provides a brief description of the properties for network devices on a Sun Fire entry-level midrange systems domain.

TABLE 3-9   Network Device Properties

Property	Description
Name	Displays the system name for this unit, such as `ce0`.
Device Type	Displays the device type. The fixed value is `Network`.
Ethernet Address	Displays the Ethernet address.
Internet Address	Displays the Internet address.
Interface Name	Displays the interface name, such as `ce0`.
Symbolic Name	Displays the symbolic name, or network host name.

LOM Properties

TABLE 3-10 provides a brief description of the properties for lights-out management (LOM) on a Sun Fire entry-level midrange systems domain.

TABLE 3-10   LOM Properties

Property	Description
Name	Fixed value: LOM.
Product Id	Displays the product identifier.
Serial Escape Char	Displays the serial escape character, such as #.
Version	Displays the LOM version, such as 8.1.

LOM Event Properties

TABLE 3-11 provides a brief description of the properties for LOM events on a Sun Fire entry-level midrange systems domain. Up to 128 events are recorded, and the event text contains a time reference relevant to a timer event. These timer events are also recorded in the event log. The most recent event has the name EVNT000.

TABLE 3-11   LOM Event Properties

Property	Description
Name	Name of the LOM event, such as EVNT000.
Event	Time stamp and description of the LOM event.

LOM Alarm Properties

TABLE 3-12 provides a brief description of the properties for LOM Alarms on a Sun Fire entry-level midrange systems domain.

TABLE 3-12   LOM Alarm Properties

Property	Description
Name	Displays the name of the LOM alarm, such as ALARM1.
Alarm State	Displays the state of the alarm, such as on.

LOM Alarms

A *critical alarm* is generated when the value of Alarm State is not `off` (rule rcr4u226).

Fault Indicator Properties

TABLE 3-13 provides a brief description of the properties for the fault indicator on a Sun Fire entry-level midrange systems domain.

TABLE 3-13   Fault Indicator Properties

Property	Description
Name	Displays the name of the indicator. The fixed value is `FAULT`.
Fault Indicator Status	Displays the status of the fault indicator, such as `off`.

Fault Indicator Alarms

A *critical alarm* is generated when the value of Fault Indicator Status is *not* `off` or *not* `NA` (rule rcr4u229).

LED Properties

TABLE 3-14 provides a brief description of the properties for the LEDs on a Sun Fire entry-level midrange systems domain.

TABLE 3-14   LED Properties

Property	Description
Name	Displays LED name, such as `FT0/FAN0/fault`.
LED Label	Displays LED label, such as `fault`.
Alarm Name	This field is not relevant for Sun Fire entry-level midrange systems.
LED State	Displays LED state, such as `ON` or `OFF`.

Temperature Monitor Properties

TABLE 3-15 and TABLE 3-16 provide a brief description of the properties for the temperature monitors on a Sun Fire entry-level midrange systems domain.

TABLE 3-15   Overtemp Monitor Properties

Property	Description
Overtemp Monitor	Displays the FRU name of the node where temperature is being monitored, such as RPO/t_ambient0.
Sensor Name	Displays the label property of the sensor, such as t_ambient0.
Overtemp Monitor Status	Displays the overtemp monitor status: OK, Warning, or Faulty.

TABLE 3-16   Temp Monitor Properties

Property	Description
Temp Monitor	Displays the FRU name of the node where temperature is being monitored, such as RPO/t_ambient0.
Sensor Name	Displays the label property of the sensor, such as t_ambient0.
Present Temperature (ºC)	Displays the present temperature in degrees Celcius.
Warning Temperature (ºC)	Displays the high- and low-temperature boundaries, in degrees Celcius, for the Warning status. Temperatures falling below the low-temperature boundary (such as <0) or rising above the high-temperature boundary (such as >80) cause the Overtemp Monitor Status to change to Warning.
Shutdown Temperature (ºC)	Displays the high- and low-temperature boundaries, in degrees Celcius, at which automatic shutdown occurs. Temperatures falling below the low-temperature boundary (such as <–12) or rising above the high-temperature boundary (such as >102) cause the Overtemp Monitor Status to change to Faulty, and shutdown ensues.

Temperature Alarms

Caution – Bear in mind that temperature alarms, like all alarms, can be delayed by up to five minutes.

A *critical alarm* is generated when the value of Overtemp Monitor Status is *not* OK (rule rcr4u230).

Voltage Sensor Properties

TABLE 3-17 provides a brief description of the properties for voltage sensors on a Sun Fire entry-level midrange systems domain.

TABLE 3-17 Voltage Sensor Properties

Property	Description
Node Name	Displays the FRU name of the node for the voltage sensor, such as RP0/v_1.5vdc0.
Sensor Name	Displays the FRU name of the voltage sensor, such as v_1.5vdc0.
Voltage Sensor Status	Displays the status of the voltage sensor. If the value of the Voltage property is higher or lower than the shutdown threshold values, the status is Faulty. If the value of the Voltage property lies between the high- or low-shutdown threshold and the corresponding warning threshold, the status is Warning. Otherwise, the status is OK.
Shutdown Enabled	Indicates whether shutdown is enabled. The fixed value is yes.

Voltage Sensor Alarms

A *critical alarm* is generated when the value of Voltage Sensor Status is *not* OK. (rule rcr4u232)

FRUID Info

TABLE 3-18 provides a brief description of the properties for field-replaceable unit identification (FRUID) information on a Sun Fire entry-level midrange systems domain.

TABLE 3-18 FRUID Info

Property	Description
Name	Displays FRU name, such as SB0/P0/B0/D0.
Fru Description	Displays FRU description, such as CPU Board (1280).
Fru Shortname	Displays FRU short name, such as DIMM.

TABLE 3-18 FRUID Info *(Continued)*

Property	Description
HW Dash Level	Displays initial hardware dash level, a two-digit integer.
Manufacturer Location	Displays geographic location of manufacturer, such as `Toronto`.
FRUID Path	Displays the FRUID path, such as `SB4/P1/B0/D2`.
Sun Part Number	Displays Sun part number, such as 5015401.
Sun Serial Number	Displays Sun serial number, such as a10235.
Timestamp	Displays the time stamp value for the time when the system information was extracted.
Vendor Name	Displays vendor name, such as `Samsung`.
COD Enabled	Indicates whether COD board is enabled (`True` or `False`). For FRUs that are not COD boards, displays `False`.

FRU Status Alarms

A *caution alarm* is generated when the value of FRU Status is

- `unknown`
- `disabled`
- `failing`

A *critical alarm* is generated when the value of FRU Status is *not* any of these values:

- `OK`
- `--`
- `unknown`
- `disabled`
- `failing`

(rule rcr4u997)

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 entry-level midrange systems.

FIGURE 3-5 shows a physical view of the system from the front. Access this view by clicking the Hardware tab, clicking the Views list box, and clicking system under Physical View. Be sure you have System–Front in the Rotate Current View list box.
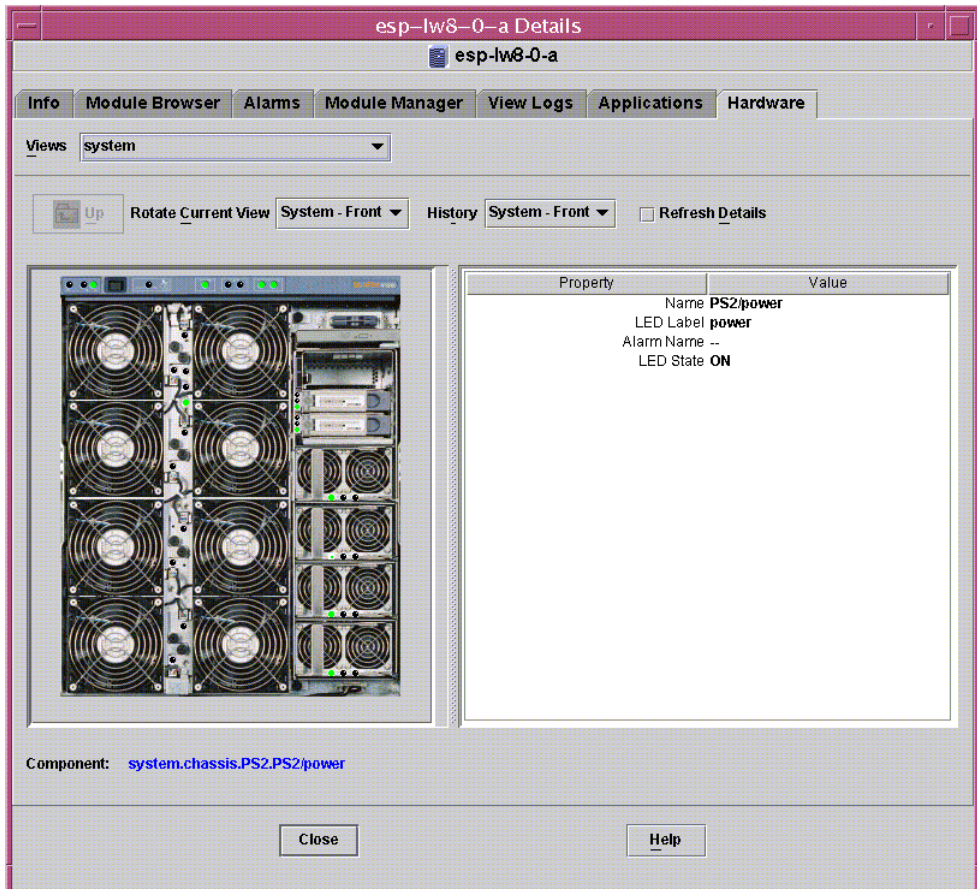
FIGURE 3-5 Physical View of the System From the Front

Note – The Physical View displays images of ports and IO adapters, but the devices attached to ports and IO adapters cannot be displayed. Similarly, the image of the PCI card depicted in the Physical View is representative, and may not correspond with the actual visual appearance of the PCI slot in your configuration.

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 CLI. For more details, refer to the *Sun Management Center Software and Installation Configuration Guide*. If you prefer to installing using the installation GUI, see Chapter 2.

Installing and Setting Up the Software Using the CLI

First ensure that the latest update for Sun Management Center 3.5 base software is installed on your systems. 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 systems.

Refer to the *Sun Management Center 3.5 Version 6 Release Notes for Sun Fire Entry-Level Midrange Systems* for details about software requirements for the server, domain, and console layers.

▼ To Install the Add-On Software Using the CLI

1. **As superuser, change the directory to the** *path*/sbin **directory, where** *path*/sbin **is the location where the base Sun Management Center software has been installed.**

2. **To install the add-on software, run the** `es-inst` **command in the** `sbin` **directory.**

   The `es-inst` script prompts you for a source directory.

3. **Type the source directory of the image of the Sun Management Center 3.5 Version 6 add-on software.**

   Refer to the *Sun Management Center Installation and Configuration Guide* for more information about the `es-inst` command and its options.

⚠ **Caution –** 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. Typing **y** (for yes) might 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 add-on software on the server and on any Sun Fire entry-level midrange agent systems that you will monitor.**

   Read the Caution and Note in Step 1 above.

   The system displays the following message:

```
-----------------------------------------------------------------------------
Sun Management Center Product Selection
-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
The following Add-On Products are applicable for installation:
Sun Fire Entry-Level Midrange System

Select the products you want to install:
Sun Fire Entry-Level Midrange System (y|n|q) y
-----------------------------------------------------------------------
```

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 Entry-Level Midrange System

Do you want to proceed? [y|n|q] y
--------------------------------------------------------------------------
```

6. **Type** y **to continue installing the add-on products.**

▼ To Set Up the Add-On Software

● **As superuser, type:**

```
# ./es-setup -p lw8
```

When you are setting the software up on the server, the system displays a message similar to this one:

```
--------------------------------------------------------------
This script will help you to setup Sun (TM) Management Center 3.5.
--------------------------------------------------------------

Setting up Addon[s]...
--------------------------------------------------------------
Starting Sun Management Center Sun Fire Entry-Level Midrange
System Setup


--------------------------------------------------------------

Do you want to start Sun Management Center agent and server
components now (y|n|
q) y

Java server started successfully.
Grouping service started successfully.
Agent started successfully.
Topology service started successfully.
Trap-handler service started successfully.
Configuration service started successfully.
Event-handler service started successfully.
Metadata Service started successfully.


Web server started successfully.

Setup of Sun Management Center is complete.
Setup logfile is :
/var/opt/SUNWsymon/install/setup_ssdn2363.050427170031.14144
```

When you are setting the software up on an agent, the system displays a message similar to this one:

```
--------------------------------------------------------------------------------
This script will help you to setup Sun (TM) Management Center 3.5 Update 1.
--------------------------------------------------------------------------------
Sep 10 09:49:04 qalw8-2 platform[12429]: [ID 305329 daemon.alert] syslog   Sep
10 09:49:04 platform      {received software termination signal}
Sep 10 09:49:04 qalw8-2 platform[12429]: [ID 770054 daemon.alert] syslog   Sep
10 09:49:04 platform      *** terminating execution ***
Stopping platform component
Stopping agent component
Sep 10 09:49:05 qalw8-2 agent[11616]: [ID 313994 daemon.alert] syslog Sep 10
09:49:05 agent          {received software termination signal}
Sep 10 09:49:05 qalw8-2 agent[11616]: [ID 638892 daemon.alert] syslog Sep 10
09:49:05 agent          *** terminating execution ***


Setting up Addon[s]...
------------------------------------------------------------
Starting Sun Management Center Sun Fire Entry-Level Midrange System Setup
------------------------------------------------------------
---> Platform Found: Sun Fire E2900
---> Sun Fire Entry-Level Midrange System add-on Agent package found! <---
Entry for Config-Readerlw8 successfully added

Do you want to start Sun Management Center agent now (y|n|q) y
Starting Sun Management Center Agent...

Agent started successfully.

Setup of Sun Management Center is complete.
Setup logfile is : /var/opt/SUNWsymon/install/setup_qalw8-2.040910094859.18052
#
```

Uninstalling the Software Using the CLI

You can uninstall:

- All the Sun Management Center software (see "To Uninstall All Sun Management Center Software" on page 40)
- Sun Fire entry-level midrange systems add-on software (see "To Uninstall Add-On Software for Sun Fire Entry-Level Midrange Systems" on page 41)

▼ 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 Entry-Level Midrange System                          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. Do one of the following:

- Type y to change your selection.

  The system displays your selection; go to the beginning of Step 2.
- Type n to *not* change your selection.

  The system displays 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. **Do one of the following:**

   - **Type** y **to keep any existing topology and event data.**
   - **Type** n **to discard the data.**

   The system displays the following message:

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

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

   - **Type** y **to proceed with the uninstall.**
   - **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 Entry-Level 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 Entry-Level Midrange System                             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 Entry-Level Midrange System? [y|n|q]
```

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

   The system displays the modules that will be uninstalled and the following message:

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

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

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

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

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

      The system displays the following message:

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

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

   ■ **Type** y **to proceed with the uninstall.**

- **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 and Stopping Sun Management Center Software Using the CLI

▼ To Start All Sun Management Center Components

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 procedure describes one common `es-start` option.

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

2. **As superuser, type the following to start all Sun Management Center components, except the console:**

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

▼ To Stop All 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 procedure describes one common `es-stop` option.

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

2. As superuser, type the following to stop all Sun Management Center components, except the console:

```
# ./es-stop -A
```

Glossary

COD	Capacity on Demand option
Dcache	data cache
DIMM	dual inline memory module
Ecache	external cache
FRU	field-replaceable unit
Icache	instruction cache
LOM	Lights Out Management
PCI	peripheral component interconnect
RP0, RP2	repeater boards
SB0, SB2, SB4	CPU/Memory boards, or system boards
Uncompress	To expand an icon to display hidden subsections below the level of that icon.
Wcache	write cache