Sun™ Management Center 3.5 Supplement for the Sun Fire™, Sun Blade™ and Netra™ Systems

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Contents

Preface xi

1. Introduction 1

Sun Management Center 3.5 1

Supported Platforms 2

Presentation of the Platform 3

Hardware Platform Module 4

Browser View 4

Physical Components 5

Device Information 6

Environmental Sensors 6

Logical View 6

Physical View 7

Alarms 10

2. Installation 11

Sun Management Center 3.5 Software 11

Installing From the Sun Management Center 3.5 Update 1 CD 13

Installing From the Web Archive 13

Obtaining the Add-on Software 13

Preparing for Installation 14

Sun Management Center Server 14

Installation and Configuration 14

GUI Setup 15

Installation Summary 15

Removing Existing Hardware Platform Modules 18

- To Remove Existing 3.5 Packages From The Server 18
- To Remove Existing 3.5 Packages From The Agent 20

Installing the Hardware Platform Module 22

- To Install and Setup the Sun Management Center Agent Component 22
- To Install the Sun Management Center Server Software 25

Creation and Installation of an Agent Update Image 27

3. Physical and Logical Properties 29

System Properties 30

Physical Component Properties 31

Common Properties 31

Fans 34

Power Supplies 34

Expansion Cards 35

Memory Modules 36

Other Physical Components 37

Locations 37

Logical Device Properties 38

Processors 40

Media Devices 40

Network Interfaces 41

Indicators 42

Other Devices 42

Environmental Sensor Properties 43

Numeric Sensors 44

Non-Numeric Sensors 44

4. Alarms 45

Overview 45

Operational State Rule 46

Availability Rule 47

Non-Numeric Sensor Rule 47

Numeric Sensor Threshold Rule 48

Occupancy Rule 48

Rate or Count Rule 49

Module Status Rule 49

Indicator Status Rule 50

A. PCI Cards 51

B. Platform-Specific Information 53

Sun Fire V210, V240, and Netra 240 Servers 54

Related Documentation 54

Netra 440 Servers 55

Related Documentation 55

Sun Fire V250 Server 55

Related Documentation 56

Sun Fire V440 Server 56

Related Documentation 56

Sun Blade 1500 and 2500 Workstations 57

Related Documentation 57

Index 59

Figures

FIGURE 1-1 Domain View Showing Icons for the Supported Platforms 3

FIGURE 1-2 Browser View for of Sun Fire V250 Showing Physical Components, Device Information and Environmental Sensors 5

FIGURE 1-3 A Section of the Sun Fire V250 Logical View 7

FIGURE 1-4 Sun Fire V250 Physical View—Front 8

FIGURE 1-5 Sun Fire V250 Physical View—Rear 9

FIGURE 2-1 Installation Process Flow 17

FIGURE 3-1 Physical Components Showing Location and Description Columns (Sun Fire V250 Shown) 32

FIGURE 3-2 Part of the Logical Device Table Showing Indicators (Sun Fire V250 Shown) 38

FIGURE 3-3 Numeric Voltage Sensors and Voltage Threshold Sensors Tables (Sun Fire V250 Shown) 43

Tables

TABLE 2-1 Required Software Versions 12

TABLE 3-1 System Information Table Properties 30

TABLE 3-2 Operational Status Values 33

TABLE 3-3 Fan Table Properties 34

TABLE 3-4 Power Supply Table Properties 34

TABLE 3-5 Expansion Card Table Properties 35

TABLE 3-6 Memory Modules Table Properties 36

TABLE 3-7 Other Physical Components Table Properties 37

TABLE 3-8 Other Physical Components Table Properties 37

TABLE 3-9 Processor Table Properties 40

TABLE 3-10 Media Device Table Properties 40

TABLE 3-11 Network Interface Table Properties 41

TABLE 3-12 Indicator Table Properties 42

TABLE 3-13 Other Device Table Properties 42

TABLE 3-14 Numeric Sensor Table Properties 44

TABLE 3-15 Non-Numeric Sensor Table Properties 44

TABLE 4-1 Operation Status Rule 46

TABLE 4-2 Availability Rule 47

TABLE 4-3 Non Numeric Sensor Rule 47

TABLE 4-4 Numeric Sensor Threshold Rule 48

TABLE 4-5 Occupancy Rule 48
TABLE 4-6 Occupancy Rule 49
TABLE 4-7 Module Status Rule 49
TABLE 4-8 Indicator Status Rule 50
TABLE A-1 Supported PCI Cards 51
TABLE B-1 Common Hardware Platform Module Packages 53
TABLE B-2 Platform-Specific Packages for Sun Fire V210, V240, and Netra 240 54
TABLE B-3 Platform-Specific Packages Netra 440 55
TABLE B-4 Platform-Specific Packages for Sun Fire V250 55
TABLE B-5 Platform-Specific Packages for Sun Fire V440 56
TABLE B-6 Platform-Specific Packages for Sun Blade 1500 and 2500 57

Preface

The *Sun Management Center 3.5 Supplement for Sun Fire, Sun Blade and Netra Systems* provides instructions on how to install, configure and use Sun Management Center software on the supported platforms. The supplement is intended for system administrators who install and use Sun Management Center 3.5 software to monitor and manage these servers and workstations.

Note – Sun Fire Entry-Level Servers, Netra Servers and Sun Blade Workstations introduced prior to the introduction of Sun Fire V210, V240, V250 and V440, Netra 240 and 440, and Sun Blade 1500 and 2500 continue to be supported by the Sun Management Center 3.5 Supplement for Netra Servers, Sun Management Center 3.5 Supplement for Workgroup Servers and Sun Management Center 3.5 Supplement for Workstations.

How This Book Is Organized

Chapter 1 introduces Sun Management Center software for the supported platforms.

Chapter 2 provides a general procedure for installing and setting up Sun Management Center software on the supported platforms. Use this chapter in conjunction with the *Sun Management Center 3.5 Software Installation Guide*.

Chapter 3 describes the data that is shown in the *Details* window.

Chapter 4 describes the alarm rules used by the supported platforms components.

Appendix A describes the level of support provided by this product for PCI cards.

Appendix B contains information concerning platform-specific packages and documentation.

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

Application	Title	Part Number
Installing and configuring Sun Management Center 3.5 software	*Sun Management Center 3.5 Installation and Configuration Guide*	816-2678
Using Sun Management Center 3.5 software	*Sun Management Center 3.5 User's Guide*	816-2716
Sun Fire V210 and V240 Platform	*Sun Fire V210 and V240 Servers Installation Guide*	816-4825
	Sun Fire V210 and V240 Servers Administration Guide	816-4826
Sun Fire V250 Platform	*Sun Fire V250 Server Installation Guide*	817-0899
	Sun Fire V250 Server Administration Guide	817-0900
Sun Fire V440 Platform	*Sun Fire V440 Server Installation Guide*	816-7727
	Sun Fire V440 Server Administration Guide	816-7728
	Sun Fire V440 Server Diagnostics and Troubleshooting Guide	816-7730
Netra 240 Platform	*Netra 240 Server Installation Guide*	817-2698
	Netra 240 Server System Administration Guide	817-2700
Netra 440 Platform	*Netra 440 Server Installation Guide*	817-3882
	Netra 440 Server System Administration Guide	817-3884
Sun Blade 1500 and 2500 Platforms	*Sun Blade 1500 Getting Started Guide*	816-7565
	Sun Blade 1500 Service, Diagnostics and Troubleshooting Manual	816-7564
	Sun Blade 2500 Getting Started Guide	816-1005
	Sun Blade 2500 Service, Diagnostics and Troubleshooting Manual	816-0996

For a list of other related documents, refer to the *Sun Management Center 3.5 Software Release Notes* on the Sun Management Center Web site:

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

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Sun Management Center 3.5 Supplement for the Sun Fire, Sun Blade and Netra Systems, part number 817-3771-12

CHAPTER 1

Introduction

This chapter provides an introduction to the Sun Management Center 3.0 software in relation to the supported platforms.

The chapter contains the following sections:

- "Sun Management Center 3.5" on page 1
- "Presentation of the Platform" on page 3
- "Hardware Platform Module" on page 4
- "Alarms" on page 10

Sun Management Center 3.5

Sun Management Center 3.5 is an open, extensible system monitoring and management solution that uses Java and a variant of the Simple Network Management Protocol (SNMP) to provide integrated and comprehensive enterprise-wide management of Sun products and their subsystem, component, and peripheral devices.

The *Sun Management Center 3.5 Software User's Guide* includes definitions, explanations and diagrams that clarify the Sun Management Center architecture. Review that document whenever you have questions about how consoles, servers, agents, domains and modules interact.

Support for hardware monitoring within the Sun Management Center environment is achieved through the use of an appropriate hardware platform module, which presents hardware configuration and fault reporting information to the Sun Management Center management server and console.

Supported Platforms

This document relates to the Sun Management Center 3.5 Supplement for Sun Fire, Sun Blade and Netra Systems, which is a hardware platform module that currently supports the following platforms:

- Sun Fire V210 Server
- Sun Fire V240 Server
- Sun Fire V250 Server
- Sun Fire V440 Server
- Netra 240 Server
- Netra 440 Server
- Sun Blade 1500 Workstation
- Sun Blade 2500 Workstation

Note – This document will be updated to support additional Sun Fire Entry-Level Servers, Netra Servers and Sun Blade Workstations as they become available.

Presentation of the Platform

The Sun Management Center graphical user interface (GUI) presents platforms as icons. For each monitored platform there is an icon representing the platform agent.

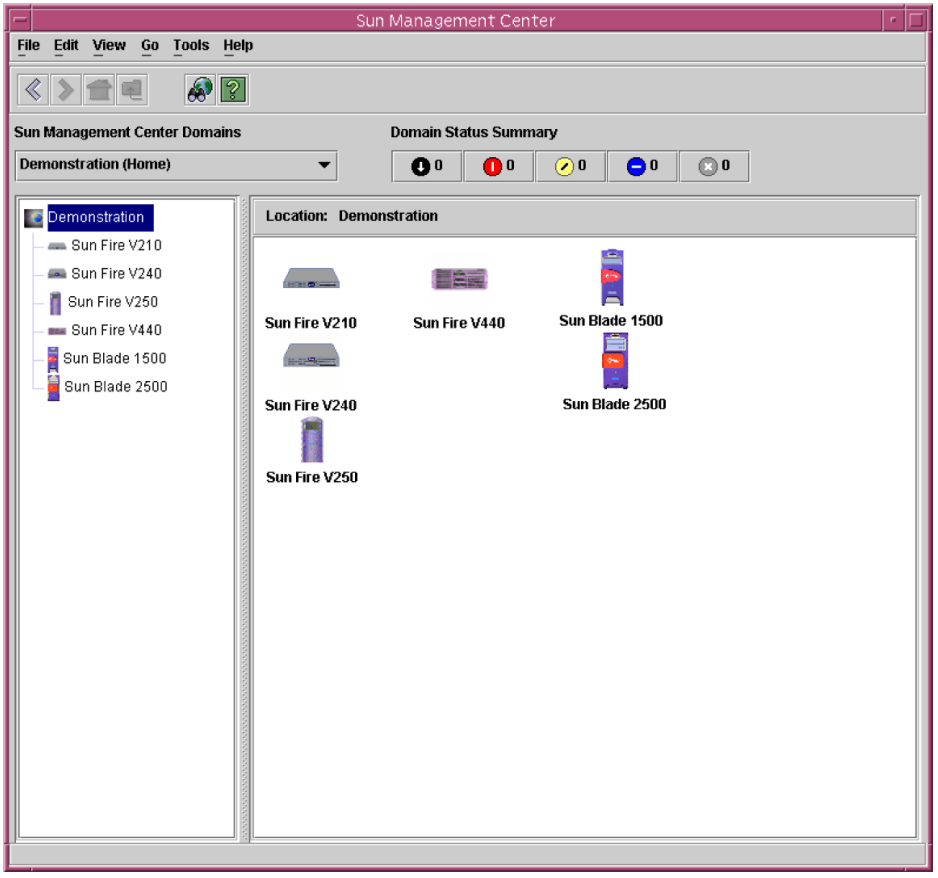

FIGURE 1-1 Domain View Showing Icons for the Supported Platforms

You can expand these icons to provide detailed views of the platform(s). Sun Management Center 3.5 launches a detail viewer in which the hardware platform module is displayed, in addition to any other traditional Sun Management Center 3.5 monitoring and control modules.

Hardware Platform Module

The hardware platform module represents the monitored hardware, and presents the following views:

- Browser view
- Logical view
- Physical view

Note – A hardware platform module is also referred to as the *Config Reader* or *platform add-on*.

Browser View

The browser view displays information representing the platform hardware in the form of tables representing the various physical and logical components.

The browser view represents the hardware configuration in terms of three primary categories:

- Physical components
- Device Information
- Environmental sensors

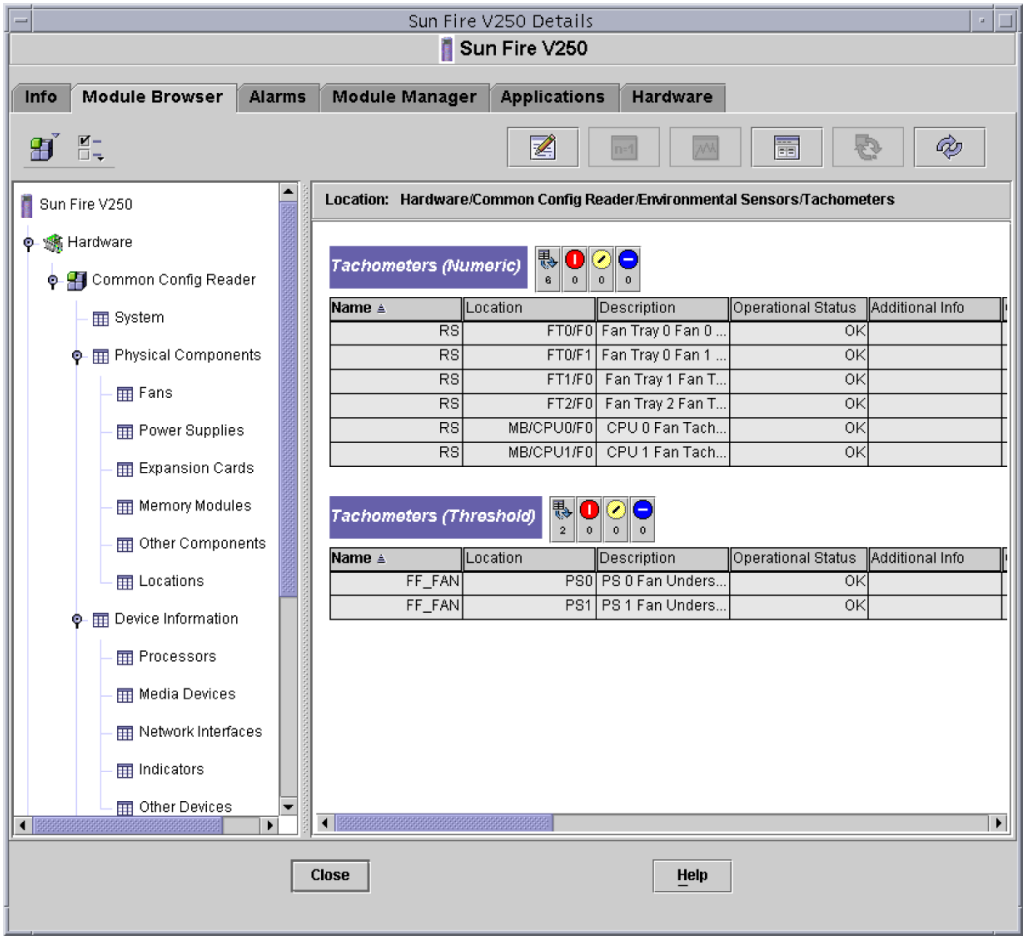

FIGURE 1-2 Browser View for of Sun Fire V250 Showing Physical Components, Device Information and Environmental Sensors

Physical Components

Physical components occupy physical space and include fans, power supply units, the chassis and so on. The browser view represents each physical component using a fundamental set of properties common to all physical components (for example, part number, serial number) with additional properties defined as appropriate.

Device Information

Devices represent the logical devices comprising the platform. For example, a CPU module could contain one or more processing cores. Hence, in this case the CPU module would be represented by the browser as a physical component, but the processing cores would be represented by the browser view as separate devices.

The browser view represents each device using a fundamental set of properties common to all devices. Additional properties are defined to extend the common set as appropriate. For example, *speed* is an additional property defined for network interfaces.

Environmental Sensors

The browser represents the various environmental sensors of the platform as a discrete category. Environmental sensors include those for voltage, current, temperature and fan speed. Two classes of sensor are supported:

- Numeric sensors
- Non-numeric sensors.

"Environmental Sensor Properties" on page 43 describes the various tables and columns in more detail.

Logical View

The logical view is a tree structure with each node in the tree corresponding to a single row in one table of the browser view. At the top of the tree is the system object. Using parent-child relationships to represent the physical containment hierarchy of the platform, the children of the system object are a set of locations, each containing one physical component. The children of the physical components are either further locations for the physical or logical devices that they realize, or the environmental sensors for monitoring them.

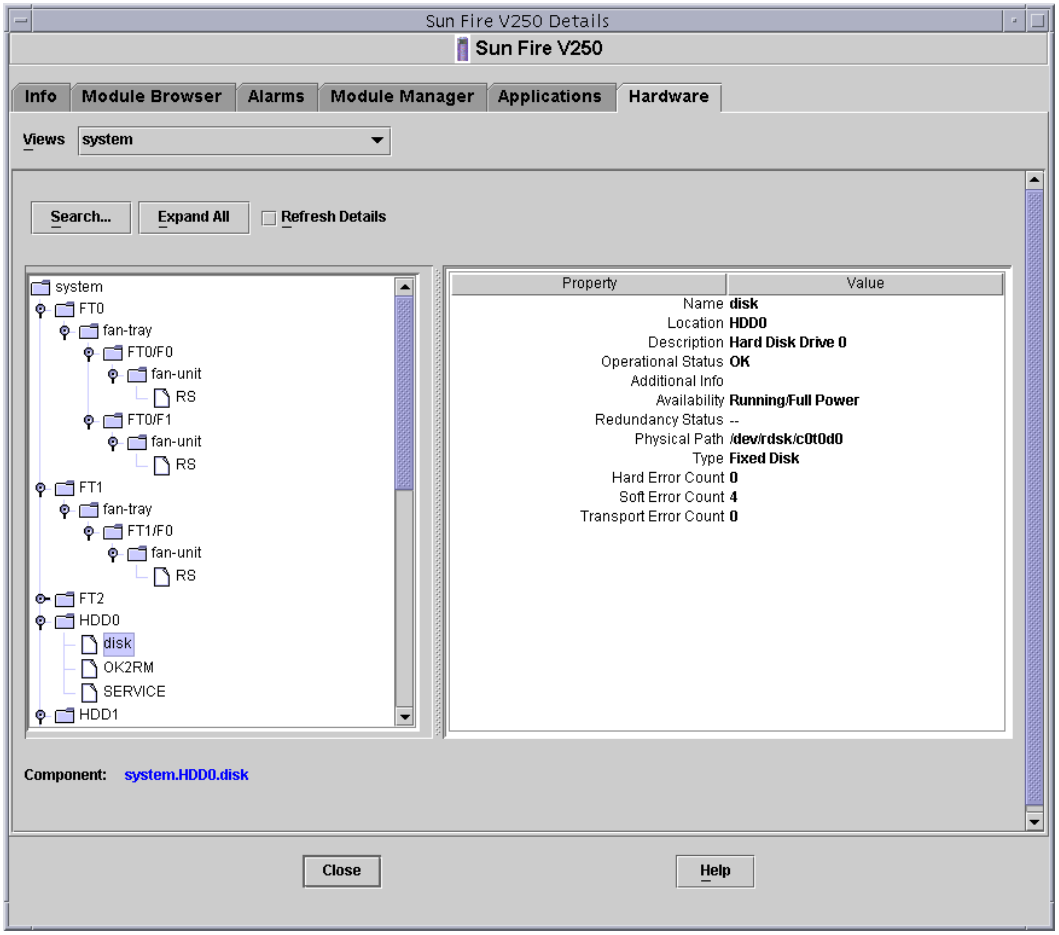

FIGURE 1-3 A Section of the Sun Fire V250 Logical View

Physical View

The physical view is represented by projections of the platform (for example, front, rear and top views). The projections enable you to select the individual physical or logical components modeled in the physical or logical components tables, and any LEDs that are visible. You can move the mouse over the physical image to display node information in a panel to the right of the physical image.

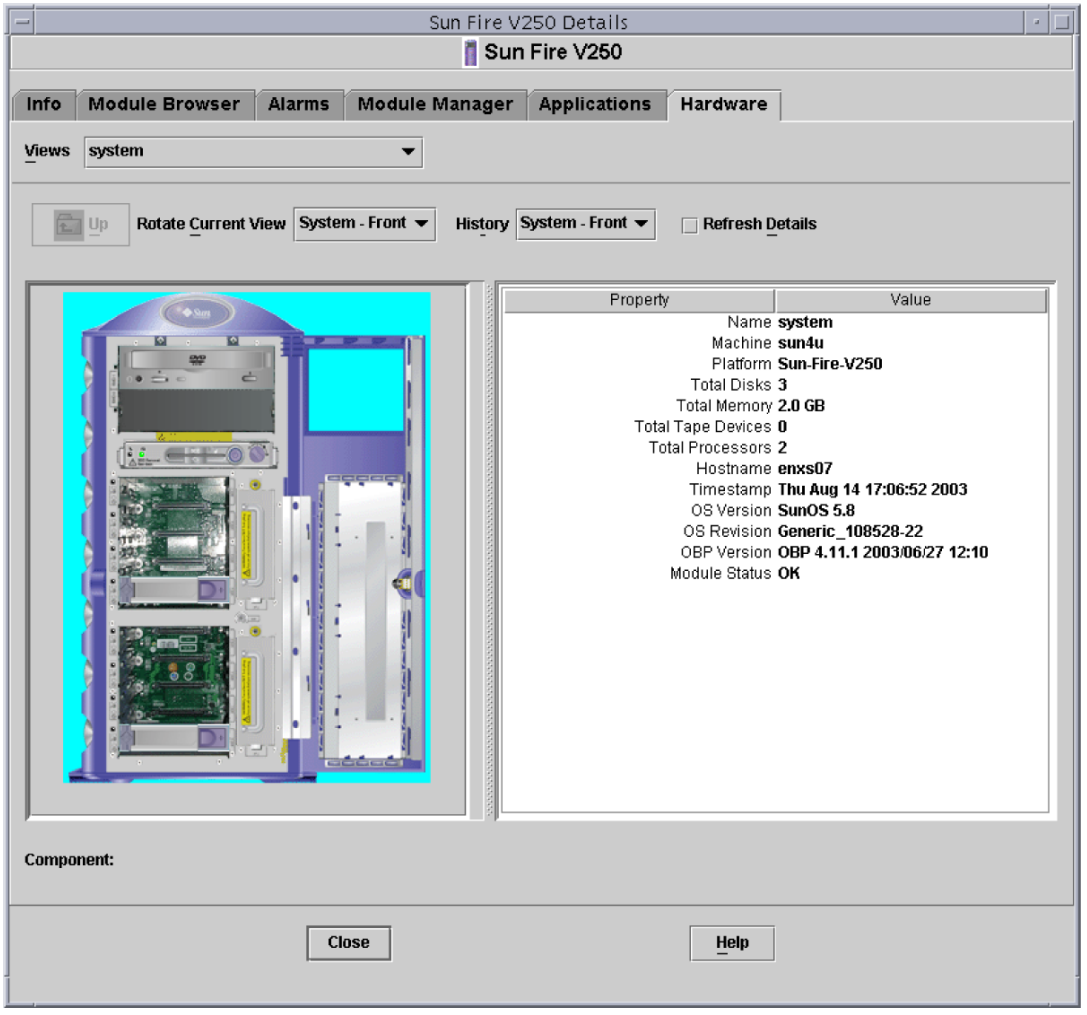

FIGURE 1-4 Sun Fire V250 Physical View—Front

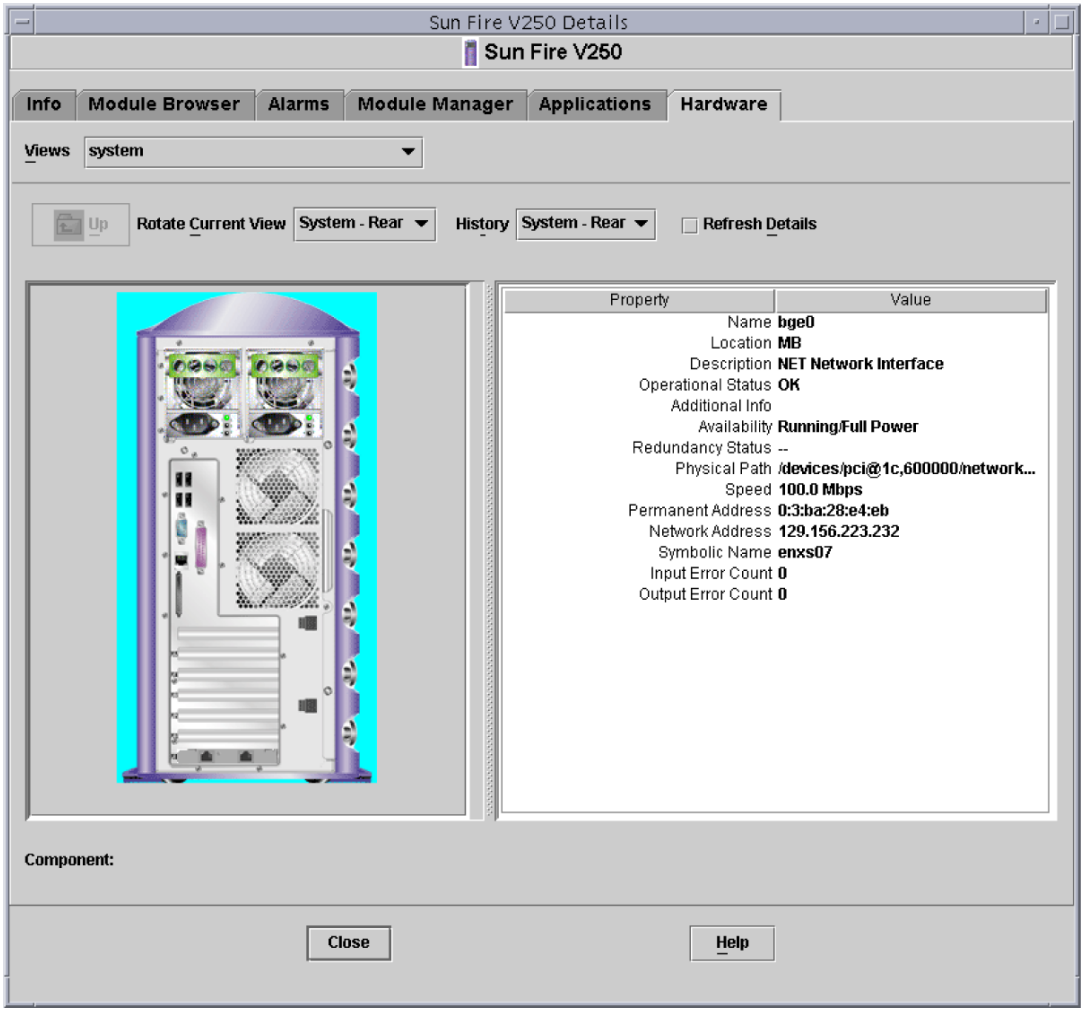

FIGURE 1-5 Sun Fire V250 Physical View—Rear

Alarms

The hardware platform module includes a number of alarm rules that are used by the system to determine the status of the various components. Each alarm rule is applied to a specific property of a table in the hardware platform module. Chapter 4 describes the various alarms in more detail.

CHAPTER 2

Installation

This chapter describes how to install and set up Sun Management Center 3.5 software on the platforms listed in "Supported Platforms" on page 2.

The chapter contains the following sections:

- "Sun Management Center 3.5 Software" on page 11
- "Preparing for Installation" on page 14
- "Installing From the Sun Management Center 3.5 Update 1 CD" on page 13
- "Installing From the Web Archive" on page 13
- "Installation and Configuration" on page 14

Sun Management Center 3.5 Software

The Sun Management Center 3.5 software comprises:

- Core Sun Management Center components
- Value-added software
- Hardware platform modules
- Integration adapters

The Sun Management Center 3.5 Software Installation and Configuration Guide provides basic information about installing and setting up the Sun Management Center 3.5 core components and starting and stopping the software. For information about the value-added software and integration adapters, please refer to the Sun Management Center web site:

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

Support for each platform requires the Sun Management Center 3.5 core packages and the add-on packages for the monitored platform. In this release of the product, the add-on packages are available independently from the Sun Management Center 3.5 core packages.

TABLE 2-1 lists the specific software revisions required to install Sun Management Center 3.5 on the monitored platform.

Your Sun Management Center 3.5 installation and setup scripts may not display the same messages in exactly the same sequence as the examples in this chapter. However, these examples show the basic messages you receive and the approximate sequence in which you receive them.

Specific installation and setup scripts depend on the additional components you install and other choices you make.

TABLE 2-1 Required Software Versions

Host	Required Software	Version
Sun Management Center Server	Solaris operating environment	8, 9
	Sun Management Center	3.5
	Hardware Platform Module packages	Platform-specific, see Appendix B
Monitored Platform	Solaris operating environment	*
	Sun Management Center*	3.5
	Hardware Platform Module packages	Platform-specific, see Appendix B

* The Solaris operating environment is dependent on the supported platform. Refer to the platform documentation for details of the Solaris version(s) supported by your platform.

The installation procedure described in this chapter installs the common packages and platform-specific packages automatically.

Installing From the Sun Management Center 3.5 Update 1 CD

The supplement for the Sun Fire, Sun Blade and Netra systems is included as part of Sun Management Center 3.5 Software Update 1. This supplement is also available as a stand-alone web download for earlier distributions of Sun Management Center 3.5, and updated versions will be available for web download in the future.

See the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678) for details of how to install this supplement as part of the Sun Management Center 3.5 Update 1 installation. Follow the instructions given in Chapter 6, *Sun Management Center 3.5 Installation and Setup*. In step 13 on page 85, select `"ELP Config-Reader Monitoring"` to install this supplement along with the other supplements you require.

Installing From the Web Archive

The instructions in the rest of this chapter apply only if you wish to install the stand-alone web download version of the supplement.

Obtaining the Add-on Software

The packages are supplied in an archive bundle named `symon_elsw_<ver>.tar.Z` where `<ver>` is the version number. Always use the latest available version of this file for installation.

The file, which is in compressed tar format, is also available from:

`http://www.sun.com/software/solaris/sunmanagementcenter/get.html`

Note – In the future, some of the filenames can vary depending on which version of Solaris you are using, the version of Sun Management Center you have downloaded, and the version of this product.

Preparing for Installation

Your environment must meet certain requirements before you can install the management software. This section explains these requirements.

Sun Management Center Server

Before installing the Sun Management Center 3.5 software, determine which server is to be the Sun Management Center server. The available memory in the server must meet the requirements given in the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678).

When the Sun Management Center server is down, you will not be able to use Sun Management Center software to manage your system. Refer to the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678) for more information about server requirements.

Installation and Configuration

Note – If you are extending an existing Sun Management Center 3.5 installation to provide support for the supported platforms, it is not necessary to re-install the core Sun Management Center packages.

Note – This document does not describe the installation and setup process for the core Sun Management Center 3.5 product. Refer to the *Sun Management Center 3.5 Installation and Configuration Guide* for information about installing and setting up the core software. Upgrade to Sun Management Center 3.5 before you attempt to install the packages specified in this document.

To simplify the installation procedure, make sure you have the following information to hand before starting your installation:

- Name of the Sun Management Center server
- Name and agent port number of the monitored platforms

If you have a previous version of the hardware platform module for a supported platform already installed, remove the existing packages before you install the new version.

There are two ways to run the installation script. You can use either the traditional installation script, `es-inst`, or the GUI Install feature, es-`guiinst`. The installation method you use determines which setup script automatically runs afterward. For example, if you used the GUI Install program for installation, es-`guisetup` runs by default.

Note – Sun Management Center packages are treated differently from platform-specific packages. This installation program does not automatically update the former. To update core packages, you must apply the appropriate patches as discussed in the *supported platforms Release Notes*.

For complete Sun Management Center 3.5 core software installation instructions, refer to the documentation provided with your Sun Management Center 3.5 media, or consult the Sun Management Center 3.5 web site:

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

GUI Setup

The GUI Setup application is new to Sun Management Center. This application enables you to set up the add-on software for the supported platforms through the GUI. For more information about the GUI Setup application, refer to the *Sun Management Center 3.5 User's Guide* and the *Sun Management Center 3.5 Installation and Configuration Guide*.

Installation Summary

1. **If necessary, uninstall any Sun Management Center 3.0 add-on software on the Sun Management Center server and agent.**

   For details, refer to "Removing Existing Hardware Platform Modules" on page 18.

2. **If necessary, upgrade the Sun Management Center software to version 3.5 on the Sun Management Center server and agent.**

   For further details, refer to the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678).

3. **If necessary, uninstall any pre-existing version 3.5 of the add-on software on the Sun Management Center server and agent.**

   For details, see "Removing Existing Hardware Platform Modules" on page 18.

4. **If necessary, install Sun Management Center 3.5 software on the system used as the Sun Management Center console.**

   For details, refer to the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678).

5. **Install Sun Management Center 3.5 server software and the add-on server software on the Sun Management Center server.**

   For details of how to install core Sun Management Center 3.5 server software, refer to the *Sun Management Center 3.5 Installation and Configuration Guide*.

   For details of how to install the add-on server software, see "To Install the Sun Management Center Server Software" on page 25.

6. **Install Sun Management Center 3.5 agent software and the add-on agent software on the platform(s) to be monitored.**

   For details of how to install core Sun Management Center 3.5 agent software, refer to the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678).

   For details of how to install the add-on agent software, see "To Install and Setup the Sun Management Center Agent Component" on page 22.

   See FIGURE 2-1 for high-level details of the installation process.

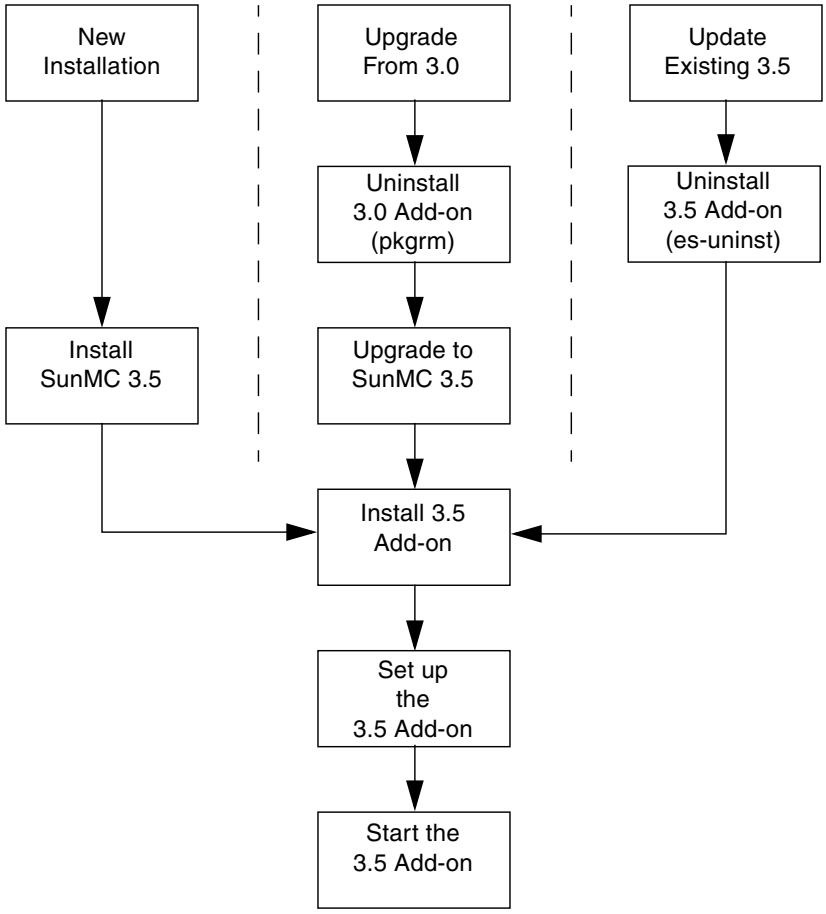

FIGURE 2-1 Installation Process Flow

Removing Existing Hardware Platform Modules

You must remove all existing packages from the server prior to installation of the new platform module packages.

Refer to "Platform-Specific Information" on page 53 for details of which Sun Management Center 3.5 platform-specific packages apply to your hardware.

If you have the earlier 3.0 supplement installed you must remove it manually in its entirety. Refer to the *Sun Management Center 3.0 Supplement for Sun Fire, Sun Blade and Netra Systems* (part no. 817-1007) for further details.

▼ To Remove Existing 3.5 Packages From The Server

1. **Remove all platform-specific Sun Management Center server packages that are already installed using the `es-uninst` command.**

CODE EXAMPLE 2-1 Using the `es-uninst` Command to Remove Existing 3.5 Server Packages

```
# /opt/SUNWsymon/sbin/es-uninst

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 Platform Administration                        None
ELP Config-Reader Monitoring                            None


Do you want to uninstall Production Environment (y|n|q) n
Do you want to uninstall Sun Fire Platform Administration (y|n|q) n
Do you want to uninstall ELP Config-Reader Monitoring (y|n|q) y


The following product[s] will be removed:
 ELP Config-Reader Monitoring.

Do you want to change selection (y|n|q) n

Select Save Data to save all user and configuration data. Your data is
saved and can be restored when you re-install Sun Management Center.
Do you want to preserve data (y|n|q) n
```

CODE EXAMPLE 2-1 Using the `es-uninst` Command to Remove Existing 3.5 Server Packages *(Continued)*

```
Proceed with uninstall (y|n|q) y

java server is not running

Calling Uninstall script of ELP Config-Reader Monitoring...
Making list of packages to uninstall...
Sorting list of packages according to reverse timestamp...

Removing package : SUNWescws...

Removal of <SUNWescws> was successful.

Removing package : SUNWescps...

Removal of <SUNWescps> was successful.

Removing package : SUNWeschs...

Removal of <SUNWeschs> was successful.

Removing package : SUNWescfs...

Removal of <SUNWescfs> was successful.

Removing package : SUNWesccs...

Removing package : SUNWescci...

Removal of <SUNWescci> was successful.

Status of uninstallation:
-------------------------------------------------------------------------------
PRODUCT                                                        STATUS
-------------------------------------------------------------------------------
ELP Config-Reader Monitoring                                   Removed

Uninstall logfile is :
/var/opt/SUNWsymon/install/uninstall_reboot.030701153157.3517
#
```

▼ To Remove Existing 3.5 Packages From The Agent

1. **Remove all platform-specific agent packages using the** `es-uninst` **command.**

CODE EXAMPLE 2-2 Using the `es-uninst` Command to Remove Existing 3.5 Agent Packages

```
# /opt/SUNWsymon/sbin/es-uninst
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 Platform Administration                    None
ELP Config-Reader Monitoring                        None


Do you want to uninstall Production Environment (y|n|q) n
Do you want to uninstall Sun Fire Platform Administration (y|n|q) n
Do you want to uninstall ELP Config-Reader Monitoring (y|n|q) y

The following product[s] will be removed:
 ELP Config-Reader Monitoring.

Do you want to change selection (y|n|q) n
Select Save Data to save all user and configuration data. Your data is
saved and can be restored when you re-install Sun Management Center.
Do you want to preserve data (y|n|q) n

Proceed with uninstall (y|n|q) y

chown: unknown group id smcorag
Stopping all Sun Management Center processes.  This may take a few moments...
agent component is not running
platform component is not running
Calling Uninstall script of ELP Config-Reader Monitoring...
Making list of packages to uninstall...
Sorting list of packages according to reverse timestamp...

Removing package : SUNWescwa...

Removal of <SUNWescwa> was successful.

Removing package : SUNWescpl...

Removal of <SUNWescpl> was successful.
```

CODE EXAMPLE 2-2 Using the `es-uninst` Command to Remove Existing 3.5 Agent Packages *(Continued)*

```
Removing package : SUNWescpa...

Removal of <SUNWescpa> was successful.

Removing package : SUNWeschl...

Removal of <SUNWeschl> was successful.

Removing package : SUNWescha...

Removal of <SUNWescha> was successful.

Removing package : SUNWescfl...

Removal of <SUNWescfl> was successful.

Removing package : SUNWescfa...

Removal of <SUNWescfa> was successful.

Removing package : SUNWescci...

Removal of <SUNWescci> was successful.

Removing package : SUNWescda...

Removal of <SUNWescda> was successful.

Removing package : SUNWescdl...

Removal of <SUNWescdl> was successful.

Removing package : SUNWescca...

Removal of <SUNWescca> was successful.

Status of uninstallation:
-------------------------------------------------------------------------------
PRODUCT                                                      STATUS
-------------------------------------------------------------------------------
ELP Config-Reader Monitoring                                 Removed

Uninstall logfile is :
/var/opt/SUNWsymon/install/uninstall_enxs07.030701160035.8064
```

Installing the Hardware Platform Module

This section describes the procedures for installing and setting up Sun Management Center 3.5 software on the supported platforms.

▼ To Install and Setup the Sun Management Center Agent Component

1. **Log on to the monitored platform as root.**
2. **If the agent is running, stop it by typing:**

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

3. **Create a temporary directory and move to it.**

   For example:

```
# mkdir /var/tmp/<temp_directory>
# cd /var/tmp/<temp_directory>
```

4. **Copy the platform-specific software archive file,** `symon_elsw_<ver>.tar.Z`**, to the directory you have created.**
5. **Uncompress and untar the file.**

   For example:

```
# zcat ../symon_elsw_<ver>.tar. Z | tar xvf -
```

Note – The exact filename depends on the software release you have downloaded.

---

6. **Add the Sun Management Center platform agent package using the** `es-inst` **command.**

CODE EXAMPLE 2-3 Using the `es-inst` Command to Install the Agent Package

```
# /opt/SUNWsymon/sbin/es-inst

-------------------------------------------------------------------------
This script installs Sun (TM) Management Center 3.5
-------------------------------------------------------------------------
```

CODE EXAMPLE 2-3 Using the `es-inst` Command to Install the Agent Package *(Continued)*

```
Enter the source directory of the installation files:
/var/tmp/<temp_directory>/disk1/image
Installation files source directory: /var/tmp/<temp_directory>/disk1/image


Installation destination directory: /opt

Reading Add-On products from image. Please wait...
This can take approximately 2 minutes to complete.

    Found: ELP Config-Reader Monitoring

Checking for applicable products. Please wait...
This can take approximately 1 minutes to complete.

The following Add-On Products are applicable for installation.
    ELP Config-Reader Monitoring

Select the products you want to install:
    ELP Config-Reader Monitoring (y|n|q) y

The following Add-On Products will be installed:
ELP Config-Reader Monitoring

Do you want to proceed (y|n|q) y

Disk Space Checking......

    <truncated>

You must perform setup before using Sun Management Center 3.5.
Do you want to run setup now (y|n|q) y
------------------------------------------------------------------------
This script will help you to setup Sun (TM) Management Center 3.5.
------------------------------------------------------------------------

Setting up Addon[s]...
------------------------------------------------------------------------------
Starting Sun Management Center Entry Level Platform Config Reader Agent Setup
------------------------------------------------------------------------------

Do you want to start Sun Management Center agent now (y|n|q) n
Use /opt/SUNWsymon/sbin/es-start -a to start Sun Management Center agent.

Setup of Sun Management Center is complete.
```

CODE EXAMPLE 2-3 Using the `es-inst` Command to Install the Agent Package *(Continued)*

```
Setup logfile is : /var/opt/SUNWsymon/install/setup_enxs07.030701160846.12642

Install logfile is :
/var/opt/SUNWsymon/install/install_enxs07.030701160341.9714

                        End of Installation


Exiting Sun Management Center installation.

#
```

Note – The name of the Sun Management Center server depends on your own environment.

---

7. **When the installation is complete, you can delete the downloaded file from the temporary directory you created at Step 3, then delete the directory itself.**

▼ To Install the Sun Management Center Server Software

1. **Make sure that the Sun Management Center 3.5 core packages are installed and set up on the Sun Management Center server.**

   For details of how to install core Sun Management Center 3.5 server software, refer to the *Sun Management Center 3.5 Software Installation Guide*.

2. **Log on to the Sun Management Center server as root.**

3. **Create a temporary directory and move to it.**

   For example:

```
# mkdir /var/tmp/<temp_directory>
# cd /var/tmp/<temp_directory>
```

4. **Copy the platform-specific software archive file,** `symon_elsw_<ver>.tar.Z`**, to the directory you have created.**

5. **Uncompress and untar the file.**

   For example:

```
# zcat symon_elsw_<ver>.tar. Z | tar xvf -
```

Note – The filename depends on the software release you have downloaded.

---

6. **Add the Sun Management Center platform server package using the** `es-inst` **command.**

   When installation is complete, you are prompted to run `es-setup` to configure the software.

CODE EXAMPLE 2-4 Using the `es-setup` Command to Install the Server Package

```
# /opt/SUNWsymon/sbin/es-inst

-------------------------------------------------------------------------------
This script installs Sun (TM) Management Center 3.5
-------------------------------------------------------------------------------

Enter the source directory of the installation files:
/var/tmp/<temp_directory>/disk1/image
Installation files source directory: /var/tmp/<temp_directory>/disk1/image
```

CODE EXAMPLE 2-4 Using the `es-setup` Command to Install the Server Package

```
Installation destination directory: /opt
Reading Add-On products from image. Please wait...
This can take approximately 3 minutes to complete.

    Found: ELP Config-Reader Monitoring

Checking for applicable products. Please wait...
This can take approximately 2 minutes to complete.

The following Add-On Products are applicable for installation.
    ELP Config-Reader Monitoring

Select the products you want to install:
    ELP Config-Reader Monitoring (y|n|q) y

The following Add-On Products will be installed:
ELP Config-Reader Monitoring

Do you want to proceed (y|n|q) y

Disk Space Checking.....

    <truncated>

You must perform setup before using Sun Management Center 3.5.
Do you want to run setup now (y|n|q) y

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

Setting up Addon[s]...
------------------------------------------------------------------------
Starting Sun Management Center Entry Level Platform Config Reader Server Setup
------------------------------------------------------------------------

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

    <truncated>

Java server started successfully.
Grouping service started successfully.
Agent started successfully.
Topology service started successfully.
Trap-handler service started successfully.
Configuration service started successfully.
```

CODE EXAMPLE 2-4 Using the `es-setup` Command to Install the Server Package

```
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_reboot.030701154003.13541

Install logfile is :
/var/opt/SUNWsymon/install/install_reboot.030701153730.11164

                        End of Installation


Exiting Sun Management Center installation.

#
```

7. **When the installation is complete, you can delete the downloaded file from the temporary directory you created at Step 3, then delete the directory itself.**

Creation and Installation of an Agent Update Image

The add-on for Sun Fire, Sun Blade and Netra Systems supports the agent update feature introduced in Sun Management Center 3.5.

See "Creating Agent Installation and Update Images" in Chapter 6 of the *Sun Management Center 3.5 Installation and Configuration Guide* (part no. 816-2678) for instructions on how to create an agent update image.

To create an agent update image containing the add-on for Sun Fire, Sun Blade and Netra Systems, type the path to the `disk1/image` directory of the add-on when prompted to provide the name of a valid Sun Management Center 3.5 source directory. For example, if you installed the add-on using the instructions in chapter 2 of the *Sun Management Center 3.5 Supplement for Sun Fire, Sun Blade and Netra Systems*, the installation source directory will be:

`/var/tmp/<temp_directory>/disk1/image`

See “Applying Agent Installation, Update, and Patch-Only Images” in chapter 6 of the *Sun Management Center 3.5 Installation and Configuration Guide* for instructions on how to apply the agent update image.

CHAPTER 3

Physical and Logical Properties

The Sun Management Center console presents hardware information for the supported platforms using a common set of tables and fields. This chapter provides a summary of the classes and properties by table.

The chapter contains the following sections:

- "System Properties" on page 30
- "Physical Component Properties" on page 31
- "Logical Device Properties" on page 38
- "Environmental Sensor Properties" on page 43

In the following tables, some fields can be filled with "--" or be blank in the following circumstances:

- The table or field is not currently used.

  For example, for many physical components a serial number is not available and therefore the Serial Number field of the corresponding table will contain "--". This is also the case with other common properties.

- The field normally contains data under certain conditions.

  For example, the Additional Info field contains textual information only when an alarm condition exists.

System Properties

The System Information table contains the top level view of the system hardware.

TABLE 3-1 System Information Table Properties

Property	Comments
Name	Fixed value of System
Machine	CPU architecture (for example Sun4u)
Platform	Platform type
Total Disks	Total of all hard disks managed directly through the platform
Total Memory	Total of all DIMM memory capacity
Total Tape Devices	Total of all tape devices managed directly through the platform
Total Processors	Total number of CPU processors
Hostname	System IP hostname
Timestamp	Date and time that the Agent was started
OS Version	System OS version
OS Revision	OS revision
OBP Version	OBP Version
Module Status	Module Status

Physical Component Properties

The tables in this section represent instances of physical components within the system.

Common Properties

All physical components (apart from the Locations table) share a common set of properties:

- Name
- Location
- Description
- Model Name
- Operational Status
- Additional Information
- Part Number
- Version
- Serial Number
- Manufacturer
- Hot Swappable
- Removable

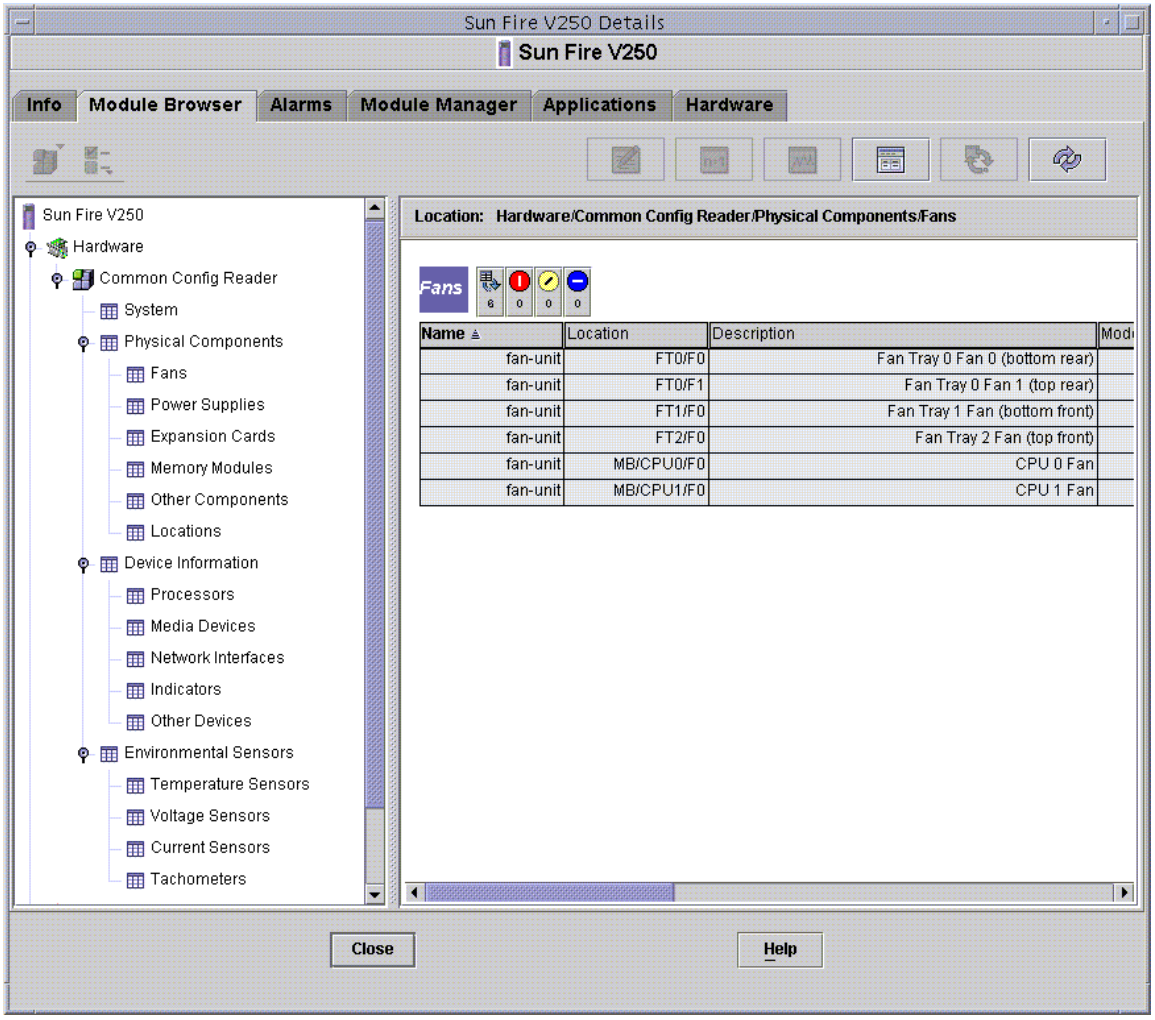

FIGURE 3-1 Physical Components Showing Location and Description Columns (Sun Fire V250 Shown)

The Operational Status property can take the values shown in TABLE 3-2.

TABLE 3-2 Operational Status Values

SunMC Property	Comments
OK	The component is operating normally.
Error	The component has a detected error.
Degraded	The component is providing service, but operating in a degraded state.
Unknown	The current operational status is unknown.
Failure Predicted	The component is functioning correctly but a failure in the near future is predicted.
Starting	The component is starting up but is not yet online.
Stopping	The component is shutting down.
Service	The component is being configured, maintained, cleaned, or otherwise administered.
Stressed	The component in operating but needs attention. Examples of stressed states include `overloaded`, `overheated` and so forth.
Non Recoverable	A non recoverable error has occurred.
No Contact	The current instance of the monitoring system has knowledge of this component but has never been able to establish communication with it.
Lost Comms	The component is known to exist and has been contacted successfully in the past, but is currently unreachable.
Stopped	The component is known to exist and has not failed, but is not operational and is unable to provide service to users. That is, the component has been purposely made non operational.

Fans

TABLE 3-3 Fan Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Model Name	Sun Microsystems model name
Operational Status	Current component state
Additional Info	Supporting textual information for the current Operational Status
Part Number	Sun Microsystems or other part number
Version	Part version number
Serial Number	Part serial number
Manufacturer	Vendor name
HotSwappable	Boolean: specifies in the component is hot swappable*
Removable	Boolean: specifies if the component is removable†

* A component is hot swappable if it can be replaced without shutting down the system

† A component is removable when the component itself is removable, rather than any containing removable group. For example, a fan in a fan tray may not individually be removable, although the fan tray itself may be removable. All Field Replaceable Units (FRUs) are Removable.

Power Supplies

TABLE 3-4 Power Supply Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Model Name	Sun Microsystems model
Operational Status	Current component status
Additional Info	Supporting textual information for the current Operational Status
Part Number	Sun Microsystems or other part number
Version	Part version number

TABLE 3-4 Power Supply Table Properties *(Continued)*

SunMC Property	Comments
Serial Number	Part serial number
Manufacturer	Vendor name
HotSwappable	Boolean: specifies in the component is hot swappable
Removable	Boolean: specifies if the component is removable

Expansion Cards

This table identifies other expansion cards that have been attached to the system.

TABLE 3-5 Expansion Card Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Model Name	Sun Microsystems model
Operational Status	Current component status
Additional Info	Supporting textual information for the current Operational Status
Part Number	Sun Microsystems or other part number
Version	Part version number
Serial Number	Part serial number
Manufacturer	Vendor name
HotSwappable	Boolean: specifies in the component is hot swappable
Removable	Boolean: specifies if the component is removable
Bus Type	Identifies card as PCI, cPCI, SCSI and so forth

The Expansion Card table contains rows corresponding to PCI cards that are installed in your system. The hardware platform module can present a textual description of the card together with the SunStore optional component code and Sun Microsystems part number in the *Description*, *Model Name* and *Part Number* fields, respectively.

Appendix A contains a list of cards for which this information is currently available. Additional cards will be added in subsequent updates of the software as they become available.

Cards for which the add-on software is not configured to provide this information, display the text "--" in the *Description, Model Name* and *Part Number* fields.

Memory Modules

This table identifies physical memory components such as DIMMs

TABLE 3-6 Memory Modules Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Model Name	Sun Microsystems model
Operational Status	Current component status
Additional Info	Supporting textual information for the current Operational Status
Part Number	Sun Microsystems or other part number
Version	Part version number
Serial Number	Part serial number
Manufacturer	Vendor name
HotSwappable	Boolean: specifies in the component is hot swappable
Removable	Boolean: specifies if the component is removable
Size	DIMM size
Blank Label	The physical label associated with this component*
ECC Error Count	The number of ECC error counts recorded for this component

* This string relates to the physical labeling of the memory location rather than the Solaris logical bank numbering.

Other Physical Components

This table is used for all physical components other than those already listed.

TABLE 3-7 Other Physical Components Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Model Name	Sun Microsystems model
Operational Status	Current component status
Additional Info	Supporting textual information for the current Operational Status
Part Number	Sun Microsystems or other part number
Version	Part version number
Serial Number	Part serial number
Manufacturer	Vendor name
HotSwappable	Boolean: specifies in the component is hot swappable
Removable	Boolean: specifies if the component is removable

Locations

Locations represent slots into which components can be (hot) plugged.

TABLE 3-8 Other Physical Components Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Location Type	Specifies the type of component occupying the location
Occupancy	Permitted values are `unknown`, `occupied` or `empty`

Logical Device Properties

Devices represent the logical devices. For example, a CPU module could contain one or more processors, hence the CPU module would be represented as a *physical* component, whereas the processors within it would be represented here as *logical* devices. The following tables enumerate the logical devices included in the common model.

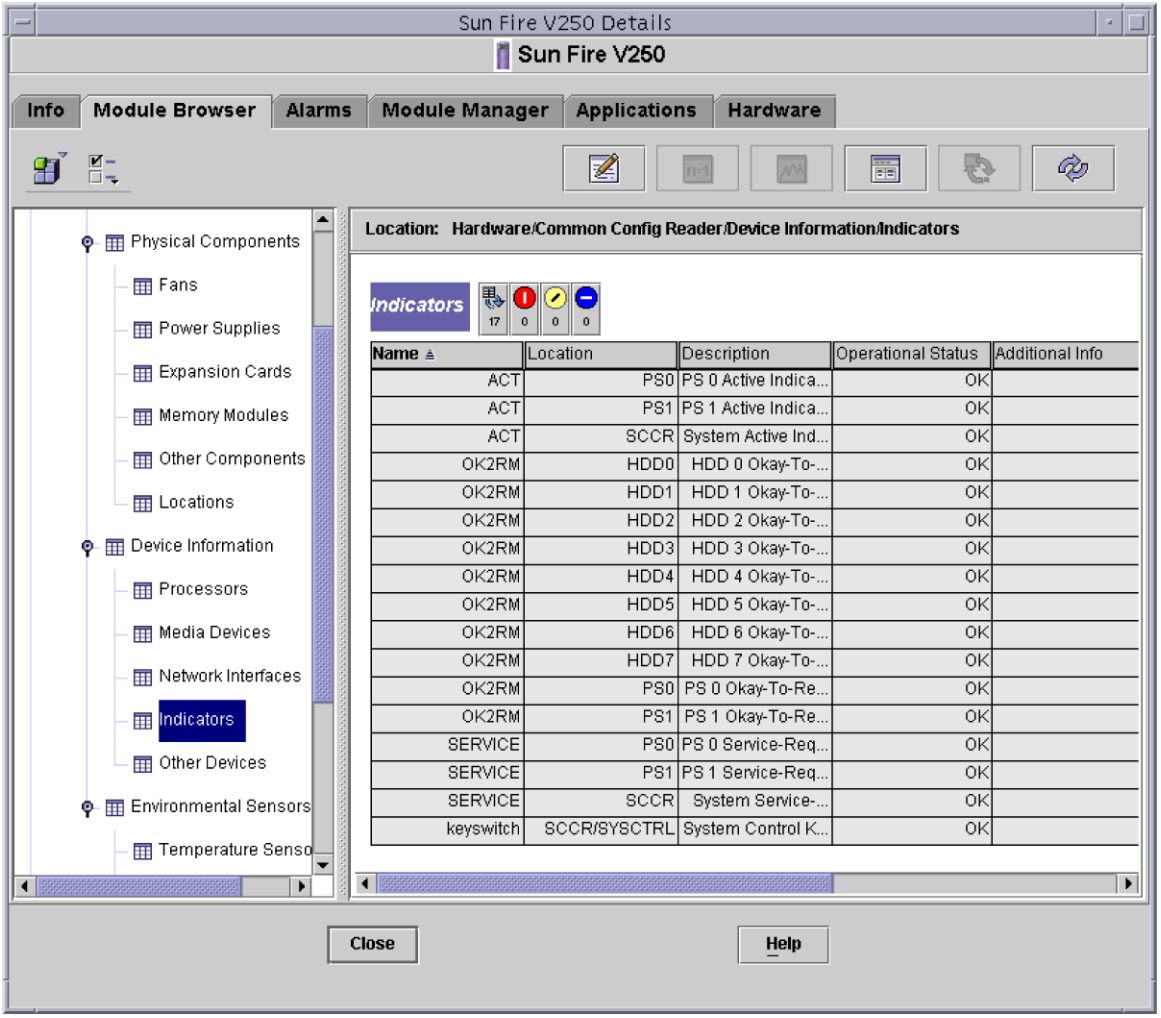

FIGURE 3-2 Part of the Logical Device Table Showing Indicators (Sun Fire V250 Shown)

Logical devices introduce an *Availability* property. The *Availability* values are:

- Other
- Unknown
- Running/Full Power
- Warning
- In Test
- Not Applicable
- Power Off
- Off Line
- Off Duty
- Degraded
- Not Installed
- Install Error
- Power Save - Unknown
- Power Save - Low Power Mode
- Power Save - Standby
- Power Cycle
- Power Save - Warning
- Paused
- Not Ready
- Not Configured
- Quiesced

Also introduced with logical devices is the *Redundancy Status* property. For devices that are part of a redundancy group, this indicates the current rôle played by this component. For example, a service processor may be operating in an active/standby pairing with another service processor. Similarly a network interface may be the primary or secondary member of a redundant network pair. Valid values for Redundancy Status are:

- Not Applicable
- Unknown
- Active
- Standby
- Primary
- Secondary
- Other

Processors

TABLE 3-9 Processor Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal device description
Operational Status	Current device status
Additional Info	Supporting textual information for the current Operational Status
Availability	The device availability
Redundancy Status	Device status as part of a redundancy group
Device ID	Numeric ID as used by various Solaris commands
Clock Frequency	Processor clock speed
Family	Processor family, for example, `sparcv9`
Data Cache Size	Primary data cache size
Instruction Cache Size	Primary instruction cache size
Level 2 Cache Size	Size of level 2 cache

Media Devices

This table represents all media devices: disks, CD-ROM, DVD-ROM, tapes, and so forth.

TABLE 3-10 Media Device Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal device description
Operational Status	Current device status
Additional Info	Supporting textual information for the current Operational Status
Availability	The device availability
Redundancy Status	Device status as part of a redundancy group

TABLE 3-10 Media Device Table Properties *(Continued)*

SunMC Property	Comments
Physical Path	Media access device path under `/dev/rdsk` or `/dev/rmt`
Type	Disk, CD-ROM, DVD-ROM, Tape
Hard Error Count	The count of *hard* device errors, as available through `iostat -e`
Soft Error Count	As available through `iostat -e`
Transport Error Count	As available through `iostat -e`

Network Interfaces

TABLE 3-11 Network Interface Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal device description
Operational Status	Current device status
Additional Info	Supporting textual information for the current Operational Status
Availability	The device availability (`offline`, `online`)
Redundancy Status	Device status as part of a redundancy group
Device ID	Network device path under `/devices`
Speed	Speed in bps
Permanent Address	MAC address
Network Address	IP address
Symbolic Name	Symbolic network or hostname associated with this IP address
Input Error Count	Input error count as available through `kstat`
Output Error Count	Output error count as available through `kstat`

Indicators

TABLE 3-12 Indicator Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Operational Status	Current device status
Additional Info	Supporting textual information for the current Operational Status
Indicator State	`STEADY`, `OFF`, `ALTERNATING` or `UNKNOWN`
Expected State	`STEADY`, `OFF`, or `ALTERNATING`
Color	Indicator color

Other Devices

This table is used for all logical devices other than those already listed

TABLE 3-13 Other Device Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Operational Status	Current component status
Additional Info	Supporting textual information for the current Operational Status
Availability	The device availability (`offline`, `online`)
Redundancy Status	Device status as part of a redundancy group
Device ID	Device path under `/devices`

Environmental Sensor Properties

Environmental sensors are modelled for fan speed (tachometer), temperature, current and voltage. Two types of sensor are supported:

- Numeric
- Non numeric

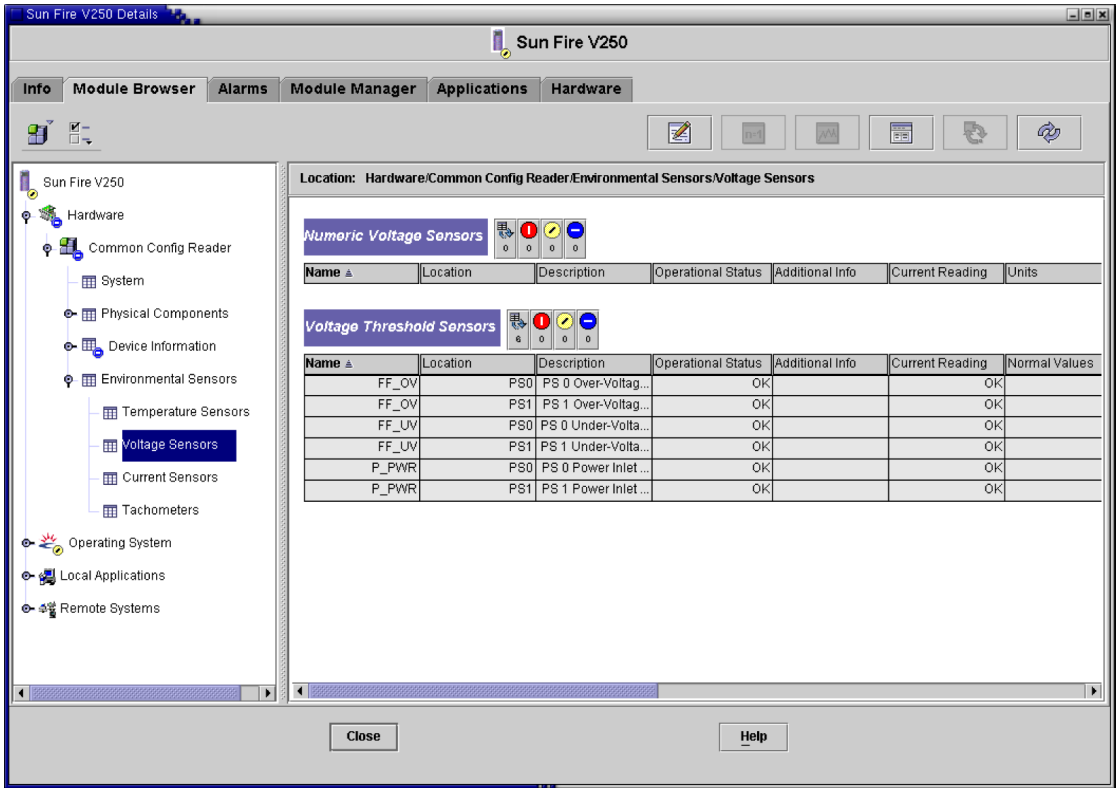

FIGURE 3-3 Numeric Voltage Sensors and Voltage Threshold Sensors Tables (Sun Fire V250 Shown)

Numeric Sensors

TABLE 3-14 shows the properties for numeric sensors.

TABLE 3-14 Numeric Sensor Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Operational Status	Current component status
Additional Info	Supporting information for Operational Status
Current Reading	Current sensor reading
Units	Reading units
Lower Non Critical Threshold	Lower first warning threshold
Upper Non Critical Threshold	Upper first warning threshold
Lower Critical Threshold	Lower second warning threshold
Upper Critical Threshold	Upper second warning threshold
Lower Fatal Threshold	Lower final warning threshold
Upper Fatal Threshold	Upper final warning threshold

Non-Numeric Sensors

TABLE 3-15 shows the properties for non-numeric sensors.

TABLE 3-15 Non-Numeric Sensor Table Properties

SunMC Property	Comments
Name	Unique name
Location	Path to the device location
Description	Informal component description
Operational Status	Current component status
Additional Info	Supporting information for Operational Status
Current Reading	Current sensor reading
Normal Values	A list of values considered *normal* for this sensor

CHAPTER 4

Alarms

This chapter summarizes the Alarm Rules that are specific to the supported platform components.

The chapter contains the following sections:

- "Overview" on page 45
- "Operational State Rule" on page 46
- "Availability Rule" on page 47
- "Non-Numeric Sensor Rule" on page 47
- "Numeric Sensor Threshold Rule" on page 48
- "Occupancy Rule" on page 48
- "Rate or Count Rule" on page 49
- "Module Status Rule" on page 49
- "Indicator Status Rule" on page 50

Overview

The hardware common config reader contains a number of alarm rules used by the system to determine the state of various components. Each alarm rule instance is applied to a specific property of a table in the config reader. A single rule can be applied to multiple properties and tables.

An alarm rule takes input from three main sources:

- Object properties within the config reader
- User-specifiable values
- Data stored by the rule itself

All three of these sources can be modified on a per-object and property basis. You can change user-specifiable values, while the rule programmer specifies which object properties and stored data are used.

You can assign actions to rule states and state transitions through the Sun Management Center console (see chapter 9 and chapter 12 of the *Sun Management 3.5 Center Software User's Guide*).

Operational State Rule

This rule is applied to any node that contains an *operational status* property. It will alarm if the operational state is anything other than `OK`, `Starting` or `Stopping` (all of which are deemed to be *normal* operational states). The error string incorporates the value of the *Additional Information* property to provide additional information to the end user.

TABLE 4-1 Operation Status Rule

Rule Property	Details
Applicable tables	Any that contain *operational status* property
Properties read	*Operational Status*, *Additional Information*
Alarm trigger	*Operational Status* is not `OK`, `Starting` or `Stopping`
Editable parameters	*Alarm Severity* for each of the following four groups of *Operational Status* values: • `Error`, `Non-Recoverable` • `Degraded`, `Predicted Failure`, `Stressed` • `Unknown`, `Lost Comms`, `No Contact` • `Service`, `Stopped`

Availability Rule

This rule is applied to any table with an *availability* property.

TABLE 4-2 Availability Rule

Rule Property	Details
Applicable tables	Any that contain the *availability* property
Properties read	*Availability*
Alarm trigger	*Availability* is not `Running`, or `Not Applicable`
Editable parameters	*Alarm Severity* for each of the following three groups of *Availability* values: • `Degraded`, `Warning`, `Power Save - Warning`, `Install Error` • `Not Configured`, `Not Installed`, `Not Ready` • `In Test`, `Off Duty`, `Off Line`, `Paused`, `Quiesced`, `Power Cycle`, `Power Off`, `Power Save - Low Power Mode`, `Power Save - Standby`, `Power Save - Unknown`

Non-Numeric Sensor Rule

This rule is applied to any non-numeric sensor. It uses the *Current Reading* in the error message.

TABLE 4-3 Non Numeric Sensor Rule

Rule Property	Details
Applicable tables	Non Numeric Temperature, Voltage and Current sensors
Properties read	*Current Value*, Normal Values
Alarm trigger	*Current Value* is not one of the Normal Values
Editable parameters	*Alarm Severity*

Numeric Sensor Threshold Rule

This rule is applied to any numeric sensor. It reads the various thresholds presented in the sensor, and generates an alarm if the current value is outside the specified ranges.

TABLE 4-4 Numeric Sensor Threshold Rule

Rule Property	Details
Applicable tables	Numeric Temperature, Voltage and Current Sensors, Tachometers
Properties read	*Current Value*, Threshold Values
Alarm trigger	*Current Value* is outside Threshold ranges
Editable parameters	*Alarm Severity* for Non-Critical, Critical and Fatal thresholds

Occupancy Rule

This rule generates an alarm when the occupancy of a location changes.

TABLE 4-5 Occupancy Rule

Rule Property	Details
Applicable tables	Location
Properties read	*Name*, *Occupancy*
Alarm trigger	The occupancy changes
Editable parameters	*Alarm Severity*

Note – You can clear this alarm by acknowledging the alarm in the Sun Management Center console. All other alarms are cleared by a change of state.

Rate or Count Rule

This rule enables you to specify a rate or count for any integer property. If the rate or count exceeds the specified values, an alarm is generated. Apply the rule to all properties that count a number of errors, so that you can generate such alarms as required.

TABLE 4-6 Occupancy Rule

Rule Property	Details
Applicable tables	Any table with an integer property
Properties read	*Error Counts* and similar integer properties
Alarm trigger	*Rate* or *Count* exceeds user-specified value
Editable parameters	*Rate*, *Count* and *Alarm Severity*

Module Status Rule

This rule only applies to the *Module Status* property in the system object. It is primarily used to report module data acquisition problems.

TABLE 4-7 Module Status Rule

Rule Property	Details
Applicable tables	System
Properties read	*Module Status*, *Module Status Severity*
Alarm trigger	*Status* is not `OK`
Editable parameters	An Alarm Severity level can be assigned to each of the *Module Status Severity* levels of `Information`, `Warning` and `Error`

Indicator Status Rule

This rule applies only to the *Indicator Alarm Status* property in the Indicator object.

TABLE 4-8 Indicator Status Rule

Rule Property	Details
Applicable tables	Indicator
Properties read	*Indicator State, Expected State*
Alarm trigger	*State* does not equal *Expected State*
Editable parameters	*Alarm Severity*

APPENDIX **A**

PCI Cards

The Expansion Card table contains rows corresponding to PCI cards that are installed in your system. The hardware platform module can present a textual description of the card together with the SunStore optional component code and Sun Microsystems part number in the *Description*, *Model Name* and *Part Number* fields, respectively.

Cards for which the add-on software is not configured to provide this information, display the text "`--`" in the *Description*, *Model Name* and *Part Number* fields.

TABLE A-1 lists the cards for which the textual description, SunStore optional component code and Sun Microsystems part number are available. Refer to the documentation supplied with your platform for details of which of these PCI cards are available for your system.

TABLE A-1 Supported PCI Cards

PCI Card	Sun Part Number	Optional Component Number
Dual-Channel Differential UltraSCSI PCI Host Adapter	375-0006	X6541A
Dual-Channel Ultra3 Differential SCSI PCI Host Adapter	375-3057	X6758A
Sun High-Speed Serial Interface PCI Adapter 2.0	370-2728	X1155A
Sun Serial Asynchronous Interface PCI Adapter 3.0	375-0100	X2156A
Sun FastEthernet 10/100BaseT PCI Adapter 2.0	501-5019	X1033A
Sun Quad FastEthernet PCI Card (QFE)	501-5406	X1034A
Sun GigaSwift Ethernet UTP PCI Adapter	501-5902	X1150A
Sun GigaSwift Ethernet MMF PCI Adapter	501-5524	X1151A
SunATM 155/MFiber PCI Adapter 4.0	501-3028	X1157A
SunATM 155/UTP PCI Adapter 4.0	501-3027	X1158A

TABLE A-1 Supported PCI Cards *(Continued)*

PCI Card	Sun Part Number	Optional Component Number
SunATM 622/MFiber PCI Adapter 4.0	501-3029	X1159A
Single Fibre Channel PCI Network Adapter	375-3019	X6799A
Dual Fibre Channel PCI Network Adapter	375-3030	X6727A
SunSwift 10/100BaseT Fast/Wide UltraSCSI PCI Adapter	501-5656	X1032A
Dual Fast Ethernet + Dual SCSI PCI Adapter	501-5727	X2222A
PGX-128 Colour Graphics Card	375-3126	X3769A
Dual Fibre Channel 2 Gb PCI Network Adapter	375-3108	X6768A
SunPCi II Pro Co-Processor Card	375-3051	X2132A
Sun PCi III Pro Co-Processor Card	605-4654	X2134A
Sun Crypto Accelerator 1000 Card	375-3089	X6762A

APPENDIX **B**

Platform-Specific Information

TABLE B-1 lists the common packages that you install on the monitored system and the Sun Management Center server.

The following sections contain platform-specific information about the software packages for this product and the related system documentation for each supported platform:

- "Sun Fire V210, V240, and Netra 240 Servers" on page 54
- "Netra 440 Servers" on page 55
- "Sun Fire V250 Server" on page 55
- "Sun Fire V440 Server" on page 56
- "Sun Blade 1500 and 2500 Workstations" on page 57

Refer to the *Sun Management Center 3.5 Software Installation Guide* for information about general Sun Management Center 3.5 prerequisites, including minimum disk space requirements.

TABLE B-1 Common Hardware Platform Module Packages

Package	Description	Layer
SUNWescci	SunMC Common Config Reader Module Initialization	Server and agent
SUNWesccs	SunMC Common Config Reader Module Server Core Component	Server
SUNWescca	SunMC Common Config Reader Module Agent Core Component	Agent
SUNWescda	SunMC Common Config Reader Module DAQ Component	Agent
SUNWescdl	SunMC Common Config Reader DAQ Library	Agent

Sun Fire V210, V240, and Netra 240 Servers

TABLE B-2 contains a list of the server and agent components for the Sun Fire V210, V240 and Netra 240 servers.

TABLE B-2 Platform-Specific Packages for Sun Fire V210, V240, and Netra 240

Package	Description	Layer
SUNWescps	SunMC Common Config Reader Module Sun Fire V210/V240 and Netra 240 Server Component	Server
SUNWescpa	SunMC Common Config Reader Module Sun Fire V210/V240 and Netra 240 Agent Component	Agent
SUNWescpl	Common Config Reader Module Sun Fire V210/V240 and Netra 240 platform support	Agent

Related Documentation

For information about Sun Fire V210 and V240 servers, refer to the following documentation:

- *Sun Fire V210 and V240 Servers Installation Guide* (part no. 816-4825)
- *Sun Fire V210 and V240 Servers Administration Guide* (part no. 816-4826)

For information about the Netra 240 server, refer to the following documentation:

- *Netra 240 Server Installation Guide* (part no. 817-2698)
- *Netra 240 Server System Administration Guide* (part no. 817-2700)

Netra 440 Servers

TABLE B-3 contains a list of the server and agent components for the Netra 440 servers.

TABLE B-3 Platform-Specific Packages Netra 440

Package	Description	Layer
SUNWescns	SunMC Common Config Reader Module Server Netra 440 Platform Component	Server
SUNWescna	SunMC Common Config Reader Module Netra 440 Agent Component	Agent
SUNWescnl	Common Config Reader Netra 440 Platform Support	Agent

Related Documentation

For information about the Netra 440 server, refer to the following documentation:

- *Netra 440 Server Installation Guide* (part no. 817-3882)
- *Netra 440 Server System Administration Guide* (part no. 817-3884)

Sun Fire V250 Server

TABLE B-4 contains a list of the server and agent components for the Sun Fire V250.

TABLE B-4 Platform-Specific Packages for Sun Fire V250

Package	Description	Layer
SUNWescfs	SunMC Common Config Reader Module Sun Fire V250 Server Component	Server
SUNWescfa	SunMC Common Config Reader Module Sun Fire V250 Agent Component	Agent
SUNWescfl	Common Config Reader Module Sun Fire V250 platform support	Agent

Related Documentation

For information about the Sun Fire V250 server, refer to the following documentation:

- *Sun Fire V250 Server Installation Guide* (part no. 817-0899)
- *Sun Fire V250 Server Administration Guide* (part no. 817-0900)

Sun Fire V440 Server

TABLE B-5 contains a list of the server and agent components for the Sun Fire V440.

TABLE B-5 Platform-Specific Packages for Sun Fire V440

Package	Description	Layer
`SUNWeschs`	SunMC Common Config Reader Module Sun Fire V440 Server Component	Server
`SUNWescha`	SunMC Common Config Reader Module Sun Fire V440 Agent Component	Agent
`SUNWeschl`	Common Config Reader Module Sun Fire V440 platform support	Agent

Related Documentation

For information about the Sun Fire V440 server, refer to the following documentation:

- *Sun Fire V440 Server Installation Guide* (part no. 816-7727)
- *Sun Fire V440 Server Administration Guide* (part no. 816-7728)
- *Sun Fire V440 Server Diagnostics and Troubleshooting Guide* (part no. 816-7730)

Sun Blade 1500 and 2500 Workstations

TABLE B-6 contains a list of the server and agent components for Sun Blade 1500 and 2500.

TABLE B-6 Platform-Specific Packages for Sun Blade 1500 and 2500

Package	Description
SUNWescws	SunMC Common Config Reader Module Sun Blade 1500/2500 Server Platform Component
SUNWescwa	SunMC Common Config Reader Module Sun Blade 1500/2500 Agent Platform Component

Related Documentation

For information about Sun Blade 1500 and 2500 workstations, refer to the following documentation:

- *Sun Blade 1500 Getting Started Guide* (part no. 816-7565)
- *Sun Blade 1500 Service, Diagnostics and Troubleshooting Manual* (part no. 816-7564)
- *Sun Blade 2500 Getting Started Guide* (part no. 816-1005)
- *Sun Blade 2500 Service, Diagnostics and Troubleshooting Manual* (part no. 816-0996)

Index

A

agent
  stopping, 22
Agent Update, 27
alarm rule, 10
alarm rules, 45
Availability property values, 39

B

browser, 4

C

command
  `es-inst`, 22, 25
  `es-setup`, 25
  `es-stop`, 22
common properties, 31

D

detail viewer, 3
Devices table, 40
documentation
  Netra 240, 54, 55
  Sun Blade 1500 and 2500, 57
  Sun Fire V210 and V240, 54
  Sun Fire V250, 56
  Sun Fire V440, 56

E

environmental sensors, 6
es-guiinst, 15
es-inst, 15
`es-inst` command, 22, 25
`es-setup` command, 25
`es-stop` command, 22
Expansion Card table, 35

F

Fan table, 34
field replaceable units, 34

G

graphical user interface, 3
GUI install feature, 15
GUI setup, 15

H

hardware, 30

I

Indicators table, 42
installation process
  core packages, 15
  GUI install feature, 15
  GUI setup, 15
installing the software, 15, 22, 25

L

Locations table, 37
logical components table, 7
logical devices, 6, 38
  properties, 38

logical view, 6

M

Media Devices table, 40
Memory Modules table, 36

N

Network Interfaces table, 41
Numeric Sensors table, 44

O

operational status, 33
Other Devices table, 42
Other Physical Components table, 37

P

packages
  updating core packages, 15
physical components, 5, 38
physical components table, 7
physical containment hierarchy, 6
physical view, 7
Power Supplies table, 34
properties, 45
  common, 5, 31
  devices, 40
  environmental sensors, 43
  expansion cards, 35
  fans, 34
  indicators, 42
  locations, 37
  media devices, 40
  memory modules, 36
  network interfaces, 41
  numeric sensors, 44
  other devices, 42
  other physical components, 37
  physical components, 31
  power supplies, 34
  system information, 30

R

Redundancy Status property values, 39
removing the software, 18
rules
  availability, 47
  count, 49
  indicator status, 50
  module status, 49
  non-numeric sensor, 47
  numeric sensor threshold, 48
  occupancy, 48
  operational state, 46
  rate, 49

S

setting up the software, 22, 25
Simple Network Management Protocol, 1
software
  common add-on packages, 53
  download web site, 13
  installation, 15, 22, 25
  platform-specific packages, 54, 55, 56, 57
  removal, 18
  requirements, 12
  setting up, 22, 25
stopping the agent, 22
Sun Management Center
  core components, 11
  GUI, 3
  web site, 11
Sun Management Center 3.0 core components, 11
supported platforms, 2
System Information table, 30
system object, 6

T

tables, 4
  Devices, 40
  Expansion Card, 35
  Fans, 34
  Indicators, 42
  Locations, 37
  Media Devices, 40
  Memory Modules, 36
  Network Interfaces, 41
  Numeric Sensors, 44
  Other Devices, 42
  Other Physical Components, 37
  Power Supplies, 34
  System Information, 30