Sun™ Management Center 3.6.1 Version 2 Add-On Software Supplement

Sun SPARC® Enterprise M4000/M5000/M8000/M9000 Servers

Sun Microsystems, Inc.
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Preface

The *Sun™ Management Center Add-On Software Supplement: Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers* provides instructions on how to install, configure, and use Sun Management Center 3.6.1 Version 2 software on SPARC Enterprise M*x*000 servers. The document is written for experienced system administrators.

Before You Read This Document

To fully use the information in this document, you must have thorough knowledge of the topics discussed in these documents:

- *Sun Management Center Installation and Configuration Guide*
- *Sun Management Center User's Guide*
- *Sun SPARC Enterprise M4000/M5000/M8000/M9000 Administration Guide*
- *Sun SPARC Enterprise M4000/M5000/M8000/M9000 User's Guide*

How This Document Is Organized

Chapter 1 provides an introduction to Sun Management Center add-on software for Sun SPARC Enterprise M*x*000 servers.

Chapter 2 includes procedures for installation, set-up, and configuration of the add-on software. The `setsunmc` and `showsunmc` man pages, which are specific to the add-on software for Sun SPARC® Enterprise M*x*000 servers, are included for reference.

Chapter 3 provides information about platform administration, including common active management tasks and a reference for platform administration module tables.

Chapter 4 provides information about domain administration, including a reference for domain administration module tables.

Chapter 5 describes how to perform dynamic reconfiguration (DR) operations from a Sun SPARC Enterprise Mx000 server domain using the Sun Management Center console and the domain dynamic reconfiguration module.

Chapter 6 summarizes the Sun Management Center add-on software alarm rules specific to SPARC Enterprise M*x*000 servers.

Using UNIX Commands

This document might not contain information about 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.

About the Examples Used in This Book

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

For example, in the main console window, you can choose from four possible ways to open a Details view of Sun SPARC Enterprise M*x*000 servers:

- Single-click the Sun SPARC Enterprise M*x*000 server icon in the hierarchy view (left side of the window), then click the Tools menu in the top bar, and choose Details.
- Do the same as above in the topology view (right side of the window).
- Double-click the Sun SPARC Enterprise M*x*000 server icon in the hierarchy view.
- Double-click the Sun SPARC Enterprise M*x*000 server icon in the topology view.

Similarly, there are multiple ways to expand (or uncompress) an icon. 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.

Related Documentation

Application	Title
Late-breaking news	*Sun Management Center Add-On Software Release Notes: Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers* *Sun SPARC Enterprise Mx000 Servers Product Notes* *Sun Management Center Release Notes*
Installation	*Sun Management Center Installation and Configuration Guide*
Using Sun Management Center software	*Sun Management Center User's Guide*
Using and administering Sun SPARC Enterprise M4000/M5000/ M8000/M9000 servers	*Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers Administration Guide* *Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers User's Guide* *Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers XSCF Reference Manual*

Documentation, Support, and Training

Sun Function	URL
Documentation	http://www.sun.com/documentation/
Support	http://www.sun.com/support/
Training	http://www.sun.com/training/

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Sun Management Center 3.6.1 Version 2 Add-On Software Supplement,
part number 819-6542-10

CHAPTER 1

Introduction

This chapter introduces Sun™ Management Center software platform and domain administration on Sun SPARC® Enterprise M4000/M5000/M8000/M9000 servers.

About This Sun Management Center Add-On Software

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

The *Sun Management Center 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.

The add-on software for Sun SPARC Enterprise M*x*000 servers adapts the core Sun Management Center software to function with Sun SPARC Enterprise M*x*000 servers.

Sun Management Center 3.6.1 Version 2 add-on software introduces support for the following systems:

- Sun SPARC Enterprise M4000/M5000 servers (midrange servers)
- Sun SPARC Enterprise M8000/M9000 servers (high-end servers)

This add-on software for Sun SPARC Enterprise M*x*000 servers provides the following features:

- Hardware monitoring
- Power management

- Domain management
- Dynamic reconfiguration
- FRU replacement (system board)

Sun SPARC Enterprise M*x*000 servers are divided into hardware domains, with each domain running a separate instance of the operating system. Depending on the capability and the number of hardware resources, Sun SPARC Enterprise M*x*000 servers can support up to 24 domains. (The minimum is one domain.) Because domains are used, the add-on software for Sun SPARC Enterprise M*x*000 servers has two modes of operation (FIGURE 1-1):

- **Domain administrators** can access Solaris Operating System domain views in one of these two ways:
  - Through the platform agent running on a Sun SPARC Enterprise M*x*000 server Service Processor
  - Through the agent running on a Sun SPARC Enterprise M*x*000 server domain
- **Platform administrators** can access platform views from the Service Processor console through the Sun Management Center platform agent.

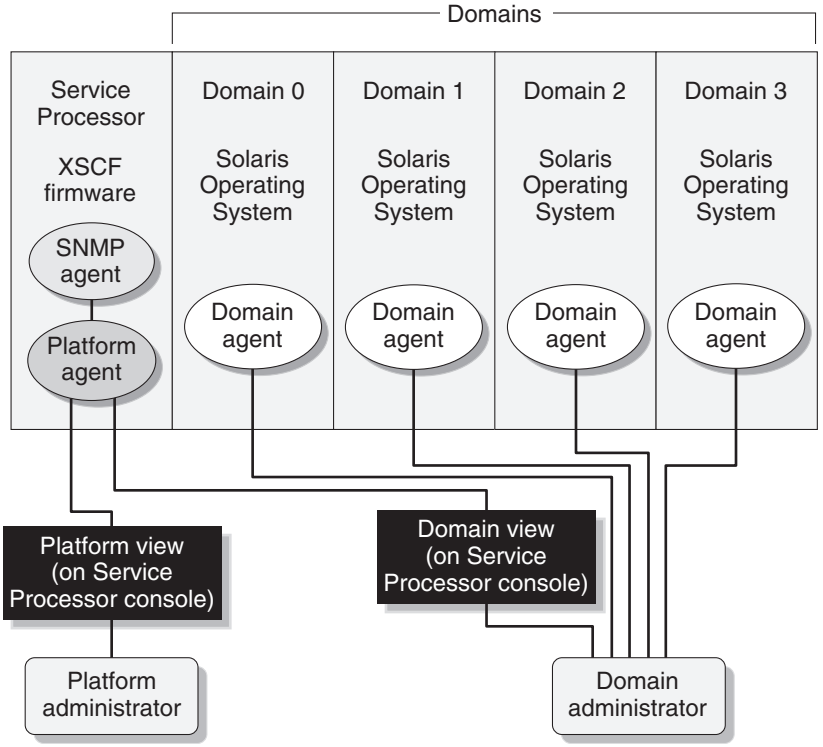

FIGURE 1-1 Platform and Domain Administration Views

After the add-on software has been installed on a host machine (workstation or server), you can run Sun Management Center software on that host machine to access the Service Processors in Sun SPARC Enterprise M*x*000 servers, as shown in FIGURE 1-2.

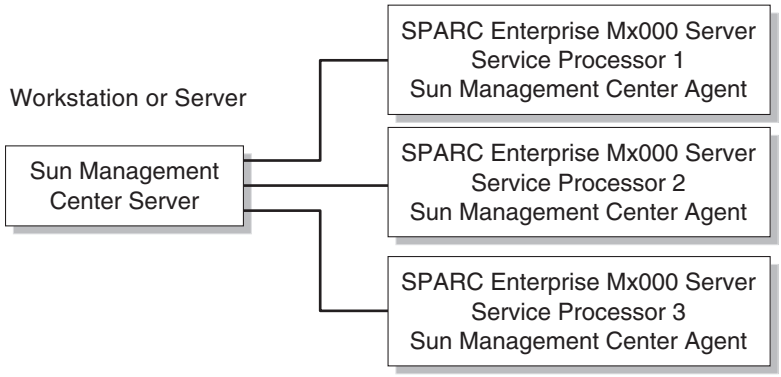

FIGURE 1-2 Platform Agents Provide Access to SPARC Enterprise Server Service Processors

To Identify Platforms and Hardware Domains

The platform and hardware domain Details windows are very similar when they are first displayed. By default, both windows open to the Module Browser tab.

▼ To Identify a Platform Details Window

- **To identify a *platform* Details window, look for a platform icon and *five* tabs:**
  - Info
  - Module Browser
  - Alarms
  - Module Manager
  - Hardware

▼ To Identify a Hardware Domain Details Window

- **To identify a *hardware domain* Details window, look for a hardware domain icon and *six* tabs.**

  The additional tab is the *Applications* tab:

  - Info
  - Module Browser
  - Alarms
  - Module Manager
  - Applications
  - Hardware

Reference: Terms Used in This Document

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

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

Dynamic reconfiguration – The add-on software for Sun SPARC Enterprise M*x*000 servers provides a graphical user interface to facilitate dynamic reconfiguration operations. On the Solaris Operating System, the dynamic reconfiguration feature provides the ability to safely remove compact PCI I/O cards into a system while the operating system is running. On the Service Processor, dynamic reconfiguration provides the ability to reconfigure system resources and safely replace system boards.

Platform – An alternative term for a complete server system. A Sun SPARC Enterprise M5000 server is an example of a platform, as described in this book.

Domain or ***hardware domain*** – Within a Sun SPARC Enterprise M*x*000 server platform, a domain can consist of a logically independent aggregation of system resources within a partition, with each domain running a separate copy of the operating system. This type of domain consists of system boards and other devices, as opposed to an administrative domain, which can consist of multiple hardware domains and entire platforms. For clarity, this type of domain is referred to as a *hardware domain* in this book.

Reference: Modules

Hardware configuration information, process monitoring, and management operations for the Sun SPARC Enterprise M*x*000 servers are provided by the modules listed in TABLE 1-1:

TABLE 1-1 Sun SPARC Enterprise M*x*000 Server Modules

Agent Modules	Description
Plat Admin Module SPARC Enterprise M*x*000	Platform administration module. Provides monitoring and active management capability for the Sun SPARC Enterprise M*x*000 server. Resides on the Service Processor.
Domain Config Reader SPARC Enterprise M*x*000	Domain administration module. Provides monitoring for domains on Sun SPARC Enterprise M*x*000 servers.
Domain DR SPARC Enterprise M*x*000	Domain Dynamic Reconfiguration (DR) module. Enables an administrator to perform dynamic reconfiguration of boards on one domain at a time.

CHAPTER 2

Installation and Setup

This chapter describes how to install, set up, uninstall, reinstall, and reconfigure the Sun Management Center software for the Sun SPARC Enterprise M*x*000 servers using Sun Management Center Wizards. It includes the following sections:

General information:

Procedures:

Reference:

- "Reference: Network Port Configuration" on page 37
- "Reference: Administrative Groups for Access Privileges" on page 38

You can also install and set up the software using a command-line interface (CLI) using the `es-inst` and `es-setup` commands. Refer to the *Sun Management Center Installation and Configuration Guide* for information about using the CLI for installation.

About Installing the Add-On Software

Sun Management Center software is provided in three ways:

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

Support for Sun SPARC Enterprise M*x*000 servers requires the Sun Management Center core packages and the add-on software for Sun SPARC Enterprise M*x*000 servers. The *Sun Management Center Installation and Configuration Guide* describes basic information about installing, setting up, starting, and stopping the Sun Management Center software. This chapter describes the processes specifically related to Sun SPARC Enterprise M*x*000 servers.

Sun Management Center software and the add-on software for specific hardware platforms must generally be installed in three places:

- On the Sun Management Center server host
- On the Sun Management Center console host
- On the hardware platforms to be monitored, in this case the Sun SPARC Enterprise M*x*000 servers

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Note – The Service Processor of the Sun SPARC Enterprise M*x*000 servers comes with the Sun Management Center software and platform-specific add-on software preinstalled. You must install the software only on the server, console, and SPARC Enterprise M*x*000 domain hosts.

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 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 see 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.

About Requirements

For information about general Sun Management Center prerequisites, refer to the *Sun Management Center Installation and Configuration Guide*.

For information about minimum requirements for your current release of this add-on software, refer to the *Sun Management Center Add-On Software Release Notes* for the current release.

About Network Port Configuration

In some cases, this default port configuration conflicts with software already running on your system. Some Sun SPARC Enterprise M*x*000 server domains might have port 161 conflicts because of the presence of legacy agents. During the Sun Management Center software setup process, specify an alternative network port to avoid this conflict. Refer to the *Sun Management Center Installation and Configuration Guide* for further information about solving port conflicts.

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

For information about default network port configuration, refer to "Reference: `setsunmc` and `showsunmc` Man Pages" on page 31 and "Reference: Network Port Configuration" on page 37.

About Service Processor Failover

For the add-on software to support Service Processor failover on high-end servers, you must set up the takeover IP address of the active Service Processor (such as `lan#0`). Refer to the man pages for XSCF commands `setnetwork`(8) and `setroute`(8) for more detailed information.

About Using the Discovery Manager

You can use the Discovery Manager to populate administrative domains automatically. Refer to the chapter "Adding Objects to the Topology Database Using the Discovery Manager" in the *Sun Management Center User's Guide* for detailed information.

When defining and initiating a Discover Objects request for Sun SPARC Enterprise M*x*000 server domains, you must change the default community string for SNMP to `oplsunmc` in the SNMP section of the Preferences tab. Refer to "To Set Preferences for a Discover Objects Request" in the *Sun Management Center User's Guide* for instructions.

To set up the software on the domains, you must also set the SNMPv1 community string to `oplsunmc` when setting up the software on the domains. Refer to "Setting Up the Add-On Software Using the Sun Management Center Setup Wizard" on page 16.

About Procedures for Installation and Setup

With Sun Management Center software, you can install, set up, uninstall, and update the software in several different ways. You must also set up access privileges for users. TABLE 2-1 lists the various methods with a cross-reference to the information in this supplement and the *Sun Management Center Installation and Configuration Guide*.

TABLE 2-1 Installation, Setup, Uninstallation, and Update Procedures

To Perform This Task	Refer to
Install software using the Sun Management Center Installation Wizard	For core software: *Sun Management Center Installation and Configuration Guide* For this add-on software: "Installing the Add-On Software Using the Sun Management Center Installation Wizard" on page 15
Set up software using the Sun Management Center Setup Wizard	For core software: *Sun Management Center Installation and Configuration Guide* For this add-on software: "Setting Up the Add-On Software Using the Sun Management Center Setup Wizard" on page 16
Setting up security access	For core software: *Sun Management Center User's Guide* For this add-on software: "Setting Up Security Access" on page 18
Start software using Wizard	"Starting Components Using `es-guistart`" in Chapter 8 of the *Sun Management Center Installation and Configuration Guide*
Stop software using Wizard	"Stopping Components Using `es-guistop`" in Chapter 8 of the *Sun Management Center Installation and Configuration Guide*
Uninstall software using Wizard	Appendix A of the *Sun Management Center Installation and Configuration Guide*
Install core and add-on software using the CLI	Appendix B of the *Sun Management Center Installation and Configuration Guide*
Set up add-on software using the CLI	Appendix B of the *Sun Management Center Installation and Configuration Guide*
Uninstall software using the CLI	Appendix B of the *Sun Management Center Installation and Configuration Guide* For this add-on software, "Uninstalling Software Using the CLI" on page 26
Start software using the CLI	"Starting Components Using `es-start`" in Chapter 8 of the *Sun Management Center Installation and Configuration Guide* For this add-on software, "Starting Sun Management Center Software Using the CLI" on page 21
Stop software using the CLI	"Stopping Components Using `es-stop`" in Chapter 8 of the *Sun Management Center Installation and Configuration Guide* For this add-on software, "Stopping and Exiting Sun Management Center Software Using the CLI" on page 22

Installation Process Overview

FIGURE 2-1 shows a high-level view of the installation process for the Sun Management server, console, and server domains software. (The software is preinstalled on the Service Processor.)

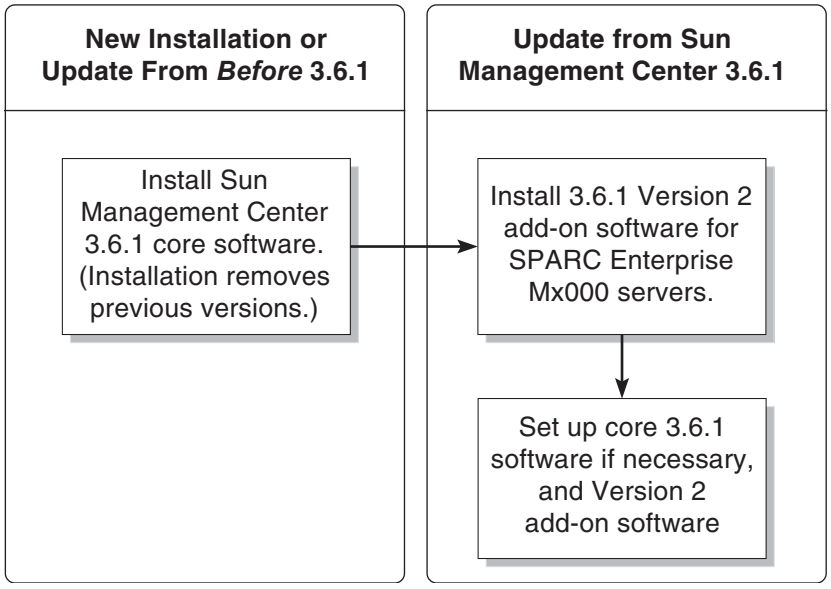

FIGURE 2-1 Installation Process Flow for Sun Management Center Server, Console, and Server Domains

Installing Core Sun Management Center Software

If you have not yet installed the core Sun Management Center 3.6.1 software, you must install it *before* installing this Version 2 add-on software.

Note – The installation process for the core Sun Management Center 3.6.1 software includes uninstallation of previous releases of Sun Management Center software. Refer to the *Sun Management Center Installation and Configuration Guide* for detailed information about upgrading from earlier releases.

▼ To Install Core Sun Management Center 3.6.1 Software

- **Refer to the** *Sun Management Center Installation and Configuration Guide* **for instructions for installing the core software.**

  If you are updating a previous release of Sun Management Center software, read the information about updating the software from your currently installed release, including any add-on software you have installed.

Installing and Setting Up New Sun Management Center Add-On Software for Sun SPARC Enterprise M*x*000 Servers

This section summarizes installation and setup procedures for this add-on software for Sun SPARC Enterprise M*x*000 servers.

Server Layers on the Server Machine

Install and set up the Sun Management Center core server layer and add-on components for Sun SPARC Enterprise M*x*000 servers on the designated Sun Management Center server machine. The Sun Management Center core agent layer is automatically installed on the Sun Management Center server machine if you install the core server layer. This is so you can monitor the server machine itself.

Console Layer and Basic Help on Workstations or Network

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

Platform Agent Layer Preinstalled on Sun SPARC Enterprise M*x*000 Servers

You do not need to install the Sun Management Center software on the Sun SPARC Enterprise M*x*000 server Service Processors that you will be monitoring. Both the core software and add-on software are preinstalled on the Service Processors.

Hosts and Installed Layers

For Sun SPARC Enterprise M*x*000 server support, install and set up the Sun Management Center add-on software as shown in TABLE 2-2. The *Sun Management Center Installation and Configuration Guide* provides information about installing and setting up the core software on the server and console hosts. It also provides instructions for starting and stopping Sun Management Center software.

TABLE 2-2 Hosts and Installed Layers

Host	Layer	Software Installed
Sun Management Center server machine	Server	Core Sun Management Center server layer Core Sun Management Center agent layer (*automatic*) Sun SPARC Enterprise M*x*000 server Domain Monitoring server component Sun SPARC Enterprise M*x*000 server Domain DR server component Sun SPARC Enterprise M*x*000 server Platform Administration server component
Workstations or common network location	Console	Core Sun Management Center console layer and basic help component Sun SPARC Enterprise M*x*000 server Platform Administration console component Sun SPARC Enterprise M*x*000 server Domain Monitoring console component Sun SPARC Enterprise M*x*000 server Domain DR console component

TABLE 2-2 Hosts and Installed Layers *(Continued)*

Host	Layer	Software Installed
Sun SPARC Enterprise M*x*000 server Service Processors	Agent	Software is preinstalled: Core Sun Management Center agent layer Sun SPARC Enterprise M*x*000 server Platform Administration agent component
Sun SPARC Enterprise M*x*000 server domains	Agent	Sun SPARC Enterprise M*x*000 server Domain Monitoring agent component Sun SPARC Enterprise M*x*000 server Domain DR agent component

Note – Installation using the Agent Update is supported only on the server domains.

Installing the Add-On Software Using the Sun Management Center Installation Wizard

"Installing Sun Management Center on the Solaris Platform" in Chapter 6 of the *Sun Management Center Installation and Configuration Guide* describes in detail how to install all the software. An overview of the process follows.

▼ To Install the Add-On Software Using the Sun Management Center Installation Wizard

1. **As superuser, run the Sun Management Center Installation Wizard,** `es-guiinst`**.**

   The `es-guiinst` command is described in the *Sun Management Center Installation and Configuration Guide*.

   a. **If you have not already installed the correct version of the core software, first follow the instructions for installing or updating the core Sun Management Center software**.

b. **Once the correct version of the core software is already installed, use the `es-guiinst` command available in your local installation.**

   The default location is `/opt/SUNWsymon/sbin/esguiinst`.

c. **Click Next to proceed to the next window.**

2. **Enter or browse to locate and select the source directory for the add-on software image; then click Next.**

3. **The Select Add-On Product screen provides a selectable list of add-on products that you can install. Choose those add-on products that apply to Sun SPARC Enterprise M*x*000 servers, and click Next.**

   The software is installed.

4. **After the software is installed, you can use the Sun Management Center Setup Wizard to set up the software.**

   If you have not yet set up the core software, refer to Chapter 1 of the *Sun Management Center Installation and Configuration Guide*. To set up the add-on software, refer to "Setting Up the Add-On Software Using the Sun Management Center Setup Wizard" on page 16.

5. **Use the `setsunmc` command to set up the software on the Sun SPARC Enterprise M*x*000 servers Service Processors to be monitored.**

Setting Up the Add-On Software Using the Sun Management Center Setup Wizard

This section describes how to set up the add-on software using the Sun Management Center Setup Wizard. The sample procedure describes setting up the software on the server machine. Also note:

- To set up the software on the domains, you must set the SNMPv1 community string to `oplsunmc`.
- To set up the agent layer of the Sun Management Center add-on software on the Service Processor, refer to "`setsunmc`" on page 31.

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

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

▼ To Set Up the Add-On Software on the Server Machine

1. **Refer to Chapter 7 of the** *Sun Management Center Installation and Configuration Guide* **and follow the instructions for setting up an add-on product using the** `es-guisetup` **command.**

   When the Select Add-On Products panel appears the list of add-on products installed on your system will include the products included in the add-on software for Sun SPARC Enterprise M*x*000 servers:

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

 - DomMonit SPARC Enterprise Mx000
 - Dom DR SPARC Enterprise Mx000
 - PlatAdmin SPARC Enterprise Mx000
```

2. **If required, choose the add-ons that you want to set up. Click Next to continue.**

   The Server Setup panel displays this message.

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

   When the update is complete, the Server Setup panel displays this message.

```
Sun SPARC Enterprise Mx000 setup is complete.
```

3. **Click Next to continue.**

The Server Setup panel displays this message.

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

When the update is complete, the Server Setup panel displays this message.

```
Sun SPARC Enterprise Mx000 setup is complete.
```

▼ To Set Up the Add-On Software on the Service Processor

- **On the Service Processor, set up the Sun Management Center agents using the** `setsunmc` **command at the** `XSCF` **prompt:**

```
XSCF> setsunmc -s server -z seed -c community_string
```

Refer to "setsunmc" on page 31 for more information about the `setsunmc` command.

Setting Up Security Access

Caution – After the Sun Management Center software is installed and set up, you must set up users according to the tasks they will perform. This section provides instructions for the following procedures:

- "To Set Up Default Sun Management Center Access Privileges" on page 19
- "To Set Up Platform and Domain Views Administrative Groups" on page 19 – In addition to the default Sun Management Center administrative groups, you must also create and add users to additional groups to use the Domain views in the platform administration module.
- "To Set Up Privileges on the Service Processor" on page 20 – To launch Active Management operations from the platform administration module, a user must have a valid XSCF user name and platadm privileges on the Service Processor.

Caution – Any single user name can have up to 16 groups associated with it; any group after the 16th one is ignored, which causes access problems for the user. In other words, a user might appear to belong to a group, but if the 16-group limit is exceeded, the user might not have the access privileges of that group.

▼ To Set Up Default Sun Management Center Access Privileges

- **Refer to the "Sun Management Center Security" chapter in the** *Sun Management Center User's Guide* **for information about security features, users and groups, and their privileges.**

  Refer to "Reference: Administrative Groups for Access Privileges" on page 38 for information about administrative groups on Sun SPARC Enterprise M*x*000 servers.

▼ To Set Up Platform and Domain Views Administrative Groups

1. **Using the** `groupadd` **command, add the administrative group names for Platform and Domain views to the** `/etc/group` **file:**

   ```
   % /usr/sbin/groupadd groupname
   ```

   For Domain views, the value of *groupname* can be one of these:

   - `dom0adm`
   - `dom1adm`
   - `dom2adm`

   and so on for all possible domains, through

   - `dom23adm`

   For Platform views, the value of *groupname* can be one of these:

   - `platadmn`
   - `platop` (read-only privileges)

Note – Note the difference between the `platadmn` group name and the `platadm` privilege mentioned in "To Set Up Privileges on the Service Processor" on page 20: Ensure that you include the *n* at the end of the `platadmn` group name.

2. **Add the user names to the groups by editing the `/etc/group` file.**

▼ To Set Up Privileges on the Service Processor

You must have an XSCF account with `useradm` privileges to perform these procedures. For more information, refer to the administrator's guide or reference manual for Sun SPARC Enterprise M*x*000 servers or to the `adduser`(8), `password`(8), and `setprivileges`(8) man pages.

1. **If the XSCF user account does not exist, create the account and a password using the `adduser` and `password` commands.**

   a. **Add the user:**

   ```
   XSCF> adduser user
   ```

   b. **Set the password for the user:**

   ```
   XSCF> password user
   Please enter your password:
   ```

2. **Add `platadm` privileges for the user, using the `setprivileges` command:**

   ```
   XSCF> setprivileges user platadm
   ```

3. **If the user will be replacing FRUs ("Replacing FRUs" on page 51), add `fieldeng` privileges for the user.**

   ```
   XSCF> setprivileges user fieldeng
   ```

Starting Sun Management Center Software Using the CLI

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

▼ To Start Sun Management Center Software

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

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

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

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

3. On the Service Processor, activate the SNMP agent and start the Sun Management Center agent using the `setsnmp` **and** `setsunmc` **commands at the** `XSCF` **prompt: .**

   ```
   XSCF> setsnmp enable
   XSCF> setsunmc enable
   ```

   Refer to "`setsunmc`" on page 31 and the `setsnmp`(8) and `setsunmc`(8) man pages for more information.

4. **To start the Sun Management Center agent on a Sun SPARC Enterprise M*x*000 server domain with only the Sun Management Center agent layer installed, type:**

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

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

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

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

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

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

Note – To start the console, you can also be logged in as your own user ID; you do not have to be logged in as superuser. However, to access the Platform or Domain Config Reader, you must be in the appropriate security access groups. See "Security Considerations for Defining Groups" on page 43.

Note – The platform administration module is listed in the "Module Manager" tab of the Details window for the Service Processor. This platform administration module should *never* be unloaded. In case it is mistakenly unloaded, refer to "To Reload the Platform Administration Module" on page 26 for instructions to reload the module.

Stopping and Exiting Sun Management Center Software Using the CLI

This section describes stopping and exiting Sun Management Center software.

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

▼ To Stop Server and Agents

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

1. **Log in as superuser on the machine where the components are to be stopped (see TABLE 2-2 for the location of the components).**
2. **Change the directory to the `/opt/SUNWsymon/sbin` directory.**

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

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

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

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

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

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

5. **On the Service Processor, to stop the host agent, which monitors the Service Processor and platform agent, go to the XSCF prompt and type:**

```
XSCF> setsunmc disable
```

   Refer to "`setsunmc`" on page 31 for more information about using the `setsunmc` command.

▼ To Exit Console

1. **From the menu bar on the main console window, choose File and Exit.**
2. **Click the Exit button on the Exit Sun Management Center panel.**

Reconfiguring Setup Parameters

You can reconfigure the setup parameters for your Sun SPARC Enterprise M*x*000 server at any time by running the setup script (`es-setup`) again. You must reconfigure the appropriate setup parameters if certain changes occur, including:

- If the system name of a Sun SPARC Enterprise M*x*000 server is changed, reconfigure the Sun SPARC Enterprise M*x*000 server domain and platform components.
- If the Sun Management Center agent port configuration changes for the domain agents, reconfigure the Sun SPARC Enterprise M*x*000 server platform component.
- If the Sun Management Center server host or trap agent port configuration changes, reconfigure the platform and domain components.
- If a host IP address changes, reconfigure the components on that host.

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

▼ To Rerun Setup

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

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

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

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

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

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

   - **To stop the server and agent components if they are currently running on the server machine, type:**

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

   - **To stop a domain agent currently running in a domain, type:**

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

- To stop the Sun Management Center agent on the Service Processor, use the `setsunmc` command at the `XSCF` prompt.

  Refer to "setsunmc" on page 31 for more information about using the `setsunmc` command.

4. **Rerun setup on the components to be reconfigured.**
   - Run the setup script to reconfigure Sun Management Center core and add-on software.

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

     For information about using other arguments for the `es-setup` command, refer to the *Sun Management Center Installation and Configuration Guide*.

   - On the Service Processor, use the `setsunmc` command to reconfigure the software.

     Refer to "setsunmc" on page 31 for more information about using the `setsunmc` command.

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

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

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

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

---

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

      In the domain agent setup, the system displays this message:

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

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

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

▼ To Reload the Platform Administration Module

Note – The platform administration module for Sun SPARC Enterprise M*x*000 servers should *never* be unloaded on the Service Processor. In case the module has been mistakenly unloaded, use these instructions to reload it.

---

1. **Log in to the Service Processor.**

   Ensure that you have `platadm` or `fieldeng` privileges.

2. **Use `setsunmc disable` to disable the Sun Management Center agent on the Service processor:**

```
XSCF> setsunmc disable
```

3. **At the XSCF prompt, use `setsunmc -s` to reset the server name:**

```
XSCF> setsunmc -s server
```

4. **Use `setsunmc enable` to enable the Sun Management Center agent on the Service Processor:**

```
XSCF> setsunmc enable
```

   The platform administration module will now appear again in the Details window.

   For more information about the `setsunmc` command, refer to "`setsunmc`" on page 31.

Uninstalling Software Using the CLI

You can uninstall:

- All the Sun Management Center software from the server and console hosts (see "To Uninstall All Sun Management Center Software" on page 27)
- Only the Sun SPARC Enterprise M*x*000 server add-on software from the server and console hosts (see "To Uninstall Only the Add-On Software" on page 28)

You cannot uninstall the Sun Management Center software that is preinstalled on the Service Processors of your Sun SPARC Enterprise M*x*000 servers.

▼ To Uninstall All Sun Management Center Software

1. **As superuser, type:**

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

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

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
DomMonit SPARC Enterprise Mx000                         None
Dom DR SPARC Enterprise Mx000                           None
PlatAdmin SPARC Enterprise Mx000                        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` **if you do not want to change your selection.**

   The system displays this message:

```
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]
```

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

---

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

   The system displays this message:

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

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

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

▼ To Uninstall Only the Add-On Software

1. **Unload the domain DR module in the Module Manager tab in the Details window of the Sun SPARC Enterprise M*x*000 domain.**

   If you want to uninstall the domain DR module, you must first unload the module. Refer to the *Sun Management Center User's Guide* for information about loading and unloading modules.

2. **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
DomMonit SPARC Enterprise Mx000                         None
Dom DR SPARC Enterprise Mx000                           None
PlatAdmin SPARC Enterprise Mx000                        None

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

3. **Type** `n` **to** ***not*** **uninstall the Production Environment.**

Caution – If you type **`y`** to uninstall the Production Environment, all Sun Management Center software will be removed including the core software.

The system displays this message:

```
Do you want to uninstall DomMonit SPARC Enterprise Mx000? [y|n|q]
```

4. **Type** `y` **to uninstall DomMonit SPARC Enterprise Mx000.**
   The system displays the product that will be removed and this message.

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

5. **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` **if you do not want to change your selection.**
     The system displays this message:

```
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]
```

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.

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

   The system displays this message:

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

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

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

Reference: Installation and Setup Log Files

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

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

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

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

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

Reference: `setsunmc` and `showsunmc` Man Pages

This section contains the man pages for the `setsunmc`(8) and `showsunmc`(8) commands. These man pages are also intalled on the Service Processor. Access them and the other XSCF man pages by using the `man`(1) command at the XSCF prompt on your SPARC Enterprise M*x*000 server Service Processor.

`setsunmc`

NAME

`setsunmc` - start or stop the Sun Management Center agent and make changes to its configuration

SYNOPSIS

`setsunmc [enable|disable]`

`setsunmc -A`

`setsunmc [-s` *`server`*`] [-z` *`seed`*`] [-p` *`agent_port`*`] [-c` *`community_string`*`] [-t` *`trap_port`*`] [-e` *`event_port`*`] [-a` *`SNMP_agent_port`*`] [-a` *`dmn_agent_port`*`]`

`setsunmc [-h]`

DESCRIPTION

When invoked with one or more options, `setsunmc` makes changes to the Sun Management Center agent configuration, as described in the Options section.

When invoked with the `enable` operand, `setsunmc` activates the Sun Management Center agent. This activation includes starting the Sun Management Center agent and notifying the startup daemon to start the agent on subsequent reboots. When invoked with the `disable` operand , the agent is stopped and the startup daemon will be notified to disable starting the agent on subsequent reboots.

The operands cannot be used together with the options.

Privileges

You must have `platadm` or `fieldeng` privileges to run this command.

Refer to `setprivileges`(8) for more information.

OPTIONS

The following options are supported. The options cannot be used together with the operands.

`-a` *SNMP_agent_port*	Specifies the listening port on the SNMP agent. The default value is `161`. Change this value only if you change the port on the SNMP agent.
`-c` *community_string*	Specifies the community string used for SNMPv1 trap host `snmp` setup. The default value is `public`.
`-d` *dmn_agent_port*	Specifies the port for the Sun Management Center agents running on the domains. The default value is `1161`. This domain agent port is used during creation of a composite object. Sun Management Center domain agents generally use the same port to ensure proper creation of composite object domains.
`-e` *event_port*	Specifies the port on the Sun Management Center server to which events are sent. The default value is `163`.
`-h`	Displays usage statement. When used with other options or operands, an error occurs.
`-p` *agent_port*	Specifies the port number that the Sun Management Center agent listens on. The default value is `1161`.

`-s` *server*	Specifies the Sun Management Center server with which the agent will be communicating. The server can be specified using either a host name or an IP address. It must be set prior to enabling the agent.
`-t` *trap_port*	Specifies the port on the Sun Management Center server to which traps are sent. The default value is `162`.
`-z` *seed*	Specifies the seed to generate a security key for communication between Sun Management Center server and agent. This value must be the same as the seed used on the server setup. It must be set prior to enabling the agent.

OPERANDS

The following operands are supported. The operands cannot be used together with the options.

`enable`	When invoked with the operand `enable`, `setsunmc` activates the Sun Management Center agent. This means the Sun Management Center agent is started, and the startup daemon is notified to start the agent on subsequent reboots.
`disable`	When invoked with the operand `disable`, `setsunmc` stops the agent, and the startup daemon is notified to disable starting of the agent on subsequent reboots.

EXAMPLES

CODE EXAMPLE 2-1 Basic Setup Command With Arguments

```
XSCF> setsunmc -s balon -z maplesyr -c double_secret
```

CODE EXAMPLE 2-2 Starting the Agent

```
XSCF> setsunmc enable
```

EXIT STATUS

No exit values are returned.

SEE ALSO

showsunmc(8)

showsunmc

NAME

showsunmc - show setup information and status of Sun Management Center agent

SYNOPSIS

showsunmc [isenabled]

showsunmc [-h]

DESCRIPTION

This command is used to show the setup information and current status of the Sun Management Center agent. When used with the isenabled option, the showsunmc command output displays the agent status: 1 if the agent is enabled, 0 if the agent is disabled.

OPTIONS

The following options are supported.

isenabled	Displays only the agent status. The value 1 indicates the agent is enabled, 0 indicates the agent is disabled.
-h	Displays usage statement. When used with other options or operands, an error occurs.

Privileges

You must have platadm, platop, or fieldeng privileges to run this command.

Refer to setprivileges(8) for more information.

OPERANDS

There are no operands for this command.

EXAMPLES

CODE EXAMPLE 2-3 Show the Status of the Agent: Not Set Up or Enabled

```
XSCF> showsunmc
Agent Status:                   Disabled
Setup Status:                   Not set up
SunMC Server:                   unknown
Security Seed:                  maplesyr
SNMPv1 Community String:        public
Agent Port:                     1161
Host Trap Port:                 162
Host Event Port:                163
SNMP Agent Port:                161
Domain Agent Ports:             1161
```

CODE EXAMPLE 2-4 Show the Status of the Agent: Set Up, But Not Enabled

```
XSCF> showsunmc
Agent Status:                   Disabled
Setup Status:                   Set up
SunMC Server:                   balon
Security Seed:                  maplesyr
SNMPv1 Community String:        double_secret
Agent Port:                     1161
Host Trap Port:                 162
Host Event Port:                163
SNMP Agent Port:                161
Domain Agent Ports:             1161
```

CODE EXAMPLE 2-5 Show the Agent Status of an Enabled Agent

```
XSCF> showsunmc isenabled
1
```

EXIT STATUS

The following exit values are returned:

`0`	Successful completion.
`1`	An error occurred.

SEE ALSO

`setsunmc`(8)

Reference: Packages Specific to the Add-On Software for SPARC Enterprise Servers

The add-on software for Sun SPARC Enterprise M*x*000 servers is delivered in the packages listed in TABLE 2-3. They are installed on the agent, console, and server layers.

TABLE 2-3 Sun Management Center Packages for Sun SPARC Enterprise M*x*000 servers

Package	Description	Layer
Platform Administration:		
`SUNWesopls`	SunMC Server Support Package For OPL Platform Administration	Server
`SUNWesopli`	SunMC Server Support Package For OPL Platform Administration	Server
`SUNWesoplc`	Sun Management Center Console OPL Platform Administration	Server
`SUNWesoplc`	Sun Management Center Console OPL Platform Administration	Console
Domain Administration:		
`SUNWesoplds`	SunMC Server Support Package For OPL Domain Administration	Server
`SUNWesoplda`	Sun Management Center Agent layer support for OPL domains	Domain agent
`SUNWesopldi`	SunMC Server and Agent Support Package For OPL Domain Administration	Domain agent

TABLE 2-3 Sun Management Center Packages for Sun SPARC Enterprise M*x*000 servers *(Continued)*

Package	Description	Layer
Domain Dynamic Reconfiguration:		
SUNWensdo	Sun Management Center OPL Systems Dynamic Reconfiguration Messages	Server
SUNWescdo	Sun Management Center Console Support for Dynamic Reconfiguration on OPL Systems	Server
SUNWessdo	Sun Management Center Server Support for Dynamic Reconfiguration on OPL Systems	Server
SUNWensdo	Sun Management Center OPL Systems Dynamic Reconfiguration Messages	Console
SUNWescdo	Sun Management Center Console Support for Dynamic Reconfiguration on OPL Systems	Console
SUNWesado	Sun Management Center Agent Support for Dynamic Reconfiguration on OPL Systems	Domain agent

Reference: Network Port Configuration

Sun Management Center software requires network ports to communicate with various components of the system. The default port addresses for these components are listed in TABLE 2-4.

TABLE 2-4 Default Sun Management Center Port Addresses

Layer	Component	Default Port Number
Agent	SNMP Agent	161
Server	Trap handler	162
Server	Event manager	163
Agent	Service Processor agent	1161
Agent	Domain Agent	1161
Server	Configuration server	165
Server	Metadata	168

Reference: Administrative Groups for Access Privileges

After the Sun Management Center software is installed and set up, you must set up users according to the tasks they will perform. This section lists and describes default Sun Management Center administrative groups for use with this add-on software. Refer to "Setting Up Security Access" on page 18 for information about setting up users in these groups, setting up administrative groups for Domain views in the platform administration module, and setting privileges for Sun Management Center users on the Service Processor.

Default Sun Management Center Administrative Groups

TABLE 2-5 lists the default Sun Management Center administrative groups that apply to Sun SPARC Enterprise M*x*000 servers.

TABLE 2-5 Default Sun Management Center Administrative Groups

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

CHAPTER 3

Platform Administration

This chapter provides information about the platform administration module (Plat Admin Module SPARC Enterprise M*x*000) in the following sections:

The chapter also provides information about accessing the Hardware Summary and Physical and Logical views of the platform in the platform Details window in these sections:

About the Platform Administration Module

The platform administration module, Plat Admin Module SPARC Enterprise M*x*000, provides information about the hardware configuration for the entire server platform. This module also provides interactive pop-up menus for active management of the server.

Note – The platform administration module is loaded by default. Unloading and reloading the platform administration module is not supported.

Platform Administration Module Refresh

The platform administration module stores platform information. It gathers and refreshes this information in two ways:

- At periodic intervals (every 60 minutes), the platform administration module interacts with the SNMP manager on the Service Processor to repopulate the entire contents of the cache. You cannot change the value of the refresh interval.
- Whenever platform properties change, such as temperature or voltage, the SNMP manager notifies the Sun Management Center software. The platform administration module then updates the affected hardware table in the Browser view.

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

Accessing the Platform Administration Module

▼ To Access the Platform Administration Module

1. **Navigate to the platform Details window.**

   From the main console window, open the Details window for the target platform by one of these methods:

   - Double-click the icon for the server.
   - Right-click the icon for the server and choose Details from the pop-up menu.
   - Select the icon for the server and choose Details from the Tools menu.

   The platform Details window appears. By default, the window opens to the Module Browser tab.

2. **Expand the platform administration module.**

   In the Details window, notice the Hardware icon. Expand or open it by using one of these methods:

   - Click once on the expansion icon to the left of the icon for the module.

     The Hardware icon is expanded in the left pane, showing the platform administration icon, labeled Plat Admin Module SPARC Enterprise M*x*000.

   - Double-click the icon for the module.

     The Hardware icon is expanded in the left pane, showing the platform administration module icon. The module's icon also appears in the right pane.

   You will now see the platform administration module in the left pane or display its contents in the right pane, by double-clicking the module's icon.

3. **Browse the tables and monitor the platform state.**

   Use the methods described in Step 2 to browse the properties displayed in the tables.

4. **Perform active management tasks.**

   You can perform active management tasks in the platform administration module by right-clicking on certain tables. Refer to "Performing Active Management in the Platform Administration Module" on page 42 for more information about how to perform typical tasks. Also refer to the reference sections for the various tables in the module for lists of tasks available for each table, where applicable.

Performing Active Management in the Platform Administration Module

This section describes how to perform some common tasks within the platform administration module to manage your Sun SPARC Enterprise server by right-clicking certain platform administration module tables. For full lists of the active management commands available within the module, refer to reference sections describing tables and related pop-up menus in "Reference: Platform Administration Properties and Tasks" on page 54.

This section includes instructions for performing the following tasks:

Setting Up Server Hardware

This section includes a description of the steps required to build a simple domain.

▼ To Build a Simple Domain

1. **Log in to the software and navigate to the platform administration module in the platform Details window.**
2. **Expand the module items to see the tables.**
3. **Set up the Domain Component List (DCL).**
   a. **Navigate to the Domain table and select the row for the target domain.**

b. **Right-click the Domain table.**

   The pop-up menu appears.

c. **Choose Assign XSB to LSB.**

   The Assign XSB to LSB dialog appears. The domain ID for the target domain is displayed.

d. **Select the target LSB and XSB IDs and click the Add to Assignment List button.**

e. **Click the Assign XSB button.**

   The assignment is implemented. Information about progress is displayed in the Progress window.

f. **Click Close to close the dialog.**

4. **Set the physical System Board mode.**

   a. **Navigate to the System Board table and select the row for the target system board.**

   b. **Right-click the System Board table.**

      The pop-up menu appears.

   c. **Choose Set SB Mode.**

      The Set SB Mode dialog appears. The target system board is displayed in the Selected System Board field.

   d. **Select the desired mode to be set.**

   e. **Click the Set Mode button.**

      The mode is set to your selection. Information about progress is displayed in the Progress window.

   f. **Click Close to close the dialog.**

5. **Add an XSB to the domain.**

   g. **Navigate to the XSB table and select the row for the target XSB.**

   a. **Right-click the XSB table.**

      The pop-up menu appears.

   b. **Choose Add XSB.**

      The Add XSB dialog appears. The target board is displayed in the Selected Board field. The target board's current Assignment and Configuration states are displayed in the Current State box.

   c. **In the Add XSB To Domain field, select the Domain ID to which you are adding the XSB.**

d. In the State After Add XSB box, select Configured.

e. Click the Add XSB button.

The XSB is added to the domain. Information about progress is displayed in the Progress window.

f. Click Close to close the dialog.

6. Power on the domain.

a. Navigate to the Domain table and select the target domain.

b. Right-click the Domain table.

The pop-up menu appears.

c. Choose Power On Domain.

The Power On confirmation dialog appears. The name of the target domain is displayed in the dialog.

d. Click OK to power on the domain.

Upgrading, Downgrading, and Retasking Server Hardware

This section describes the steps required to perform the following common tasks:

▼ To Remove an XSB From a Domain

1. Navigate to the XSB table and select the row for the target XSB.

Note the Domain ID for the target XSB.

2. Right-click the table.

The pop-up menu appears.

3. Choose Delete XSB.

The Delete XSB dialog appears. The target XSB is displayed in the Selected Board field. Its current Assignment and Configuration states are displayed in the Current State box.

4. **In the State After Delete XSB box, choose the desired state.**

   The default value is Unassigned.

   - Unassigned – Completely removes the XSB from the domain configuration and puts it into the system board pool, from which the XSB can be added or assigned to other domains.
   - Disconnected – Removes the XSB from the domain configuration, maintaining its status as Assigned to the domain. The XSB can be added to the same domain configuration simply by rebooting or by using the Add XSB dialog.
   - Reserved – Does not immediately remove the XSB from the domain configuration. After the domain is next powered off, the XSB is completely removed from the domain configuration and becomes part of the system board pool.

5. **Click Delete XSB.**

   The Delete XSB action is implemented. Information about progress is displayed in the Progress window.

6. **Click Close to close the dialog.**

▼ To Add an XSB to a Domain

1. **Navigate to the XSB table and select the row for the target XSB.**
2. **Right-click the XSB table.**

   The pop-up menu appears.

3. **Choose Add XSB.**

   The Add XSB dialog appears. The target XSB is displayed in the Selected Board field. Its current Assignment and Configuration states are displayed in the Current State box.

4. **In the Add XSB To Domain field, select the Domain ID to which you are adding the XSB.**
5. **In the State After Add XSB box, select Configured.**
6. **Click the Add XSB button.**

   The XSB is added to the domain. Information about progress is displayed in the Progress window.

7. **Click Close to close the dialog.**

▼ To Reconfigure Domains

1. **Navigate to the System Board table and view its properties.**

   Determine which system boards you would like to reconfigure and note the value of their Domain Assignment property. This will be the target domain for the operation.

2. **Power off the target domain.**

   a. **Navigate to the Domain table and select the row for the target domain.**

   b. **Right-click the Domain table.**

      The pop-up menu appears.

   c. **Choose Power Off Domain.**

      The Power Off confirmation dialog appears. The target domain is named in the dialog.

   d. **Click the OK button.**

3. **Delete the XSB(s) from the domain.**

   a. **Navigate to the XSB table and select the first target XSB to be removed.**

   b. **Right-click the row containing the XSB target.**

      The pop-up menu appears.

   c. **Choose Delete XSB.**

      The Delete XSB dialog appears. The target XSB is displayed in the Selected Board field. Its current Assignment and Configuration states are displayed in the Current State box.

   d. **In the State After Delete XSB box, select Unassigned.**

   e. **Click the Delete XSB button.**

      The Delete XSB action is implemented. Information about progress is displayed in the Progress window.

   f. **For each additional XSB to be removed, repeat Steps a through e.**

4. **Clear the domain's LSB(s).**

   a. **Navigate to the Domain table and select the row for the target domain.**

   b. **Right-click the Domain table.**

      The pop-up menu appears.

   c. **Choose Clear LSB.**

      The Clear LSB dialog appears. The target domain is displayed in the Selected Domain field.

   d. **Choose the first LSB to be deleted from the Clear LSB menu.**

   e. **Click the Clear LSB button.**

      The Clear LSB action is implemented. Information about progress is displayed in the Progress window.

f. **Repeat Step e for each LSB.**

5. **Set the system board mode to Uni-XSB.**

   a. **Navigate to the System Board table and select the row for the target system board.**

   b. **Right-click the System Board table.**

      The pop-up menu appears.

   c. **Choose Set SB Mode.**

      The Set SB Mode dialog appears. The selected system board is displayed in the Selected System Board field, and its current SB mode is displayed in the Current Mode box.

   d. **In the Select SB Mode box, select Uni-XSB.**

   e. **Click Set Mode.**

      The Set Mode action is implemented. Information about progress is displayed in the Progress window.

   f. **Click the Close button.**

6. **Assign the target XSB to the target LSB.**

   a. **Navigate to the Domain table and select the row for the target domain.**

   b. **Right-click the Domain table.**

      The pop-up menu appears.

   c. **Choose Assign XSB to LSB.**

      The Assign XSB to LSB dialog appears. The target domain appears in the Selected Domain field.

   d. **Select the target LSB from the Assign to LSB menu.**

   e. **Select the target XSB ID in the Select XSB to Assign box and and click Add to Assignment List to add it to the LSB=XSB list.**

   f. **Click the Assign XSB button.**

      The assignment is implemented. Information about progress is displayed in the Progress window.

   g. **Click Close to close the dialog.**

7. **Add the target XSB to the target domain.**

   a. **Navigate to the XSB table and select the target XSB.**

b. Right-click the XSB table.

The pop-up menu appears.

c. Choose Add XSB.

The Add XSB dialog appears. The selected XSB is displayed in the Selected Board field. Its current Assignment and Configuration states are displayed in the Current State box.

d. Select the target domain from the Add XSB To Domain menu.

e. Select Assigned in the State After Add XSB box.

f. Click the Add XSB button.

The Add XSB action is implemented. Information about progress is displayed in the Progress window.

g. Click the Close button.

8. Power on the domain.

a. Navigate to the Domain table and select the row for the target domain.

b. Right-click the Domain table.

The pop-up menu appears.

c. Choose Power On Domain.

The Power On confirmation dialog appears. The target domain is named in the dialog.

d. Click the OK button.

9. Double-click the Domain table icon and read its properties.

Ensure the reconfiguration has been successfully completed.

▼ To Move an XSB

1. Navigate to the Domain table and read its properties.

Determine the target domain.

2. Navigate to the XSB table and select the row for the target board.

3. Right-click the XSB table.

The pop-up menu appears.

4. Choose Move XSB.

The Move XSB dialog appears. The target XSB is displayed in the Selected Board field. Its current Assignment and Configuration states are displayed in the Current State box.

5. **From the Move XSB to Domain menu, select the target domain.**
6. **In the State After Move XSB box, select Configured.**
7. **Click the Move XSB button.**

   The Move XSB action is implemented. Information about progress is displayed in the Progress window.
8. **Click the Close button.**
9. **Navigate to the Domain table and read its properties.**

   Ensure that the move has been successfully completed.

▼ To Power Off an I/O Boat

1. **Ensure that all PCI cards in the target I/O Boat have been disconnected from the domain side.**

   a. **Use one of these methods to disconnect the PCI cards:**
      - Use the Domain DR module to disconnect the PCI cards. Refer to Chapter 5 for more information.
      - Log in to the Solaris domain as root. Then use the `cfgadm` command to disconnect the PCI cards.

   b. **Ensure the value of the Receptacle property in the Domain DR Attachment Points table is** `DISCONNECTED`**.**
2. **Navigate to the IO Boat table and select the row for the target I/O boat.**
3. **Right-click the IO Boat table.**

   The pop-up menu appears.
4. **Choose Power Off IO Boat.**

   The Power Off confirmation dialog appears. The target I/O boat is named in the dialog.

Note – Clicking the Use Force Option box might crash the domain. If an I/O boat is powered off using the Use Force Option while the I/O boat is still in use by a domain, the domain might crash. To avoid such domain crashes, ensure that all PCI cards on an I/O boat have been disconnected from the domain before powering off.

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5. **Click the OK button.**

   The Power Off action is implemented.

6. **Double-click the IO Boat table and select the row for the target I/O boat.**

   For the target I/O boat, the value of the OK To Remove LED property is ON if the Power Off action has been successful.

7. **Right-click the IO Boat table.**

   The pop-up menu appears.

8. **Choose IO Boat Set Locator LED.**

   The IO Boat Set Locator LED dialog appears. The target I/O boat is named in the dialog.

9. **Select On and click the OK button.**

   The Locator LED is launched and the dialog closes.

Operating and Maintaining Server Hardware

▼ To Power On a Domain

1. **Navigate to the Domain table and select the row for the target domain.**
2. **Right-click the Domain table.**

   The pop-up menu appears.

3. **Choose Power On Domain.**

   The Power On confirmation dialog appears. The target domain is named in the dialog.

4. **Click the OK button.**

▼ To Reset a Domain

1. **Navigate to the Domain table and select the row for the target domain.**
2. **Right-click the Domain table.**

   The pop-up menu appears.

3. **Choose Reset Domain.**

   The Reset Domain dialog appears. The target domain is named in the dialog.

4. **Select POR to reset the domain immediately, and click OK.**

▼ To Power Off a Domain

1. **Navigate to the Domain table and select the row for the target domain.**

2. **Right-click the Domain table.**

   The pop-up menu appears.

3. **Choose Power Off Domain.**

   The Power Off confirmation dialog appears. The target domain is named in the dialog.

4. **Click the OK button.**

Replacing FRUs

Using Sun Management Center, FRU replacement is supported only on high-end servers and only for:

- System boards
- CPU/Memory unit boards (CMUs)
- I/O unit boards (IOUs)

Replacing FRUs requires `fieldeng` privileges. Refer to "To Set Up Privileges on the Service Processor" on page 20 and the `setprivileges`(8) man page for information about setting privileges on the Service Processor.

▼ To Replace a System Board

1. **Use the XSCF `deleteboard` command on the Service Processor to disconnect all thoseExtended System Boards (XSBs) targeted for replacement from all domains.**

   Refer to the reference manual for Sun SPARC Enterprise M*x*000 servers or to the `deleteboard`(8) man page for more information about using the command.

2. **Use the `cfgadm` command on the domains to disconnect all the PCI cards in the corresponding IOUs.**

   Refer to the `cfgadm`(1M) man page for more information.

3. **Navigate to the System Board table and select the row for the target system board to be replaced.**

4. **Right-click the System Board table.**

   The pop-up menu appears.

5. **Choose Replace SB.**

   The Replace SB dialog appears.

6. **Click the Replace SB button to start the replacement process.**

   The Replace CMU dialog appears.

7. **Physically replace the CMU board.**

   Refer to your hardware documentation for instructions.

8. **Click the OK button in the Replace CMU dialog.**

   The dialog closes, and you are still in the Replace SB dialog.

9. **Click the Replace IOU button.**

   The Replace IOU dialog appears.

10. **Physically replace the IOU board.**

    Refer to your hardware documentation for instructions.

11. **Click the OK button in the Replace IOU dialog.**

    The dialog closes, and you are still in the Replace SB dialog.

12. **In the Replace SB dialog, click the Finalize button.**

13. **Click the Close button to close the dialog.**

▼ To Delete a System Board

1. **Use the XSCF `deleteboard` command on the Service Processor to disconnect all Extended System Boards (XSBs) targeted for deletion from all domains.**

   Refer to the reference manual for Sun SPARC Enterprise M*x*000 servers or to the `deleteboard`(8) man page for more information about using the command.

2. **Use the `cfgadm` command on the domains to disconnect all the PCI cards in the corresponding IOUs.**

   Refer to the `cfgadm`(1M) man page for more information.

3. **Navigate to the System Board table and select the row for the target system board to be deleted.**

4. **Right-click the System Board table.**

   The pop-up menu appears.

5. **Choose Delete SB.**

   The Delete SB dialog appears.

6. **Click the Delete SB button to start the deletion process.**

   The Delete CMU dialog appears.

7. **Physically remove the CMU board.**

   Refer to your hardware documentation for instructions.

8. **Click the OK button in the Delete CMU dialog.**

   The dialog closes, and you are still in the Delete SB dialog.

9. **Click the Delete IOU button.**

   The Delete IOU dialog appears.

10. **Physically remove the IOU board.**

    Refer to your hardware documentation for instructions.

11. **Click the OK button in the Delete IOU dialog.**

    The dialog closes, and you are still in the Delete SB dialog.

12. **In the Delete SB dialog, click the Finalize button.**

13. **Click the Close button to close the dialog.**

▼ To Add a System Board

1. **Navigate to the System Board table.**

2. **Right-click the System Board table.**

   The pop-up menu appears.

3. **Choose Add SB.**

   The Add SB dialog appears.

4. **In the pull-down menu, select the target location where the system board will be added.**

5. **Click the Add SB button.**

   The process of adding the system board is started, and the Add CMU dialog appears.

6. **Physically add the system board.**

   Refer to your hardware documentation for instructions.

7. **Click the OK button in the Add CMU dialog.**

   The dialog closes, and you are still in the Add SB dialog.

8. **Click the Add IOU button.**

   The process of adding the IOU is started, and the Add IOU dialog appears.

9. **Physically add the IOU.**

   Refer to your hardware documentation for instructions.

10. **Click the OK button in the Add IOU dialog.**

    The dialog closes, and you are still in the Add SB dialog.

11. **In the Add SB dialog, click the Finalize button.**

12. **Click the Close button to close the dialog.**

Reference: Platform Administration Properties and Tasks

This section contains descriptions of the properties listed in tables for each Sun SPARC Enterprise M*x*000 server Platform Administration object. If a property has a value of `--` (double dash) or `-1`, the Platform Administration module is unable to obtain data for that property.

The tables include references to pertinent alarm rules. For more detailed information about alarm rules, refer to Chapter 6.

This section also includes descriptions of the pop-up menus that are available for active management of the target system from each table. For information about how to use these pop-up menus, refer to "Performing Active Management in the Platform Administration Module" on page 42.

The following tables are described in this section:

System

TABLE 3-1 provides a brief description of the system properties for the target server.

TABLE 3-1 Platform Administration: System Table

Property	Alarm Rule (if any)	Description
Node Name		Node name. Value is `system`.
Platform Name		Name assigned to this server during XSCF firmware configuration. Sample values: `chiron`, `balon`
Platform Type		Platform type identifier. Sample value: `Sun SPARC Enterprise M4000`
Serial Number		System serial number. Sample value: `FJ890023-020`
Number of CPUs		Number of CPU chips in the system. Sample values: `1`, `2` ... `64`
Memory Capacity		Total capacity of memory in the system, in Gbytes.
Number of Domains		Number of domains in the system. The maximum value varies depending on the platform.
Power LED		Indicates whether main power is on or off. Possible values: `ON`, `OFF`, `BLINKING`, `UNKNOWN`.
Ready LED		Indicates whether machine is online. Possible values: `ON`, `OFF`, `BLINKING`, `UNKNOWN`.
Check LED	rLEDState	Indicates that service may be required. Possible values: `ON`, `OFF`, `BLINKING`, `UNKNOWN`.

TABLE 3-1 Platform Administration: System Table *(Continued)*

Property	Alarm Rule (if any)	Description
System State	rErrorStatus	Overall system state. Possible values: NORMAL, DEGRADED, FAULTED, CHANGE, UNKNOWN.
Firmware State	rErrorStatus	State of the firmware. Possible values: NORMAL, DEGRADED, FAULTED, CHANGE, UNKNOWN.
Hardware State	rErrorStatus	State of the hardware. Possible values: NORMAL, DEGRADED, FAULTED, CHANGE, UNKNOWN.
Modeswitch State		State of the mode switch. Possible values: LOCKED, SERVICE, UNKNOWN.

Platform View Tables

The tables in this section appear in the Platform View of the platform administration module. For information about the tables in the External IO section, refer to "External I/O" on page 70.

CPU/Memory Unit Boards

The CMU Board table displays all the CPU/Memory Unit (CMU) boards in the system. The number of entries varies depending on the type of Sun SPARC Enterprise M*x*000 server. TABLE 3-2 shows the information displayed for each CMU board. The information in this table is also available in the Hardware Physical/Logical View.

TABLE 3-2 Platform Administration: CMU Board Table

Property	Alarm Rule (if any)	Description
Name		Type and ID of board. Sample values: CMU#00, PCMU#01
Board Name		Name of the CMU board.
Board State		State of the CMU board. Possible values: UNMOUNTED, STOP, INIT, NOT CONFIGURED, IDLE, RUN, DECONFIGURED, CHANGE, UNKNOWN

TABLE 3-2 Platform Administration: CMU Board Table *(Continued)*

Property	Alarm Rule (if any)	Description
XSB Mode		Indicates Uni-XSB or Quad-XSB mode. Possible values: `1`, `4`
Domain Assignment		Domain to which the CMU is assigned. Value can be > 1, depending on XSB mode. Sample values: `0`, `1`, `2`, `3`
COD Enabled		Specifies whether the CMU board is a COD board. Possible values: `ENABLED`, `DISABLED`
Error Status	rErrorStatus	Error status. Possible values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name. Sample value: `CMU`.

Active Management is available from the CMU Board table and supported only on high-end servers. The pop-up menu items for this table are described in TABLE 3-3.

Note – Clicking the Abort button is ignored.

TABLE 3-3 Platform Administration: CMU Board Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Add CMU...	`addfru`	Add a CMU. Displayed only when empty CMU locations are available. Requires `fieldeng` privileges.
Delete CMU...	`deletefru`	Delete a CMU. Displayed only when the value of the CMU Board State property is not `RUN`. Requires `fieldeng` privileges.
Replace CMU...	`replacefru`	Replace a CMU. Displayed only when the value of the CMU Board State property is not `RUN`. Requires `fieldeng` privileges.

CPU Modules

The CPU Module (CPUM) table displays all the CPUMs in the system. Each CPU/Memory unit contains up to four CPUMs. TABLE 3-4 shows the information displayed for each CPUM. The information in this table is also available in the Hardware Physical/Logical View.

TABLE 3-4 Platform Administration: CPU Module Table

Property	Alarm Rule (if any)	Description
Name		Concatenation of CMU and CPU type and identifier. Sample values: `CMU#00/CPUM#00`, `PCMU#00/CPUM#01`
CPU Chip Number		CPU chip number. Sample value: `CPUCHIP#00`.
Parent CMU		The CMU to which this CPU module belongs. Sample values: `CMU#00`, `PCMU#01`
CPU Type		Type of CPU. Sample value: `CPUM_A -12-2277`.
CPU State		State of the CPU. Possible values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Clock Frequency		Frequency of the CPU clock. Sample values: `2150`, `2277`
Error Status	rErrorStatus	Error status. Possible values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name. Sample value: `CPUM_A`

Memory Boards

The Memory Board table displays all the Memory boards in a midrange server. TABLE 3-5 shows the information displayed for each Memory board. Note: This table is populated with information for midrange servers only. The information in this table is also available in the Hardware Physical/Logical View.

TABLE 3-5 Platform Administration: Memory Board Table

Property	Alarm Rule (if any)	Description
Name		Type and ID of board. Sample values: `PCMU#00/MEMB#00`, `PCMU#00/MEMB#01`
Parent CMU		The CMU to which this memory board belongs. Sample values: `PCMU#00`, `PCMU#01`
Memory Capacity		Total memory capacity of all DIMMs on the memory board, in Gbytes. Sample value: `8`.
Status		Memory board status. Possible values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status. Possible values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name. Sample value: `FFMEMB`

Memory DIMMs

The Memory DIMM table displays all the DIMM modules in the server. TABLE 3-6 shows the information displayed for each entry. The information in this table is also available in the Hardware Physical/Logical View.

TABLE 3-6 Platform Administration: Memory DIMM Table

Property	Alarm Rule (if any)	Description
Name		Concatenation of CMU & MEM type and IDs. Sample values: `CMU#00/MEM#00`, `CMU#00/MEM#01`
Parent CMU		The CMU to which this DIMM module belongs. Sample values: `CMU#00`, `CMU#01`
Memory Capacity		Size of the memory DIMM, in Gbytes. Sample values: `2`, `4`
Memory State		State of the memory DIMM module. Possible values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status. Possible values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name.

I/O Unit Boards

The IOU Board table displays all the I/O unit boards in the server. TABLE 3-7 shows the information displayed for each entry. The information in this table is also available in the Hardware Physical/Logical View.

TABLE 3-7 Platform Administration: IOU Board Table

Property	Alarm Rule (if any)	Description
Name		Type and ID of Board. Sample values: `IOU#00`, `IOU#01`
Board Name		Name of the I/O board.
Board State		State of the I/O board. Possible values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.

TABLE 3-7 Platform Administration: IOU Board Table *(Continued)*

Property	Alarm Rule (if any)	Description
XSB Mode		Indicates Uni-XSB or Quad-XSB mode. Possible values: `1`, `4`
Domain Assignment		Domain to which the IOU is assigned. Value can be > 1, depending on XSB mode. Sample values: `0`, `1`, `2`, `3`
Error Status	rErrorStatus	Error status. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name. Sample value: `IOU`.

Active Management is available from the IOU Board table. The Add IOU, Delete IOU, and Replace IOU menu items are supported only on high-end servers. The pop-up menu items for this table are described in TABLE 3-8.

Note – Clicking the Abort button is ignored.

TABLE 3-8 Platform Administration: IOU Board Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Add IOU...	`addfru`	Add an I/O unit. Displayed only when empty IOU slot locations are available. Requires `fieldeng` privileges.
Delete IOU...	`deletefru`	Delete an I/O unit. Displayed only when the value of the IOU Board State property is not `RUN`. Requires `fieldeng` privileges.
Replace IOU...	`replacefru`	Replace an I/O unit. Displayed only when the value of the IOU Board State property is not `RUN`. Requires `fieldeng` privileges.

PCI Slots

The PCI Slot table displays all the occupied PCI slots. TABLE 3-9 shows the information displayed for each entry. Note: The information in this table is also available in the Hardware Physical/Logical View.

TABLE 3-9 Platform Administration: PCI Slot Table

Property	Alarm Rule (if any)	Description
Name		Concatenation of IOU and PCI types and IDs. Sample values: `IOU#00/PCI#00`, `IOU#01/PCI#01`
Parent IOU		The IOU to which this PCI slot belongs. Sample values: `IOU#00, IOU#01`
PCI State		State of the PCI slot. Possible values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name.

System Boards

The System Board table lists every system board in the system. TABLE 3-10 shows the information displayed for each entry.

TABLE 3-10 Platform Administration: System Board Table

Property	Alarm Rule (if any)	Description
Name		Unique Name. Sample values: `SB#00`, `SB#01`
Board State		DR state of the board. Sample values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
XSB Mode		Indicates Uni-XSB or Quad-XSB mode. Possible values: `1`, `4`

TABLE 3-10 Platform Administration: System Board Table *(Continued)*

Property	Alarm Rule (if any)	Description
Domain Assignment		List of the domains to which the board belongs. When XPAR mode is off, the maximum value is 1. When XPAR mode is on, the value can be > 1. Sample values: 0, 1, 2, ..., 23, --
CMU Board		Name (type and ID) of the CMU that is part of the system board. Sample values: CMU#00, CMU#01
CMU Error Status	rErrorStatus	Error status of the CMU that is part of the system board. Sample values: NORMAL, DEGRADED, FAULTED, CHANGE, UNKNOWN.
IOU Board		The I/O unit board that is part of the system board. A one-to-one relationship exists between the CMUs and IOU boards that make up a system board. Sample values: IOU#01, IOU#02
IOU Error Status	rErrorStatus	Error status of IOU. Sample values: NORMAL, DEGRADED, FAULTED, CHANGE, UNKNOWN.

Active Management is available from the System Board table. The Add SB, Delete SB, and Replace SB menu items are supported only on high-end servers. The pop-up menu items for this table are described in TABLE 3-11.

Note – Clicking the Abort button is ignored.

TABLE 3-11 Platform Administration: System Board Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Add SB...	addfru	Add a system board. Displayed only when empty SB locations are available. Requires fieldeng privileges.
Delete SB...	deletefru	Delete a system board. Displayed only when the value of the System Board State property is not RUN. Requires fieldeng privileges.

TABLE 3-11 Platform Administration: System Board Table Pop-Up Menu *(Continued)*

Menu Item	Equivalent Command	Description
Replace SB...	`replacefru`	Replace a system board. Displayed only when the value of the System Board State property is not `RUN`. Requires `fieldeng` privileges.
Set SB Mode...	`setupfru`	Set the SB modes (x1 or x4).
Test SB...	`testsb`	Execute initial diagnosis of SB.

Extended System Boards

The XSB table lists every Extended System Board (XSB) in the Sun SPARC Enterprise M*x*000 server system. TABLE 3-12 shows the information displayed for each entry.

TABLE 3-12 Platform Administration: XSB Table

Property	Alarm Rule (if any)	Description
ID		Identifier for the XSB. Sample values: `00-0`, `02-3`
Status		Current status of the XSB. Sample values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status for the XSB. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Domain ID		Identifier for the domain to which the XSB belongs. Sample values: `0`, `1`
DR Status		DR status of the XSB. Possible values: `CONFIGURED`, `UNCONFIGURED`, `WAITING`, `DISCONNECTED`, `UNKNOWN`. After a DR operation, such as Add XSB, the value `WAITING` indicates that the `CONFIGURED` status has not yet been reached.
Power		Current power setting for the XSB. Sample values: `OFF`, `ON`

TABLE 3-12 Platform Administration: XSB Table *(Continued)*

Property	Alarm Rule (if any)	Description
Test	rTestState	Describes the result of testing the XSB. Possible values: `PASSED`, `FAILED`, `UNKNOWN`, `UNMOUNTED`, `TESTING`
Assignment		Describes whether the XSB is assigned. Possible values: `ASSIGNED`, `AVAILABLE`, `UNAVAILABLE`.
Connectivity		Describes whether the XSB is connected. Sample values: `CONNECTED`, `DISCONNECTED`
Configuration		Describes whether the XSB is configured. Sample values: `CONFIGURED`, `UNCONFIGURED`

Active Management is available from the XSB table. The pop-up menu items for this table are described in TABLE 3-13.

Note – Clicking the Abort button is ignored.

TABLE 3-13 Platform Administration: XSB Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Add XSB...	`addboard`	Add selected XSB to a domain. Options for State After Add XSB: • `ASSIGNED` – The XSB is assigned to the specified domain. The assigned system board is reserved for the specified domain and cannot be interrupted or assigned by other domains. Upon being assigned, the system board will be added, either by rebooting or by executing the Add XSB operation with the `CONFIGURED` option. • `CONFIGURED` – The XSB is added to the specified domain configuration. Once added, the XSB can be accessed from the operating system.

TABLE 3-13 Platform Administration: XSB Table Pop-Up Menu *(Continued)*

Menu Item	Equivalent Command	Description
Delete XSB...	`deleteboard`	Delete selected XSB from a domain. Not available if the value of Assignment is `UNAVAILABLE`. Options for State After Delete XSB: `UNASSIGNED` – Disconnects the system board completely from the domain configuration and puts it into the system board pool. Once in the system board pool, the system board can be added or assigned to the other domains. `DISCONNECTED` – Disconnects the system board from the domain configuration and changes the status to `ASSIGNED`. Since the system board is still assigned to the domain, it can be added again to the same domain configuration simply by rebooting or using the Add XSB dialog. `RESERVED` – Holds the immediate disconnection of the system board from the domain configuration, but does the reservation of the disconnection only. After being reserved, it will be disconnected by domain power being turned off and will be put into the system board pool.
Move XSB...	`moveboard`	Move the selected XSB to a new domain. Not available if the value of Assignment is `UNAVAILABLE`. Options for State After Move XSB: `ASSIGNED` – Assigns the XSB to the destination domain configuration. The assigned XSB is then reserved for the specified domain and cannot be added or assigned to another domain. After being assigned, the XSB will be added to the domain by rebooting or using the Add XSB dialog with the `CONFIGURED` option. `CONFIGURED` – Adds the XSB to the destination domain configuration. The added XSB can then be accessed from the operating system. `RESERVED` – Rather than moving the XSB immediately from the domain configuration, it only reserves the XSB for the move. After reserving, the XSB will be disconnected from the domain when the domain power is turned off, and added to the destination domain when the new domain is powered on.

Logical System Boards

The Logical System Board (LSB) table lists every LSB in the system. Each domain contains 16 LSBs. Therefore, the number of rows in the table equals the number of possible domains times 16. TABLE 3-14 shows the information displayed for each entry.

TABLE 3-14 Platform Administration: LSB Table

Property	Alarm Rule (if any)	Description
Domain ID		Domain identifier. Value falls between 0 and 23. Sample values: `0`, `1`
LSB ID		LSB identifier. Sample values: `0`, `10`, `15`
XSB ID		Identifier for the XSB associated with this LSB. Sample values: `01-2`, `00-1`
No Mem		Indicates whether to omit the use of memory on a domain. Possible values: `ON`, `OFF`.
No IO		Indicates whether to omit the use of I/O devices on a domain. Possible values: `ON`, `OFF`.
Floating Board		Indicates whether to set a priority for the board as a floating board, relative to other boards. Possible values: `ON`, `OFF`.

System Components

The System Components table displays field-replaceable units (FRUs) that share common properties and are not listed in TABLE 3-1 through TABLE 3-14. The following system components are displayed in this table:

- Power supplies
- Fan trays
- Crossbar board units
- Clock boards (high-end servers only)
- XSCF board
- Back panels (high-end servers only)

TABLE 3-15 shows the information displayed for each entry.

TABLE 3-15 Platform Administration: System Components Table

Property	Alarm Rule (if any)	Description
Name		Type and ID of component. Sample values: `PSU#00`, `XSCFA#01`
Status		Component status. Sample values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Part Number		FRU part number.
Serial Number		FRU serial number.
Product Name		FRU product name.

Environmental Monitors

The Environmental Monitors table displays information about environmental probes for temperature, current, and voltage information. TABLE 3-16 shows the information displayed for each entry.

TABLE 3-16 Platform Administration: Environmental Monitors Table

Property	Alarm Rule (if any)	Description
Name		Location of the environmental probe. Sample values: `CMU#00`, `CMU#00/CPUM#00`
Description		Description of the environmental probe. Sample values: `CPUM CHIP 0`, `1.2V`
Value		Current value measured by the sensor.
Units		Unit of measure for the value of Value. Sample values: `mV`, `C` (degrees Celcius).
Status	rValidStatus	Status of environmental probe. Possible values: `INVALID`, `VALID`, `UNKNOWN`.
Value Status	rErrorStatus	Status of the current value measured by the sensor. Possible values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.

Domains

The Domain table displays information about all existing domains. TABLE 3-17 shows the information displayed for each domain in the system.

TABLE 3-17 Platform Administration: Domain Table

Property	Alarm Rule (if any)	Description
Domain ID		Unique identifier of the domain. Sample values: `0`, `1`, `2` ... `31`
Domain Name		Name of the domain. Sample values: `col2-45`, `tokyo32`
OS Release		Identifier for the operating system release. Sample value: `5.10`
OS Version		Identifier for the operating system version. Sample value: `Generic_118833-29`
Number of CPUs		Number of CPU strands in the domain. There are four strands per CPU chip. Sample values: `1`, `2` ... `64`
Memory Capacity		Capacity of memory in the domain, in Gbytes. Sample values: `0`, `64`
Status	rDomainStatus	Domain status. Possible values: `POWER OFF`, `PANIC`, `SHUTDOWN`, `INITIALIZE`, `BOOT`, `RUNNING`, `PROM`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Configuration Policy		Configuration policy for degradation area when a hardware error is detected at initial hardware diagnosis. Sample values: `COMPONENT`, `XSB`, `SYSTEM`

Active Management is available from the Domain table. The pop-up menu items for this table are described in TABLE 3-18.

Note – Clicking the Abort button is ignored.

TABLE 3-18 Platform Administration: Domain Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Clear LSB...	`setdcl`	Clear LSB configuration values in Domain Component List for a domain.
Setup LSB Configuration...	`setdcl`	Set up LSB configuration values in Domain Component List for a domain.
Assign XSB to LSB...	`setdcl`	Assign XSBs to LSBs in Domain Component List for a domain.
Power On Domain...	`poweron`	Power on domain. Not available if the value of domain Status is one of these: `PANIC`, `SHUTDOWN`, `INITIALIZE`, `BOOT`, `RUNNING`, `PROM`, `CHANGE`, or `UNKNOWN`.
Power On All Domains...	`poweron`	Power on all domains that are powered off.
Power Off Domain...	`poweroff`	Power off domain. Not available if the value of domain Status is `POWER OFF`.
Power Off All Domains...	`poweroff`	Power off all domains that are powered on.
Reset Domain...	`reset`	Reset the domain.

External I/O

The tables in this section appear in the External IO section of the platform administration module. This section is hierarchically nested within the Platform View section. Information about External I/O Expansion Units is available only if you have an External I/O Expansion Unit installed on the system.

External I/O Expansion Unit Chassis

The IO Box Chassis table displays general information about any available External I/O Expansion Unit. TABLE 3-19 shows the information displayed for each External I/O Expansion Unit in the system.

TABLE 3-19 Platform Administration: IO Box Chassis Table

Property	Alarm Rule (if any)	Description
ID		Unique External I/O Expansion Unit identifier. Sample value: `XCX01U`
Locator LED		Locator LED used to visually locate the I/O External Expansion Unit. Sample values: `ON`, `OFF`.
Over Temperature LED	rIoBoxLEDState	LED indicating whether temperature is too high. Possible values: `OFF`, `BLINK FAST`, `BLINK SLOW`, `FEEDBACK FLASH`, `ON`, `STANDBY BLINK`, `UNKNOWN`
Service Required LED	rIoBoxLEDState	LED indicating that service may be required. Possible values: `OFF`, `BLINK FAST`, `BLINK SLOW`, `FEEDBACK FLASH`, `ON`, `STANDBY BLINK`, `UNKNOWN`
Active LED		LED indicating I/O activity. Possible values: `OFF`, `BLINK FAST`, `BLINK SLOW`, `FEEDBACK FLASH`, `ON`, `STANDBY BLINK`, `UNKNOWN`
Part Number		FRU part number.
Serial Number		FRU serial number.
Dash Level		Dash level.

Active Management is available from the IO Box Chassis table. The pop-up menu item for this table is described in TABLE 3-20.

TABLE 3-20 Platform Administration: IO Box Chassis Table Pop-Up Menu

Menu Item	Equivalent Command	Description
IO Box Set Locator LED...	`ioxadm locator {on|off}` *target*	Change the state of the Locator LED.

I/O Boats

The IO Boat table displays general information about all I/O boats in the system. TABLE 3-21 shows the information displayed for each I/O boat in the system.

TABLE 3-21 Platform Administration: IO Boat Table

Property	Alarm Rule (if any)	Description
Box ID		Unique External I/O Expansion Unit identifier. Sample value: `XCX01U`
Boat ID		I/O boat identifier. Sample value: `1`
Boat Location		Side of the External I/O Expansion Unit on which the I/O boat resides. Possible values: `LEFT`, `RIGHT`
Boat Type		Type of board. Sample values: `PCIE`, `PCIX`
OK To Remove LED	rOKtoRemoveLED	LED indicating whether boat is ready for removal. Sample values: `OFF`, `ON`
Service Required LED	rIoBoxLEDState	Indicates that service may be required. Sample values: `ON`, `OFF`
Active LED		LED indicating I/O activity. Sample values: `ON`, `OFF`, `STANDBY BLINK`
Part Number		FRU part number.
Serial Number		FRU serial number.
Dash Level		Dash level.

Active Management is available from the IO Boat table. The pop-up menu items for this table are described in TABLE 3-22.

TABLE 3-22 Platform Administration: IO Boat Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Power On IO Boat...	`ioxadm poweron` *target*	Power on the I/O boat. Not available if the value of OK To Remove LED is `OFF`.
Power Off IO Boat...	`ioxadm [-f] poweroff` *target*	Power down the I/O boat and light the OK to Remove LEDs on the host chassis. PCI slots and components in the I/O boat are powered down. An I/O boat that is part of a domain cannot be powered down except by checking Use Force Option, which may crash the domain. Not available if the value of OK To Remove LED is `ON`.
IO Boat Set Locator LED...	`ioxadm locator {-off|-on}` *target*	Change the state of the Locator LED.

Link Cards

The Link Card table displays general information about all Link Cards in the system. TABLE 3-23 shows the information displayed for each Link Card in the system.

TABLE 3-23 Platform Administration: Link Card Table

Property	Alarm Rule (if any)	Description
Box ID		Unique External I/O Expansion Unit identifier. Sample value: `XCX01U`
Boat ID		I/O boat Identifier
Link Card ID		Link Card Identifier
Data LED	rLinkCardLEDState	Data LED. Possible values: `ON`, `OFF`, `STANDBY BLINK`, `BLINK SLOW`, `BLINK FAST`, `FEEDBACK FLASH`, `UNKNOWN`
Management LED	rLinkCardLEDState	Management LED. Possible values: `ON`, `OFF`, `STANDBY BLINK`, `BLINK SLOW`, `BLINK FAST`, `FEEDBACK FLASH`, `UNKNOWN`
Downlink Card Location		Location of the downlink card.
Downlink Card ID		Downlink card identifier.
Part Number		FRU part number.
Serial Number		FRU serial number.
Dash Level		Dash level.

External I/O Expansion Unit Power Supplies and Fans

The IO Box Power Supply and Fan table displays information about all the power supplies and fan trays in the External I/O Expansion Unit. TABLE 3-24 shows the information displayed for each External I/O Expansion Unit in the system.

TABLE 3-24 Platform Administration: IO Box Power Supply and Fan Table

Property	Alarm Rule (if any)	Description
Box ID		Unique External I/O Expansion Unit identifier. Sample value: `XCX01U`
ID		I/O boat identifier.
Location		Location of External I/O Expansion Unit power supply and fan.
OK To Remove LED	rOKtoRemoveLED	Describes the OK to Remove LED. Sample values: `ON`, `OFF`, `UNKNOWN`
Service Required LED	rIoBoxLEDState	Describes the Service Required LED. Sample values: `ON`, `OFF`, `UNKNOWN`
AC Power LED		AC Power LED.
DC Power LED		DC Power LED.
Part Number		FRU part number.
Serial Number		FRU serial number.
Dash Level		Dash level.

Active Management is available from the IO Box Power Supply and Fan table. The pop-up menu items for this table are described in TABLE 3-25.

TABLE 3-25 Platform Administration: IO Box Power Supply and Fan Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Power On IO Box PSU...	`ioxadm poweron` *target*	Power on a power supply that has been previously put to sleep or marked OK to Remove. Not available if the value of OK To Remove LED is `OFF`.
Power Off IO Box PSU...	`ioxadm [-f] poweroff` *target*	Power off I/O Boat and light OK to Remove LEDs. When a power supply is powered off, the corresponding fan may nonetheless continue to run. Not available if the value of OK To Remove LED is `ON`. **Note:** If both PSUs are powered down from the same External I/O Expansion Unit at the same time, you will only be able to turn the unit back on by physically powering on the unit. You must check Use Force Option to remove a solitary PSU from a unit.
IO Box PSU Set Locator LED...	`ioxadm locator {-off|-on}` *target*	Change the state of the Locator LED.

External I/O Expansion Unit Sensors

The IO Box Sensor table displays information about all the sensors in the External I/O Expansion Unit. TABLE 3-26 shows the information displayed for each External I/O Expansion Unit sensor in the system.

TABLE 3-26 Platform Administration: IO Box Sensor Table

Property	Alarm Rule (if any)	Description
Box ID		Unique External I/O Expansion Unit identifier. Sample value: `XCX01U`
Sensor ID		Sensor Identifier.
Value	rIoBoxSensor	Current value measured by the sensor.
Units		Unit of measure for the value of `Value`.
Enabled Alarms		Indicates which values are being monitored to throw alarms. Possible values: `MIN`, `MAX`, `BOTH`, `NONE`.
Minimum Alarm Threshold		A sensed value lower than this minimum threshold indicates an alarm condition. Used in the alarm rule for the Value property.
Maximum Alarm Threshold		A sensed value higher than this maximum threshold indicates an alarm condition. Used in the alarm rule for the Value property.

Domain Views

For each domain in the system, a Domain View object displays information that relates specifically to that domain. Each Domain View replicates a subset of the tables available in the Platform View tables. This section describes the contents of a Domain View for any given domain.

Domain Information

The Domain table displays information about the target domain for the Domain View. TABLE 3-27 shows the information displayed for the target domain.

TABLE 3-27 Domain Views: Domain Table

Property	Alarm Rule (if any)	Description
Domain ID		Unique identifier of the domain. Sample values: `0`, `1`, `2` ... `31`
Domain Name		Name of the domain. Sample values: `col2-45`, `tokyo32`
OS Release		Identifier for the operating system release. Sample value: `5.10`
OS Version		Identifier for the operating system version. Sample value: `Generic_118833-29`
Number of CPUs		Number of CPUs in the domain. Sample values: `1`, `2` ... `64`
Memory Capacity		Capacity of memory in the domain in Gbytes. Sample value: `64`.
Status	rDomainStatus	Domain status. Possible values: `POWER OFF`, `PANIC`, `SHUTDOWN`, `INITIALIZE`, `BOOT`, `RUNNING`, `PROM`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Configuration Policy		Configuration policy. Sample values: `COMPONENT`, `XSB`, `SYSTEM`

Some Active Management is available from the domain view of the Domain table. The pop-up menu items for this table are described in TABLE 3-28.

TABLE 3-28 Domain Views: Domain Table Pop-Up Menu

Menu Item	Equivalent Command	Description
Power Off Domain...	`poweroff`	Power off domain. Not available if the value of the domain Status property is `POWER OFF`.
Power On Domain...	`poweron`	Power on domain. Not available if the value of the domain Status property is one of these: `PANIC`, `SHUTDOWN`, `INITIALIZE`, `BOOT`, `RUNNING`, `PROM`, `CHANGE`, or `UNKNOWN`.
Reset Domain...	`reset`	Reset the domain. Possible reset levels: • Power On Reset (POR) – Reset the domain system immediately. • Request (Instruct Panic) – Instruct the operating system on the domain to panic. Ignored during poweroff or shutdown. • Externally Initiated Reset (XIR) – Reset the CPU of the domain.

System Boards

The System Board table lists every system board in the targeted domain for the Domain View. TABLE 3-29 shows the information displayed for each entry.

TABLE 3-29 Domain Views: System Board Table

Property	Alarm Rule (if any)	Description
Name		Unique Name. Sample values: `SB#00`, `SB#01`
Board State		DR state of the board. Sample values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
XSB Mode		Indicates Uni-XSB or Quad-XSB mode. Possible values: `1`, `4`
Domain Assignment		List of the domains to which the board belongs. When XPAR mode is off, the maximum value is 1. When XPAR mode is on, the value can be > `1`. Sample values: `0`, `1`, `2`, ..., `23`, `SP`

TABLE 3-29 Domain Views: System Board Table *(Continued)*

Property	Alarm Rule (if any)	Description
CMU Board		Name (type and ID) of the CMU that is part of the system board. Sample values: `CMU#00`, `CMU#01`
CMU Error Status	rErrorStatus	Error status of the CMU that is part of the system board. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
IOU Board		The IOU board that is part of the system board. A one-to-one relationship exists between the CMUs and IOUs that make up a system board. Sample values: `IOU#01`, `IOU#02`
IOU Error Status	rErrorStatus	Error status of IOU. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.

Extended System Boards

The Extended System Board (XSB) table lists every XSB in the domain. TABLE 3-30 shows the information displayed for each entry.

TABLE 3-30 Domain Views: XSB Table

Property	Alarm Rule (if any)	Description
ID		Identifier for the XSB. Sample values: `00-0`, `01-0`, `01-1`, `01-2`, `01-3`
Status		Current status of the XSB. Sample values: `UNMOUNTED`, `STOP`, `INIT`, `NOT CONFIGURED`, `IDLE`, `RUN`, `DECONFIGURED`, `CHANGE`, `UNKNOWN`.
Error Status	rErrorStatus	Error status for the XSB. Sample values: `NORMAL`, `DEGRADED`, `FAULTED`, `CHANGE`, `UNKNOWN`.
Domain ID		Identifier for the domain to which the XSB belongs. Sample values: `0`, `1`
DR Status		DR status of the XSB. Sample values: `CONFIGURED`, `UNCONFIGURED`, `UNKNOWN`

TABLE 3-30 Domain Views: XSB Table *(Continued)*

Property	Alarm Rule (if any)	Description
Power		Current power setting for the XSB. Sample values: `OFF`, `ON`
Test	rTestState	Describes the result of testing the XSB. Possible values: `PASSED`, `FAILED`, `UNKNOWN`, `UNMOUNTED`, `TESTING`
Assignment		Describes whether the XSB is assigned. Sample values: `UNAVAILABLE`, `AVAILABLE`, `ASSIGNED`.
Connectivity		Describes whether the XSB is connected. Sample values: `CONNECTED`, `DISCONNECTED`
Configuration		Describes whether the XSB is configured. Sample values: `CONFIGURED`, `UNCONFIGURED`

Logical System Boards

The Logical System Board (LSB) table lists the 16 LSBs in the targeted domain for the Domain View. TABLE 3-31 shows the information displayed for each entry.

TABLE 3-31 Domain Views: LSB Table

Property	Alarm Rule (if any)	Description
Domain ID		Domain identifier. Value falls between 0 and 23. Sample values: `0`, `1`
LSB ID		LSB identifier. Sample values: `0`, `9`, `15`
XSB ID		Identifier for the XSB associated with this LSB. Sample values: `00-3`, `01-2`
No Mem		Indicates whether to omit the use of memory on a domain. Possible values: `ON`, `OFF`.
No IO		Indicates whether to omit the use of I/O devices on a domain. Possible values: `ON`, `OFF`.
Floating Board		Indicates whether to set a priority for the board as a floating board, relative to other boards. Possible values: `ON`, `OFF`.

About the Hardware Tab

In the platform Details window, you can access two types of views from the Hardware tab.

- Physical View
- Logical View

Physical View

The Physical View provides a photo-realistic view of the Sun SPARC Enterprise M*x*000 server. The Physical View shows only components that are visible in the chassis. To view information about devices that are not visible in the chassis, examine the Logical View or Module Browser displays.

Logical View

The Logical View provides a hierarchical view of the boards and components in that entity. Unlike the Physical View, which shows only those boards and components physically visible in the chassis, the Logical View shows all the boards and components.

Accessing Views Under the Hardware Tab

▼ To Access the Physical View

To access a photo-realistic view of the platform:

1. **Open the platform Details window.**
2. **Click on the Hardware tab.**
3. **In the Views pull-down menu, choose platform under Physical View.**

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

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

▼ To Access the Logical View

The platform Logical View shows the hierarchy of all boards and components attached to the entire server. To access a hierarchical view of a platform:

1. **Open the platform Details window.**
2. **Click on the Hardware tab.**
3. **In the Views pull-down menu, choose platform under Logical View.**
4. **Click on the Expand All button and then click on an object in the left pane to see a logical view**

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

CHAPTER 4

Domain Administration

This chapter provides information about the domain administration module, Domain Config Reader SPARC Enterprise M*x*000, in the following sections:

About the Domain Administration Module

The domain administration module provides information about domains on your Sun SPARC Enterprise M*x*000 servers. The module is represented by an icon labeled with the module name, Domain Config Reader SPARC Enterprise M*x*000.

Accessing the Domain Administration Module

▼ To Access the Domain Administration Module

1. **Navigate to the platform Details window.**

   From the main console window, open the Details window for the target platform by using one of these methods:

   - Double-click the icon for the server.
   - Right-click the icon for the server and choose Details from the pop-up menu.
   - Select the icon for the server and choose Details from the Tools menu.

   The platform Details window appears. By default,the window opens to the Module Browser tab.

2. **Expand the domain administration module.**

   In the Details window, notice the Hardware icon. Expand or open it by using one of these methods:

   - Click once on the expansion icon to the left of the icon for the module.

     The Hardware icon is expanded in the left pane, showing the domain administration icon, labeled Domain Config Reader SPARC Enterprise M*x*000.

   - Double-click the icon for the module.

     The Hardware icon is expanded in the left pane, showing the domain administratoin module icon. The module's icon also appears in the right pane.

   You will now see the domain administration module in the left pane or display its contents in the right pane.

3. **Browse the tables and monitor the domains.**

   Use the methods described in Step 2 to browse the properties displayed in the tables.

   Refer to the reference sections later in this chapter for detailed information about the various tables in the module.

Reference: Domain Administration Properties

This section contains descriptions of the properties listed in tables for each Sun SPARC Enterprise M*x*000 server Domain Administration object. If a property has a value of `--` (double dash) or `-1`, the domain administration module is unable to obtain data for that property.

The following tables are described in this section:

System

TABLE 4-1 provides a brief description of the system properties for a domain.

TABLE 4-1 Domain Administration: System Table

Property	Alarm Rule (if any)	Description
Node Name		Node name. Value is `system`.
Hostname		Domain host name.
Host ID		Host identification number.
Operating System		Operating system. Sample value: `SunOS5.10`.
OS Version		Operating system version.
Architecture		Machine architecture. Sample value: `sparc`.
Last Update		Date and time when the configuration information was last updated.

TABLE 4-1 Domain Administration: System Table *(Continued)*

Property	Alarm Rule (if any)	Description
Total Disks		Total number of disks.
Total Processors		Number of CPU processors.
Total Tape Devices		Number of tape devices.

Logical System Boards

TABLE 4-2 provides a brief description of the properties for all the logical system boards in a domain.

TABLE 4-2 Domain Administration: Logical System Board Table

Property	Alarm Rule (if any)	Description
LSB ID		Logical system board identifier containing FRU ID(Slot ID).
Floating Board		Indicates whether the LSB is a floating board. Possible values: `Yes`, `No`.
Processor List		Comma-separated list of identifiers for the processors on the logical system board.

PCI Cards

TABLE 4-3 provides a brief description of the properties for all the PCI cards in a domain.

TABLE 4-3 Domain Administration: PCI Card Table

Property	Alarm Rule (if any)	Description
Card ID		PCI card identifier containing FRU ID (Slot ID).
Device Path		Path to the device. Sample value: `/pci@0,600000/pci@0/scsi@1`.
Device Type		Device type. Sample values: `scsi-2`, `network`.

TABLE 4-3 Domain Administration: PCI Card Table *(Continued)*

Property	Alarm Rule (if any)	Description
Device Class		Device class. Sample values: `Mass Storage Controller(SCSI)`, `Network Controller(Ethernet)`.
Clock Frequency		Device clock frequency in megahertz (MHz).
Name		PCI card name. Sample values: `scsi`, `network`.
Revision ID		Card revision identifier.
Manufacturer		Card manufacturer.
Vendor ID		Vendor identifier. Sample values: `4096`, `5348`.
Model		Card model identifier.
Version		Card version.

Processors

TABLE 4-4 provides a brief description of the properties for all the processors in a domain.

TABLE 4-4 Domain Administration: Processor Table

Property	Alarm Rule (if any)	Description
Proc ID		Processor identifier containing FRU ID(Slot ID)
Core Status	oplCPUstatus	Current status of the processor. Possible values: `ONLINE`, `OFFLINE`, `POWEROFF`, `UNKNOWN`.
Processor Number		Processor number.
Module Revision		Processor module revision identifier.
Manufacturer		Processor manufacturer identifier.
SPARC Version		SPARC version identifier.
Clock Frequency (MHz)		Processor clock frequency in megahertz (MHz).
L1 Icache Size		L1 instruction cache size in kilobytes (Kbytes).
L1 Dcache Size		L1 data cache size in kilobytes (Kbytes).
L2 Cache Size		L2 external cache size in kilobytes (Kbytes).

Memory Controllers

TABLE 4-5 provides a brief description of the properties for all the memory controllers in a domain.

TABLE 4-5 Domain Administration: Memory Controller Table

Property	Alarm Rule (if any)	Description
Memory Controller		Memory controller identifier containing ID(SlotID).
CS0 Status	oplStateCheck	Indicates the POST status of CS0. Possible values: `UNKNOWN`, `OKAY`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, `REDLISTED`.
CS0 Available Memory		Available memory for CS0 (integer).
CS0 DIMM Capacity		DIMM capacity for CS0 (integer).
CS0 DIMM Count		DIMM count for CS0 (integer).
CS1 Status	oplStateCheck	Indicates the POST status of CS1. Possible values: `UNKNOWN`, `OKAY`, `DISABLED`, `UNDEFINED`, `MISCONFIGURED`, `FAIL-OBP`, `FAIL`, `BLACKLISTED`, `REDLISTED`.
CS1 Available Memory		Available memory for CS1 (integer).
CS1 DIMM Capacity		DIMM capacity for CS1 (integer).
CS1 DIMM Count		DIMM count for CS1 (integer).

Disk Devices

TABLE 4-6 provides a brief description of the properties for all the disk devices in a domain.

TABLE 4-6 Domain Administration: Disk Device Table

Property	Alarm Rule (if any)	Description
Disk ID		Disk device identifier in the format `disk(cxtydz)`, where *x* is the PCI controller number (`0` or `1`), *y* is the target number, and *z* is the logical unit number. Sample value: `c0t4d0`. If the disk is dual-ported, two disk device identifiers are separated by comma.
Card ID		Card identifier.
Path		Physical path to the disk device. Sample values: `/pci@1f,0/pci@1,1/scsi@2/sd@0,0`; ...`1,0`; or `6,0`.
Block Size		Block size established when the disk was partitioned.
Block Count		Number of blocks allocated for the file system.
Blocks Available		Number of unused blocks available for the file system.
File Count		Number of files existing on the file system.
Files Available		Number of unused files available for the files system.
Status		Status of the disk. Possible values: `OK` or a messages describing the problem encountered, such as `FAIL`.
Hardware Errors	oplDskErrCnt	Number of hardware-related errors.
Software Errors	oplDskErrCnt	Number of software-related errors.
Transport Errors	oplDskErrCnt	Number of transport-related errors.

Tape Devices

TABLE 4-7 provides a brief description of the properties for all the tape devices in a domain.

TABLE 4-7 Domain Administration: Tape Device Table

Property	Alarm Rule (if any)	Description
Tape ID		Tape device identifier, following the standard naming convention for tape devices. Sample value: `tape (0)`.
Card ID		Card identifier.
Path		Physical path to the tape device. Sample value: `/devices/pci@1f,0/pci@1,1/scsi@2/st@4,0`.
Device Name		Tape device identifier. Sample value: `HP DDS-3 4MM DAT`.
Status		Status for the tape device. Possible values: `OK` or a message describing the problem encountered.
Tape Errors	oplTpeErrCnt	Number of tape errors recorded in the `syslog` file (integer).

Network Interfaces

TABLE 4-8 provides a brief description of the properties for all the network interfaces in a domain.

TABLE 4-8 Domain Administration: Network Interface Table

Property	Alarm Rule (if any)	Description
Network ID		Network interface identifier. Sample values: `network(hme0)`, `network(scman1)`, `network(scman1:1)`.
Symbolic Name		Host name of the host computer associated with the network interface.
Ethernet Address		Ethernet address for the network interface.

TABLE 4-8 Domain Administration: Network Interface Table *(Continued)*

Property	Alarm Rule (if any)	Description
IP Address		IP address for the network interface.
Status		Status of the network interface. Possible values: `OK` or blank.
Network Error		Network error message. A network error message is displayed if the system either cannot obtain information for any network interface property or obtains an error code.

CHAPTER 5

Domain Dynamic Reconfiguration

This chapter describes how to perform dynamic reconfiguration (DR) operations from a Sun SPARC Enterprise M*x*000 server domain using the Sun Management Center console and the domain dynamic reconfiguration module, Domain DR SPARC Enterprise M*x*000. The dynamic reconfiguration operations apply only to PCI cards and PCI card slots.

Before Performing Domain DR Operations

You must be familiar with DR operations before you use the Sun Management Center GUI to perform DR operations. Refer to the following documentation to learn more about DR operations on Sun SPARC Enterprise M*x*000 servers:

- The `cfgadm`(1M) man page, which describes the underlying command for the domain DR module.
- *Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers Dynamic Reconfiguration (DR) User's Guide*

About the DR Module

The Domain DR SPARC Enterprise M*x*000 module enables you to perform dynamic reconfiguration operations on the domain through the attachment points listed in the IO Cards/Devices table. You can perform the operations in the same manner that you would with the `cfgadm`(1M) command, only using the Sun Management Center console.

You must both install and load this module to use it the first time. You can unload the module, if desired. For specific information about loading and unloading Sun Management Center modules, refer to the *Sun Management Center User's Guide*.

Note – If you want to uninstall and reinstall the domain DR module, you must first unload the currently loaded module. Refer to the *Sun Management Center User's Guide* for detailed information about loading and unloading modules in the Module Manager tab of the Details window.

The icon for the module — Domain DR SPARC Enterprise M*x*000 — is displayed in the host Details window on a domain under the Module Browser tab and Hardware icon.

About Domain DR Operations

For DR operations, pop-up menus are launched in the same way as for other domain operations: by right-clicking the appropriate table of managed objects. The current condition of the object determines which options are displayed in the menu. For example, when a PCI card slot is already connected to the PCI bus, the Disconnect option is displayed in the menu. When the PCI card slot is not connected to the PCI bus, the Connect option is displayed in the menu.

Performing Domain DR Operations

This section provides sample Domain DR operations:

- "To Connect a PCI Card Slot to a PCI Bus" on page 94
- "To Show the Status of an IO/Devices DR Command" on page 95

▼ To Connect a PCI Card Slot to a PCI Bus

1. **Right click the IO Cards/Devices table for your PCI card slot and choose Connect.**

   The Connect dialog appears.

2. **Click OK to connect the PCI card slot.**

▼ To Show the Status of an IO/Devices DR Command

1. **Right click the IO Cards/Devices table for your PCI card slot and choose Show Status.**

   The Status dialog appears.

2. **Click OK to close the Status dialog.**

Reference: IO Cards/Devices Table Menu Options

TABLE 5-1 lists the DR menu options for the IO Cards/Devices table.

TABLE 5-1 DR Options for the IO Cards/Devices Table Menu

Menu Entry	Description
Connect	Connect a PCI card slot
Disconnect	Disconnect a PCI card slot
Configure	Configure a PCI card
Unconfigure	Unconfigure a PCI card
Show Status	Shows status of most recent IO Cards/Devices DR command

Reference: Domain Dynamic Reconfiguration Properties

Use the dynamic reconfiguration data table in the right half of a Details window to find the last-known state of a dynamically reconfigurable PCI card.

Attachment Points: I/O Cards and Devices

An attachment point is a collective term for a component and its slot. TABLE 5-2 shows information about PCI card slots.

TABLE 5-2 Attachment Point Properties for IO Cards/Devices

Property	Description
Unique Ap_Id	Unique logical attachment point identifier from `cfgadm`: `iou#`*x*`-pci#`*y*, where *x* is the number of the IOU and *y* is the PCI number.
Slot State	Slot availability state. Possible values: `assigned`, `unassigned`.
Power State	Power state. Possible values: `powered-on` or `powered-off`.
Receptacle	Receptacle state. Possible values: `connected`, `disconnected`, `empty`.
Occupant	State of the occupant, which is the combination of the board and its attached devices. Possible values: `configured`, `unconfigured`.
Type	Type. Sample value: `pci-pci/hp`.
Condition	Component condition. Possible values: `ok`, `unknown`, `failed`, `unusable`.
Information	General information for the `io` type; for example, `device/pci@23d,700000 referenced`. Refer to the `cfgadm_sbd`(1M) man page in the Solaris Reference Manual Collection for descriptions of the fields.
When	Date and time when the components were configured into the domain.
Busy	`y` (yes) indicates a state, availability, or condition change operation is in progress; `n` (no) indicates *no* state, availability, or condition change operation is in progress.
Phys_Id	Physical attachment point ID: `/devices/pci@`*y*`,600000:iou#`*x*`-pci#`*y*, where *x* is the number of the IOU and *y* is the PCI number.

CHAPTER 6

Alarm Rules

An alarm is a notification of an abnormal event. Sun Management Center software enables you to monitor your system using alarms that have differing severities.

This chapter summarizes the alarm rules specific to Sun SPARC Enterprise M*x*000 servers. The chapter contains the following sections:

For more detailed information about alarms, refer to the *Sun Management Center User's Guide*.

About Alarm Rules

The add-on software contains a number of alarm rules used by the system to respond to the state of various components. Each alarm rule instance is applied to a specific property of a table in the platform administration module. A single rule can be applied to multiple properties and tables.

An alarm rule takes input from two main sources:

- Object properties within the platform administration module
- Data stored by the rule itself

You can assign actions to rule states and state transitions through the Sun Management Center console. Refer to the *Sun Management Center Software User's Guide* for detailed information.

Reference: Platform Administration Module Alarm Rules

This section lists the alarm rules for properties monitored by the platform administration module.

The first table in each section lists

- The tables where the rule is applied
- The properties in each table that are read by the rule

The alarm rules are also listed in the tables describing the platform administration module properties in Chapter 3.

The second table in each section lists each value for the monitored properties:

- Any associated alarm level
- Any associated alarm color
- Any recommended action

Error Status Rule (`rErrorStatus`)

Alarms governed by the error status rule alert you to changes in the status of the system or a component of the system.

TABLE 6-1 Error Status Rule Tables and Properties

Applicable Tables	Properties Read
System	System State, Firmware State, Hardware State
CMU Board	Error Status
CPU Module	Error Status
Memory Board	Error Status
Memory DIMM	Error Status
IOU Board	Error Status
PCI Slot	Error Status
System Board	CMU Error Status, IOU Error Status
XSB	Error Status
System Components	Error Status
Environmental Monitors	Value Status
Domain	Error Status

TABLE 6-2 Error Status Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
`NORMAL`	no alarm	OK
`WARNING`	warning	yellow
`ALARM`	error	red
`CHANGE`	no alarm	OK
`NOTICE`	info	blue
`UNKNOWN`	info	blue

LED State Rule (`rLEDState`)

Alarms governed by the LED state rule alert you when the system might require service.

TABLE 6-3 LED State Rule Tables and Properties

Applicable Tables	Properties Read
System	Check LED

TABLE 6-4 LED State Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
ON	error	red
OFF	no alarm	OK
BLINKING	info	blue
UNKNOWN	info	blue

Test State Rule (rTestState)

Alarms governed by the test state rule alert you when the current state of testing Extended System Boards (XSBs) is not either PASSED or UNMOUNTED.

TABLE 6-5 Test State Rule Tables and Properties

Applicable Tables	Properties Read
XSB	Test

TABLE 6-6 Test State Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
PASSED	no alarm	OK
FAILED	error	red
UNKNOWN	info	blue
UNMOUNTED	no alarm	OK
TESTING	info	blue

Domain Status Rule (rDomainStatus)

Alarms governed by the domain status rule alert you when the status of a domain is PANIC or UNKNOWN.

TABLE 6-7 Domain Status Rule Tables and Properties

Applicable Tables	Properties Read
Domain	Status

TABLE 6-8 Domain Status Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
POWER OFF	no alarm	OK
PANIC	error	red
SHUTDOWN	no alarm	OK
INITIALIZE	no alarm	OK
BOOT	no alarm	OK
RUNNING	no alarm	OK
PROM	no alarm	OK
CHANGE	no alarm	OK
UNKNOWN	warning	yellow

Valid Status Rule (rValidStatus)

Alarms governed by the valid status rule alert you when the status of an environmental probe is not VALID.

TABLE 6-9 Valid Status Rule Tables and Properties

Applicable Tables	Properties Read
Environmental Monitors	Status

TABLE 6-10 Valid Status Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
INVALID	warning	yellow
VALID	no alarm	OK
UNKNOWN	info	blue

External I/O Expansion Unit LED State Rule (rIoBoxLEDState)

Alarms governed by the External I/O Expansion Unit LED state rule alert you when such LEDs indicate there might be an issue requiring your attention, or that service might be required, relating to external I/O.

TABLE 6-11 External I/O Expansion Unit LED State Rule Tables and Properties

Applicable Tables	Properties Read
IO Box Chassis	Over Temperature LED, Service Required LED
IO Boat	Service Required LED
IO Box Power Supply and Fan	Service Required LED

TABLE 6-12 External I/O Expansion Unit LED State Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
OFF	no alarm	OK
STANDBY BLINK	no alarm	OK
BLINK SLOW	warning	yellow
BLINK FAST	no alarm	OK
FEEDBACK FLASH	no alarm	OK
ON	error	red
UNKNOWN	warning	yellow

Link Card LED State Rule (rLinkCardLEDState)

Alarms governed by the Link Card LED state rule alert you when such LEDs indicate there might be an issue requiring your attention, or that service might be required, relating to external I/O.

TABLE 6-13 Link Card LED State Rule Tables and Properties

Applicable Tables	Properties Read
Link Card	Data LED, Management LED

TABLE 6-14 Link Card LED State Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
OFF	error	red
STANDBY BLINK	no alarm	OK
BLINK SLOW	warning	yellow
BLINK FAST	no alarm	OK
FEEDBACK FLASH	no alarm	OK
ON	no alarm	OK
UNKNOWN	warning	yellow

OK To Remove LED Rule (rOKtoRemoveLED)

Alarms governed by the OK To Remove LED rule alert you when the OK To Remove LED property is ON or UNKNOWN.

TABLE 6-15 OK To Remove LED Rule Tables and Properties

Applicable Tables	Properties Read
IO Boat	OK To Remove LED

TABLE 6-16 OK To Remove LED Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
OFF	no alarm	OK
STANDBY BLINK	no alarm	OK
BLINK SLOW	no alarm	OK
BLINK FAST	no alarm	OK
FEEDBACK FLASH	no alarm	OK
ON	info	blue
UNKNOWN	warning	yellow

External I/O Expansion Unit Sensor Rule (rIoBoxSensor)

Alarms governed by the External I/O Expansion Unit sensor rule alert you when an environmental value is sensed that is equal to a threshold value, exceeds a maximum threshold value, or is lower than a minimum threshold value.

TABLE 6-17 External I/O Expansion Unit Sensor Rule Tables and Properties

Applicable Tables	Properties Read
IO Box Sensor	Value

TABLE 6-18 External I/O Expansion Unit Sensor Rule Property Values

Sensor Value	Alarm Level (if any)	Meaning/Color
> minimum threshold value	no alarm	OK
< maximum threshold value	no alarm	OK
= minimum threshold value	warning	yellow

TABLE 6-18 External I/O Expansion Unit Sensor Rule Property Values *(Continued)*

Sensor Value	Alarm Level (if any)	Meaning/Color
= maximum threshold value	warning	yellow
< minimum threshold value	error	red
> maximum threshold value	error	red

Reference: Domain Administration Module Alarm Rules

This section lists the alarm rules for properties monitored by the domain administration module.

The first table in each section lists

- The tables where the rule is applied
- The properties in each table that are read by the rule

The alarm rules are also listed in the tables describing the domain administration module properties in Chapter 4.

The second table in each section lists each value for the monitored properties:

- Any associated alarm level
- Any associated alarm color
- Any recommended action

CPU Status Rule (`oplCPUStatus`)

Alarms governed by the CPU status rule alert you to changes in the status of the CPU. A caution alarm is generated if the processor is `OFFLINE`.

TABLE 6-19 CPU Status Rule Tables and Properties

Applicable Tables	Properties Read
Processor	Core Status

TABLE 6-20 CPU Status Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
ONLINE	no alarm	OK
OFFLINE	caution	blue
POWEROFF	no alarm	OK
UNKNOWN	no alarm	OK

State Check Rule (oplStateCheck)

Alarms governed by the state check rule alert you to changes in the CS status of a memory controller. A caution alarm is generated if the status is not OKAY.

TABLE 6-21 State Check Rule Tables and Properties

Applicable Tables	Properties Read
Memory Controller	CS0 Status, CS1 Status

TABLE 6-22 State Check Rule Property Values

Property Value	Alarm Level (if any)	Meaning/Color
UNKNOWN	caution	blue
OKAY	no alarm	OK
DISABLED	caution	blue
UNDEFINED	caution	blue
MISCONFIGURED	caution	blue
FAIL-OBP	caution	blue
FAIL	caution	blue
BLACKLISTED	caution	blue
REDLISTED	caution	blue
--	caution	blue

Disk Error Count Rule (`oplDskErrCnt`)

Alarms governed by the disk error count rule alert you when an error count threshold is exceeded.

TABLE 6-23 Disk Error Count Rule Tables and Properties

Applicable Tables	Properties Read
Disk Device	Hardware Errors, Software Errors, Transport Errors

TABLE 6-24 Disk Error Count Rule Property Values

Error Count Threshold	Alarm Level (if any)	Meaning/Color
5	info	blue
10	warning	yellow
15	error	red

Tape Error Count Rule (`oplTpeErrCnt`)

Alarms governed by the tape error count rule alert you when an error count threshold is exceeded.

TABLE 6-25 Tape Error Count Rule Tables and Properties

Applicable Tables	Properties Read
Tape Device	Tape Errors

TABLE 6-26 Tape Error Count Rule Property Values

Error Count Threshold	Alarm Level (if any)	Meaning/Color
10	info	blue
20	warning	yellow
30	error	red

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