



Sun N1 System Manager 1.3 Introduction



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Part No: 819-5133
April 2006

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Preface

The *Sun N1 System Manager 1.3 Introduction* provides an overview of the N1 System Manager features and components, and a walkthrough describing the sequence of tasks required to implement N1 System Manager on your site.

Who Should Use This Book

This guide is intended for those who will install, upgrade, or use the N1 System Manager software and hardware.

Related Documentation

This guide is part of a nine-volume implementation reference set. The set should be read in the following order:

- *Sun N1 System Manager 1.3 Release Notes*
- *Sun N1 System Manager 1.3 Introduction*
- *Sun N1 System Manager 1.3 Site Preparation Guide*
- *Sun N1 System Manager 1.3 Installation and Configuration Guide*
- *Sun N1 System Manager 1.3 Discovery and Administration Guide*
- *Sun N1 System Manager 1.3 Operating System Provisioning Guide*
- *Sun N1 System Manager 1.3 Command Line Reference Manual*
- *Sun N1 System Manager 1.3 Grid Engine Provisioning and Monitoring Guide*
- *Sun N1 System Manager 1.3 Troubleshooting Guide*

How This Book Is Organized

- [Chapter 1](#) provides an overview of the N1 System Manager.
- [Chapter 2](#) provides an overview of the steps required to install and configure the N1 System Manager and then to use the N1 System Manager to discover and provision servers.
- The [Glossary](#) provides definitions of the terms used in the N1 System Manager environment.

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (<http://www.sun.com/documentation/>)
- Support (<http://www.sun.com/support/>)
- Training (<http://www.sun.com/training/>)

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P-1 Typographic Conventions

Typeface	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name% you have mail.</code>
AaBbCc123	What you type, contrasted with onscreen computer output	<code>machine_name% su</code> <code>Password :</code>
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <i>rm filename</i> .
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . <i>A cache</i> is a copy that is stored locally. Do <i>not</i> save the file. Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX® system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P-2 Shell Prompts

Shell	Prompt
C shell	machine_name%
C shell for superuser	machine_name#
Bourne shell and Korn shell	\$
Bourne shell and Korn shell for superuser	#

Sun N1 System Manager Overview

This chapter provides a summary of Sun N1 System Manager 1.3 functions and components.

Sun N1 System Manager Features

The Sun N1 System Manager is a system management tool that enables you to discover and subsequently manage racks of servers or other groupings of horizontally scaled servers using a single browser user interface. In this manual, the term *manageable server* is used for a server that the N1 System Manager network can access, but the N1 System Manager has not yet discovered. A *managed server* is a server that has been successfully discovered by the N1 System Manager and is subsequently managed by the N1 System Manager.

The Sun N1 System Manager browser interface provides an integrated command line interface. You can also run the same command line interface from a UNIX shell on the [management server](#).

The Sun N1 System Manager system or *N1 System Manager* enables you to do the following tasks:

- Discover servers
- Provision operating systems
- Manage firmware and patches
- Monitor server health
- Automate server configuration and recovery
- Maximize server utilization
- Minimize user-visible hardware downtime
- Log N1 System Manager and server events

Sun N1 System Manager Components

The following figure provides a high-level overview of the hardware components of the N1 System Manager.

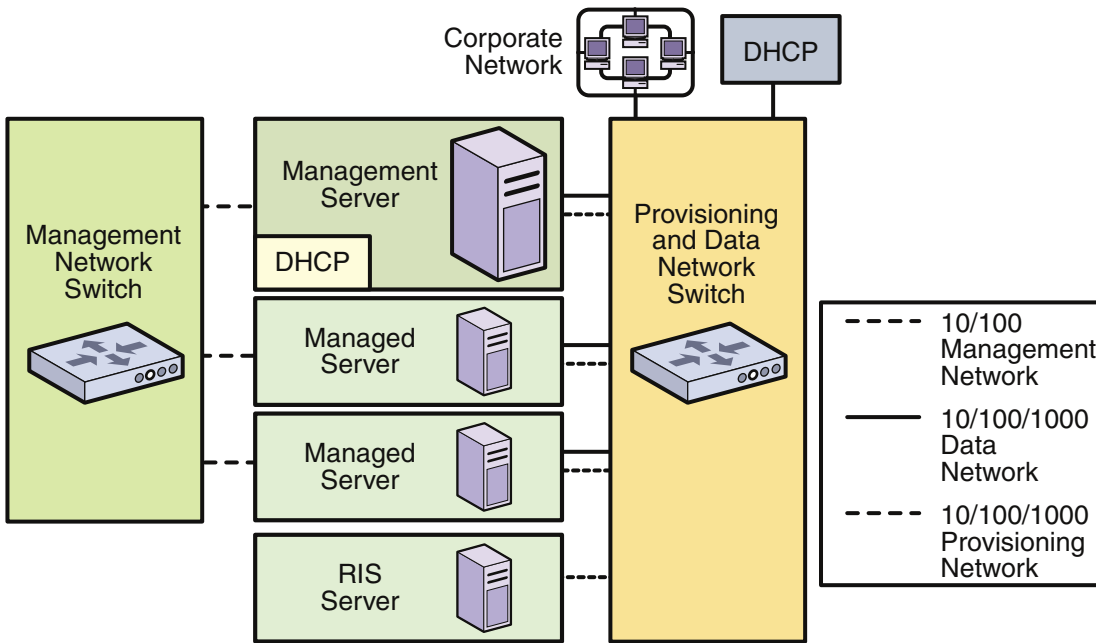


FIGURE 1-1 N1 System Manager Components

The above diagram represents one of the possible N1 System Manager configurations. For further information, see “Reference Configurations” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

The following list describes each of the components.

- Management server and managed servers

Note – If your network is designed to use only a management network or only a provisioning network, then the N1 System Manager operates in a *restricted mode* when installed. N1 System Manager provides two default security roles with specific privileges assigned for the restricted mode of operation. See “Managing Roles” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* and “Restricted Mode Capabilities” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*.

- The N1 System Manager management server should be dedicated only to the N1 System Manager software, and should not be managed by any system management software such as N1 System Manager, Sun Management Center, Sun Control Station, or any other management system.
- The management server is the Solaris or Linux based server on which the N1 System Manager software is installed and run.

The N1 System Manager DHCP service allocates IP addresses to the managed servers during discovery for use by the provisioning network. The N1 System Manager uses the provisioning network to load operating systems and updates to the managed servers.

For a list of the supported management servers and the qualified operating systems, see “Management Server Requirements” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

- For a list of the supported manageable servers and the qualified operating systems that can be provisioned, see “Manageable Server Requirements” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

- RIS server

The Microsoft Windows Remote Installation Services (RIS) server is required only if you are going to provision Windows to managed servers. For further information, see “Setting Up a Windows Remote Installation Services Server” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

- The corporate network connection to the provisioning and data network switch enables corporate users to access managed servers over the data network.

An Ethernet connection of 100 megabits per second is the minimum requirement. A 1,000 megabits (1 Gbit) connection is advised.

- The management network provides the path to and from the N1 System Manager and the managed server’s management processor port. The N1 System Manager uses the management network for server discovery, managed server firmware updates, and for managed server hardware management and monitoring.

The management network should be a private network that is accessible by the management server, and not accessible by the data network. An Ethernet connection of 100 megabits per second is the required minimum.

- The management network switch provides connectivity to a management port on each managed server, and should be a VLAN- programmable switch.
- The data and provisioning network switch provides provisioning network and data network connectivity to and from the management server and the managed servers. The provisioning and data switch should be a VLAN- programmable switch.

The provisioning and data network requirements are as follows:

- The provisioning network is used by the management server to configure and provision the operating and application environments on the managed servers, to monitor managed server OS resources and hardware, and to apply OS updates to managed servers. Ethernet connections of 1 Gbit per second are the required minimum.

Due to the use of the DHCP protocol and the bandwidth requirements for OS provisioning, the provisioning network should be isolated from the data network.

- The data network provides the connections from the managed servers to the corporate network through the management server for the end user. The corporate DHCP service allocates IP addresses to the managed server to provide end user access to the managed server.

The data network should not have access to any of the N1 System Manager networks.

The following diagram illustrates a sample production environment in which the data and provisioning network are on separate VLANs, and in which multiple VLAN assignments have been used to configure the data network for end user access.

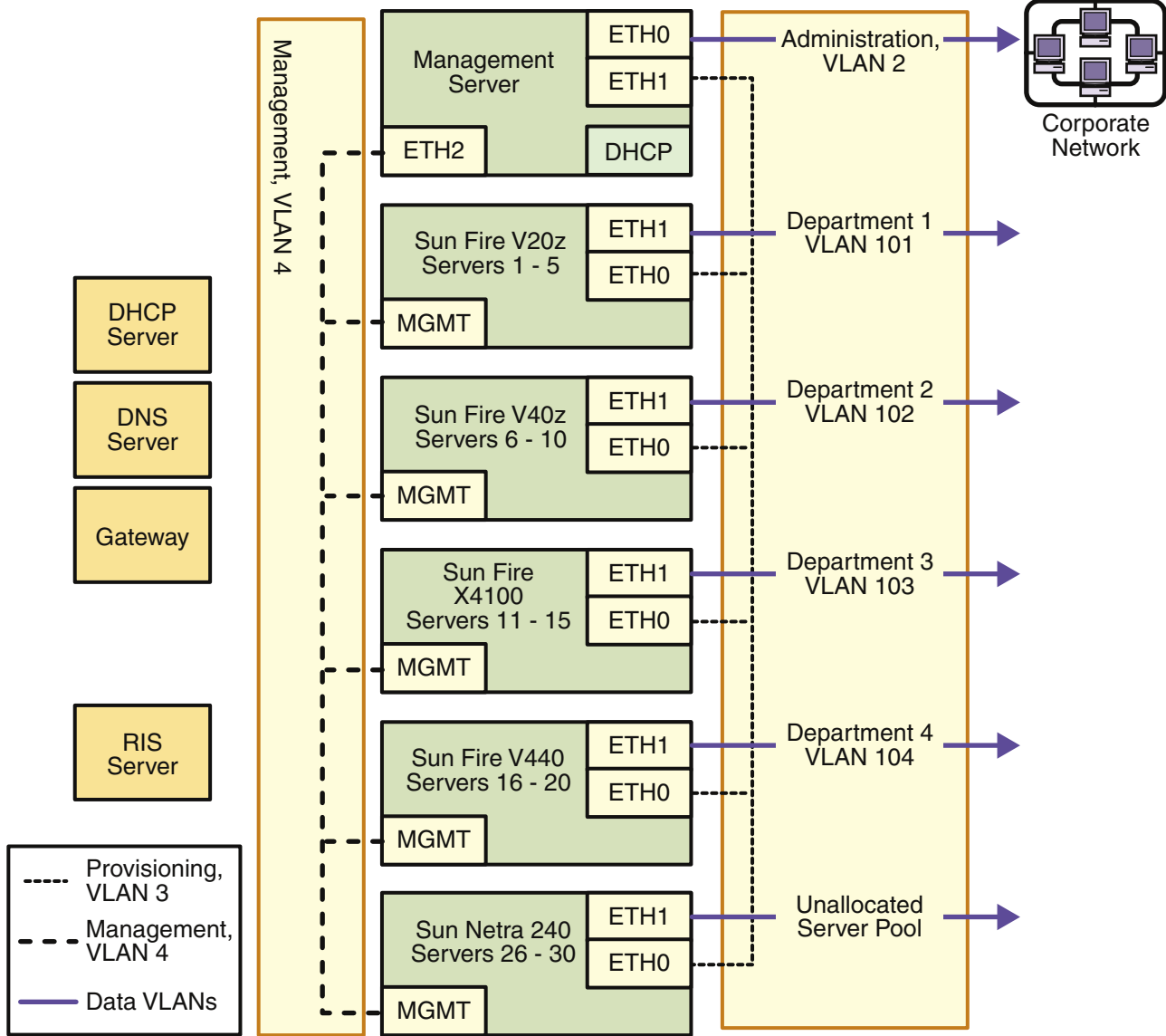


FIGURE 1-2 Sample Production Environment

Installing, Configuring, and Using the Sun N1 System Manager

This chapter provides summaries of the high-level steps that you will perform as part of the N1 System Manager preparation, installation, configuration, and run time processes. Although this chapter presents a serial-based set of steps, many of these steps can be done in parallel or in a different sequence.

The high-level steps described in this chapter are:

- “N1 System Manager Installation and Configuration” on page 17
- “N1 System Manager Administration” on page 24

N1 System Manager Installation and Configuration

This section provides a task flow diagram of the high-level tasks for site planning, installation and configuration of the Sun N1 System Manager software, and summaries of each of the tasks, including links to the applicable manuals and procedures.

The following topics are discussed:

- “N1 System Manager Site Preparation Task Flow” on page 17
- “Determine System Requirements and Map Your Network” on page 19
- “Prepare the Manageable Servers for Discovery” on page 20
- “Set Up the RIS Server” on page 20
- “Install an Operating System on the Management Server” on page 20
- “Install and Configure the N1 System Manager Software on the Managed Server” on page 21
- “Access the N1 System Manager” on page 22
- “Set Up N1 System Manager Users and Roles” on page 23

N1 System Manager Site Preparation Task Flow

The following diagram illustrates the sequence of the high-level tasks for site planning, installation and configuration of the Sun N1 System Manager software.

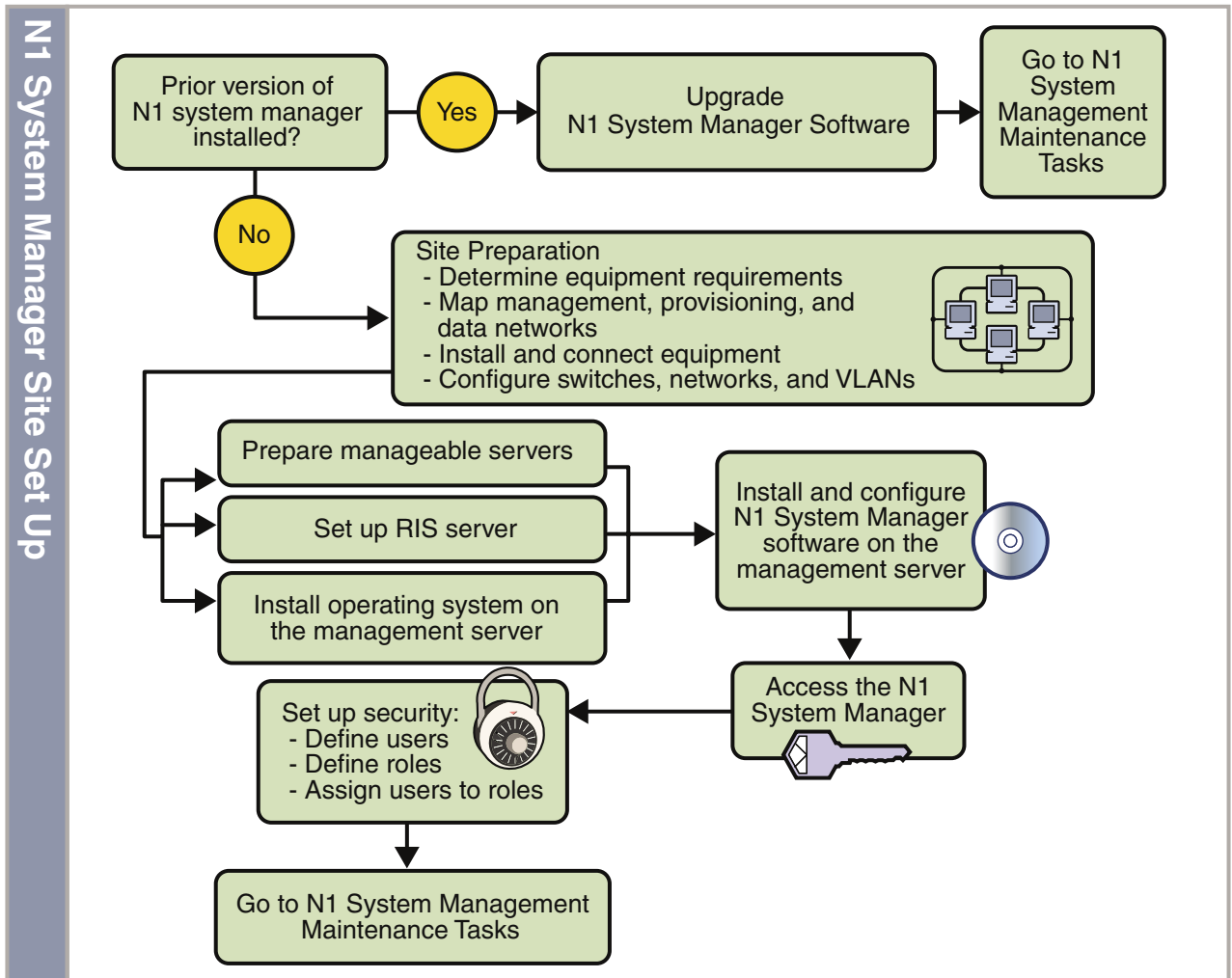


FIGURE 2-1 N1 System Manager Site Preparation Task Flow

If a previous version of the N1 System Manager is installed on your management server, follow the appropriate upgrade process depending on the previously-installed version:

- If N1 System Manager version 1.2 is installed on your management server, upgrade to version 1.3 as described in Chapter 3, “Upgrading the Sun N1 System Manager Software,” in *Sun N1 System Manager 1.3 Installation and Configuration Guide*.
- If N1 System Manager version 1.1 is installed on your management server, you must first upgrade to version 1.2 as described in Chapter 2, “Upgrading the Sun N1 System Manager Software and Provisionable Server Management Agents,” in *Sun N1 System Manager 1.2 Installation and Configuration Guide*, and then upgrade to version 1.3.

If you have not installed the N1 System Manager software on your management server, read the following sections. Each section summarizes each site preparation task in sequence, and includes links to the applicable manuals and procedures for each.

Determine System Requirements and Map Your Network

Before you can prepare your equipment for the N1 System Manager, you need to determine your site architecture and system requirements as follows:

1. Map your network and determine the subnet addresses that you will use for the management, provisioning, and data networks.

Note – If your network is designed to use only a management network or only a provisioning network, then the N1 System Manager operates in a *restricted mode* when installed. N1 System Manager provides two default security roles with specific privileges assigned for the restricted mode of operation. See “Managing Roles” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* and “Restricted Mode Capabilities” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*.

2. Take inventory of the equipment you want to use with the N1 System Manager, and compare the inventory to the system requirements in “Sun N1 System Manager Hardware and OS Requirements” in *Sun N1 System Manager 1.3 Site Preparation Guide*.
3. To assist you in determining whether you will use one switch or two switches, review “Reference Configurations” in *Sun N1 System Manager 1.3 Site Preparation Guide*.
4. Based on the number of manageable servers installed on your N1 System Manager network, determine the management server and switch requirements.

For management server sizing guidelines, see “Management Server Considerations” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

For switch sizing guidelines and worksheets, see “Switch Considerations” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

Based on the above information, decide:

- Which server will be used as the management server
- Which operating system will be installed on the management server
- Whether the N1 System Manager network will use a single switch or dual switch configuration
- Which N1 System Manager networks you will use

When you have completed your site planning, connect your equipment.

The next tasks are to prepare the manageable servers, to install a RIS server if you will provision Microsoft Windows operating systems, and to install an operating system on the management server. Each of these tasks can be performed in parallel.

Prepare the Manageable Servers for Discovery

Before you can use the N1 System Manager to discover manageable servers, each manageable server must be set up as follows:

- An IP address must be assigned to each manageable server's management port.
- A minimum set of management processor credentials must be configured on each manageable server. The type of credential to be configured depends on the manageable server management processor and whether the manageable server has been configured with factory default credentials.

For further information, see "Setting Up Manageable Servers" in *Sun N1 System Manager 1.3 Site Preparation Guide*.

Tip – Install an OS and the N1 System Manager software on your management server at the same time you set up your manageable servers and the RIS server.

Set Up the RIS Server

If you plan to provision Microsoft Windows operating systems on managed servers, you must set up a Remote Installation Services (RIS) server as described in "Setting Up a Windows Remote Installation Services Server" in *Sun N1 System Manager 1.3 Site Preparation Guide*. After running N1 System Manager discovery, you can provision Windows to managed servers as described in Chapter 3, "Provisioning Windows Operating Systems," in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*.

Install an Operating System on the Management Server

An operating system must be installed on the management server before you can install N1 System Manager.

- For a list of qualified Solaris and Linux operating systems that can be installed on the management server, see "Sun N1 System Manager Hardware and OS Requirements" in *Sun N1 System Manager 1.3 Site Preparation Guide*.
- For Solaris installation procedures, see "Installing the Solaris OS on the Management Server" in *Sun N1 System Manager 1.3 Site Preparation Guide*.

- For Linux installation procedures, see “Installing the RedHat Enterprise Linux OS on the Management Server” in *Sun N1 System Manager 1.3 Site Preparation Guide*

Each section provides disk drive considerations for the chosen operating system and guidelines for installation of the chosen operating system.

When you have completed operating system installation on the management server, install the N1 System Manager software on the management server as described in the next section.

Install and Configure the N1 System Manager Software on the Managed Server

When you have completed installing the operating system on the management server, the next step is to install and configure the N1 System Manager software on the management server. Once the N1 System Manager software has been successfully installed, you then configure the N1 System Manager for your operations environment.

The installation process probes your operating system installation to ensure all required software has been installed. If required software is not installed, the installation process notifies you and gives you the opportunity to resolve the error and then continue with the installation. For further information, see Chapter 1, “Installing and Configuring the Sun N1 System Manager Software,” in *Sun N1 System Manager 1.3 Installation and Configuration Guide*.

When you have completed installing the N1 System Manager on the management server, the next step is to configure the N1 System Manager.

- The configuration process prompts you for the management server port that is to be used for the provisioning network. The configuration process then prompts you for the range of addresses that the management server DHCP service is to use to assign IP addresses to each managed server for the provisioning network.
- You are then asked to configure the search domains, SMTP service, event logging, mail service, and Microsoft Windows Remote Installation Services server. For further information, see “Configuring the N1 System Manager” in *Sun N1 System Manager 1.3 Installation and Configuration Guide*.

When you have completed configuring the N1 System Manager, you should tune the N1 System Manager performance based on the number of servers that are to be managed. For further information, see “N1 System Manager Performance Tuning” in *Sun N1 System Manager 1.3 Installation and Configuration Guide*.

When you have completed tuning the N1 System Manager, the final task is to prepare the N1 System Manager for production as described in the following sections. Preparing for production requires that you log in to the N1 System Manager to set up user accounts and roles, discover and provision the managed servers, set up maintenance, and maintain the N1 System Manager.

Access the N1 System Manager

Once you finish installing the N1 System Manager software, you can access the N1 System Manager as described in “Accessing the N1 System Manager Through the Command Line” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*. Both a command line and browser interface are provided. The browser interface also has an integrated command line.

The following figure provides a quick reference overview of the browser interface.

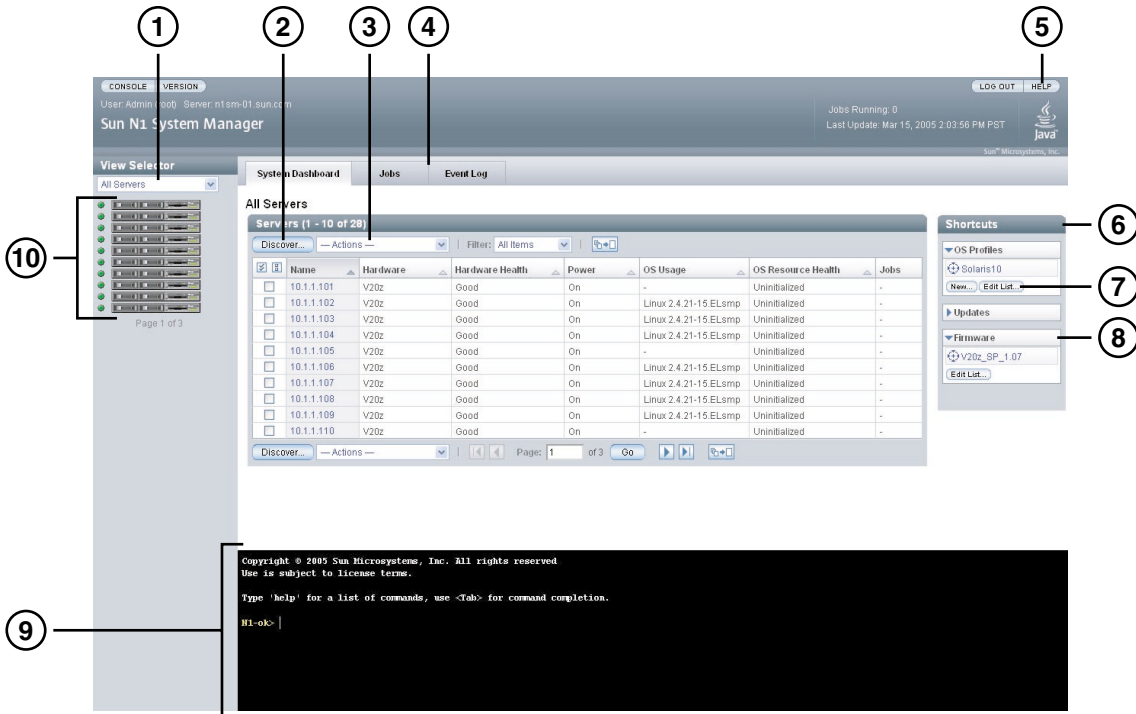


FIGURE 2-2 N1 System Manager Browser Interface Highlights

1. Use the View Selector menu to change between viewing all of the managed servers, the servers by health state, or the servers by group in the N1 System Manager.
2. Click the Discover button to launch a wizard that enables you to add servers to the N1 System Manager. Click the System Dashboard tab to view all discovered servers in the All Servers table.
3. Use the Actions menu to perform operations on managed servers selected in the table, such as loading (installing) software, enabling monitoring, and managing power.
4. Click the Jobs or Event Log tabs to see a listing of jobs or events in the N1 System Manager, respectively. The Jobs tab enables you to track the status of the operations and commands being performed on the system.

5. Click the Help button to launch a searchable help system that includes instructions for browser interface tasks and command line tasks, as well as the N1 System Manager glossary.
6. Drag-and-drop the software icons onto a server or server group in the table to begin the installation.
7. Click the Edit List button to change the list of software icons that appear in the Task Shortcuts pane.
8. Click the arrows to expand or collapse the Task Shortcut lists.
9. Use the command line pane to issue commands provided by the `n1sh` shell. Use this integrated shell to issue commands or to view the command output of operations initiated from the Actions menu or wizards.
 - To display help for a command in the command line pane, type `help command` where `command` is the command for which you want more information.
 - To display completion information for a command, type the command in the command line pane and press the Tab key. For example:

```
N1-ok> create os [press the Tab key]
Potential matches (create os):
    os          Create (copy) an OS distribution
    osprofile   Create or copy an OS profile
N1-ok>
```

10. Use the server icons to view power status and running jobs. Click a server icon to view the Server Details page.

See [“Access the N1 System Manager” on page 22](#) for more details on accessing the N1 System Manager.

Set Up N1 System Manager Users and Roles

The management server’s superuser (`root`) account is automatically set up to access the N1 System Manager. You can also define other users and roles to manage your servers. You can set up new users at any time. The N1 System Manager provides role-based security to enable you to limit users’ access to the system.

See “Managing Users” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* and “Managing Roles” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* for details on creating new users and the roles that enable them to use the N1 System Manager features.

N1 System Manager Administration

This section provides a task flow diagram of the high-level tasks for administration of the N1 System Manager and summaries of each of the tasks, including links to the applicable manuals and procedures.

The following topics are discussed:

- “Discover Manageable Servers” on page 25
- “Set Up Event Notification” on page 26
- “Install Firmware Updates on Provisionable Servers” on page 26
- “Install an OS on the Managed Servers” on page 27
- “Install OS Updates on Managed Servers” on page 28
- “Track N1 System Manager Jobs” on page 29
- “Monitor the Managed Servers” on page 29

N1 System Manager Administration Task Flow

The following diagram illustrates the high-level Sun N1 System Manager administration tasks.

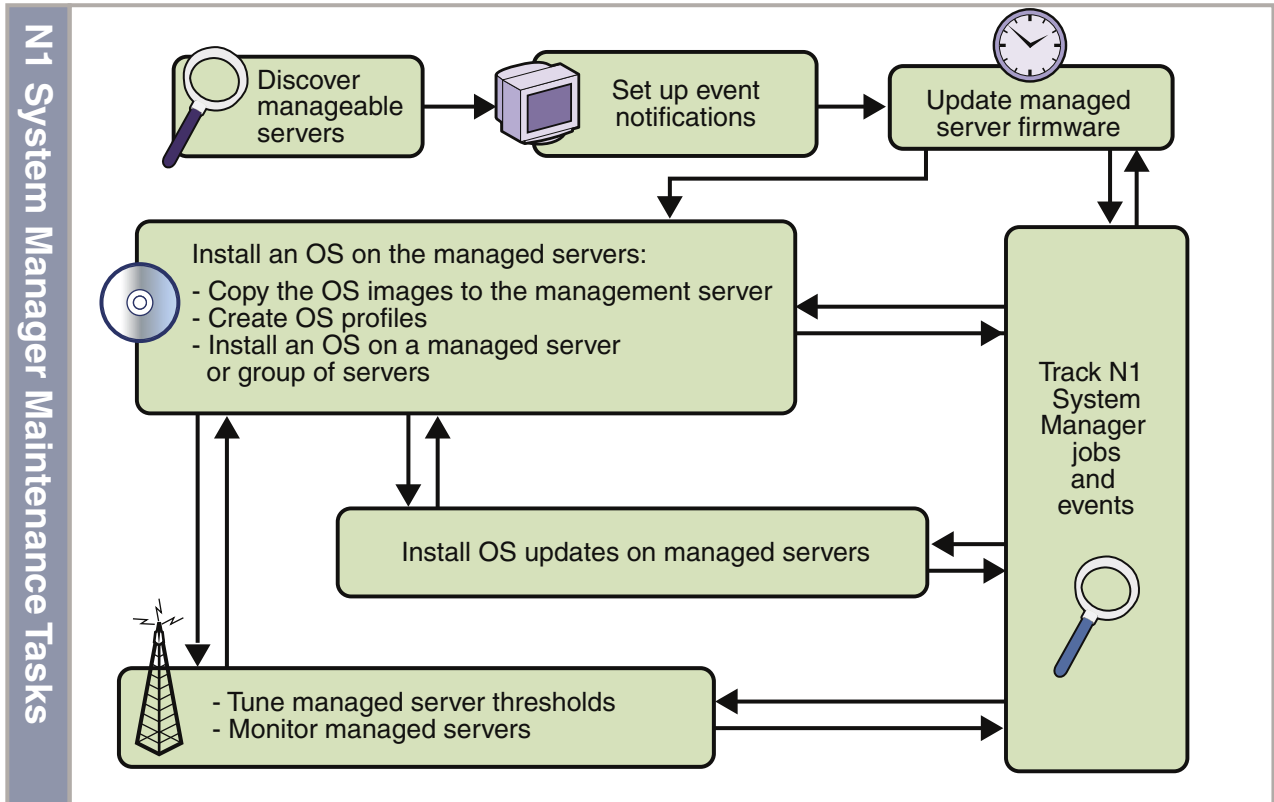


FIGURE 2-3 N1 System Manager Administration Task Flow

The N1 System Manager enables you to provision the Grid Engine software using the command line interface, and provides a browser interface to monitor the status of your grid. See the *N1 System Manager Grid Engine Provisioning Guide* for more details.

The following sections summarize each of the above N1 System Manager administration tasks, and include links to the applicable manuals and procedures for each.

Discover Manageable Servers

The N1 System Manager discovery process must be used to locate and identify manageable servers before they can be monitored and managed. The discovery process is used to locate, identify, and set up network access to the manageable servers. You can run the discovery process by clicking the Discover button in the browser interface or by running the `discover` command in the command line pane. Once a manageable server is discovered, it is known as managed server.

Note – Manageable servers can be discovered using three different methods.

SP-Based Discovery	Discovery of a managed server through its Service Processor (SP)
OS-Based Discovery	Discovery of a managed server using its operating system
Manual Discovery	Discovery of a managed server manually, using its MAC address and model name

For further information about discovery methods, see “Choosing a Method of Discovery” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*.

The managed servers are displayed in the System Dashboard tab in the browser interface. You can also list all managed servers by typing the command `show server all` in the command line pane. After running discovery, you can then group the managed servers based on your business or organizational needs if desired.

You can then perform the following management tasks on the managed servers from the N1 System Manager browser interface or command line:

- Event notification
- Firmware update installations
- OS installations
- OS update installations (Solaris packages and patches and Linux RPMs)
- Set event thresholds
- Track jobs
- Monitor servers
- Power management (booting, power on, power off)

The following sections provide overviews of the major N1 System Manager administrative tasks.

Set Up Event Notification

The N1 System Manager provides the ability to set up email or SNMP notifications when events occur either within the N1 System Manager itself or on the managed servers. You can set up customized notification rules for as many different scenarios as you need. Setting up notifications can be done only through the command line.

See “Setting Up Event Notifications” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* for details on setting up notifications.

Install Firmware Updates on Provisionable Servers

Installing a firmware update on a managed server for the first time is a two-step process:

1. Copy the firmware update into the N1 System Manager. The N1 System Manager must have system access to the firmware update before the update can be installed on the managed servers. The `create firmware` command enables you to copy a firmware update from a web site or an accessible file system on the management server. Once a firmware update is copied to the management server, you can display it in the browser interface under Task Shortcuts, or you can use the `show firmware` command.
2. Install the firmware update on the appropriate managed servers by using the browser interface or the `load server` or `load group` commands.

For a list of qualified managed server firmware versions, see “Manageable Server Firmware Requirements” in *Sun N1 System Manager 1.3 Site Preparation Guide*.

For firmware update procedures, see Chapter 6, “Managing Firmware SP, BIOS, and ALOM Updates,” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*.

Install an OS on the Managed Servers

The capability of installing an OS on multiple managed servers from a single interface is one of the core features of the N1 System Manager. Installing an OS on a managed server for the first time is a three-step process:

1. The N1 System Manager must have system access to an OS distribution before it can be installed on the managed servers or provisioned to diskless clients. Use the `create os` command to copy an OS distribution to the N1 System Manager or to provide access to a RIS server for Windows. Use the `show os` command to view the available OS distributions on the N1 System Manager.

For further information, see the following:

- Chapter 2, “Provisioning UNIX Operating Systems,” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*
 - Chapter 3, “Provisioning Windows Operating Systems,” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*
 - Chapter 4, “Working with Diskless Clients,” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*
2. An OS profile specifies which operating system components to install, which additional files and programs to install with the operating system, and configuration information such as the root password and the disk partitioning specifications. OS profiles enable you to install and configure a group of servers consistently. You can create one or more OS profiles depending on how many different ways the servers need to be installed.

Note – A default OS profile is automatically created for each newly created OS distribution, with the same name as the OS distribution.

The browser interface provides a wizard to help you create an OS profile. You can also create an OS profile using the command line. In both instances, once an OS profile is created, you can display it in the browser interface under Task Shortcuts or by using the `show osprofile` command.

3. The browser interface provides a wizard to help you install an OS distribution on a single managed server or group of managed servers. You can also use the command line `load server` or `load group` commands.

To start the wizard that loads an OS profile onto a managed server from the browser interface System Dashboard, use one of the following methods:

- Select the managed server or managed server group, and then choose Load an OS Profile on the Actions menu.
- Drag the OS profile from the Task Shortcuts pane and drop it on the managed server or managed server group.

For information about how to install a UNIX distribution, see “Installing the UNIX OS on Managed Servers” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*.

For information about how to install a Microsoft Windows distribution, see Chapter 3, “Provisioning Windows Operating Systems,” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*.

After you perform step 1 for an particular OS and create the appropriate OS profiles mentioned in step 2, installing an OS becomes a single step, even on multiple servers.

Install OS Updates on Managed Servers

Once you have an OS installed on a managed server, the N1 System Manager enables you to install OS updates, which consist of either Solaris packages and patches or Linux RPMs depending on the OS on the managed server. Installing OS updates on servers for the first time is a three-step process:

1. The N1 System Manager must have system access to the OS update before the update can be installed on the managed servers. The `create update` command is used to import an OS update from a web site or from an accessible file system on the management server. Once an OS update has been copied to the management server, you can display the OS update in the browser interface under Task Shortcuts or you can use the `show update` command.

Note – The N1 System Manager also enables you to install non-standard updates to a managed server using the `update type other` attribute with the `create update` command.

2. The base management agents must be enabled in order to load an OS update to a managed server.
3. Install the OS update on the appropriate managed servers by using the browser interface, or by using the command line `load server` or `load group` commands.

For more details, see:

- “Adding and Upgrading Base Management and OS Monitoring Features” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*
- “Enabling and Disabling Monitoring” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*
- Chapter 5, “Managing Packages, Patches, and RPMs,” in *Sun N1 System Manager 1.3 Operating System Provisioning Guide*

Track N1 System Manager Jobs

Each major action you take in the N1 System Manager starts a job. You can use the job log to track status on a currently running action or to verify whether a job has finished. Monitoring jobs is especially useful for N1 System Manager actions that might take a long time to finish, such as installing an OS distribution on one or more managed servers.

You can track jobs through the Jobs tab in the browser interface or the `show job` command. If you are using the browser interface, the number of running jobs is displayed in the Masthead at the top of the page.

See “Managing Jobs” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* for details on managing and tracking jobs.

Monitor the Managed Servers

The N1 System Manager provides monitoring of hardware health attributes, OS resource health attributes, file systems, and network connectivity. Threshold values can be modified for monitored OS resource health attributes. Monitoring enables you to track the status of all your managed servers from a single access point.

Note – By default, hardware health is monitored on a managed server. You must add the OS monitoring feature to a managed server in order to modify the OS resource health threshold values.

For more information on monitoring, see Chapter 6, “Monitoring Servers and Server Groups,” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*.

Glossary

admin file	An ASCII administration file that defines default installation actions for Solaris packages.
boot	To load the system software into memory and start it. In the Sun N1™ System Manager, you can use the <code>start</code> command to power on and boot a managed server if needed. See also reset .
bootip	Also known as the provisioning IP. IP addresses that are used during the installation process for Linux based managed servers. This IP address may be temporary just for the duration of the installation process. Some sites may reuse the same range of bootip addresses for subsequent provisioning operations.
browser interface	A web-based user interface for the N1 System Manager that provides a subset of the command line features.
data network	The network that is used to access managed server from other machines in the data center or enterprise. This network might not be visible to the management network.
data network interface	This interface provides access from the managed server to the data center network. Multiple data network interfaces might exist.
data network switch	One or more switches used for data transfers outside the horizontally scaled system (HSS). Both GigE and Infiniband switches are supported.
distribution group	A collection of software clusters and packages that is to be installed on a managed server.
event	A change in the N1 System Manager system or a managed server, which is tracked in the N1 System Manager event log and may initiate a notification message to external systems.
fault	An identified problem with a component, usually at the field replaceable unit (FRU) level.
firmware	Software stored in read-only memory (ROM) or programmable ROM (PROM). Firmware is usually used to help with the initial booting stage.
FRU	Field Replaceable Unit. An assembly that a manufacturer replaces on failure of an assembly component.

in use profile	An OS profile that is currently being installed on a managed server. An in-use profile cannot be deleted.
installation script	A script used to provide a customized installation of Solaris packages or patches.
job	A user-defined task to be completed by a computer system. In the N1 System Manager, an asynchronous action initiated and tracked by a user to perform a task.
load	Installing software to a managed server, such as the operating system, firmware updates, and software updates.
log	A single logical location of events in the N1 System Manager network.
manageable server	A physical server that has not been discovered by the N1 System Manager and is not currently monitored or managed by the N1 System Manager. Also known as a provisionable server in earlier N1 System Manager releases. For a list of supported servers, see Manageable Server Requirements.
managed server	A physical server that has been successfully discovered by the N1 System Manager and is subsequently monitored and managed by the N1 System Manager. Also known as a provisionable server in earlier N1 System Manager releases. For a list of supported servers, see Manageable Server Requirements.
management agents	Management software that must be added to a managed server to provide remote command functionality, OS resource monitoring, package deployment, and inventory management. Also known as management features. The N1 System Manager provides two management features: base management and OS monitoring.
management feature	See management agents.
management IP address	The IP address of a managed server that the N1 System Manager uses to manage the server. This IP address depends on how the managed server is discovered.
management name	A unique name used to denote a managed server within the N1 System Manager environment. By default, the name is set to the server's management IP address determined during discovery. However, a user-defined name can be assigned.
management network interface	The interface that provides access to the management information and functions primarily for managed server hardware and firmware. This interface is the interface to the managed server's service processor or ALOM processor.
management network switch	An Ethernet switch used for sending management signal data within the horizontally scaled system (HSS).

management server	The server on which the N1 System Manager software is installed. For a list of supported management server, see “Management Server Requirements” in <i>Sun N1 System Manager 1.3 Site Preparation Guide</i> .
manual netboot	A feature within N1 System Manager that enables the user to manually control the netboot process to provision a managed server. This feature is required to provision servers that are discovered using the manual or OS discovery process.
N1 System Manager	Software running on the management server that acts as the entry and control point for provisioning and managing servers. A browser interface and a command-line interface are provided.
notification message	A message sent using email or SNMP traps to notify an external entity of managed server events.
notification rule	A user-specified configuration for when, where, and how to send a class of notification messages .
operating system	A collection of programs that monitor the use of the system and supervise the other programs executed by the operating system. The N1 System Manager enables you to install a operating system such as RedHat Linux and Solaris x86 to a managed server or server group.
OS	See operating system .
OS distribution	A installable image of an operating system. In the N1 System Manager, you must copy an OS distribution from a CD or DVD or ISO file before it can be installed on a managed server or group of managed servers. See also OS profile .
OS profile	Specifies how to install an operating distribution, including which operating system components to install, which additional files and programs to install with the operating system, and configuration information such as root password and disk partitioning specifications. See also OS distribution .
privilege	A predefined set of permissions enabling a user to perform certain operations within the N1 System Manager. A privilege is granted to a user by assigning to a role and then assigning the role to the user.
provision	The process of using the N1 System Manager to install a preconfigured operating system on a server managed by the N1 System Manager.
provisioning network	The network used to provision managed servers from the N1 System Manager management server. This network must be visible to the management server.
provisioning network interface	This interface provides access to the managed server’s OS management functions. This interface is used to provision an operating system and OS updates to a managed server, monitor managed server OS resources, and for remote command execution on each managed server. Typically only one provisionable network interface exists.
reboot	See reset .

reset	Power off and power on a hardware device. In the N1 System Manager, you can use the reset command to reboot a managed server (power off, power on, and boot a server).
response file	A file that provides the interaction responses that would be requested during a Solaris package installation in interactive mode onto a managed server. A response file enables a package to be installed without user intervention.
role	A set of permissions and privileges regarding what a user may do to the system.
server	See management server , manageable server , managed server .
server group	A user-defined group of servers for the purpose of creating a logical target for management operations. For example, server groups enable operations such as reboot and OS install to be performed on multiple managed servers with a single command.
shutdown	The process of taking a system from a multiuser OS state to a single user state and a complete halt and power down. In the N1 System Manager, you can use the <code>stop</code> command to shut down and power off a managed server.
start	See boot .
terminal server	A network device that provides a serial connection to the switches, management server, and servers.
update	A software update for an OS. In the N1 System Manager, a RedHat Linux RPM or a Solaris package or patch.
user	A person who is authorized to log in to and use the N1 System Manager.

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