



Sun N1 System Manager 1.3.2 Release Notes



Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054
U.S.A.

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Preface

Sun N1™ System Manager 1.3.2 Release Notes contains information and problem details that are specific to the N1 System Manager software.

Who Should Use This Book

This guide is intended for system administrators who are responsible for installing or upgrading the N1 System Manager software and hardware, and for personnel who use the N1 System Manager.

Related Documentation

- *Sun N1 System Manager 1.3.1 What's New*
- *Sun N1 System Manager 1.3.1 Troubleshooting Guide*
- *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 Grid Engine Provisioning and Monitoring Guide*
- *Sun N1 System Manager 1.3 Command Line Reference Manual*
- Hardware documentation:
<http://www.sun.com/products-n-solutions/hardware/docs/>

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> Password:
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <code>rm filename</code> .
<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	<code>machine_name%</code>
C shell for superuser	<code>machine_name#</code>
Bourne shell and Korn shell	<code>\$</code>
Bourne shell and Korn shell for superuser	<code>#</code>

What's New in Sun N1 System Manager 1.3.2

This chapter details the new hardware and operating systems supported in the Sun N1™ System Manager 1.3.2 release.

New Hardware and Operating System Support in N1 System Manager 1.3.2

The N1 System Manager 1.3.2 release provides the following new hardware and operating system support.

For a complete list of hardware and operating systems supported by N1 System Manager, see [Chapter 3](#).

TABLE 1-1 New Hardware and Operating System Support in N1 System Manager 1.3.2

Hardware	Provisionable OS	Minimum Firmware Version	Recommended Firmware Version
Sun Fire™ V215 and Sun Fire V245	Solaris 10 6/06	1.6	1.6.2
Sun Fire V445	Solaris 10 6/06	1.6	1.6.2
Sun Fire X2100 M2	Solaris 10 6/06	1.1/1.80/3A05 ¹	1.2/1.91/3A07
	Red Hat Enterprise Linux 3.0 AS Update 8, 32-bit and 64-bit		
	Red Hat Enterprise Linux 4.0 AS Update 4, 32-bit and 64-bit		
	SUSE Linux Enterprise Server 9 SP3, 64-bit		

¹ 1.1 is the external version of the tools/drivers ISO; 1.80 is the SP version; 3A05 is the BIOS version.

TABLE 1-1 New Hardware and Operating System Support in N1 System Manager 1.3.2 (Continued)

Hardware	Provisionable OS	Minimum Firmware Version	Recommended Firmware Version
Sun Fire X2200 M2	Solaris 10 6/06	1.1/1.60/3BB5	1.2/1.91/3B10
	Red Hat Enterprise Linux 3.0 AS Update 8, 32-bit and 64-bit		
	Red Hat Enterprise Linux 4.0 AS Update 4, 32-bit and 64-bit		
Sun Fire X4600 M2	SUSE Linux Enterprise Server 9 SP3, 64-bit		
	Solaris 10 1/06, 64-bit,	1.0.2/0ABHA038 ²	1.0.6/0ABIT032
	Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 4, 64-bit,		
Sun Fire X4100 M2 and Sun Fire X4200M2	SUSE Linux Enterprise Server 9 SP3, 64-bit		
	Windows 2003 SE, SP1, 32-bit		
	Solaris x64 Version 10 HW1, 64-bit	1.0.7/0ABJX024	1.0.7/0ABJX024
	Solaris x64 Version 10 1/06, 64-bit		
	Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 1 and Update 2, 64-bit		
	Windows 2003 SE, 64-bit		
	Windows 2003 SE, SP1 32-bit		

² 1.0.2 is the SP version; 0ABHA038 is the BIOS version.

Upgrading From N1 System Manager 1.3.1

The upgrade procedure to N1 System Manager 1.3.2 from N1 System Manager 1.3.1 is identical to the upgrade procedure to N1 System Manager 1.3.1 from N1 System Manager 1.3. See “Upgrading to Sun N1 System Manager 1.3” in *Sun N1 System Manager 1.3 Installation and Configuration Guide* for details.

Online Help Updates for New System Support

This section details some minor additions that were added to the online help for the N1 System Manager 1.3.1 and 1.3.2 releases. The following model names are required for the firmware-related commands: `create firmware`, `delete firmware`, and `show firmware`.

TABLE 1-2 Updated Model Name Values for Firmware Commands

System Name	Firmware Command Model Name Value
Sun Fire V215 server	V215
Sun Fire V245 server	V245
Sun Fire V445 server	V445
Sun Fire X2100 M2	X2100M2
Sun Fire X2200 M2	X2200M2
Sun Fire X4100 M2 server	X4100M2
Sun Fire X4200 M2 server	X4200M2
Sun Fire X4600 M2 server	X4600M2

Sun N1 System Manager 1.3.2 Issues

This chapter contains important information available at the time of the Sun N1 System Manager 1.3.2 release. Enhancements, installation notes, known problems, and other late-breaking issues are addressed here. Read this document before you begin using this Sun product.

Feature and Software Support Notices

This section lists the features and software that are not supported in Sun N1 System Manager 1.3.2 release.

- The N1 System Manager product is localized only in Japanese.
- For the Windows OS, N1 System Manager primarily supports only OS provisioning. Other features such as OS monitoring and OS updates are not supported in this release for managed servers running Windows.
- The N1 System Manager management server should be dedicated only to the N1 System Manager software.
- Diskless clients are not supported for Sun Blade™ X8400 Server Modules.

Documentation Updates

This section describes known documentation updates, including documentation errors.

Sun N1 System Manager 1.3 Document Collection Issue

When instructed to “log in as root”, either use the “su - root” command or physically log in to the server using the server's root account and password.

The `bootnetworkdevice` attribute of the `load` command applies only to Linux OS. The `networkdevice` attribute of the `load` command applies to both Solaris and Linux.

Sun N1 System Manager 1.3 Site Preparation Guide Issue

The information in the second list item of the Linux OS Installation Requirements section is incorrect. The information should read as follows:

If you are installing Red Hat Enterprise Linux AS 4.0 Update 1 or later, when prompted whether to enable SELinux, choose `Disable`. N1 System Manager does not support SELinux enabled even in permissive mode.

Sun N1 System Manager 1.3 Discovery and Administration Guide Issue

The restricted mode capabilities of the `show privilege` command are not correct. This command is available only to the `SecurityAdmin` role.

Sun N1 System Manager 1.3 Installation and Configuration Guide Issue

The information on the port used by IPMI in Appendix A, “Sun N1 System Manager Protocol, Ports, and Features Reference,” in *Sun N1 System Manager 1.3 Installation and Configuration Guide* is incorrect. IPMI uses the UDP protocol and not TCP.

Invalid Swap Threshold Properties Are Mentioned in N1 System Manager 1.3 Documentation (6478871)

Invalid swap threshold properties are mentioned in “Full OS Monitoring (With Thresholds)” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*. The properties `memusage.mbswapfree` and `memusage.pctswapfree` are not valid.

Invalid swap threshold properties are mentioned in “set group” in *Sun N1 System Manager 1.3 Command Line Reference Manual*. The properties `memusage.mbswapfree` and `memusage.pctswapped` are not valid.

Invalid swap threshold properties are displayed when you type `help set group` from the `n1sh` shell prompt. The properties `memusage.mbswapfree` and `memusage.pctswapped` are not valid.

The following attributes are valid:

- `cpustats.loadavg1min`
- `cpustats.loadavg5min`
- `cpustats.loadavg15min`
- `cpustats.pctusage`
- `cpustats.pctidle`
- `memusage.pctmemused`
- `memusage.pctmemfree`
- `memusage.mbmempused`
- `memusage.mbmempfree`
- `memusage.kbswapused`
- `fsusage.pctused`
- `fsusage.kbpacefree`

Command-Line Help Issues

This section provides documentation errors in the command-line help pages.

Specifying the `force` and `netboot` Attributes

The `force` and `netboot` attributes are documented in the command-line help pages without a corresponding value. You must specify `true` as their values to provide a valid command, such as `force=true` or `force true`.

Description of `bootip` Attribute Is Incomplete

The command-line help page mentions that the `bootip` attribute is required only to provision Linux. However, the `bootip` attribute is also required to provision Windows.

`create os` Errors

The `type` attribute is not valid with the `file` and `cdrom` attributes. When copying OS images, the OS type is automatically determined.

Grid Engine Module Name Is Incorrect

The Grid Engine module name used for the CLI `type` attribute value must be `GridEngine` instead of `n1ge`. This affects the following commands:

- `create application/create applicationprofile`
- `delete application/delete applicationprofile`
- `set application/set applicationprofile`
- `show application/show applicationprofile`

N1 System Manager/N1 Service Provisioning System Cohabitation Issue

This section describes the workaround if you want to install both N1™ Service Provisioning System (N1 SPS) and N1 System Manager (N1 SM) on the same system.

Installing an N1 Service Provisioning System Master Server and an N1 System Manager Management Server on the Same System

If you use the default installation scripts for the N1 SPS master server and N1 SM management server, you cannot install both applications on the same system.

If you want to install both applications on the same system, you can modify the N1 SPS master server installation script to install the master server in an alternate root directory. To use this workaround, perform the following steps.

Note – Do not install the N1 SPS OS Provisioning plug-in on a system that hosts both the N1 SM management server and the N1 SPS master server.

1. Install the N1 SM management server. For more information, see *Sun N1 System Manager 1.3 Installation and Configuration Guide*.
2. Log in as root on the N1 SM management server system.
3. Copy the appropriate N1 SPS master server installation script to the system.

Copy either the `cr_ms_solaris_x86_pkg_5.2.sh` or the `cr_ms_solaris_sparc_pkg_5.2.sh` from the N1 SPS distribution.

4. If necessary, start a Korn shell session.

```
# ksh
```

5. Create a shell script file that is named `aliases.sh` with the following contents.

```
#!/bin/ksh
alias -x pkgadd='pkgadd -R $NEW_PKG_ROOT'
alias -x pkginfo='pkginfo -R $NEW_PKG_ROOT'
alias -x pkgparam='pkgparam -R $NEW_PKG_ROOT'
```

6. Export the value of the alternate root directory to use with the N1 SPS installation script.

```
# export NEW_PKG_ROOT=alternate-root-path
```

In the previous step, *alternate-root-path* specifies the root directory in which you want to install the N1 SPS Master Server, for example, *root1*. This alternate root directory will contain a new package repository for the N1 SPS Master Server packages.

7. Create a symbolic link from the *opt* directory to an alternate *opt* directory in the new alternate root directory.

```
# ln -s /opt alternate-root-path/opt
```

8. Create a new installation script by prepending the *aliases.sh* script to the default N1 SPS Master Server installation script. For example:

```
# cat aliases.sh cr_ms_solaris_x86_pkg_5.2.sh > new_ms_installer.sh
```

9. Install the N1 SPS Master Server by running the new installation script.

```
# ./new_ms_installer.sh
```

10. Answer the installer questions.

During the installation, consider the following limitations.

- When you are prompted to specify the installation directory for the master server, enter a new subdirectory under */opt*. To avoid overwriting the master server that is installed with N1 SM, ensure that this new subdirectory is different from the installation directory of the master server that is installed with N1 SM. For example, if, in step 7, you created a symbolic link from */opt* to */root1/opt*, specifying an installation directory of */opt/ms1* during the installation installs the new N1 SPS master server in */root1/opt/ms1*.
- When you are prompted to choose a port to use with the master server, ensure that you specify a port that is different from the port that is used by the master server used by N1 SM.

For more information about how to install N1 SPS, see *Sun N1 Service Provisioning System 5.3 Installation Guide*.

11. After the installation is completed, change to the directory that contains the N1 SPS master server scripts. For example:

```
# cd /root1/opt/ms1/N1_Service_Provisioning_System_5.2/server/bin
```

12. Create a backup copy of the N1 SPS Master Server uninstallation script.

```
# cp cr_uninstall_ms.sh cr_uninstall_ms.sh.backup
```

13. Edit the *cr_uninstall_ms.sh.backup* script to perform the package operations on the alternate root. You can use the *sed* command to make these changes to the script by typing the following command.

```
# /usr/bin/sed -e 's!pkginfo!& -R '${NEW_PKG_ROOT}'!g' \  
-e 's!pkgrm!& -R '${NEW_PKG_ROOT}'!g' \  
-e 's!pkgparam!& -R '${NEW_PKG_ROOT}'!g' \  

```

```
cr_uninstall_ms.sh.backup > cr_uninstall_ms.sh
```

14. Remove the backup copy of the uninstallation script.

```
# rm cr_uninstall_ms.sh.backup
```

To uninstall the N1 SPS Master Server, use this revised version of the `cr_uninstall_ms.sh` script.

Note – Do not remove the new alternate root directory. This directory is required to uninstall the N1 SPS master server.

Issues with Sun Fire X2100 M2 or Sun Fire X2200 M2 Servers

This section describes known issues with Sun Fire X2100 M2 or Sun Fire X2200 M2 servers.

Provisioning Solaris 10 6/06 on a Sun Fire X2100 M2 Server

To provision Solaris 10 6/06 on a Sun Fire X2100 M2 server, you must perform the following steps to modify the default OS profile and specify `bge0` for `networkdevice` in the `load` command. This example uses an OS profile named `s10u2_x86`.

```
N1-ok> remove osprofile s10u2_x86 partition swap
N1-ok> remove osprofile s10u2_x86 partition /
N1-ok> add osprofile s10u2_x86 partition swap device=c0d0s1 size=2048 type=swap sizeoption=fixed
N1-ok> add osprofile s10u2_x86 partition / device=c0d0s0 type=ufs sizeoption=free
N1-ok> load server ipaddress osprofile s10u2_x86 networktype=static ip=ipaddress
console=ttyb consolebaud=9600 networkdevice=bge0
```

Note – You must use the Broadcom network port (`net0`).

Provisioning Solaris 10 6/06 on a Sun Fire X2200 M2 Server

To provision Solaris 10 6/06 on a Sun Fire X2200 M2 server, you must perform the following steps to modify the default OS profile and specify `bge0` for `networkdevice` in the `load` command. This example uses an OS profile named `s10u2_x86`.

```
N1-ok> remove osprofile s10u2_x86 partition swap
N1-ok> remove osprofile s10u2_x86 partition /
```

```
N1-ok> add osprofile s10u2_x86 partition swap device=c1d0s1 size=2048 type=swap sizeoption=fixed
N1-ok> add osprofile s10u2_x86 partition / device=c1d0s0 type=ufs sizeoption=free
N1-ok> load server ipaddress osprofile s10u2_x86 networktype=static ip=ipaddress
console=ttyb consolebaud=9600 networkdevice=bge0
```

Note – You must use the Broadcom network port (net0).

Provisioning Red Hat Enterprise Linux 3.0 AS Update 8 on a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server

To provision Red Hat Enterprise Linux 3.0 AS Update 8 on a Sun Fire X2100 M2 or Sun Fire X2200 M2 server, you must use the Broadcom network port (net0). You must also use the appropriate console and bootnetworkdevice settings to view the console output through the connect server command. Refer to the server documentation to determine which physical port is net0.

The following example is a sample command to deploy the default OS profile on a Sun Fire X2200 M2 server.

```
N1-ok> load server ipaddress osprofile RHEL3-U8 bootip=ipaddress networktype=static ip=ipaddress
bootnetworkdevice=eth2 console=ttyS1 consolebaud=115200
```

Provisioning SUSE Linux Enterprise Server 9 SP3 on a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server

To provision SUSE Linux Enterprise Server 9 SP3 on a Sun Fire X2100 M2 or Sun Fire X2200 M2 server, you must use the Nvidia network ports (net2 and net3). The bootnetworkdevice value must be eth1 for net2 or eth0 for net3. You must also use the appropriate console and consolebaud settings to view the console output through the connect server command.

The following example is a sample command to deploy the default profile on a Sun Fire X2200 M2 server.

```
N1-ok> load server ipaddress osprofile SUSE9SP3 bootip=ipaddress networktype=static ip=ipaddress
bootnetworkdevice=eth1 console=ttyS1 consolebaud=115200
```

Serial Console Is Not Available During Solaris OS Provisioning on a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server (6480994)

Workaround: View the console through the system's Web GUI during installation.

SUSE Linux Enterprise Server 9 SP3, 64-Bit OS Deployment Fails on a Sun Fire X2100 Server (6416190)

The deployment fails with the message “Reread of the partition table failed.”

Workaround: Specify `hde` for the device attribute value in the server's OS profile.

Rediscovery of Sun Fire X2100 M2 Systems Fail (6489463)

If you delete an existing Sun Fire X2100 server from N1 System Manager and try to rediscover it, the discovery might fail with the following error message in the job details: “Cannot set alert destination to N1 SM. Maximum destination count has reached.”

Workaround: You need to manually clear the alert destination on the managed node and run the `discover` command again:

1. Log in as root on the management server.
2. Change directory to the `ipmitool` location.

```
# cd /opt/ipmitool/bin/ipmitool
```
3. Manually clear the alert destination on the managed node. You must know the root password of the managed node's SP.

```
# ./ipmitool -H sp-ip -U root -I lan lan alert set 1 1 ipaddr 0.0.0.0
```

4. Rediscover the server using the `discover` command.

Provisioning Firmware on a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server

You need to download the “tools and drivers iso” file for the firmware and then extract the firmware file by mounting the ISO image. After mounting the ISO image, the firmware is located in the `remoteflash` subdirectory and has a name similar to `X2100-190_3A06`.

When importing Sun Fire X2100 M2 or Sun Fire X2200 M2 firmware into N1 System Manager, there is an eight character limitation on the firmware name. N1 System Manager will allow longer names to be specified. However, any attempt to load the firmware onto a managed node will be rejected. To avoid having to recreate the firmware image later on, the best practice is to use a shorter name at the time of firmware creation.

Firmware Update May Timeout for a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server (6493791)

If the management network is slow between a managed server's SP and the N1 SM management server, the firmware update process may take longer than the default timeout (10 minutes) to complete and the firmware update job will error out.

Workaround: You need to increase the speed of the management network or increase the timeout value.

1. Verify that the firmware update actually failed. The update might have actually completed. To verify this, perform steps 4-9 described in the workaround for [“Upgrading Firmware Version 1.0a/1.1 to 1.2 Is Not Supported on a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server \(6492583\)”](#) on page 22. If the firmware has not been updated, proceed to the next step.
2. Log in as root on the N1 SM management server.
3. Make a new directory in the `/opt/sun/n1gc/dvrs` directory.

```
# mkdir /opt/sun/n1gc/dvrs/resources
```

4. Create a file named `taurus.properties` in the `resources` directory with the following contents. Note the value of the `firmwareUpdateTimeout` property, which is set to 40 minutes.

```
ipmi.lan.channel=1
consoleProtocol=ssh
nicFruPattern=(.*NIC0.*)|(*NIC1.*)
supportedModels=X2100M2,X2200M2
firmwareUpdateTimeout=2400
firmwareUpdateFinishedPattern=Update Successful
firmwareUpdateFailedPattern=fail|error
ipmi.factory_default_user_name=root
ipmi.factory_default_password=changeme
```

5. Restart the N1 SM management server.

```
# /etc/init.d/n1sminit stop
# /etc/init.d/n1sminit start
```

6. Retry the firmware update.

Upgrading Firmware Version 1.0a/1.1 to 1.2 Is Not Supported on a Sun Fire X2100 M2 or Sun Fire X2200 M2 Server (6492583)

N1 System Manager does not fully support upgrading firmware version 1.0a/1.1 to 1.2 on the Sun Fire X2100 M2 and Sun Fire X2200 M2 servers. Though the update will actually complete successfully in all cases, N1 System Manager may report the operation as a failure depending on the server type and the firmware version being updated. Also, the CMOS checksum will be invalid and must be manually cleared to allow the system to boot properly.

Workaround: Use the following procedure to update the firmware. This procedure assumes you have already imported the firmware image into N1 System Manager using the `create firmware` command.

1. Log in as root on the management server.
2. Update the firmware on the managed server to version 1.2.

```
# n1sh stop server server-name force=true  
# n1sh load server server-name firmware firmware1.2-name
```

3. Wait for the firmware update job to finish.

Depending on the following upgrade path, the job may either succeed or fail.

- 1.0a to 1.2 will fail
- 1.1 to 1.2 will fail for the Sun Fire X2200 M2 server

4. Connect to the console of the managed server being updated:

```
# n1sh connect server servername
```

5. In a different N1 SM terminal window, power off and on the managed server.

```
# n1sh stop server server-name force=true  
# n1sh start server server-name
```

After the managed server powers on, the console window will display the BIOS POST output, which will report an invalid CMOS checksum.

6. In the console window, press F2 to restore the defaults and allow the POST to complete.

Note – If the basemanagement or osmonitor features have been enabled on the server, wait until the system fully boots up before proceeding.

7. Exit the console window for the managed server.
8. Refresh the system information for the managed server.

```
# n1sh set server server-name refresh
```

9. Verify that the firmware has been updated to version 1.2 on the managed server.

```
# n1sh show server server-name | egrep 'SP|BIOS'
```

The SP and BIOS versions should be updated to the latest versions.

Upgrading BIOS to Future Versions of Firmware on Sun Fire X2100 M2 or Sun Fire X2200 M2 Servers May Overwrite User Specified BIOS Settings

To update BIOS firmware, N1 System Manager uses the default native firmware update mechanism provided by the platform service processor. For some rare upgrade paths, this default behavior may result in BIOS settings reverting to optimized defaults. Depending on the operating system and platform configuration, this may require the user to manually re-apply these settings. Refer to the server documentation for additional details on which configurations are affected.

Sun Fire X2100 M2 or Sun Fire X2200 M2 Server “Unreachable” After Firmware Upgrade (6489473)

After you upgrade the firmware to version 1.2 on a Sun Fire X2100 M2 or Sun Fire X2200 M2 server, the server may occasionally change to “Unreachable” state within 5 minutes.

Workaround: You must reset the server's service processor (SP):

1. Log in to the server's SP.

```
# ssh -l sp-user sp-ip
```

2. Reset the SP.

```
-> reset
```

3. On the management server, refresh the server's monitoring information.

```
n1-ok> set server server-name refresh
```

Installation and Configuration Issues

This section describes known N1 System Manager installation and configuration issues.

- Check the localization settings of the system prior to installation. The settings need to be consistent and not mixed.
- On a Sun Blade X8400 system using the Solaris 10 3/05 Operating System (OS), you must choose ISC DHCP if you are configuring N1 System Manager.

N1 System Manager Does Not Automatically Restart After Backup and Restore (6444305)

N1 System Manager on a Solaris SPARC or x86 management server does not automatically restart after backup and restore. You might get the following error message:

```
Lost connection to command line service.
```

Workaround: Restart N1 System Manager manually by typing the following command:

```
# svcadm enable n1sm
```

Occasionally Unable to Run n1sh Shell After Installation and Configuration (6443655)

Workaround: SSL certificates might be corrupted. Regenerate the security keys by issuing the following commands:

```
# /opt/sun/cacao/bin/cacaoadm stop
```

```
# /opt/sun/cacao/bin/cacaoadm create-keys --force
```

```
# /opt/sun/cacao/bin/cacaoadm start
```

For detailed steps, refer to “Regenerating Common Agent Container Security Keys” in *Sun N1 System Manager 1.3.1 Troubleshooting Guide*.

Java Web Console Is Removed After N1 System Manager Uninstall (6433383)

When N1 System Manager is installed and uninstalled, the Java™ Web Console is removed from the system. The packages of Java Web Console are not available in the system.

Workaround: Before uninstalling N1 System Manager, run the `rm /n1gc-setup/installer/jobs/3installLockhart.pl` script.

Stopping N1 System Manager Stops the Java Web Console (6432305)

Workaround: Restart the Java Web Console by using `/usr/sbin/smcwebserver start`.

When Installation Is Cancelled, User Interface Components Are Not Installed (6430787)

If you cancel the N1 System Manager installation process by pressing Control-C, the user interface components are not installed.

Workaround: Manually uninstall the user interface components using `/usr/share/webconsole/bin/setup -u -f`. Run the installer again.

N1 System Manager Database Does Not Start After Solaris x86 Management Server Reboots (6398263)

In some rare instances, the N1 System Manager database does not start after a Solaris x86 management server boot. A typical error message is as follows:

```
DBI connect('dbname=mgmt;port=5434','mgmt',...) failed:
could not connect to server: No such
file or directory at /opt/SUNWscs/lib/perl5/SCSDB.pm
```

Workaround: Restart the N1 System Manager database manually on the management server:

```
# svcadm clear scs-db
# svcadm restart scs-db
```

N1 System Manager Can Fail to Install (6284696)

If the N1 System Manager installation process is interrupted and restarted, the N1 System Manager installation can fail in Step 5, “Install OS provisioning components.” If this issue occurs, a subsequent uninstall and reinstall of the N1 System Manager will fail.

The installation log file `/var/tmp/installer.log.latest` shows the following message after initial installation failure:

```
Installing Master Server ...
Error! Missing file (looked for /opt/SUNWn1sps
  /N1_Grid_Service_Provisioning_System_5.2
  /server/postgres/postgresql.conf.in)!
print() on closed filehandle GEN0 at
  /usr/perl5/5.8.4/lib/i86pc-solaris-64int/IO/Handle.pm line 399.
SPS install failed with exit status: 256
-----

      2k. Which port should Postgres listen on?
          (default: 5434) [1024-65535] spawn id(3) is not a tty. Not changing mode
at /usr/perl5/site_perl/5.8.4/Expect.pm line 375.
admin
admin
admin

** Invalid Input. Enter a numeric value for the port number.

      2k. Which port should Postgres listen on?
          (default: 5434) [1024-65535] spawn id(3) is not a tty. Not changing mode
at /usr/perl5/site_perl/5.8.4/Expect.pm line 375.
admin
admin
admin

** Invalid Input. Enter a numeric value for the port number.

      2k. Which port should Postgres listen on?
          (default: 5434) [1024-65535
```

The installation log shows the following message after uninstall and reinstall of the N1 System Manager software:

```
Error! Failed to initialize the database (exit value was 1).
Exiting..
print() on closed filehandle GEN0 at /usr/lib/perl5/5.8.0
  /i386-linux-thread-multi/IO/Handle.pm line 395.
SPS install failed with exit status: 256
```

Workaround: Perform the workaround procedure below that is applicable to the operating system installed on your management server. Depending on how the installation error occurred, some of the workaround steps might not complete successfully. If a workaround step does not complete successfully, go to the next step.

Solaris based Sun Fire X4100 or Sun Fire X4200 management server:

1. Stop the server and agent.

```
# su - n1gsps -c "/opt/SUNWn1sps/N1_Service_Provisioning_System_5.2/
server/bin/cr_server stop"
# su - n1gsps -c "/opt/SUNWn1sps/N1_Service_Provisioning_System/
agent/bin/cr_agent stop"
```

2. Uninstall service provisioning manually.

```
# /opt/SUNWn1sps/N1_Service_Provisioning_System_5.2/cli/bin/cr_uninstall_cli.sh
# /opt/SUNWn1sps/N1_Service_Provisioning_System_5.2/server/bin/cr_uninstall_ms.sh
```

3. Remove the following packages.

```
# pkgrm SUNWspsc1.*
# pkgrm SUNWspsms.*
# pkgrm SUNWspsc1.*
```

More than one instance of the SPS packages might be installed. The text string `.*` specifies that all instances of the package will be removed.

Type **y** in response to prompts asking “Do you want to remove this package? [y,n,?,q]”. If the message `pkgrm: ERROR: no package associated with SUNWspsc1` appears, that package has already been removed in Step 2. Continue removing packages.

4. Delete the service provisioning directory and files.

```
# cd /
# rm -rf /opt/SUNWn1sps/
# rm /n1gc-setup/sps/state
# rm /n1gc-setup/state/0installSPS.pl.state
```

5. Reboot the management server and then install the N1 System Manager software.

Linux based Sun Fire X4100 or Sun Fire X4200 management server:

1. Stop the server and agent.

```
# su - n1gsps -c "/opt/sun/N1_Service_Provisioning_System_5.2/
server/bin/cr_server stop"
# su - n1gsps -c "/opt/sun/N1_Service_Provisioning_System/
agent/bin/cr_agent stop"
```

2. Delete the service provisioning directory and files.

```
# cd /
# rm -rf /opt/sun/N1_Grid_Service_Provisioning_System_5.1
# rm -rf /opt/sun/N1_Grid_Service_Provisioning_System
# rm -rf /opt/sun/N1_Service_Provisioning_System
# rm -rf /opt/sun/N1_Service_Provisioning_System_5.2
# rm /n1gc-setup/sps/state
# rm /n1gc-setup/state/0installSPS.pl.state
```

3. Reboot the management server and then install the N1 System Manager software.

OS Provisioning Issues

This section describes the known OS provisioning (deployment) issues.

Provisioning Solaris 10 6/06 on a Sun Fire X4200 M2 Server

Perform the following steps to modify the default OS profile to provision Solaris 10 6/06 on a Sun Fire X4200 M2 server. This example uses an OS profile named `s10u2_x86`.

```
N1-ok> remove osprofile s10u2_x86 partition /
N1-ok> remove osprofile s10u2_x86 partition swap
N1-ok> add osprofile s10u2_x86 partition swap type swap size 1024 device c3t2d0s1 sizeoption fixed
N1-ok> add osprofile s10u2_x86 partition / type ufs device c3t2d0s0 sizeoption free
```

Windows OS Deployment Fails if OS Profile Does Not Have the Product Key (6449265)

The deployment fails because the OS profile does not have the product key. However, attempting to add the product key to the OS profile fails with the message “OS profile is in use.”

Workaround: Wait until the job times out to add the product key to the OS profile.

Red Hat OS Deployment Using DHCP Option Does Not Assign an IP Address From the DHCP Range (6449051)

When Red Hat OS is deployed on a system using the DHCP option, the system does not get an IP address from the DHCP range.

Workaround: Perform the following steps:

1. Log in to the management server.
2. In the `/opt/sun/scs/data/allstart/scripts/dhcp_redhat.sh` file, change the `Device` entry to the appropriate interface needed to run DHCP.

```
DEVICE=eth0
FILE=/etc/sysconfig/network-scripts/ifcfg-$DEVICE
cat << _EOF_ > $FILE DEVICE=$DEVICE
BOOTPROTO=dhcp
_EOF_
chown root.root $FILE
chmod 644 $FILE
```

3. Add the `dhcp_redhat.sh` script to the server's OS profile.

```
#n1sh add osprofile osprofile-name script
/opt/sun/scs/data/allstart/scripts/dhcp_redhat.sh type=post
```

Red Hat OS Deployment on a Sun Blade X8400 Server Fails if ACPI Is Enabled (6442992)

By default, the Sun Blade X8400 Server CMOS settings have ACPI enabled, which will cause Linux installation to go into interactive mode.

Workaround: Specify the additional kernel parameter to the `load` command.

```
N1-ok> load server servername osprofile profilename ... kernelparameter
pci=nommconf
```

Specify this parameter each time you issue the `load` command.

SUSE Linux Enterprise Server 9 SP3, 64 Bit OS Deployment on a Sun Blade X8400 Server Fails if `nfs` Option Is Specified (6438194)

If `nfs` is specified as the install protocol, OS deployment goes into interactive mode.

Workaround: Specify `http` as the install protocol.

Managed Server Does Not Reboot Completely After Red Hat OS Is Provisioned on a Sun Blade X8400 Server Through Expansion Module (6437482)

The managed server fails to reboot completely after Red Hat Enterprise Linux 4.0AS Update 3, 64-bit operating system is provisioned on an Sun Blade X8400 server through the expansion module. The blade might fail to boot if Kudzu is enabled. The operation stops with the message `Checking for new hardware`.

To disable Kudzu on a Sun Blade X8400 Server through a Linux OS Profile, perform the following steps:

1. Log in to the management server as root.
2. Create a shell script file containing the following lines.

```
#!/bin/sh
chkconfig kudzu off
```

3. Save the file in a known location, for example, `/scripts/kudzu.sh`.
4. Add the script to the post section of the OS profile from the N1 System Manager command line using the `add osprofile` command.

For example, if your Red Hat Enterprise Linux 4 Update 3 OS profile is named `rhel4u3`, you would then type:

```
N1-ok> add osprofile rhel4u3 script /scripts/kudzu.sh type=post
```

Ensure that you add the script to the correct OS profile.

5. Redeploy the Red Hat Enterprise Linux 4 Update 3 to the Sun Blade X8400 Server using the updated profile.

During Windows Deployment, Specifying Manual Netboot Does Not Create an Entry in the `dhcpd.conf` File (6432047)

Workaround: Deploy without specifying manual netboot.

Blank Error Messages Displayed for OS Deployments Due to Exceeding Job or Job Step Timeout Value (6405994)

When deploying an OS on a large number of managed servers, the OS deployments might fail due to the OS deployment jobs exceeding the job or job step timeout value. When this situation occurs, the job indicates the error but the error description is blank and the installation might have actually succeeded.

```
bash-3.00# n1sh show job 12
Job ID: 12
Date: 2006-03-29T01:06:53+0000
Type: Load OS
Status: Error (2006-03-29T03:07:00+0000)
Command: load group sparc-srvrs osprofile sol-sparc networktype=static ip=10.0.108.81-10.0.108.90
Owner: root
Errors: 10
Warnings: 0
```

Steps

ID	Type	Start	Completion	Result
1	Acquire Host	2006-03-29T01:06:54+0000	2006-03-29T01:06:54+0000	Completed
2	Acquire Host	2006-03-29T01:06:54+0000	2006-03-29T01:06:54+0000	Completed
.				
.	<i>Servers 3 through 28</i>			
.				
29	Acquire Host	2006-03-29T01:06:56+0000	2006-03-29T01:06:57+0000	Completed
30	Acquire Host	2006-03-29T01:06:56+0000	2006-03-29T01:06:57+0000	Completed
31	Execute Java	2006-03-29T01:06:56+0000	2006-03-29T03:06:58+0000	Error 1
32	Execute Java	2006-03-29T01:06:56+0000	2006-03-29T03:06:58+0000	Error 2
33	Execute Java	2006-03-29T01:06:56+0000	2006-03-29T03:06:58+0000	Error 3
34	Execute Java	2006-03-29T01:06:56+0000	2006-03-29T03:06:58+0000	Error 4
35	Execute Java	2006-03-29T01:06:56+0000	2006-03-29T03:06:58+0000	Error 5
36	Execute Java	2006-03-29T01:06:56+0000	2006-03-29T03:06:58+0000	Error 6
37	Execute Java	2006-03-29T01:06:57+0000	2006-03-29T03:06:58+0000	Error 7
38	Execute Java	2006-03-29T01:06:57+0000	2006-03-29T03:06:58+0000	Error 8
39	Execute Java	2006-03-29T01:06:57+0000	2006-03-29T03:06:58+0000	Error 9
40	Execute Java	2006-03-29T01:06:57+0000	2006-03-29T03:06:58+0000	Error 10

Errors

Error 1:

Description:

Error 2:

Description:

.

.

Blank error messages 3 through 8

.

Error 9:

Description:

Error 10:

Description:

Workaround: Increase the job timeout value using `n1smconfig` or try to reduce the reasons for exceeding the existing timeout value, for example, network latency problems. Also, some of the OS deployments might have succeeded. You can verify whether a server installed properly by viewing the OS Usage column in the All Servers page or by using the Serial Console to log in to the server.

Creating Windows OS Distribution Fails Due to Missing RIS Host Key (6392700)

The `create os` command will fail for Windows if the RIS server's host key does not exist in the management server's `./ssh/known_hosts` file.

Workaround: Make sure the RIS server's host key exists in the management server's `./ssh/known_hosts` file. Manually logging into the RIS server from the management server using the `ssh` command will automatically create a host key.

Provisioning IP Address is Not Assigned Properly When Deploying the Windows OS Using DHCP (6381141)

When you deploy a Windows OS with the `networktype=dhcp` attribute, the IP address assigned to the managed server after Windows is installed is the IP address specified by the `boot ip` attribute. The IP address should be automatically assigned by the DHCP service.

Workaround: After the installation completes, reboot the managed server. The server's provisioning IP address will be correctly reassigned from the DHCP server.

Solaris 10 6/06 OS Deployment on a Sun Fire X4500 Server Requires a Profile (6379990)

Deploying Solaris 10 6/06 OS on a Sun Fire X4500 Server requires a special profile. You cannot choose any random disks. The system needs to be booted first either from the factory installed OS or from a CD-ROM to determine the server's correct boot disk.

To discover the correct boot disk, perform the following steps:

1. Open a terminal window.
2. Find the first bootable disk by typing

```
#cfgadm | grep sata3/0
```

You should see a message similar to the following example.

```
sata3/0: : dsk/cXt0dY
```

Where *X* and *Y* are numbers, for example, `c4t0d0`.

3. To find the second bootable drive, perform either of the following actions:
Increment 0 by 4. For example, if the first drive is `c4t0d0`, then the second drive is `c4t4d0`.
Or type the command: `#cfgadm | grep sata3/4`

You should see a message similar to the following example.

```
sata3/4 : : dsk/cNtNdN
```

Where *N* is a number, for example, c4t1d0.

4. Proceed through the install using the information in Step 2 and Step 3 and apply it to the server's OS profile.

OS Profile for Windows Does Not Have Default Values for Time Zone and Language Attributes (6374740)

Workaround: No workaround exists.

OS Deployments Fail on Newer Sun Fire V20z Servers When Specifying bge1 Device Path for bootpath Attribute (6346563)

As documented in the N1System Manager product documentation, the bge1 device path for Sun Fire V20z servers is `/pci@0,0/pci1022,7450@a/pci17c2,10@3`. However, when specifying the bge1 device path for the bootpath attribute, the OS deployments will fail on newer Sun Fire V20z servers because the bge1 device path has changed.

Workaround: On newer Sun Fire V20z servers, use the following bge1 device path for the bootpath attribute: `/pci@0,0/pci1022,7450@a/pci17c2,10@2,1`

Setting Baud Rate for the BIOS Console Makes OS Deployment Fail on Sun Fire V20z and V40z Servers (6322295)

The baud rate for the BIOS console must be set to 9600 (default) or OS deployment to a Sun Fire V20z or V40z server will fail. Therefore, you should not change the `consolebaudrate` value in the load server command or the Load OS wizard in the browser interface.

Note – If the SP console baud rate is set to something other than 9600, the OS deployment will succeed but the console through the connect server command will display garbage characters.

Workaround: You must change the baud rate for the BIOS console manually after an OS deployment. Reboot the target server and enter the BIOS setup screen during the boot sequence. Consult the server's user manual to see how to change its BIOS settings.

OS Profile Installation Fails on a Server Which Has Grid Engine Application (6406020)

When the user tries to load a OS profile on a server that is running the Grid Engine application, the operation fails with the message “Operation failed.”

Workaround: Unload the Grid Engine application from the target server.

Interface Issues

This section describes the known browser interface and command-line interface issues.

Product Version in Browser Interface Is Incorrect if N1 System Manager Is Installed Through Media

The product version number displayed in the Version screen of the browser interface is incorrect if N1 System Manager is installed through the DVD. The part number of the DVD is 708-0189-10. The correct version number is 1.3.2.

Print Function in Online Help Does Not Work Consistently (6440149, 6436572)

The Printer icon in the online help window might not work in some instances.

Workaround: Open the help content frame in a new browser window and print the help like a typical web page. For example, in a Mozilla-based browser, click mouse button 3 on the content page and select This Frame->Open Frame in New Window.

N1 System Manager Express Module Nomenclature Does Not Match Sun Blade X8400 Server Module CLI (6432413)

Express modules for a Sun Blade X8400 Server Module are denoted by EM.0 and EM.1 instead of EMa and EMb in the ILOM Web GUI.

Workaround: EMa in the user interface needs to be inferred as EM.0 and EMb as EM.1.

The remove group Command Returns an Error Message After Success (6404420)

The remove group command returns an error message even though the remove operation is a success.

```
N1-ok> show group
```

Name	Servers	Hardware Faults	OS Resource Faults
new1	1	Unknown	-

```
N1-ok> show group new1
```

Name	Hardware	Hardware Health	Power	OS Usage	OS Resource Health
10.0.106.6	V20z	Unknown	On		Uninitialized

```
N1-ok> remove group new1 server all
```

```
"10.16.0.5,10.16.0.6" is not in "new1"           False error stating remove failed.
```

```
N1-ok> show group new1
```

Verification that remove succeeded.

```
No items found.
```

Workaround: Use the show group command as shown in the previous example to verify that the remove group command succeeded.

Browser Interface Displays Script Problems When Displaying Over 500 Servers (6365731)

If you try to display more than 500 servers in the System Dashboard page, the following message is displayed:

```
Warning: Unresponsive script
```

```
A script on this page may be busy, or it may have stopped responding.
You can stop the script now, or you can continue to see if the script
will complete.
```

```
<Stop script> <Continue>
```

Workaround: Choose Stop script and wait a few minutes for all the servers to display. This workaround will not work with the Internet Explorer browser.

Incorrect Swap Information Is Reported for Sun Fire X4100 and Sun Fire X4200 Servers With Firmware Level (6344709)

The browser interface server details and the `show server` command results show the wrong swap information for Sun Fire X4100 and Sun Fire X4200 Servers with Firmware Level 6464 and the Red Hat operating system.

Workaround: Use the serial console to access the server and find out the correct swap information by using the `top` command.

Stopping a Job Using Browser Interface Does Not Display a Stop Message in Command-Line Pane (6344094)

Stopping a job in the browser interface's Job tab page does not display the associated stop message in the command-line pane.

Workaround: Confirm that the job stopped by viewing the job's detail page in the browser interface or by using the `show job job-ID` command.

Firmware Update Issues

This section describes known firmware update issues.

Run a Script Before Updating Firmware on Sun Fire X4100/X4200/X4600 Platforms

If you are running older versions of firmware on Sun Fire X4100/X4200/X4600 platforms and want to update firmware to the current level, you *must* first run a pre-flash upgrade script on all affected servers. Refer to the chapter “Flash Upgrading Your Server to Release 1.1” at <http://www.sun.com/products-n-solutions/hardware/docs/html/819-1162-17/> to determine if your servers are affected.

N1 System Manager provides a script that will automatically perform the following actions:

- Examine all discovered servers.
- Determine the servers that require pre-flash upgrade.
- Run the pre-flash upgrade script on each affected server.

The location of the script is `/opt/sun/n1gc/bin/updateall`.

After this script has been successfully applied to all the affected servers, you can update the firmware using N1 System Manager. Refer to the *Sun N1 System Manager 1.3 Operating System Provisioning Guide* for instructions.

N1 System Manager Does Not Display System Firmware Version for T1000/T2000 Platforms (6443502)

Firmware updates for T1000/T2000 platforms are provided as versioned bundles which might update any of its subcomponents. N1 System Manager does not display this version number.

Workaround: Log in manually to the service processor using telnet. Determine the version of System Firmware using the `showhost` command.

Inadequate Error Message When Firmware Update Fails on ALOM-based Servers (6330195)

If the FTP service is not enabled on the management server, firmware updates on ALOM-based servers fail with the following error message in the job output:

```
An exception occurred trying to update server-name. Please refer to the log file for more information.
```

Workaround: Enable the FTP service on the management server. See “Enabling FTP on the Management Server” in *Sun N1 System Manager 1.3 Site Preparation Guide* for details.

N1 System Manager Allows Deployment of Incompatible Firmware to Dual-Core Sun Fire V20z and Sun Fire V40z Servers (6296404)

Dual-core Sun Fire V20z and Sun Fire V40z servers require a 2.3.x and greater firmware revision. N1 System Manager does not prevent you from deploying firmware revisions below 2.3.x. Deploying firmware revisions below 2.3.x might result in issues with the server's service processor.

Workaround: Double check the firmware revision before updating.

Monitoring Issues

This section describes known monitoring issues.

OS Monitoring Status Does Not Change Back to “Good” State (6483181)

If you change an OS monitoring threshold value that moves the current monitoring status from Warning to Good, the status is not consistently updated in the N1 SM interface.

Workaround: On the management server, refresh the server's monitoring information:

```
n1-ok> set server server-name refresh
```

OS Monitoring Threshold Violations Are Not Being Sent (6433480)

The OS monitoring agent outbound interface might not match the user specified agent ip. If `uname -n` on the target server does not resolve to agent ip, the agent will not send traps to N1 System Manager over the agent ip interface and the system will not restart upon reboot.

Workaround: Before adding the OS monitoring (`osmonitor`) feature, ensure that on the target server, the primary host name always resolves to the agent ip IP address, which will be used to add the OS monitoring feature. Verify that `uname -n` always returns this host name, even upon reboot. Then, add the OS monitoring feature.

Jobs That Are Queued But Not Running Are Shown in the Job Detail as “Not Started” (6318398)

When the total job load is high enough to prevent the next job in the queue from running, the Job Details screen shows the running jobs' status as “running,” and the status for other jobs is shown as “Not Started.” The queued jobs will run after one or more of the running jobs have completed and the total job load is low enough to allow the next job in the queue to run.

See “Job Queueing” in *Sun N1 System Manager 1.3 Discovery and Administration Guide* for further information.

Clock Icon Representing Running Jobs Remains After Jobs Finish (6258571)

Even after all jobs are finished running, the clock icon next to the servers in the View Selector section might still display due to a problem with the refresh feature.

Workaround: Click the Refresh button or press F5 to refresh the browser interface.

Grid Engine Module Issues

This section describes known Grid Engine module issues.

Grid Engine Master Cannot Be Unloaded From N1 System Manager When Two Masters Are Present (6423617)

Workaround: Reload N1 System Manager or remove one of the master hosts from the database by performing the following procedure.

1. Access the database through `/opt/SUNWscs/sbin/db_tool.pl psql` for Solaris or `/opt/sun/scs/sbin/db_tool.pl psql` for Linux.
2. List the entries for the two masters:

```
mgmt=>select * from sge_hosts;
```

```

appliance_id | type | hostname | spooldir
-----+-----+-----+-----
                2 | MASTER | 10-0-0-17 | /gridware/sge/default/spool/qmaster
                3 | MASTER | hdco16   | /gridware/sge/default/spool/qmaster
(2 rows)

```

```
mgmt=>SELECT * from sge_host_versions;
```

```

appliance_id | version
-----+-----
                2 | a1
                3 | a1
(2 rows)

```

3. Delete one of the masters from the `sge_host_versions` table and the `sge_hosts` table.

```
mgmt=>delete from sge_host_versions where appliance_id = '3';
```

```
DELETE 1
```

```

mgmt=>SELECT * from sge_host_versions;

  appliance_id | version
-----+-----
              2 | a1
(1 row)

mgmt=>delete from sge_hosts where appliance_id = '3';

DELETE 1

mgmt=>select * from sge_hosts;

  appliance_id | type | hostname | spooldir
-----+-----+-----+-----
              2 | MASTER | 10-0-0-17 | /gridware/sge/default/spool/qmaster
(1 row)

```

Missing Job Type for Grid Engine Module Jobs (6375965)

The job type for Grid Engine module jobs are missing. For example, after issuing a load server command to install the GE application, the associated jobs 5, 6, and 7 are missing a job type.

Job ID	Date	Type	Status	Owner
7	2006-01-07T08:13:24-0700		Completed	root
6	2006-01-07T08:08:22-0700		Completed	root
5	2006-01-07T08:04:42-0700		Completed	root
4	2006-01-07T07:54:41-0700	Add Base Management Support	Completed	root
3	2006-01-07T07:53:43-0700	Add Base Management Support	Completed	root
2	2006-01-07T07:03:04-0700	Discovery	Completed	root
1	2006-01-07T07:02:10-0700	Discovery	Completed	root

Workaround: No workaround exists.

Non-root User With Grid Engine Privileges Cannot Create or Delete Grid Engine Application (6407102)

A non-root user with the appropriate Grid Engine privileges cannot create or delete the Grid Engine application on the management server by using the create application and delete application commands, respectively.

Workaround: You must be root on the management server to use the create application or delete application commands.

Internationalization Issues

The following issues might occur if the management server is running in a non-English environment.

CLI Help in the Localized Version Is Not Updated

CLI help in the localized version of the product is not updated with the latest hardware model numbers.

Language Attributes for Each OS Profile Are Not Documented (6426098)

N1 System Manager Online Help does not display a list of valid language attributes for each OS profile. The language attribute differs depending on the OS platform of the OS profile.

Language Attributes for RHEL3 and RHEL4 Platforms

name='Chinese(Mainland)' attribute='zh_CN'

name='Chinese(Taiwan)' attribute='zh_TW'

name='Czech' attribute='cs_CZ'

name='Danish' attribute='da_DK'

name='Dutch' attribute='nl_NL'

name='English' attribute='en_US'

name='French' attribute='fr_FR'

name='German' attribute='de_DE'

name='Icelandic' attribute='is_IS'

name='Italian' attribute='it_IT'

name='Japanese' attribute='ja_JP'

name='Korean' attribute='ko_KR'

name='Norwegian' attribute='no_NO'

name='Portuguese' attribute='pt_PT'

name='Russian' attribute='ru_RU'

name='Slovenian' attribute='sl_SI'

name='Spanish' attribute='es_ES'

name='Swedish' attribute='sv_SE'

name='Ukrainian' attribute='uk_UA'

Language Attributes for Solaris Platform

name='Arabic (UTF-8)' attribute='ar_EG.UTF-8'

name='Arabic (ISO8859-6)' attribute='ar_EG.ISO8859-6'

name='Bulgarian (ISO-8859-5)' attribute='bg_BG.ISO8859-5'

name='English (7-bit ASCII)' attribute='C'

name='Catalan (ISO 8859-1)' attribute='ca_ES.ISO8859-1'

name='Catalan (ISO 8859-15)' attribute='ca_ES.ISO8859-15'

name='Czech (ISO 8859-2)' attribute='cs_CZ.ISO8859-2'

name='Danish (ISO 8859-1)' attribute='da_DK.ISO8859-1'

name='Danish (ISO 8859-15)' attribute='da_DK.ISO8859-15'

name='German (Austria ISO 8859-1)' attribute='de_AT.ISO8859-1'

name='German (Austria ISO 8859-15)' attribute='de_AT.ISO8859-15'

name='German (Switzerland ISO 8859-1)' attribute='de_CH.ISO8859-1'

name='German (de_DE UTF-8)' attribute='de_DE.UTF-8'

name='German (de_DE ISO 8859-1)' attribute='de_DE.ISO8859-1'

name='German (de_DE ISO 8859-15)' attribute='de_DE.ISO8859-15'

name='Greek (el_GR ISO 8859-7)' attribute='el_GR.ISO8859-7'

name='English (Australia ISO 8859-1)' attribute='en_AU.ISO8859-1'

name='English (Canada ISO 8859-1)' attribute='en_CA.ISO8859-1'

name='English (Great Britain ISO 8859-1)' attribute='en_GB.ISO8859-1'

name='English (Great Britain ISO 8859-15)' attribute='en_GB.ISO8859-15'

name='English (Ireland ISO 8859-1)' attribute='en_IE.ISO8859-1'
name='English (Ireland ISO 8859-15)' attribute='en_IE.ISO8859-15'
name='English (New Zealand ISO 8859-1)' attribute='en_NZ.ISO8859-1'
name='English (UTF-8)' attribute='en_US.UTF-8'
name='Canada-English (ISO8859-1)' attribute='en_US'
name='U.S.A. (en_US.ISO8859-1)' attribute='en_US.ISO8859-1'
name='U.S.A. (en_US.ISO8859-15)' attribute='en_US.ISO8859-15'
name='Spanish (Argentina) (es_AR.ISO8859-1)' attribute='es_AR.ISO8859-1'
name='Spanish (Bolivia) (es_BO.ISO8859-1)' attribute='es_BO.ISO8859-1'
name='Spanish (Chile) (es_CL.ISO8859-1)' attribute='es_CL.ISO8859-1'
name='Spanish (Columbia) (es_CO.ISO8859-1)' attribute='es_CO.ISO8859-1'
name='Spanish (Costa Rica) (es_CR.ISO8859-1)' attribute='es_CR.ISO8859-1'
name='Spanish (Ecuador) (es_EC.ISO8859-1)' attribute='es_EC.ISO8859-1'
name='Spanish (Spain) (es_ES ISO8859-1)' attribute='es_ES.ISO8859-1'
name='Spanish (Spain) (es_ES ISO8859-15)' attribute='es_ES.ISO8859-15'
name='Spanish (Guatemala) (es_GT.ISO8859-1)' attribute='es_GT.ISO8859-1'
name='Spanish (Mexico) (es_MX.ISO8859-1)' attribute='es_MX.ISO8859-1'
name='Spanish (Nicaragua) (es_NI.ISO8859-1)' attribute='es_NI.ISO8859-1'
name='Spanish (Panama) (es_PA.ISO8859-1)' attribute='es_PA.ISO8859-1'
name='Spanish (Peru) (es_PE.ISO8859-1)' attribute='es_PE.ISO8859-1'
name='Spanish (Paraguay) (es_PY.ISO8859-1)' attribute='es_PY.ISO8859-1'
name='Spanish (El Salvador) (es_SV.ISO8859-1)' attribute='es_SV.ISO8859-1'
name='Spanish (Uruguray) (es_UY.ISO8859-1)' attribute='es_UY.ISO8859-1'
name='Spanish (Venezula) (es_VE.ISO8859-1)' attribute='es_VE.ISO8859-1'
name='Estonian (et_EE.ISO8859-15)' attribute='et_EE.ISO8859-15'
name='Finnish (fi_FI.UTF-8)' attribute='fi_FI.UTF-8'

name='Finnish (fi_FI.ISO8859-1)' attribute='fi_FI.ISO8859-1'
name='Finnish (fi_FI.ISO8859-15)' attribute='fi_FI.ISO8859-15'
name='French (Belgium) (fr_BE.UTF-8)' attribute='fr_BE.UTF-8'
name='French (Belgium) (fr_BE.ISO8859-1)' attribute='fr_BE.ISO8859-1'
name='French (Belgium) (fr_BE.ISO8859-15)' attribute='fr_BE.ISO8859-15'
name='French (Canada) (fr_CA.ISO8859-1)' attribute='fr_CA.ISO8859-1'
name='French (Switzerland) (fr_CH.ISO8859-15)' attribute='fr_CH.ISO8859-15'
name='French (French) (fr_FR.UTF-8)' attribute='fr_FR.UTF-8'
name='French (French) (fr_FR.ISO8859-1)' attribute='fr_FR.ISO8859-1'
name='French (French) (fr_FR.ISO8859-15)' attribute='fr_FR.ISO8859-15'
name='Hebrew (Israel) (he_IL.UTF-8)' attribute='he_IL.UTF-8'
name='Hebrew (Israel) (he_IL.ISO8859-8)' attribute='he_IL.ISO8859-8'
name='English (India) (hi_IN.UTF-8)' attribute='hi_IN.UTF-8'
name='Croatian (hr_HR.ISO8859-2)' attribute='hr_HR.ISO8859-2'
name='Hungarian (hu_HU.ISO8859-2)' attribute='hu_HU.ISO8859-2'
name='Icelandic (is_IS.ISO8859-1)' attribute='is_IS.ISO8859-2'
name='Italian (it_IT.UTF-8)' attribute='it_IT.UTF-8'
name='Italian (it_IT.ISO8859-1)' attribute='it_IT.ISO8859-1'
name='Italian (it_IT.ISO8859-15)' attribute='it_IT.ISO8859-15'
name='Japanese (ja_JP.UTF-8)' attribute='ja_JP.UTF-8'
name='Japanese (ja)' attribute='ja'
name='Japanese (ja_JP.PCK)' attribute='ja_JP.PCK'
name='Korean (ko_KR.UTF-8)' attribute='ko_KR.UTF-8'
name='Lithuanian (lt_LT.ISO8859-13)' attribute='lt_LT.ISO8859-13'
name='Latvian (lv_LV.ISO8859-13)' attribute='lv_LV.ISO8859-13'
name='Macedonian (mk_MK.ISO8859-5)' attribute='mk_MK.ISO8859-5'

name='Dutch (Belgium) (nl_BE.ISO8859-1)' attribute='nl_BE.ISO8859-1'
name='Dutch (Belgium) (nl_BE.ISO8859-15)' attribute='nl_BE.ISO8859-15'
name='Dutch (Netherlands) (nl_NL.ISO8859-1)' attribute='nl_NL.ISO8859-1'
name='Dutch (Netherlands) (nl_NL.ISO8859-15)' attribute='nl_NL.ISO8859-15'
name='Norwegian (no_NO.ISO8859-1)' attribute='no_NO.ISO8859-1'
name='Polish (pl_PL.UTF-8)' attribute='pl_PL.UTF-8'
name='Polish (pl_PL.ISO8859-2)' attribute='pl_PL.ISO8859-2'
name='Portuguese (Brazil) (pt_BR.UTF-8)' attribute='pt_BR.UTF-8'
name='Portuguese (Brazil) (pt_BR.ISO8859-1)' attribute='pt_BR.ISO8859-1'
name='Portuguese (Portugal) (pt_PT.ISO8859-1)' attribute='pt_PT.ISO8859-1'
name='Portuguese (Portugal) (pt_PT.ISO8859-15)' attribute='pt_PT.ISO8859-15'
name='Romanian (Romania) (ro_RO.ISO8859-2)' attribute='ro_RO.ISO8859-2'
name='Russian (Russia) (ru_RU.UTF-8)' attribute='ru_RU.UTF-8'
name='Russian (Russia) (ru_RU.ANSI1251)' attribute='ru_RU.ANSI1251'
name='Russian (Russia) (ru_RU.ISO8859-5)' attribute='ru_RU.ISO8859-5'
name='Russian (Russia) (ru_RU.KO18-R)' attribute='ru_RU.KO18-R'
name='Serbo-Croatian (sh_BA.ISO8859-2)' attribute='sh_BA.ISO8859-2'
name='Slovak (sk_SK.ISO8859-2)' attribute='sk_SK.ISO8859-2'
name='Slovenian (sl_SI.ISO8859-2)' attribute='sl_SI.ISO8859-2'
name='Albanian (sq_AL.ISO8859-2)' attribute='sq_AL.ISO8859-2'
name='Serbian (sr_YU.ISO8859-5)' attribute='sr_YU.ISO8859-5'
name='Swedish (sv_SE.UTF-8)' attribute='sv_SE.UTF-8'
name='Swedish (sv_SE.ISO8859-1)' attribute='sv_SE.ISO8859-1'
name='Swedish (sv_SE.ISO8859-15)' attribute='sv_SE.ISO8859-15'
name='Thai (th_TH.UTF-8)' attribute='th_TH.UTF-8'
name='Thai (th_TH.TIS620)' attribute='th_TH.TIS620'

name='Turkish (tr_TR.UTF-8)' attribute='tr_TR.UTF-8'
name='Turkish (tr_TR.ISO8859-9)' attribute='tr_TR.ISO8859-9'
name='Simplified Chinese (zh_CN.UTF-8)' attribute='zh_CN.UTF-8'
name='Simplified Chinese (zh_CN.EUC)' attribute='zh_CN.EUC'
name='Simplified Chinese (zh_CN.GB18030)' attribute='zh_CN.GB18030'
name='Traditional Chinese (zh_HK.Big5HK)' attribute='zh_HK.Big5HK'
name='Traditional Chinese (zh_HK.UTF-8)' attribute='zh_HK.UTF-8'
name='Traditional Chinese (zh_TW.UTF-8)' attribute='zh_TW.UTF-8'
name='Traditional Chinese (zh_TW.Big5)' attribute='zh_TW.BIG5'

Language Attributes for SUSE Platform

name='Catala' attribute='ca_ES.UTF-8'
name='Bosnia' attribute='bs_BA'
name='Cestina' attribute='cs_CZ.UTF-8'
name='Dansk' attribute='da_DK.UTF-8'
name='Deutsch' attribute='de_DE.UTF-8'
name='Greek' attribute='el_GR.UTF-8'
name='English (GB)' attribute='en_GB.UTF-8'
name='English (US)' attribute='en_US.UTF-8'
name='Espanol' attribute='es_ES.UTF-8'
name='Francais' attribute='fr_FR.UTF-8'
name='Magyar' attribute='hu_HU.UTF-8'
name='Italiano' attribute='it_IT.UTF-8'
name='Japanese' attribute='ja_JP.UTF-8'
name='Korean' attribute='ko_KR.UTF-8'
name='Lithuanian' attribute='lt_LT.UTF-8'
name='Nederlands' attribute='nl_NL.UTF-8'

```

name='Norsk' attribute='no_NO.UTF-8'
name='Portugues brasileiro' attribute='pt_BR.UTF-8'
name='Portugues' attribute='pt_PT.UTF-8'
name='Slovenscina' attribute='sl_SI.UTF-8'
name='Slovincina' attribute='sk_SK.UTF-8'
name='Svenska' attribute='sv_SE.UTF-8'
name='Simplified Chinese' attribute='zh_CN.gb18030'
name='Traditional Chinese' attribute='zh_TW'
name='Turkce' attribute='tr_TR.UTF-8'

```

The n1sh Command Does Not Work in Some Locales (6402666)

The n1sh command fails to run in some locales and the following error message is displayed:

```
The current encoding "locale-name" is not supported.
```

Workaround: Change the LANG and LC_ALL environment variables on the management server to UTF-8 (for example, en_US.UTF-8) or en_US locale.

Windows OS Deployment Does Not Work When OS Chooser Directory Name and RIS Server Language Are Different (6400419)

The RIS server assumes that you have files in a language path that is the same as the RIS server's OS language. To provision a Windows OS that is not the same as the RIS server's OS language, you need to do some additional configuration.

Workaround: To configure an English RIS server to deploy a non-English Windows image, copy the other language's files to the English path by performing the following procedure.

1. Go to the directory in which the OS Chooser files are located.

For example:

```
% cd RemoteInstall\OSChooser
```

2. Copy the files from the language directory to an English directory.

For example:

```
% copy -r Japanese English
```

This procedure creates a directory `RemoteInstall\OSChooser\English` that contains the install screens in the native language. When the RIS software checks the default English path, it will display the non-English OS Chooser screens during install.

To configure a non-English RIS server to deploy an English Windows image, type:

```
% copy -r English language
```

Internationalization Features Are Not Supported for the `n1sh` Command on Solaris Management Servers (6297808)

The Python version 2.3 on a default Solaris management server does not provide adequate internationalization support for the `n1sh` command.

Workaround: Install Python 2.4 or later on the Solaris management server. The Python executable must be `/usr/bin/python2.4`.

Cannot Install ALOM Firmware With a Non-ASCII Firmware Name (6297238)

The `load server` command fails to install ALOM firmware if the firmware name is non-ASCII.

Workaround: Change the firmware name to ASCII using the `set firmware` command.

Non-ASCII Objects Display Random Characters if the N1 System Manager Is Running in a Non-UTF8 Locale (6231209)

Non-ASCII objects created using the N1 System Manager display random characters if you start N1 System Manager in any of the following ways:

- Restarting N1 System Manager in a non-UTF8 locale
- Rebooting the management server in a non-UTF8 locale

Workaround: Use either of the two following methods.

- Temporary solution: Set the `LANG` environment variable to the UTF8 locale on the management server and restart the N1 System Manager. For example:

- Solaris management server:

```
# export LANG en_US.UTF-8
# sccadm restart n1sm
```

- Red Hat management server:

```
# export LANG en_US.UTF-8
# /etc/init.d/n1sm init stop
# /etc/init.d/n1sm init start
```

- Permanent solution:

- Solaris based management server:

Edit the file `/etc/default/init` and change the LANG value to `en_US.UTF-8`.

- Red Hat based management server:

Edit the file `/etc/sysconfig/i18n` and change the LANG value to `en_US.UTF-8`.

Deploying Solaris 10 3/05 OS With Some Installation Languages Will Time Out (6178721)

If you deploy Solaris 10 3/05 OS with an OS profile that has a particular installation language set, the installation is performed in interactive mode and you must select a language when prompted. The deploy OS job will eventually time out if you do not make the language selection. The following languages create this behavior:

- `ja_JP.eucJP`
- `no_NO.ISO8859-1`
- `th_TH.TIS620`
- `ko_KR.UTF-8`
- `sh_BA.ISO8859-2`
- `zh_CN.EUC`
- `zh_CN.UTF-8`

Workaround: Because the installation is no longer automated, you must monitor the deployment through the server's serial console and make the language selection. You can choose Serial Console from the Actions menu in the browser interface or use the `connect server` command.

Supported Hardware and Operating Systems

This chapter details the supported hardware and operating systems up to this release of Sun N1 System Manager.

Supported Hardware and Operating Systems

This section details the supported hardware and operating systems up to this release of N1 System Manager.

Management Server Requirements

N1 System Manager management server hardware and operating software minimum requirements are listed in the following table.



Caution – Dedicate the N1 System Manager management server only to the N1 System Manager software. Do not install other applications on the management server. The management server must not be managed by any system management software such as N1 System Manager, Sun Management Center, Sun Control Station, or any other management system.

TABLE 3-1 Disk Space and RAM Requirements

Disk Space	RAM
<p>5 Gbytes minimum for a management server with one Solaris 10 3/05 OS distribution. However, you will need to increase the available disk space when you have more than one OS distribution or when you need to manage OS updates, firmware updates or when you have a large number of managed servers.</p> <p>The recommended disk space is 35 Gbytes. After the OS is installed, the disk space requirement will reduce by 5 Gbytes.</p>	4 Gbytes minimum for all management servers

TABLE 3-2 SPARC-based Supported Hardware and Operating Systems

Type	Operating System
Netra™ 240, 440	Solaris 10 3/05, 64-bit
	Solaris 10 1/06, 64-bit
Sun Fire™ T1000, T2000	Solaris 10 3/05, 64-bit
	Solaris 10 1/06, 64-bit
Sun Fire V210, V240, V440	Solaris 10 3/05, 64-bit
	Solaris 10 1/06, 64-bit
Sun Fire V490	Solaris 10 3/05, 64-bit
	Solaris 10 1/06, 64-bit
SunFire V445	Solaris 10 6/06
Sun Fire V215 and Sun Fire V245	Solaris 10 6/06

TABLE 3-3 x86 and x64-based Supported Hardware and Operating Systems

Type	Operating System
Sun Fire X2100	Solaris 10 3/05 HW1, 32-bit and 64-bit
	Solaris 10 1/06, 32-bit and 64-bit
	Solaris 10 6/06, 32-bit and 64-bit
	Red Hat Enterprise Linux 3.0 AS Update 6, 32-bit and 64-bit
	Red Hat Enterprise Linux 4.0 AS Update 2, 32-bit and 64-bit

TABLE 3-3 x86 and x64-based Supported Hardware and Operating Systems (Continued)

Type	Operating System
Sun Fire X4100 and X4200	Solaris x64 Version 10 HW1, 64-bit
	Solaris x64 Version 10 1/06, 64-bit
	Solaris x64 Version 10 6/06, 64-bit
	Red Hat Enterprise Linux 3.0 AS Update 5, 32-bit and 64-bit
	Red Hat Enterprise Linux 4.0 AS Update 1 and Update 3, 64-bit
Sun Fire V20z and V40z	Solaris x64 Version 10 HW1, 64-bit
	Solaris x64 Version 10 1/06 and Solaris 10 6/06, 64-bit
	Red Hat Enterprise Linux 3.0 AS Updates 2 through 4, 32-bit and 64-bit, single core only
	Red Hat Enterprise Linux 3.0 AS Update 5, 32-bit and 64-bit
	Red Hat Enterprise Linux 4.0 AS Update 1, 32-bit and 64-bit
Sun Fire X2100M2	Solaris 10 6/06
	Red Hat Enterprise Linux 3.0 AS Update 8, 32-bit and 64-bit
	Red Hat Enterprise Linux 4.0 AS Update 4, 32-bit and 64-bit
Sun Fire X2200 M2	Solaris 10 6/06
	Red Hat Enterprise Linux 3.0 AS Update 8, 32-bit and 64-bit
	Red Hat Enterprise Linux 4.0 AS Update 4, 32-bit and 64-bit
Sun Fire X4100 M2 and Sun Fire X4200 M2	Solaris x64 Version 10 HW1, 64-bit
	Solaris x64 Version 10 1/06, 64-bit
	Solaris x64 Version 10 6/06, 64-bit
	Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 1 and above, 64-bit
Sun Fire X4600	Solaris 10 1/06, 64-bit
	Solaris 10 6/06, 64-bit
	Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 4, 64-bit,

A minimum of 3.0 Gbytes should be allocated for each OS distribution you plan to provision.

- On a Solaris based management server, OS distributions are stored as follows:
 - Linux OS distributions are stored in /var/opt/SUNWscs/share/allstart
 - Solaris OS distributions are stored in /var/js
- On a Linux based management server, OS distributions are stored as follows:

- Linux OS distributions are stored in `/var/opt/sun/scs/share/allstart/`
- Solaris OS distributions are stored in `/var/opt/sun/scs/share/allstart/jumpstart/`

Note – If the server you have chosen for the management server has only two network interfaces, consider installing a third 10/100 or 10/100/1000 NIC in N1 System Manager. A third NIC enables you to assign the management, provisioning, and data networks to separate network interfaces, and simplifies administrative tasks. The example diagrams and configurations in this document assume that an additional NIC has been installed in the management server.

Manageable Server Requirements

N1 System Manager manageable server hardware and operating software requirements are listed in the following tables.

TABLE 3-4 Manageable Server Disk Space and RAM Requirements

Disk Space	RAM
500 Mbytes minimum for all manageable servers considering that the OS is already installed	512 Mbytes minimum, 1 Gbyte recommended for all manageable servers

TABLE 3-5 SPARC-Based Manageable Server Supported Hardware and Operating Systems

Type	Provisionable OS
Sun Netra 240 and 440	Solaris 10 3/05 GA and later
	Solaris 9 Update 7 and Update 8
Sun Fire V210, V240, and V440	Solaris 10 3/05 GA and later
	Solaris 9 Update 7 and Update 8
Sun Fire V490	Solaris 9 9/05
	Solaris 10 3/05
Sun Fire V890	Solaris 9 9/05
	Solaris 10 3/05
Sun Fire T1000 and T2000	Solaris 10 3/05 HW2 and later
SunFire V445	Solaris 10 6/06
Sun Fire V215 and Sun Fire V245	Solaris 10 6/06

TABLE 3-6 X86 and X64 Based Manageable Server Supported Hardware and Operating Systems

Type	Provisionable OS
Sun Blade X8400 Server Module	Solaris x64 Version 10 6/06, 64-bit Red Hat Enterprise 4 AS, Update 3 SUSE Linux Enterprise Server 9 SP3, 64-bit Windows 2003 SE, 2003 EE 64-bit Windows 2003 SE, 2003 EE, SP1 32-bit
Sun Fire V20z and V40z	Solaris x64 Version 10 HW1, 64-bit Solaris x64 Version 10 1/06, 64-bit Solaris 9 04/05 32-bit Solaris 9 09/05 HW 32-bit Solaris 9 09/05 32-bit Red Hat Enterprise Linux 3.0 WS, ES, and AS, Updates 1 through 4, 32-bit and 64-bit, single core only Red Hat Enterprise Linux 3.0 WS, ES, and AS, Updates 5 through 6, 32-bit and 64-bit Red Hat Enterprise Linux 4.0 WS, ES, and AS, 32-bit, single core only Red Hat Enterprise Linux 4.0 WS, ES, and AS, Update 1, 32-bit and 64-bit SUSE Linux Enterprise Server 9 SP1 and SP2, 64-bit MS Windows 2003 SE, 2003 EE, 2003 WE 32-bit only Windows 2003 SE, 2003 EE 64-bit only Windows 2000S, 2000AS 32-bit only
Sun Fire X2100 with the 8081A IPMI 1.5 Remote Management Card: Part Number: 371-0743	Solaris Version 10 HW1. 32-bit and 64-bit Solaris Version 10 1/06, 32-bit and 64-bit Red Hat Enterprise Linux 3.0 WS, ES, and AS Update 6 or greater, 32-bit and 64-bit Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 2, 32-bit and 64-bit SUSE Linux Professional 9 SP3 or greater, 32-bit and 64-bit Windows 2003 SE, 2003 EE, 64-bit Windows 2003 SE, 2003 EE, SP1, 32-bit

TABLE 3-6 X86 and X64 Based Manageable Server Supported Hardware and Operating Systems
(Continued)

Type	Provisionable OS
Sun Fire X4100 and X4200	Solaris Version 10, 64-bit Red Hat Enterprise Linux 3.0 WS, ES, and AS, 32-bit and 64-bit Red Hat Enterprise Linux 4.0 WS, ES, and AS, 64-bit SUSE Linux Enterprise Server 9 SP1 through SP3, 64-bit Windows 2003 SE, 2003 EE, 32-bit and 64-bit
Sun Fire X4100 M2 and Sun Fire X4200 M2	Solaris Version 10, 64-bit Red Hat Enterprise Linux 4.0 WS, ES, and AS, 64-bit Windows 2003 SE, 2003 EE, 32-bit and 64-bit
Sun Fire X4500	Solaris 10 1/06, 64-bit
Sun Fire X4600	Solaris 10 1/06, 64-bit, Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 3 and Update 4, 64-bit, SUSE Linux Enterprise Server 9, 64-bit Windows 2003 SE, SP1, 32-bit and 64-bit Windows 2003 EE, 32-bit and 64-bit
Sun Fire X4600 M2	Solaris 10 1/06, 64-bit, Red Hat Enterprise Linux 3.0 WS, ES, and AS 64-bit, Red Hat Enterprise Linux 4.0 WS, ES, and AS, 32-bit, Red Hat Enterprise Linux 4.0 WS, ES, and AS Update 4, 64-bit, SUSE Linux Enterprise Server 9, 64-bit Windows 2003 SE, SP1, 32-bit and 64-bit Windows 2003 EE, 32-bit and 64-bit
Sun Fire X2100M2	Solaris 10 6/06 Red Hat Enterprise Linux 3.0 Update 8, 32-bit and 64-bit Red Hat Enterprise Linux 4.0 Update 4, 32-bit and 64-bit SUSE Linux Enterprise Server 9 SP3, 64-bit

TABLE 3-6 X86 and X64 Based Manageable Server Supported Hardware and Operating Systems
(Continued)

Type	Provisionable OS
Sun Fire X2200 M2	Solaris 10 6/06 Red Hat Enterprise Linux 3.0 Update 8, 32-bit and 64-bit Red Hat Enterprise Linux 4.0 Update 4, 32-bit and 64-bit SUSE Linux Enterprise Server 9 SP3, 64-bit

Note – OS discovery, OS monitoring, and software update management are not supported for managed servers running the Windows operating system. For further information about OS discovery, see Chapter 4, “Discovering Manageable Servers,” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*. For further information about OS monitoring, see Chapter 6, “Monitoring Servers and Server Groups,” in *Sun N1 System Manager 1.3 Discovery and Administration Guide*.

