sgi

 $SGI^{\mbox{\tiny $^{\circ}$}}$ $UV^{\mbox{\tiny $^{\circ}$}}$ Systems Software Install Guide

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New Features in This Guide

This revision includes the following changes:

- Support for ${\rm SGI}^{\circ}$ Foundation Software 2.8
- Support for SGI UV[™] 2000

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Record of Revision

Version	Description
001	June 2010 Original Printing.
002	October 2010 Updated to support the SGI Performance Suite 1.0 release.
003	February 2011 Updated to support the SGI Performance Suite 1.1 release.
004	April 2011 Updated to support the SGI Performance Suite 1.2 release.
005	June 2011 Updated to support additional changes for the SGI Performance Suite 1.2 release.
006	November 2011 Updated to support changes for the SGI Performance Suite 1.3 release.
007	May 2013 Updated to support changes for the SGI Foundation Software 2.8 release.

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About This Manual

SGI installs operating system software and the SGI Foundation Software on all SGI $UV^{\text{\tiny M}}$ 2000, SGI UV 1000, and SGI UV 100 systems before the systems leave the factory. This manual explains how to reinstall these software packages on those systems in the event of a disaster or system failure.

The procedures in this guide were developed using the following hardware and software:

An SGI UV 2000 with an SMN. This system was the primary test system.
 Differences for other systems are noted in the text, but noted differences are not comprehensive. Differences are noted for systems without an SMN.

This guide does not support SGI UV 20 systems or SGI UV 10 systems.

- Red Hat Enterprise Linux 6.4 (RHEL 6.4) and SUSE Linux Enterprise Server 11 SP2 (SLES 11 SP2). These were the specific operating systems used during the documentation's development. Different operating system levels might behave somewhat differently on SGI hardware.
- The SGI Foundation Software 2.8 release. SGI requires that the SGI Foundation Software be installed on each SGI UV system. You can install the SGI Foundation Software on the SGI UV server and on the SMN after you install the operating system software.
- The System Management Node 1.6 release. If your SGI UV system includes a system management node (SMN), install the SMN software on this node.

Obtaining Publications

You can obtain SGI documentation in the following ways:

- Download or view documentation from the SGI Technical Publications Library at: http://docs.sgi.com. Various formats are available. This library contains the most recent and most comprehensive set of online books, release notes, man pages, and other information.
- View man pages by typing man *title* on a command line.

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Related Publications and Other Sources

The following documentation might be useful to you:

• SGI Performance Suite x.x Start Here

Provides information about the SGI Performance Suite release including information about major new features, software installation, and an overview of SGI Performance Suite products.

• SGI Foundation Software x.x Start Here

Provides information about the SGI Foundation Software release that supports SGI differentiated server solutions.

• SGI Management Center (SMC) Installation and Configuration

Describes how to install and configure the SGI Management Center.

• SGI Management Center (SMC) System Administrator Guide

Describes general cluster administration.

• SGI UV System Management Node Administrator Guide

Describes how to install, configure, and administer the system management node (SMN) on SGI UV 2000, SGI UV 1000, and SGI UV 100 series systems.

SGI UV CMC Software User Guide

Describes how to use the chassis management controller (CMC) to monitor and manage SGI UV 2000, SGI UV 1000, and SGI UV 100 systems.

The SGI Knowledgebase includes additional technical information. For example, the Knowledgebase includes a document that explains how to boot an SGI UV 1000 system using the iSCSI protocol and how to boot from a Fibre Channel Disk. Contact your SGI representative for this information.

Conventions

The following conventions are used throughout this document:

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Convention	Meaning
command	This fixed-space font denotes literal items such as commands, files, routines, path names, signals, messages, and programming language structures.
manpage(x)	Man page section identifiers appear in parentheses after man page names.
variable	Italic typeface denotes variable entries and words or concepts being defined.
user input	This bold, fixed-space font denotes literal items that the user enters in interactive sessions. (Output is shown in nonbold, fixed-space font.)
[]	Brackets enclose optional portions of a command or directive line.
	Ellipses indicate that a preceding element can be repeated.

Reader Comments

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Preparing to Install the SGI UV System Software

This chapter includes the following topics:

- "About Installing SGI UV System Software" on page 1
- "Gathering Installation Materials and Information" on page 3
- "Preparing the Environment and Gathering BMC Information" on page 8
- "(Optional) Setting or Changing an Administrative Password on the Console" on page 11
- "Preparing to Install the Operating System Software and the SMN Software from the Local Console" on page 13
- "Enabling JViewer" on page 14

About Installing SGI UV System Software

SGI installs operating system software, the SGI Foundation Software, and any additional customer-purchased software on all SGI UV systems before the systems leave the SGI manufacturing facility. The operating system can be one of the following:

- Red Hat Enterprise Linux (RHEL)
- SUSE Linux Enterprise Server (SLES)

If your site practices require you to reinstall the software, or if a disaster occurs at your site, you can use the procedures in this manual to reinstall all the factory-installed software. The procedures in this manual assume the following:

- You, the installer, are familiar with Linux operating systems.
- You want to reinstall the factory-installed software on the SGI UV server and, optionally, on the SGI UV system management node (SMN). The following list explains the SMN options for the SGI UV systems:

System SMN Options
SGI UV 2000 SMN is optional.

SGI UV 1000 SMN is required. SGI UV 100 SMN is not needed.

The software installation instructions include steps to insert DVDs into the DVD drive on the SMN. If your SGI UV system does not have an SMN, use one of the following methods to connect to the SGI UV server:

- Connect to the SGI UV server through the JViewer, which this chapter describes.
- Plug a DVD drive into the USB port on the Base I/O riser BMC on the SGI UV server and reboot.
- You are familiar with the operating system software update process. The
 installation instructions describe how to register the operating system installation
 with the operating system software provider to ensure automatic updates. This
 manual assumes that your site wants to use the automatic updates. As an
 alternative, you can use physical media to apply updates.
- Your SMN, if included, is a factory-installed SMN, which includes Java software. If your SMN hosts a custom installation, this procedures in this manual might fail.
- Your SGI UV system is cabled correctly and attached to the network in accordance with your site practices.

There is a specific order in which you need to install software on an SGI UV system.

To install the software on an SGI UV server, install the software in this order:

- 1. Operating system software, either RHEL or SLES
- 2. SGI Foundation Software

To install the software on an SGI UV SMN, install the software in this order:

- 1. Operating system software, either RHEL or SLES
- 2. SGI Foundation Software
- 3. SGI SMN Software

If you need to install software on both the SGI UV server and on the SGI UV SMN, install the software on the SMN first. Install the software on the SGI UV server after you install the operating system software, the SGI Foundation Software, and the SMN software on the SMN.

The operating system installation procedure is nearly identical for both the SGI UV server and the SMN. Use the operating system installation procedures in this manual as a guide when you perform the operating system installations on both the SGI UV server and the SMN. Small differences related to the platforms are noted within the procedures.

Gathering Installation Materials and Information

The following procedure explains how to gather the information you need for the SGI UV server operating system installation session. If you gather the information you need in advance, your session with the installer can proceed more quickly.

Procedure 1-1 To gather installation materials and information

 Locate the software DVDs or CDs that SGI sent to you, or download and create DVDs or CDs.

This manual assumes that you have DVDs of the operating system and CDs of the SGI software.

You can obtain the operating system software in one of the following ways:

- In a media kit from SGI. SGI distributes DVD copies of the RHEL and SLES operating system releases.
- As a software download. You can download the RHEL and SLES releases from the Red Hat or SUSE websites and write the software to a DVD.

You can obtain the SGI software from the SGI Supportfolio website. To download the SGI software, complete the following steps:

- In a browser window, navigate to the following URL:
 - https://support.sgi.com/login
 - SupportFolio prompts you for your username and password.
- Download the SGI software that you need. If you install the operating system software, also plan to install the SGI Foundation Software.
- Write the ISO file to a CD or DVD. The instructions in this manual assume
 that you have hard media. Some procedures explain how to access the release
 software if you want to install from a network-resident ISO image, but the
 instructions are not comprehensive. If you wrote downloaded ISO images to

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your house network and you do not want to write them to hard media, plan to use your network tools to access the software when the procedures instruct you to insert a DVD or CD.

2. Plan the order in which to install the software.

If you need to install both the SGI UV server software and the SGI SMN software, plan to install the SMN software first. You can install the SGI UV server software after the SMN software installation is complete.

3. Gather the information that the installer requires.

The installation requires you to provide information about passwords, your public (or house) network, and so on. Your session with the installer can be completed more quickly if you gather this information before you begin. Obtain the system configuration information that was used when the SGI UV System was originally configured. The following list shows the information you need to collect:

•	SMN fully qualified domain name (FQDN)
•	SMN hostname
•	SMN IP address
•	SMN subnet mask
•	Password for the SMN's system administrator (root user) login
•	SGI UV server fully qualified domain name (FQDN)
•	SGI UV server hostname
•	SGI UV server IP address
•	SGI UV server subnet mask
•	Site DNS server IP addresses
•	Site search domain
•	Password for the SGI UV server's system administrator (root user) login

•	FQDN of your site's network time protocol (NTP) server
•	IP address of your primary name server
•	IP address of your secondary name server
•	(Conditional) Fully qualified domain name (FQDN) of the chassis management controller (CMC)
	You need this information if your SGI UV system does not have an SMN.

- For RHEL installations, do the following:
 - Verify your site's Red Hat Networks (RHN) registration status and your Customer Center registration status.
 - Obtain your RHN login.
 - Obtain your RHN password.
- For SLES installations, do the following:
 - Determine the email address you want to use when you register with Novell.
 - (Optional) Obtain the activation code for SLES components.
 - (Optional) Determine the system name or description.
- 4. Familiarize yourself with the hardware components in the rack, and identify the System Management Node (SMN), if present.

Figure 1-1 and Figure 1-2 show the location of the SMN in an SGI UV 2000 system rack and in an SGI UV 1000 system rack. The SMN is located either in the top 1U slot between the individual rack units (IRUs) or at the top of the rack.

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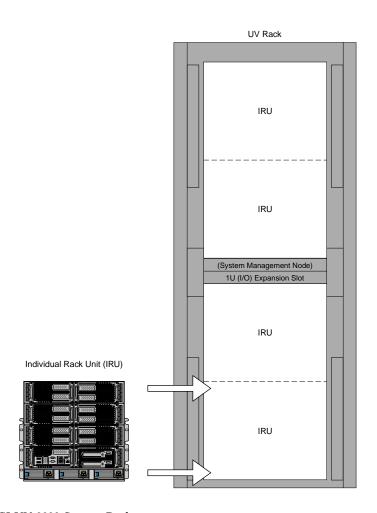


Figure 1-1 SGI UV 2000 System Rack

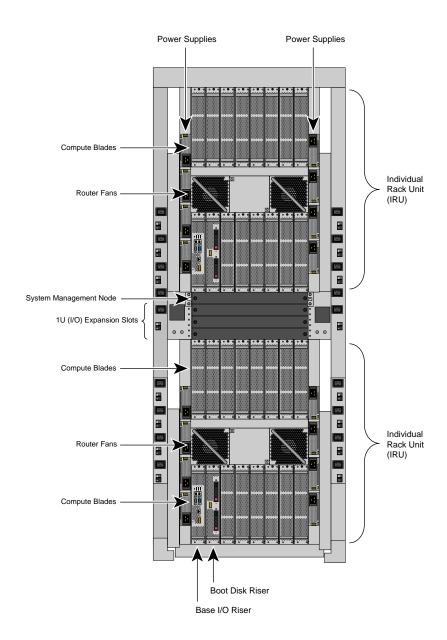


Figure 1-2 SGI UV 1000 System Rack

When you begin the installation, instructions direct you to insert the installation DVD into the SMN and press the power button. As Figure 1-3 on page 8 shows, the DVD drive is on the left of the SMN.

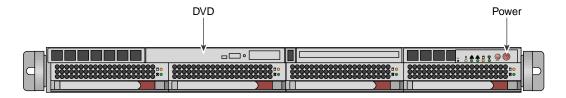


Figure 1-3 SMN Power Button and DVD Drive

- Attach a keyboard, monitor, and mouse to the SMN.The SMN includes USB ports for this purpose.
- 6. Proceed to the following:

"Preparing the Environment and Gathering BMC Information" on page 8

Preparing the Environment and Gathering BMC Information

The procedure in this topic explains how to prepare your local or remote console for an installation session. Some steps are labeled conditional, and completion of these steps depends on whether you are local, remote, or using a specific SGI UV system model.

Note: The connection procedures direct you to establish secure connections to various subsystems. For convenience, you can open each connection in its own window and leave that window open for the duration of the procedure. Some steps require you to go back to a previous subsystem and type additional commands.

Procedure 1-2 To prepare a local or remote console

1. Notify users that they need to log off.

The software installation process includes a step to reboot the system. If any users are logged in at this time, their sessions end abruptly.

2. (Conditional) From your remote computer, establish a secure network connection to the chassis management controller (CMC) on the system management node (SMN) of your SGI UV system.

Perform this step if you are at a remote console. You do not need to perform this step if you are at the local console.

For information about how to connect to the CMC, use one of the methods in the following manual:

SGI UV CMC Software User Guide, publication 007-5636-xxx

3. Open an ssh connection to the baseboard management controller (BMC).

On an SGI UV 2000 system, type the following command:

```
uv44-cmc CMC:r001i01c> ssh bmc0
```

On an SGI UV 1000 system, type the following command:

```
uv44-cmc CMC:r001i01c> ssh bmc0i
```

4. Retrieve the IP address of the BMC.

This step differs, depending on your platform, as follows:

 For SGI UV 2000 systems, type the following command to retrieve the IP address of eth2 on the BMC:

```
CMC:r001i01b00> ifconfig eth2
```

For example, the following output shows that 172.20.255.254 is the IP address of eth2:

 For SGI UV 1000 systems, type the following command to retrieve the IP address of eth1 on the BMC:

```
CMC:r001i01b00i> ifconfig eth1
```

For example, the following output shows that 172.20.255.254 is the IP address of eth1:

5. Note the IP address of eth2 on the BMC (for SGI UV 2000 systems) or eth1 on the BMC (for SGI UV 1000 systems).

Keep the IP address in a safe place. You need this IP address during the installation session and for future installation sessions.

- 6. Proceed to one of the following:
 - To set an administrative password for the local console, proceed to the following:

"(Optional) Setting or Changing an Administrative Password on the Console" on page 11

SGI does not require that you set an administrative password, but you can do so if you are logged into a direct-attached, local console. After you set this password, you can proceed with the software installation.

 To install the operating system and SGI Foundation Software on an SMN, proceed to the following:

"Preparing to Install the Operating System Software and the SMN Software from the Local Console" on page 13

 To install the operating system and SGI Foundation Software on an SGI UV server, proceed to the following:

"Enabling JViewer" on page 14

(Optional) Setting or Changing an Administrative Password on the Console

The procedure in this topic explains how to set, or change, an administrative password on the console attached to an SGI UV system. A password is not required.

To delete a console password, type the following command, which clears the EFI variables:

```
system-cmc CMC:r001i01c> power -c reset
```

If you delete the password with the power -c reset command, you need to go back through the setup screens to set it again.

Procedure 1-3 To set or change an administrative password on the console

1. (Conditional) Shut down the system.

Complete this step if the system is running at this time.

Type the following command:

```
# shutdown now
```

2. From the CMC, type the following command to reset the power:

```
system-cmc CMC:r001i01c>power reset
```

3. Wait for the reset to complete and type the following command to start the device manager:

uvcon

- 4. At the console's **Hit [Space] for Boot Menu** prompt, press the space bar.
- 5. On the boot manager screen, select **Device Manager**, and press Enter.

Figure 1-4 shows the boot manager screen.

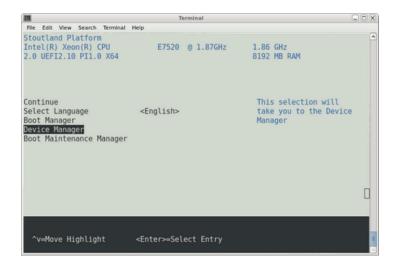


Figure 1-4 Boot Manager Screen

6. On the **Device Manager** screen, select **Security**, and press Enter.

The following list shows how to navigate the Device manager:

- F1 for scroll help.
- Shift-6(^), v, or arrow keys to move highlight.
- F9 to reset to defaults.
- Enter to select entry.
- F10 to save.
- Esc to exit without saving.
- Plus (+) and minus (-) keys to change setting values.
- To exit the console, press CTRL and the right bracket (]) together, and then press q. This sequence drops you to the CMC console.
- 7. On the **Security** screen, select the **Admin Password** option, and press Enter.
- 8. In the **Please type in your new password** field, type the new administrative password, and press Enter.

The minimum password length is 6 characters and the maximum password length is 30 characters. The password is case sensitive.

The next time you boot the system, the system will prompt you to type in the new password at the end of the boot sequence. The system issues this prompt before the Shell> prompt appears.

- 9. Press F10 to save the change.
- 10. Press Esc twice to return to the boot manager.
- 11. To return to the CMC console, press CTRL and the right bracket (]) together, and then press ${\tt q}.$
- 12. Proceed to one of the following:
 - To install the operating system and SGI Foundation Software on an SMN, proceed to the following:
 - "Preparing to Install the Operating System Software and the SMN Software from the Local Console" on page 13
 - To install the operating system and SGI Foundation Software on an SGI UV server, proceed to the following:

"Enabling JViewer" on page 14

Preparing to Install the Operating System Software and the SMN Software from the Local Console

Perform the procedure in this topic if you want to install software on the SMN.

Perform all SMN software installations from the local console that is attached directly to the SMN. You cannot install software on the SMN from a remote console.

The following procedure explains how to enable local console access.

Procedure 1-4 To enable access to the SMN from the local console

- 1. Make sure that the SGI UV system is configured properly.
- 2. Notify users that they need to log off.

The software installation process includes a step to reboot the system. If any users are logged in at this time, their sessions end.

- 3. Insert the operating system DVD into the DVD drive on the SMN.
- 4. Press CTRL-ALT-F2 to get to tty2.
- 5. Log in as root.
- 6. Type reboot.
- 7. Start the installer.

This step differs, depending on the operating system you want to install, as follows:

- To install a RHEL SMN, on the **Welcome to Red Hat Enterprise Linux 6.X** screen, position the cursor at **Install or upgrade an existing system**, and press Enter.
- To install a SLES SMN, on the SLES boot menu, select **Installation**.
- 8. Proceed to one of the following:
 - To install a RHEL operating system, the SGI Foundation Software, and the SMN software on the SMN, proceed to the following:
 - Chapter 2, "Installing a Red $\mathrm{Hat}^{^{\otimes}}$ Enterprise $\mathrm{Linux}^{^{\otimes}}$ (RHEL) Platform" on page 21
 - To install a SLES operating system, the SGI Foundation Software, and the SMN software on the SMN, proceed to the following:

Chapter 3, "Installing a SUSE Linux Enterprise Edition (SLES) Platform" on page 43

Enabling JViewer

Perform the procedures in this topic if you want to install software on the SGI UV server. The JViewer is the software interface you use to install the SGI UV system software.

The following topics explain how to enable the JViewer:

- "Starting JViewer" on page 15
- "Preparing the Installation Environment" on page 17

Starting JViewer

The following procedure explains how to start the JViewer.

Procedure 1-5 To start the JViewer

1. Start the Firefox browser.

This step differs depending on your installation environment, as follows:

- If the SGI UV system has an SMN and you want to perform the installation from a direct-attached, local console, click **Computer** > **Firefox**.
- If the SGI UV system has an SMN and you want to perform the installaiton from a remote console (your local computer), complete the following steps:
 - Establish a secure network connection to the SMN.

For example:

```
ssh -X sysco@uv-system-smn
```

When prompted, type the password sysco.

- From the SMN, type the following command to launch the Mozilla Firefox browser:

```
sysco@system-smn:~/hw>firefox -no-remote 2>/dev/null &
```

When started, the top of your menu bar displays the SMN you are on. For example, you might see ... on smn4 at the end of the display line at the top.

• If the SGI UV system does not have an SMN, start Firefox as you typically do at your site.

Make sure that Java is enabled on your local computer, and make sure the Base I/O BMC is attached to the local network.

2. In the Firefox address bar, type the IP address of eth1 (on an SGI UV 1000 system) or eth2 (on an SGI UV 2000 system) on the BMC.

For example:

```
http://172.20.255.254
```

Use the URL you retrieved and saved in a safe place when you performed the following procedure:

"Preparing the Environment and Gathering BMC Information" on page 8

3. On the BMC login screen, log into the system.

On an SGI UV 2000 system, type admin as the username, type admin as the password, and press Enter.

On an SGI UV 1000 system, type root as the username, type superuser as the password, and press Enter.

4. Launch the console.

This step differs depending on whether you want to install software on an SGI UV 2000 or an SGI UV 1000.

On an SGI UV 2000 system, on the Dashboard screen, click Launch.

On an SGI UV 1000 system, on the Altix UV screen, complete the following steps:

- Click Remote Control.
- Click Console Redirection.
- Click Launch Console.
- 5. (Conditional) Enable Firefox pop-ups.

Perform this step if Firefox displays a message about pop-ups.

Perform the following steps:

- Click Preferences.
- Click Allow pop-ups for ip_address.
- · Click Launch again.
- 6. On the **Opening jviewer.jnlp** ... screen, click **OK**.
- 7. On the **Warning Security:** The web site's certificate cannot be verified ... screen, complete the following steps:
 - Check Always trust content from this publisher.
 - Click Yes.
- 8. On the Warning Security: The application's digital signature cannot be verified ... screen, complete the following steps:

- · Check Always trust content from this publisher.
- · Click Run.
- 9. Proceed to the following:

"Preparing the Installation Environment" on page 17

Preparing the Installation Environment

The following procedure prepares the installation environment for the JViewer console.

Procedure 1-6 To prepare the installation environment

1. From your local computer, establish a secure connection to the SGI UV server.

For example:

```
ssh root@uv_server_name
```

2. Type the following command to shut down the system:

```
shutdown now
```

This command drops you into single-user mode. Wait for the root prompt (#) to appear.

3. Launch the virtual media wizard.

This step differs on SGI UV 2000 and SGI UV 1000 systems.

On SGI UV 2000 systems, complete the following steps:

- In the top-most JViewer menu bar, click Media > Virtual Media Wizard
- Insert the operating system DVD into the DVD drive on the SMN, or if you are at a remote console, insert the DVD into your local desktop.
- On the **Virtual Media** pop-up, under **CD/DVD Media 1**, complete the following steps:
 - Select /dev/sr0.
 - Click Connect to CD/DVD.
- On the Information pop-up, click OK.

• On the Virtual Media pop-up, click Close.

On SGI UV 1000 systems, complete the following steps:

- Insert the operating system DVD into the DVD drive on the SMN, or if you are at a remote console, insert the DVD into your local desktop.
- In the JViewer main menu, select **Device** > **Redirect CDROM**.
- On the CD-ROM Selection pop-up, select a drive.
 For example, select /dev/scd0.
- · Click OK.
- 4. From the SMN or the CMC, type the following command to boot the system as a single node:

```
power -s reset
```

5. Press the space bar after a message similar to the following appears in the JViewer window:

```
133,110,038,528 bytes of system memory tested OK Hit [Space] for Boot Menu...
```

- 6. Use the arrow keys to select **Boot Manager**, and press Enter.
- 7. On the **Boot Manager** screen, use the down-arrow key to select or highlight **EFI USB Device**, and press Enter.
- 8. (Conditional) Configure the accelerated boot process. (RHEL platform SGI UV servers only)

Perform this step only if you inserted a RHEL DVD into the DVD drive on an SGI UV server. Failure to accelerate the boot process can result in boots that last twenty minutes or more on RHEL platforms. You do not need to perform this step on an SMN.

Complete the following steps:

- On the **Press any key for the boot menu** ... screen, press Enter.
- On the GNU GRUB menu, verify that **Red Hat Enterprise Linux** ... is selected, and type e to edit the Red Hat Enterprise Linux commands before booting.
- On the GNU GRUB menu, verify that **kernel** / ... is selected, and type e to edit the kernel.

• At the end of the **grub edit** > line that contains the default boot options, type the following additional boot option: ipmi_si.trydefaults=0

Remember to type a space character at the end of the standard boot options, and remember to press Enter when you finish typing the additional boot option.

- On the GNU GRUB menu, type b to boot RHEL with the additional boot options.
- 9. Proceed to one of the following:
 - To install a RHEL operating system and the SGI Foundation Software on an SGI UV server, proceed to the following:
 - Chapter 2, "Installing a Red Hat[®] Enterprise Linux[®] (RHEL) Platform" on page 21
 - To install a SLES operating system and the SGI Foundation Software on an SGI UV server, proceed to the following:

Chapter 3, "Installing a SUSE Linux Enterprise Edition (SLES) Platform" on page 43

Installing a Red Hat[®] Enterprise Linux[®] (RHEL) Platform

This chapter includes the following topics:

- "About Installing the RHEL Operating System on an SGI UV System" on page 21
- "Installing the RHEL Operating System Software on an SGI UV Server or an SGI UV SMN" on page 22
- "Installing the SGI Foundation Software on a RHEL Platform SGI UV Server or a RHEL Platform SMN" on page 38
- "Installing the SMN Software on a RHEL Platform SMN" on page 41

About Installing the RHEL Operating System on an SGI UV System

This chapter explains how to install the following software on an $SGI^{\circ}UV^{\mathbb{T}}$ server and on an SGIUV system management node (SMN):

- The Red Hat[®] Enterprise Linux (RHEL) operating system. The operating system installation instructions are nearly identical for the SGI UV server and the SMN. The instructions note differences where necessary.
- The SGI Foundation Software. The SGI Foundation Software installation instructions are nearly identical for the SGI UV server and the SMN. The instructions note differences where necessary.
- · The SMN software. This is an SMN-specific package.

The following additional documentation might be useful to you during this installation process:

• The *Red Hat Enterprise Linux 6 Installation Guide*. This guide is available at the following location:

 $http://docs.redhat.com/docs/en-US/Red_Hat_Enterprise_Linux/6/pdf/Installation_Guide/Red_Hat_Enterprise_Linux-6-Installation_Guide-en-US.pdf$

- The SGI Foundation Software 2.*X* release notes file. After you log into Supportfolio, you can retrieve the release notes from the following location:
 - https://support.sgi.com/content_request/194480/index.html
- The SMN software release notes file. After you log into Supportfolio, you can retrieve the release notes from the following location:
 - https://support.sgi.com/content_request/738299/index.html

Installing the RHEL Operating System Software on an SGI UV Server or an SGI UV SMN

The following procedures explain how to install the RHEL operating system software:

- "Initiating the Installation" on page 22
- "Specifying the Network" on page 23
- "(Conditional) Specifying Disk Partitions for an SGI UV Server" on page 25
- "(Conditional) Specifying Disk Partitions for an SGI UV SMN" on page 30
- "Completing the RHEL Installation" on page 34
- "(Conditional) Configuring the Accelerated Boot Process Permanently" on page 37

Initiating the Installation

The following procedure explains how to connect to the system management node (SMN) on an SGI UV system.

Procedure 2-1 To begin the software installation

- 1. Make sure you gathered the information that you need for this installation.
 - For more information, see the following:
 - "Gathering Installation Materials and Information" on page 3
- 2. On the **Disc Found** screen, tab to one of the following and press Enter:
 - Skip. Select this option if you are using the standard DVD you received from SGI.

- **OK**. Select this option if you downloaded the software and created your own DVD. This option checks the integrity of the disk.
- 3. On the **Red Hat Enterprise Linux 6** splash screen, click **Next**.
- 4. On the **What language would you like to use during the installation process?** screen, select your language, and click **Next**.
- On the Select the appropriate keyboard for the system screen, select your keyboard, and click Next.
- 6. On the **What type of devices will your installation involve?** screen, select **Basic storage devices**, and click **Next**.
- 7. (Conditional) Select Fresh Installation, and select Next.

Perform this step if a screen with the following information appears: At least one existing installation has been detected on your system. What would you like to do?

- 8. On the **Please name this computer** screen, type the fully qualified domain name (FQDN) for the SMN, and click **Configure Network**.
- 9. Proceed to the following:

"Specifying the Network" on page 23

Specifying the Network

The following procedure explains how to specify the networking information.

Procedure 2-2 To specify the network

- 1. On the Network Connections popup, select System eth0, and click Edit.
- 2. On the **Editing System eth0** popup, complete the following steps:
 - Select Connect automatically to start the network card.
 - Select the IPv4 Settings tab.
- 3. Complete the **IPv4 Settings** tab.

This step is differs depending on whether you want to install the operating system on an SGI UV server or on an SMN.

Note: On an SGI UV server, use this step as a general guide. This step explains how to configure a static address on a network card. This is an example. If you want a different network configuration, for example if you want to configure DHCP, your actions will be different. You can use this procedure as a guide and consult the RHEL documentation for more specific steps.

On an SGI UV SMN, complete this step as documented.

On an SGI UV server, complete the following steps:

- In the Method: field, pull down Manual.
- In the Addresses pane, click Add, and complete the following steps:
 - Type the IP address for the SMN.
 - Type the netmask for the SMN.
 - Type the IP address for the default gateway.
- In the **DNS servers**: field, type the IP address of one or more DNS servers. If you specify more than one, use a comma to separate each IP address.
- In the **Search domains:** field, type one or more search domains. If you specify more than one, use a comma to separate each domain.
- Click Apply.
- · Click Close.

On an SMN, complete the following steps:

- Make sure that **Automatic** (**DHCP**) is selected.
- Click Apply
- On the **Network Connections** pop-up, click **Close**.
- 4. On the Please name this computer screen, click Next.
- 5. On the **Please select the nearest city in your time zone** screen, select a city, and click **Next**.
- 6. On the **The root account is used for administering the system** screen, complete the following steps:

- In the Root Password field, type the password you want to use for the root account.
- In the **Confirm** field, type the root password again.
- · Click Next.
- 7. On the Which type of installation would you like? screen, select Create Custom Layout, and click Next.
- 8. Proceed to one of the following:
 - To configure disk partitions on an SGI UV server, complete the following procedure:
 - "(Conditional) Specifying Disk Partitions for an SGI UV Server" on page 25
 - To configure disk partitions on an SMN, complete the following procedure:
 "(Conditional) Specifying Disk Partitions for an SGI UV SMN" on page 30

(Conditional) Specifying Disk Partitions for an SGI UV Server

Perform the procedure in this topic if you want to configure the partitions for am SGI UV server.

This topic includes information about disk partitioning for SGI UV servers. The procedure in this topic explains how to configure the disk partitions and monitor a reboot.

For the SGI UV server, your goal is to configure the disks according to Table 2-1 on page 25

Table 2-1 Disk Partitions for an SGI UV Server

Size	Mount Point	File System
500 MB	/boot/efi	EFI System Partition
250 GB (256,000 MB)	/	ext4
8 GB (8,192 MB)	swap	swap
rest of disk	/data1	ext4

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The following procedure explains how to specify the disk partitions.

Procedure 2-3 To specify disk partitions

- 1. On the main disk partitioning screen, complete the following steps to clean the disk:
 - Select a disk device.
 - Click Delete.
 - On the Confirm Delete pop-up, click Delete.
 - Proceed to the next step after you have deleted all existing partitions.
- 2. On the main disk partitioning screen, click Create.

Figure 2-1 on page 27 shows an example of the main screen before you create any disk partitions.

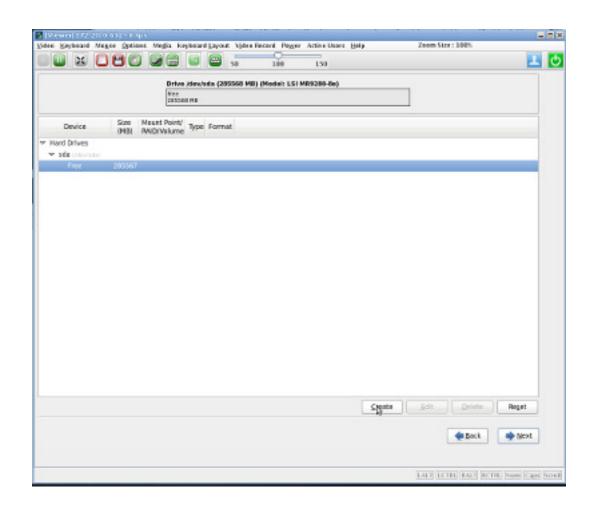


Figure 2-1 Initial RHEL Disk Partitioning Screen

- 3. On the **Create Storage** pop-up, complete the following steps:
 - Click Standard Partition.
 - Click Create.
- 4. On the **Add Partitions** pop-up, complete the following steps:
 - In the Mount Point field, select /boot/efi from the pull-down menu.

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- Verify that **EFI System Partition** is selected.
- In the Size field, type 500, which is 500 MB.
- Verify that Fixed size is selected.
- · Verify that Encrypt is clear.

Note: Do not check **Encrypt**.

- · Click OK.
- 5. On the main disk partitioning screen, click Create.
- 6. On the Create Storage pop-up, click Create.
- 7. On the **Add Partition** pop-up, complete the following steps:
 - In the **Mount Point** field, select / from the pull-down menu.
 - In the File System Type field, verify that ext4 appears.
 - In the **Size** field, type **256000**, which is 250 GB.
 - Verify that Fixed size is selected.
 - Verify that Encrypt is clear.

Note: Do not check Encrypt.

- · Click OK.
- 8. On the main disk partitioning screen, click Create.
- 9. On the Create Storage pop-up, click Create.
- 10. On the **Add Partition** pop-up, complete the following steps:
 - In the File System Type field, select swap from the pull-down menu.
 - In the Size field, type 8192, which is 8 GB.
 - Verify that **Fixed size** is selected.
 - · Verify that Encrypt is clear.

Note: Do not check Encrypt.

- · Click OK.
- 11. On the main disk partitioning screen, click Create.
- 12. On the Create Storage pop-up, click Create.
- 13. On the **Add Partition** pop-up, complete the following steps:
 - In the Mount Point field, type /data1.
 - In the File System Type field, select ext4 from the pull-down menu.
 - In the Additional Size Options box, select Fill to maximum allowable size.
 - · Verify that Encrypt is clear.

Note: Do not check **Encrypt**.

- · Click OK.
- 14. On the main disk partitioning screen, click Next.
- 15. On the Writing Storage Configuration to disk pop-up, select Write changes to disk.

Wait for the disk formatting to complete.

- 16. On the boot loader specifications page, complete the following steps:
 - Verify that the **Use boot loader password** box is clear.
 - In the Boot loader operating system list box, verify that Red Hat Enterprise Linux /dev/sda2 appears.
 - · Click Next.
- 17. Proceed to the following:

"Completing the RHEL Installation" on page 34

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(Conditional) Specifying Disk Partitions for an SGI UV SMN

Perform the procedure in this topic if you want to configure the partitions for am SGI UV server.

This topic includes information about disk partitioning for SGI UV system SMNs. The procedure in this topic explains how to configure the disk partitions and monitor a reboot.

For the SMN, your goal is to configure the disks according to Table 2-2 on page 30. Note that the system automatically creates an **Extended** partition.

Table 2-2 Disk Partitions for an SGI UV SMN

Size	Mount Point	File System
200 MB	/boot	ext4
250 GB (256,000 MB)	/	ext4
8 GB (8,192 MB)	swap	swap
rest of disk	/data1	ext4

The following procedure explains how to specify the disk partitions.

Procedure 2-4 To specify disk partitions

- 1. On the main disk partitioning screen, complete the following steps to clean the disk:
 - · Select a disk device.
 - Click Delete.
 - On the **Confirm Delete** pop-up, click **Delete**.
 - Proceed to the next step after you have deleted all existing partitions.
- 2. On the main disk partitioning screen, click Create.

Figure 2-2 on page 31 shows an example of the main screen before you create any disk partitions.

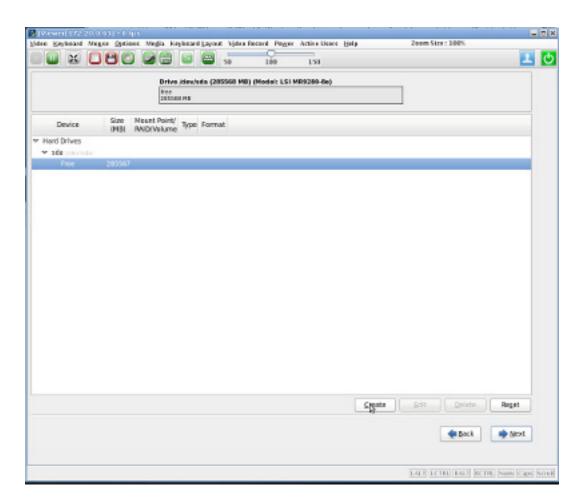


Figure 2-2 Initial RHEL Disk Partitioning Screen

- 3. On the **Create Storage** pop-up, complete the following steps:
 - Click Standard Partition.
 - Click Create.
- 4. On the **Add Partitions** pop-up, complete the following steps:
 - In the **Mount Point** field, select /boot from the pull-down menu.

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- In the **File System Type** field, select **ext4** from the pull-down menu.
- Verify that the default size is 200 MB.
- Verify that Fixed size is selected.
- Verify that **Encrypt** is clear.

Note: Do not check **Encrypt**.

- Click OK.
- 5. On the main disk partitioning screen, click Create.
- 6. On the Create Storage pop-up, click Create.
- 7. On the **Add Partition** pop-up, complete the following steps:
 - In the **Mount Point** field, select / from the pull-down menu.
 - In the File System Type field, verify that ext4 appears.
 - In the Size field, type 256000, which is 250 GB.
 - Verify that Fixed size is selected.
 - Verify that Encrypt is clear.

Note: Do not check Encrypt.

- · Click OK.
- 8. On the main disk partitioning screen, click Create.
- 9. On the Create Storage pop-up, click Create.
- 10. On the **Add Partition** pop-up, complete the following steps:
 - In the File System Type field, select swap from the pull-down menu.
 - In the Size field, type 8192, which is 8 GB.
 - Verify that **Fixed size** is selected.
 - Verify that **Encrypt** is clear.

Note: Do not check Encrypt.

- · Click OK.
- 11. On the main disk partitioning screen, click Create.
- 12. On the Create Storage pop-up, click Create.
- 13. On the **Add Partition** pop-up, complete the following steps:
 - In the Mount Point field, type /data1.
 - In the File System Type field, select ext4 from the pull-down menu.
 - In the Additional Size Options box, select Fill to maximum allowable size.
 - · Verify that Encrypt is clear.

Note: Do not check **Encrypt**.

- · Click OK.
- 14. On the main disk partitioning screen, click Next.
- 15. On the Writing Storage Configuration to disk pop-up, select Write changes to disk.

Wait for the disk formatting to complete.

- 16. On the boot loader specifications page, complete the following steps:
 - Verify that the **Use boot loader password** box is clear.
 - In the **Boot loader operating system list** box, verify that **Red Hat Enterprise Linux** ... appears.
 - · Click Next.
- 17. Proceed to the following:

"Completing the RHEL Installation" on page 34

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Completing the RHEL Installation

The following procedure explains how to complete the installation.

Procedure 2-5 To complete the installation

- 1. On the **The default installation of Red Hat Enterprise Linux is a basic server install ...** page, complete the following steps:
 - Select **Desktop**.
 - · Select Next.

Wait for the operating system installation to complete.

- 2. On the Congratulations, your Red Hat Enterprise Linux installation is complete page, click Reboot.
- 3. (Conditional) Accelerate the boot process.

Perform this step if you are installing RHEL on an SGI UV server. You do not need to complete this step if you are installing RHEL on an SMN.

Complete the following steps:

- On the Press any key for the boot menu ... screen, press Enter.
- On the GNU GRUB menu, verify that **Red Hat Enterprise Linux** ... is selected, and type e to edit the Red Hat Enterprise Linux commands before booting.
- On the GNU GRUB menu, verify that kernel / ... is selected, and type e to
 edit the kernel.
- At the end of the grub edit > line that contains the default boot options, type
 the following additional boot option: ipmi_si.trydefaults=0
 - Remember to type a space character at the end of the standard boot options, and remember to press Enter when you finish typing the additional boot option.
- On the GNU GRUB menu, type b to boot RHEL with the additional boot options.
- 4. On the **Welcome** page, click **Forward**.
- 5. On the **License Information** page, complete the following steps:
 - · Click Yes, I agree to the License Agreement.

- Click Forward.
- 6. On the **Set Up Software Updates** page, decide whether to register now or whether to postpone registration.

If your SGI UV system is connected to the network correctly, you can register now. The following information explains how to proceed:

Situation Action

If the screen contains a message that begins with **This assistant will guide you** through the process of registering your system with Red Hat to receive software updates ...

The SGI UV system is connected correctly to the network. Complete these steps:

- Select Yes, I'd like to register now, and click Forward.
- On the Choose Service page, select Red Hat Subscription Management, and click Forward.
- On the **Subscription Management Registration** page, click **Forward**.
- On the second Subscription Management Registration page, complete the fields appropriately for your site, and click Forward.
- On the third Subscription Management Registration page, click Forward.

If the screen includes a warning symbol and a message that begins with **The network connection on your system is not active** ...

The SGI UV system is not connected correctly to the network. Complete the following steps:

- Click Forward.
- Continue on to the next step in this procedure.

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You can restart the installer, correct your network network configuration, and connect to RHN later.

- 7. On the Create User page, complete the following steps to create an end-user account:
 - In the **Username** field, type the username.
 - In the Full Name field, type the user's full name.
 - In the **Password** field, type the user's password. Passwords must be at least eight characters long, contain at least one digit, and contain a mixture of uppercase and lowercase letters.
 - In the Confirm Password field, type the user's password again.
 - Click Forward.
- 8. On the **Date and Time** screen, configure system clock settings that you site requires and click **Forward**.
- 9. On the **Kdump** page, specify the following:
 - For the SGI UV server, specify 1280 MB, and click Finish.
 - For the SMN, specify 256 MB, and click Finish.
- 10. On the Changing Kdump ... pop-up, click Yes.
- 11. On the **The system must reboot** ... pop-up, click **OK** to confirm the reboot.
- 12. (Conditional) Accelerate the boot process.

Complete this step if you are installing RHEL on an SGI UV server. You do not need to complete this step if you are installing RHEL on an SMN.

Complete the following steps:

- On the **Press any key for the boot menu** ... screen, press Enter.
- On the GNU GRUB menu, verify that **Red Hat Enterprise Linux** ... is selected, and type e to edit the Red Hat Enterprise Linux commands before booting.
- On the GNU GRUB menu, verify that **kernel** / ... is selected, and type e to edit the kernel.
- At the end of the **grub edit** > line that contains the default boot options, type the following additional boot option: ipmi_si.trydefaults=0

Remember to type a space character at the end of the standard boot options, and remember to press Enter when you finish typing the additional boot option.

- On the GNU GRUB menu, type b to boot RHEL with the additional boot options.
- 13. Proceed to one of the following:
 - If you installed RHEL on an SGI UV server, proceed to the following:
 "(Conditional) Configuring the Accelerated Boot Process Permanently" on page 37
 - If you installed RHEL on an SGI SMN, proceed to the following:
 "Installing the SGI Foundation Software on a RHEL Platform SGI UV Server or

(Conditional) Configuring the Accelerated Boot Process Permanently

a RHEL Platform SMN" on page 38

Perform the procedure in this topic if you installed RHEL on an SGI UV server.

The following procedure configures an accelerated boot process that persists across all subsequent boots.

Procedure 2-6 To configure accelerated booting permanently

- 1. Open a RHEL operating system window to the SGI UV server and log in as the root user.
- 2. Use a text editor to open file /boot/efi/EFI/redhat/grub.conf.
- 3. Search for the following string:

```
kernel /boot/vmlinuz
```

4. Add the following to the end of the kernel /boot/vmlinuz ... line:

```
ipmi_si.trydefaults=0
```

Remember to type a space character at the end of the standard boot options and before the new boot option.

5. Save and close the file.

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When complete, the file should contain lines similar to the following:

```
title Red Hat Enterprise Linux (2.6.32-358.el6.x86_64)
    root (hd0,1)
    kernel /boot/vmlinuz-2.6.32-358.el6.x86_64 ro
        root=UUID=46e6eaal-7c8d-478c-a709-738fbf29ec48 rd_NO_LUKS rd_NO_LVM
        LANG=en_US.UTF-8 rd_NO_MD SYSFONT=latarcyrheb-sun16 crashkernel=192M
        KEYBOARDTYPE=pc KEYTABLE=us rd_NO_DM rhgb quiet ipmi_si.trydefaults=0
```

6. Proceed to the following:

"Installing the SGI Foundation Software on a RHEL Platform SGI UV Server or a RHEL Platform SMN" on page 38

Installing the SGI Foundation Software on a RHEL Platform SGI UV Server or a RHEL Platform SMN

The following procedure explains how to install the SGI Foundation Software on a RHEL SGI UV server or SMN. You can use the same procedure on both the SGI UV server and an SGI UV SMN.

Procedure 2-7 To install the SGI Foundation Software

1. Log into the SGI UV server or the SGI UV SMN as the root user.

The SGI Foundation Software installation procedure is the same for both the SGI UV server and the SGI UV SMN.

- 2. On the login page, complete the following steps:
 - · Select Other.
 - In the Username field, type root.
 - In the **Password** field, type the root user's password.
 - · Click Log In.
- On the You are currently trying to run as the root super user ... pop-up, click Close.
- 4. Access the installation software.

Complete this step in one of the following ways:

- If a DVD drive is available, insert the *SGI Foundation Software X.X* CD into the DVD drive.
- On an SGI UV 2000 without a DVD drive, complete the following steps:
 - In the top-most JViewer menu bar, click **Media** > **Virtual Media Wizard**
 - Insert the operating system DVD into the DVD drive on the SMN, or if you are at a remote console, insert the DVD into your local desktop.
 - On the Virtual Media pop-up, under CD/DVD Media 1, complete the following steps:
 - Select /dev/sr0.
 - Click Connect to CD/DVD.
 - On the **Information** pop-up, click **OK**.
 - On the Virtual Media pop-up, click Close.
- On an SGI UV 1000 without a DVD drive, complete the following steps:
 - Insert the operating system DVD into the DVD drive on the SMN, or if you are at a remote console, insert the DVD into your local desktop.
 - In the JViewer main menu, select Device > Redirect CDROM.
 - On the CD-ROM Selection pop-up, select a drive.
 For example, select /dev/scd0.
 - Click OK.
- 5. Click **Applications** > **System Tools** > **Terminal** to open a terminal window.
- 6. Type the following command to create an installation directory for the files from the CD:
 - # mkdir -p /opt/sgi/Factory-Install/sgi-foundation-2.7/
- 7. Type the following command to create a temporary mount directory:
 - # mkdir /var/sfs2.7

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8. Type the following command to mount the CD in read-only mode (-r), using a loop device:

```
# mount -t iso9660 -ro loop /dev/cdrom /var/sfs2.7
```

9. Type the following command to copy the files from the temporary mount directory to the installation directory:

```
# rsync -avHx /var/sfs2.7/ /opt/sgi/Factory-Install/sgi-foundation-2.7/
```

10. Type the following command to unmount the CD from the temporary directory:

```
# umount /var/sfs2.7
```

11. Type the following command to remove the temporary mount directory:

```
# rmdir /var/sfs2.7
```

12. Use a text editor to create file

/etc/yum.repos.d/foundation2.7-local.repo with the following
contents:

13. Type the following command to retrieve the list of software that you can install:

```
# yum grouplist | grep SGI
```

14. Type the following command to install the SGI Foundation Software group:

```
# yum groupinstall "SGI Foundation Software"
```

15. Type the following command to reboot the system:

```
# reboot -f
```

- 16. Proceed as follows:
 - If you wanted to install software only on the SGI UV server, you are finished at this time.

If you want to install software on the SGI UV SMN, proceed to the following:
 "Installing the SMN Software on a RHEL Platform SMN" on page 41

Installing the SMN Software on a RHEL Platform SMN

The SMN requires its own specific software, and you need to install the SMN software on the SMN after you install the SGI Foundation Software.

The following procedure explains how to install the SMN software on a RHEL SMN.

Procedure 2-8 To install the SMN software on a RHEL SMN

- 1. Insert the CD labeled *SGI System Management Node Software X.X* into the DVD drive on the SMN.
- 2. Type the following command to create an installation directory for the files from the CD:

```
# mkdir -p /opt/sgi/Factory-Install/sgi-smn-1.6/
```

3. Type the following command to create a temporary mount directory:

```
# mkdir /var/smn1.6
```

4. Type the following command to mount the CD in read-only mode (-r), using a loop device:

```
# mount -ro loop /dev/cdrom /var/smn1.6
```

5. Type the following command to copy the files from the temporary mount directory to the installation directory:

```
# rsync -avHx /var/smn1.6/ /opt/sgi/Factory-Install/sgi-smn-1.6/
```

6. Type the following command to unmount the CD from the temporary directory:

```
# umount /var/smn1.6
```

7. Type the following command to remove the temporary mount directory:

```
# rmdir /var/smn1.6
```

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8. Use a text editor to create file /etc/yum.repos.d/smn1.6-local.repo with the following contents:

- 9. Type the following command to retrieve the list of software that you can install:
 - # yum grouplist | grep SGI
- 10. Type the following command to install the SGI SMN software group:
- # yum --enablerepo=rhel-6-server-optional-rpms groupinstall "SGI Management Node Software"
 - 11. Type the following command to reboot the system:
 - # reboot -f
 - 12. Log into the system as the root user.
 - 13. Type the following command to configure the SMN software:
 - # smnconfig -Aa -3
 - 14. Type the following commands to reboot:
 - # reboot -f

Installing a SUSE Linux Enterprise Edition (SLES) Platform

This chapter includes the following topics:

- "About Installing the SLES Operating System on an SGI UV System" on page 43
- "Installing the SLES Operating System Software on an SGI UV Server or an SGI UV SMN" on page 44
- "Installing the SGI Foundation Software on a SLES Platform SGI UV Server or a SLES Platform SMN" on page 58
- "Installing the SMN Software on a SLES Platform SMN" on page 59

About Installing the SLES Operating System on an SGI UV System

This chapter explains how to install the following software on an SGI UV server and on an SGI UV system management node (SMN):

- The SLES operating system. The operating system installation instructions are nearly identical for the SGI UV server and the SMN. The instructions note differences where necessary.
- The SGI Foundation Software. The SGI Foundation Software installation instructions are nearly identical for the SGI UV server and the SMN. The instructions note differences where necessary.
- The SMN software. This is an SMN-specific package.

The following additional documentation might be useful to you during this installation process:

- The SLES 11 Installation Quick Start and the SLES 11 Deployment Guide. These guides are available at the following location:
 - https://www.suse.com/documentation/sles11/
- The SGI Foundation Software 2.*X* release notes file. After you log into Supportfolio, you can retrieve the release notes from the following location:

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https://support.sgi.com/content_request/194480/index.html

• The SMN software release notes file. After you log into Supportfolio, you can retrieve the release notes from the following location:

https://support.sgi.com/content_request/738299/index.html

Installing the SLES Operating System Software on an SGI UV Server or an SGI UV SMN

The following procedures explain how to install the SLES operating system software:

- "Initiating the Installation" on page 44
- "(Conditional) Specifying Disk Partitions for an SGI UV Server" on page 46
- "(Conditional) Specifying Disk Partitions for an SGI UV SMN" on page 49
- "Specifying the Network and Miscellaneous Settings" on page 54
- "Completing the SLES Installation" on page 57

Note: The mouse unit's behavior can be unpredictable during the following procedures:

- "Initiating the Installation" on page 44
- "(Conditional) Specifying Disk Partitions for an SGI UV Server" on page 46
- "(Conditional) Specifying Disk Partitions for an SGI UV SMN" on page 49

After the first boot, the mouse unit behaves as expected.

Initiating the Installation

The following procedure explains how to begin the installation.

Procedure 3-1 To begin the installation

1. Make sure you prepared for the installation.

For more information, see the following:

"Gathering Installation Materials and Information" on page 3

- 2. On the **Welcome** page, complete the following steps:
 - Select your language.
 - · Select your keyboard layout.
 - Click I agree to the license terms.
 - Click Next.
- 3. On the **Media Check** page, complete the following steps:
 - (Conditional) Select Start Check.

Select this option if you want to troubleshoot a failed installation. If a previous installation failed, you can check this option, install the operating system software again, and observe the messages that the installer issues. It is possible that media problems prevented your previous installation from completing correctly.

Click Next.

If this is your first installation session, you can click Next safely.

- 4. On the **System Probing** ... screen, monitor the progress.
- On the Installation Mode screen, accept the default of New Installation, and click Next.
- 6. On the **Clock and Time Zone** screen, complete the following steps:
 - · Select your region.
 - Select your time zone.
 - Check the box next to Hardware Clock Set To UTC.
 - · Click Next.
- 7. On the **Server Base Scenario** screen, accept the default of **Physical Machine**, and click **Next**.
- 8. Proceed to one of the following:
 - To configure disk partitions on an SGI UV server, complete the following procedure:

"(Conditional) Specifying Disk Partitions for an SGI UV Server" on page 46

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To configure disk partitions on an SMN, complete the following procedure:
 "(Conditional) Specifying Disk Partitions for an SGI UV SMN" on page 49

(Conditional) Specifying Disk Partitions for an SGI UV Server

Perform the procedure in this topic if you want to configure the partitions for an SGI UV server.

This topic includes information about disk partitioning for SGI UV system servers. The procedure in this topic explains how to configure the disk partitions and monitor a reboot.

For the SGI UV server, your goal is to configure the disks according to Table 3-1.

Table 3-1 Disk Partitions for an SGI UV Server

Size	Mount Point	File System
500 MB	/boot/efi	FAT
250 GB	/	ext3
8 GB	swap	Swap
rest of disk	/data1	ext3

The following procedure explains how to specify the disk partitions.

Procedure 3-2 To configure the disk partitions

- 1. On the Installation Settings screen, click the Partitioning link.
- 2. On the **Preparing Hard Disk** screen, click **Custom Partitioning for Experts**, and click **Next**.
- 3. On the **Expert Partitioner** screen, complete the following steps to clean the disk:
 - Expand Hard Disks.
 - Expand the hard disk you want to use.
 - For example, expand sda.
 - Select the first disk partition.

For example, select sda1

- Click Delete
- On the YaST2 pop-up, select Yes.
- Select the other partitions, click **Delete** ..., and confirm.
- Proceed to the next step after you have deleted all existing partitions.
- 4. On the **Expert Partitioner** screen, complete the following steps:
 - Expand Hard Disks.
 - · Select the hard disks you want to use.
 - · Click Add.
- 5. Complete the following steps on the **Add Partition on /dev**/*disk* screen to configure the boot partition:
 - Under New Partition Size, click Custom Size.
 - Type 500 MB in the **Size** field.
 - · Click Next.
 - Under Formatting Options, select Format partition.
 - Under File system, use the pull-down menu to select FAT.
 - Under Mounting Options, select Mount Partition.
 - Under **Mount point**, use the pull-down menu to select /boot/efi.
 - · Select Finish.
- 6. On the Expert Partitioner screen, click Add.
- 7. On the Add Partition on /dev/disk screen, select Primary Partition, and click Next.
- 8. Complete the following steps on the **Add Partition on /dev**/*disk* screen to configure the root partition:
 - Under New Partition Size, click Custom Size.
 - Type 250 GB in the **Size** field.
 - · Click Next.

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- Under Formatting Options, select Format partition.
- Under **File system**, use the pull-down menu to select ext3.
- Under Mounting Options, select Mount Partition.
- Under **Mount point**, use the pull-down menu to select /.
- · Select Finish.
- 9. On the Expert Partitioner screen, click Add.
- 10. On the Add Partition on /dev/disk screen, select Primary Partition, and click Next.
- 11. Complete the following steps on **Add Partition on /dev**/*disk* screen to configure the swap partition:
 - Under New Partition Size, click Custom Size.
 - Specify 8 GB in the Size field.
 - Click Next.
 - Under Formatting Options, select Format partition.
 - Under **File system**, use the pull-down menu to select Swap.
 - Under Mounting Options, select Mount Partition.
 - Under Mount point, use the pull-down menu to select swap.
 - · Select Finish.
- 12. On the **Expert Partitioner** screen, click **Add**.
- 13. On the Add Partition on /dev/disk screen, select Primary Partition, and click Next.
- 14. Complete the following steps on the **Add Partition on /dev**/*disk* screen to configure the data partition:
 - Under New Partition Size, click Maximum Size.
 - Click Next.
 - Under Formatting Options, select Format partition.
 - Under **File system**, use the pull-down menu to select ext3.
 - Under Mounting Options, select Mount Partition.

- Under Mount point, type /data1.
- Select Finish.
- 15. On the **Expert Partitioner** screen, examine the disk partitions in the **Partitions** tab.

If the partitions match those in Table 3-1 on page 46, click Accept.

If the partitions are incorrect, correct the partition specifications.

- 16. On the **Installation Settings** screen, click **Install**.
- 17. On the Confirm Package License: agfa-fonts pop-up, click I Agree.
- 18. On the Confirm Installation pop-up, click Install.
- 19. Monitor the installation and be prepared to remove the installation software before the boot.

The installation itself can take several minutes. At the end of the installation, the system boots. The installation software notifies you of this boot. If you can, remove the installation DVD before the system boots, as follows:

- If you are performing the installation at the console, remove the DVD.
- If you are performing the installation remotely, complete the following steps:
 - Click Media > Virtual Media Wizard.
 - Under CD/DVD Media1, select Disconnect CD/DVD.
 - Click Close.

If you fail to remove the installation software before the final boot, remove it after the boot, and then press CTRL—ALT—DEL to proceed with the installation.

20. Proceed to the following:

"Specifying the Network and Miscellaneous Settings" on page 54

(Conditional) Specifying Disk Partitions for an SGI UV SMN

Perform the procedure in this topic if you want to configure the partitions for an SMN.

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This topic includes information about disk partitioning for SGI UV system SMNs. The procedure in this topic explains how to configure the disk partitions and monitor a reboot.

For the SMN, your goal is to configure the disks according to Table 3-2 on page 50.

Table 3-2 Disk Partitions for an SGI UV SMN

Size	Mount Point	File System
200 MB	/boot	ext3
250 GB (256,000 MB)	/	ext3
8192 MB	swap	swap
rest of disk	/data1	ext3

The following procedure explains how to specify the disk partitions.

Procedure 3-3 To configure the disk partitions

- 1. On the **Installation Settings** screen, click the **Partitioning** link.
- On the Preparing Hard Disk screen, click Custom Partitioning for Experts, and click Next.
- 3. On the **Expert Partitioner** screen, complete the following steps to clean the disk:
 - Expand Hard Disks.
 - Expand the hard disk you want to use.
 - For example, expand sda.
 - Select the first disk partition.
 - For example, select sda1
 - Click Delete
 - On the YaST2 pop-up, select Yes.
 - Select the other partitions, click **Delete** ..., and confirm.
 - Proceed to the next step after you have deleted all existing partitions.

- 4. On the **Expert Partitioner** screen, complete the following steps:
 - Expand Hard Disks.
 - Select the hard disks you want to use.
 - Click Add.
- 5. Complete the following steps on the **Add Partition on /dev**/*disk* screen to configure the boot partition:
 - Under New Partition Type, select Primary Partition, and click Next.
 - Under New Partition Size, click Custom Size.
 - Specify 200 MB in the Size field.
 - · Click Next.
 - Under Formatting Options, select Format partition.
 - Under File system, use the pull-down menu to select Ext3.
 - Under Mounting Options, select Mount Partition.
 - Under **Mount point**, use the pull-down menu to select /boot.
 - Select Finish.
- 6. On the Expert Partitioner screen, click Add.
- 7. On the Add Partition on /dev/disk screen, select Primary Partition, and click Next.
- 8. Complete the following steps on the **Add Partition on /dev**/*disk* screen to configure the root partition:
 - Under New Partition Size, click Custom Size.
 - Specify 250 GB in the Size field.
 - · Click Next.
 - Under Formatting Options, select Format partition.
 - Under **File system**, use the pull-down menu to select Ext3.
 - Under Mounting Options, select Mount Partition.
 - Under **Mount point**, use the pull-down menu to select /.

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- Select Finish.
- 9. On the **Expert Partitioner** screen, click **Add**.
- 10. On the Add Partition on /dev/disk screen, select Primary Partition, and click Next.
- 11. Complete the following steps on **Add Partition on** /**dev**/*disk* screen to configure the swap partition:
 - Under New Partition Size, click Custom Size.
 - Specify 8 GB in the Size field.
 - Click Next.
 - Under Formatting Options, select Format partition.
 - Under File system, use the pull-down menu to select Swap.
 - Under Mounting Options, select Mount Partition.
 - Under Mount point, use the pull-down menu to select swap.
 - Select Finish.
- 12. On the **Expert Partitioner** screen, click **Add**.
- 13. On the Add Partition on /dev/disk screen, select Primary Partition, and click Next.
- 14. Complete the following steps on **Add Partition on** /**dev**/*disk* screen to configure the data partition:
 - Under New Partition Size, click Maximum Size.
 - Click Next.
 - Under Formatting Options, select Format partition.
 - Under File system, use the pull-down menu to select ext3.
 - Under Mounting Options, select Mount Partition.
 - Under Mount point, type /data1.
 - Select Finish.
- 15. On the **Expert Partitioner** screen, examine the disk partitions in the **Partitions** tab. If the partitions match those in Table 3-1 on page 46, click **Accept**.

If the partitions are incorrect, correct the partition specifications.

- 16. On the **Installation Settings** screen, complete the following steps:
 - Click the **Expert** tab near the top of the page.
 - Scroll down to **Kdump**, and click the **Kdump** link.
 - In the **Kdump Memory** box, type one of the following values:
 - For the SGI UV server, type 512.
 - For the SMN, type 256.
 - · Click OK.
- 17. On the **Installation Settings** screen, click **Install**.
- 18. On the Confirm Package License: agfa-fonts pop-up, click I Agree.
- 19. On the Confirm Installation pop-up, click Install.
- 20. Monitor the installation and be prepared to remove the installation software before the boot.

The installation itself can take several minutes. At the end of the installation, the system boots. The installation software notifies you of this boot. If you can, remove the installation DVD before the system boots, as follows:

- If you are performing the installation at the console, remove the DVD.
- If you are performing the installation remotely, complete the following steps:
 - Click Media > Virtual Media Wizard.
 - Under CD/DVD Media1, select Disconnect CD/DVD.
 - Click Close.

If you fail to remove the installation software before the final boot, remove it after the boot, and then press CTRL—ALT—DEL to proceed with the installation.

21. Proceed to the following:

"Specifying the Network and Miscellaneous Settings" on page 54

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Specifying the Network and Miscellaneous Settings

The following procedure explains how to specify the hostname, networking information, and other miscellaneous settings.

Procedure 3-4 To specify the hostname, networking, and miscellaneous settings

- 1. On the **Password for the System Administrator "root"** screen, complete the following steps:
 - In the **Password for root User** field, type the root user's password.
 - In the **Confirm password** field, retype the root user's password.
 - Type a few characters in the **Test Keyboard Layout** field. For example, if you specified a language that includes non-English characters and you include these characters in passwords, type these characters into this field. This is a plain text field, and you can assure yourself that the operating system recognizes these characters when you type them.
 - Click Next.
- 2. On the **Hostname and Domain Name** screen, complete the following steps:
 - Type the hostname.
 - Type the domain name.
 - Verify that Change Hostname via DHCP is set correctly.

To assign a static IP address, clear the checkbox to the left of the **Change Hostname via DHCP** label. A later step saves the hostname to the /etc/hosts file. Consult your network administrator if you have questions regarding the use of DHCP.

Note: This procedure explains how to configure a static address on a network card. This is an example. If you want to a different network configuration, for example if you want to configure DHCP, ensure that the checkbox in this step is checked before you click **Next**. You can use this procedure as a guide and consult the SLES documentation for more specific steps.

- · Select Next.
- 3. On the **Network Configuration** screen, proceed as follows:

- For an SGI UV server configuration, complete the following steps:
 - Click the Network Interfaces link.
 - Proceed to the next step in this procedure, which is as follows:
 Procedure 3-4, step 4 on page 55
- For an SGI UV SMN, complete the following steps:
 - Click Next.
 - Proceed to a later step in this procedure, which is as follows:
 Procedure 3-4, step 8 on page 56
- On the Network Settings screen, highlight one of the network cards, and click Edit.
- 5. On the **Network Card Setup** screen, take one of the following actions:
 - Select the type of dynamic addressing that you want, and click Next to accept the default of DHCP.
 - Verify that eth0 appears in the Configuration Name field, and click Statically assigned IP Address.

This rest of this step shows an example session that enables static addressing. Configure the first NIC (eth0) for your house (public) network. Complete the tabs as follows:

- On the **Address** tab, specify the following:
 - The IP Address
 - The **Subnet Mask**
 - The Hostname
- · Click Next.
- Click the Hostname/DNS tab.
- On the **Hostname/DNS** tab, specify the following:
 - The IP address for Name Server 1.

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- (Optional) The IP address for Name Server 2.
- (Optional) The IP address for Name Server 2.
- (Optional) In the **Domain Search** field, add additional domains.
- Click the Routing tab.
- On the **Routing** tab, type the **Default Gateway**, and click **OK**.
- 6. (Optional) Examine the **Network Configuration** screen, and supply additional network information as required by your site.

For example, you might want to change the following settings:

- Firewall settings. If you enable a firewall, make sure to enable the firewall only for the public NIC (eth0). The firewall is enabled by default.
- VNC Remote Administration. This setting enables remote administration and is disabled by default.
- 7. Click **Next** to advance from the **Network Configuration** screen.

Wait for the installer to save the network configuration.

8. On the Test Internet Connection screen, click Next.

Wait for the internet connection test to complete.

- 9. On the **Novell Customer Center Configuration** screen, complete the following steps:
 - Select Configure Now (Recommended).
 - Verify that each of the following defaults under Include for Convenience are selected:
 - Hardware Profile
 - Optional Information
 - Regularly Synchronize With the Customer Center
 - Click Next.

For more information, see the information about how to register with Novell at www.novell.com.

- 10. On the YaST2 Manual Interaction Required pop-up, click Continue.
- On the Novell Customer Center System Registration screen, complete the fields, and click Next.
- 12. On the Network Services Configuration screen, click Next.
- 13. Proceed to the following:

"Completing the SLES Installation" on page 57

Completing the SLES Installation

The following procedure explains how to complete the SLES installation.

Procedure 3-5 To complete the SLES installation

- 1. On the **User Authentication Method** screen, select one of the authentication methods, and click **Next**.
- 2. On the New Local User screen, create at least one non-root user.

Complete the following steps:

- Complete the following fields:
 - User's Full Name
 - Username
 - Password
 - Confirm Password
- (Optional) Click User Management to specify another non-root user.
- Click Next.
- 3. On the Release Notes screen, click Next.
- 4. On the Hardware Configuration screen, click Next.
- 5. On the Installation Completed screen, click Finish.
- 6. Proceed to the following:

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"Installing the SGI Foundation Software on a SLES Platform SGI UV Server or a SLES Platform SMN" on page 58

Installing the SGI Foundation Software on a SLES Platform SGI UV Server or a SLES Platform SMN

The following procedure explains how to install the SGI Foundation Software on an SMN or on an SGI UV server that hosts the SUSE operating system.

Procedure 3-6 To install the SGI Foundation Software on a SUSE platform from the direct-attached console

- 1. Insert the DVD labeled *SGI Foundation Software X.X* into the DVD drive on the SMN.
- 2. Log into the SMN as the root user.
- 3. Click **Computer** > **YaST** to start the YaST interface.
- 4. Click **Software > Software Repositories** to start the SLES repository manager.
- 5. On the Configured Software Repositories screen, click Add.
- 6. On the Media Type screen, select DVD, and click Next.
- 7. On the YaST pop-up, click Continue.
- 8. (Conditional) On the Import Untrusted GnuPG Key, click Import.

Perform this step if this is the first time through this process and you need to confirm the security of the SGI digital key.

- 9. On the **Configured Software Repositories** screen, click **OK**.
- 10. On the YaST Control Center screen, click Software Management.
- 11. Select View > Patterns.
- 12. Scroll down to SGI Foundation.
- 13. Check the box to the left of **SGI Foundation Libraries**, **Software**, **and Drivers**, and click **Accept**.
- 14. On the Changed Packages pop-up, click Continue.

15. Insert DVDs into the DVD drive as directed by the prompts on the **Perform Installation** screen.

If necessary, click **Eject** on the YaST2 pop-up to open the DVD drive. In the **YaST** pop-up, you might need to click **Retry** more than once to read the new disk. You can ignore the graphic representation of the file system that appears in a new window during this step.

- 16. Close the YaST session.
- 17. Type the following command to reboot the system:
 - # reboot -f
- 18. (Conditional) Install the SMN-specific software on the SMN.

Perform the following procedure to complete the SMN software installation:

"Installing the SMN Software on a SLES Platform SMN" on page 59

The SGI UV server installation is finished at this time.

Installing the SMN Software on a SLES Platform SMN

The SMN requires its own specific software, and you need to install the SMN software on the SMN after you install the SGI Foundation Software.

The following procedure explains how to install the SMN software on a SLES platform SMN.

Procedure 3-7 To install the SMN software on a SLES platform SMN

- 1. Insert the CD labeled *SGI System Management Node Software X.X* into the DVD drive on the SMN.
- 2. Complete the following steps from "Installing the SGI Foundation Software on a SLES Platform SGI UV Server or a SLES Platform SMN" on page 58:
 - Procedure 3-6, step 2 on page 58 through
 - Procedure 3-6, step 11 on page 58
- 3. Scroll down to SGI SMN.

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- 4. Check the box to the left of SGI System Management Node Libraries, Software, and Drivers and click Accept.
- 5. Return to "Installing the SGI Foundation Software on a SLES Platform SGI UV Server or a SLES Platform SMN" on page 58 and complete the following steps:
 - Procedure 3-6, step 14 on page 58 through
 - Procedure 3-6, step 17 on page 59
- 6. Log into the system as the root user.
- 7. Type the following command to configure the SMN software:
 - # smnconfig -Aa -3
- 8. Type the following command to reboot the system:
 - # reboot -f

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