Installing Red Hat Enterprise Linux 3 on ProLiant servers

HOWTO

Abstract

ProLiant servers provide an excellent platform for Linux. ProLiant servers are engineered from the ground up to provide performance, reliability, and scalability using industry-standard components.

This HOWTO provides details for installing Red Hat Enterprise Linux 3 on all ProLiant servers.

Supported products

HP works with key Linux distribution vendors and software partners in the development phase to test daily software builds, tune the operating system, build in support for hardware features, and provide continuous feedback and fixes. All this testing increases the reliability of applications running on ProLiant servers with Red Hat Enterprise Linux 3.

ProLiant servers

HP supports Linux on a wide range of ProLiant server models. The ProLiant Server Certification Matrix identifies, by model, the ProLiant servers that have been certified for Linux , the Linux distribution and version each supports, and the status of HP support for each. To view this matrix, visit http://h18000.www1.hp.com/products/servers/linux/hplinuxcert.html.

Descriptions of ProLiant servers are located at www.hp.com/servers/proliant.

Option ROM Configuration for Arrays

ProLiant servers support the use of Option ROM Configuration for Arrays (ORCA) for setting up drive arrays.

ROM-Based Setup Utility

ROM-Based Setup Utility (RBSU) is a utility that allows users to easily configure ProLiant servers. It allows a user to set the date and time, boot controller order, hardware interrupts, and advanced system settings.

The first time you power up the server, the system will prompt you to enter RBSU, select an operating system, and select a language. Default configuration settings are made at this time and can be changed later. To load RBSU, press **F9** when prompted to do so during POST.

ProLiant Essentials Rapid Deployment Pack

The ProLiant Essentials Rapid Deployment Pack is a server deployment product that facilitates the installation, configuration, and deployment of high-volumes of servers through a graphical user interface (GUI) console using either scripting or imaging technology. Use of this product reduces server configuration time, making it possible to scale server deployments to high volumes in rapid fashion.

The Rapid Deployment Pack integrates two powerful products: Altiris eXpress Deployment Server and the SmartStart Scripting Toolkit. The management console GUI provides an intuitive drag-and-drop of events, such as scripts and images, to deploy the operating systems and applications.

For instructions on how to install Red Hat Linux and all support software using the ProLiant Essentials Rapid Deployment Pack CD, refer to the documentation provided with the CD or on the Rapid Deployment Pack website, www.hp.com/servers/rdp.

ProLiant Essentials Integrated Lights-Out

ProLiant Essentials Integrated Lights-Out (iLO) Advanced Pack is a software product that enables IT administrators to manage servers remotely from anywhere in the world. This product integrates industry-leading Lights-Out functionality and system board management capabilities. The iLO Virtual Media feature may be used to remotely present your deployment floppy to the server for an over-the-network installation.

Refer to the iLO User Guide, located at http://h18013.www1.hp.com/manage/ilo-description.html, for information on how to use the iLO Virtual Media.

Important
With this release of the Red Hat Enterprise Linux 3 operating system (OS), iLO Virtual CD installs are available; however, iLO Virtual Floppy installs are not. HP and Red Hat are working to resolve this issue in a future release of the OS.

To view which ProLiant server models support installation using the ProLiant Essentials Integrated Lights-Out Advanced Pack, visit http://h18013.www1.hp.com/manage/supported-servers.html.

Installation process

This section outlines general procedures for installing Red Hat Enterprise Linux 3 on ProLiant servers as a new installation. To find installation procedures for other Linux distributions, refer to the appropriate HOWTO located on the Linux documentation page, http://h18000.www1.hp.com/products/servers/linux/documentation.html.

Note
HP also provides installation information for individual servers in the form of Read This First (RTF) guides accessible through the Server Certification Matrix at http://h18000.www1.hp.com/products/servers/linux/hplinuxcert.html. To read an RTF, click on a specific ProLiant server model listed in the matrix. If an RTF is available for that server and Linux operating system, it will be listed under the "documentation" heading.

Before beginning Red Hat Enterprise Linux 3 installation, view the Server Certification Matrix, http://h18000.www1.hp.com/products/servers/linux/hplinuxcert.html, to ensure that this OS version is supported on the ProLiant server targeted for the install.

General installation procedures

Note
HP highly recommends to our customers that are installing Red Hat Enterprise Linux 3 on ProLiant servers to also install Update 1 (2.4.21-9.EL kernel) or greater. More details are located here: http://rhn.redhat.com/errata/RHSA-2004-017.html

1. If the server contains drive arrays, configure them using ORCA: When prompted, press **F8** at POST to create the logical drive.

2. Configure the server using RBSU:

  - When prompted, press **F9** at POST.
  - Select **System Options,** and set OS Selection to **Linux**.
  - Set the Controller Boot order, if applicable.
  - Press **F10** to save and exit RBSU.

3. Insert the Red Hat Enterprise Linux 3 CD #1 into the CD-ROM drive and boot the OS from the CD.

4. Follow the instructions detailed in the Red Hat Linux Installation Guide, located at www.redhat.com/docs/manuals/linux/, to install Red Hat Enterprise Linux 3.

5. After installing the operating system, upgrade your drivers by running the ProLiant Support Pack located here: <http://h18000.www1.hp.com/support/files/server/us/locate/7712.html>.

Installing additional options

Before installing an option:

1. Verify support of this option for the ProLiant server at www.hp.com/servers/proliant.

2. Verify that the option is supported on the operating system by visiting http://h18000.www1.hp.com/products/servers/linux/options-matrix-all.html.

3. Insert the new hardware into the ProLiant server.

4. Check the following URL to see if a newer driver is available: http://h18000.www1.hp.com/products/servers/linux/softwaredrivers.html. If so, select the latest version of the appropriate driver and download the file from this site. Follow the online instructions for installing the software.

Installing a Remote Insight Lights-Out Edition adapter

Before installing a Remote Insight Lights-Out Edition (RILOE) or RILOE II adapter:

1. Verify support of this controller for the ProLiant server at www.hp.com/servers/proliant.

2. Insert the new hardware into the ProLiant server.

3. Download software to optimize the performance of the adapter, if desired.

Note
The adapter itself operates without any additional drivers (for example, the Remote Log In and Virtual Floppy features are available). HP provides software called HP Lights-Out Drivers and Agents that enhance the capabilities of the adapter. This software is available for download at http://h18000.www1.hp.com/support/files/server/us/locOsCat/101_59.html.

---

4. Select the latest version of this package and download the file from this site. Follow the online instructions for installing the software.

Troubleshooting

Table 1 describes common problems that might occur during installation and operation of Red Hat Enterprise Linux 3 on ProLiant servers and identifies available.

Table 1. Known issues

Issue 1	**When the Red Hat Enterprise Linux 3 CD #1 is inserted into the CD-Drive, the system hangs before the installation can start.**	
	Workaround	1. When the initial screen comes up and asks you whether you want to install in graphical mode or text mode, type one of the following and press Enter: • pci=noacpi • acpi=oldboot • acpi=off
Issue 2	**After installing Red Hat Enterprise Linux 3, the system hangs when booting the system.**	
	Workaround	When you reach the initial GRUB screen, perform the following steps: 1. Highlight the kernel you want to boot and press the 'e' key. 2. Highlight the line that says "root" and press the 'e' key. 3. At the end of the line, add one of the following: • pci=noacpi • acpi=oldboot • acpi=off 4. Press Enter. 5. High the line that says "root" and press the 'b' key.
Issue 3	**When performing an install, the system hangs when switching from text to graphical mode.**	
	Workaround	It is important not to try inputting anything at this time. Refrain from using the keyboard or the mouse until the installer has fully switched from text to graphical mode.

For more information

The links listed in Table 2 contain valuable information regarding Linux, ProLiant servers, software downloads, and additional technical documentation.

Table 2. Web resources

Resource description	Web address
Linux at HP offers industry-defining technology, break-through performance, high availability, and easy serviceability.	www.hp.com/linux
Linux for ProLiant website contains software, hardware certification matrices, and documentation for ProLiant servers running Linux.	http://h18000.www1.hp.com/products/servers/linux/index.html
Linux Server Certification Matrix contains the latest tested, supported, and certified information about Linux operating systems supported on ProLiant servers.	http://h18000.www1.hp.com/products/servers/linux/hplinuxcert.html
Linux Options Support Matrix includes the latest Options Support Matrix and discusses products supported by Linux.	http://h18000.www1.hp.com/products/servers/linux/options-matrix-all.html
Linux Support Software provides support software, device drivers, agents, utilities and links to comprehensive support software listings for all supported Linux distributions.	http://h18000.www1.hp.com/products/servers/linux/softwaredrivers.html
Opensource.hp.com hosts a number of Open Source software projects running on various HP systems.	http://opensource.hp.com/
Manageability provides tools, guides, and information to reduce expense, minimize complexity, and speed execution.	www.hp.com/servers/manage
E-Commerce Solution Sizer is automated tool assisting the user with sizing hp hardware for E-Commerce and Web Server applications.	http://vcmproapp02.compaq.com/aasizercode/aasizer.asp?L=no&SizerCountry=UnitedStates&SizerName=E_Catalog

The links listed in Table 3 contain additional information about Red Hat Linux.

Table 3. Web resources

Resource description	Web address
Red Hat Enterprise Linux Site contains subscription information, white papers, and benchmarks.	www.redhat.com/software/rhel/
Red Hat Documentation & Online Resources provides the same guides that come with boxed Red Hat products.	www.redhat.com/docs/
The Official Red Hat Linux Customization Guide contains information on how to customize your Red Hat Linux system to fit your needs.	www.redhat.com/docs/manuals/linux/

Resource description	Web address
Red Hat Tips, FAQS and HOWTOs contain documents to help you install, set up, and troubleshoot your Linux system.	www.redhat.com/apps/support/resources/
Red Hat Linux Errata contains the most recent information about important updates, fixes, and corrections for Red Hat Linux.	www.redhat.com/apps/support/errata/index.html

Call to action

To help us better understand and meet your needs for ISS technology information, please send comments about this paper to: TechCom@HP.com.

TC040105HT, 01/2004