

Installing Red Hat Enterprise Linux 2.1 on ProLiant servers

HOWTO, 4th Edition



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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 2.1 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 means that applications running on ProLiant servers with Red Hat Enterprise Linux 2.1 are more stable and work better.

The following sections include descriptions of and recommendations for supported utilities, drivers, and other ProLiant value-add software running on ProLiant servers.

ProLiant servers

HP supports Linux on a wide range of ProLiant server models. No other industry-standard server has been tested, retested, certified, and optimized for Linux applications the way the ProLiant server has. And the testing does not end at the walls of the legendary HP engineering facilities. HP's major Linux distribution partners also test and certify ProLiant servers, ensuring that their applications run right and run true, right out of the box.

In the Server Certification Matrix, the ProLiant servers that have been certified for Linux are listed by server model and supported Linux distribution and version. 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.

Array configuration

For ProLiant servers with an array controller, press **F8** during the Power-On Self Test (POST) after the controller initializes. This procedure allows you to set up the drive arrays using Option ROM Configuration for Arrays (ORCA).

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.

For servers without RBSU, refer to the archived documentation located at <http://h18000.www1.hp.com/products/servers/linux/archived-howto.html>.

Installation process

This section outlines several generalized procedures for installing Red Hat Enterprise Linux 2.1 on ProLiant servers. 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 additional installation information for the ProLiant BL, DL, and ML server lines in the form of server install guides. These guides can be found on the ProLiant Linux Documentation site at <http://h18000.www1.hp.com/products/servers/linux/documentation.html>.

ProLiant Essentials Rapid Deployment Pack installation

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. Server configuration time is reduced, 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's 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 installation

IT expenses can be reduced by managing remotely from anywhere in the world with the ProLiant Essentials Integrated Lights-Out (iLO) Advanced Pack. 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 2.1 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 servers support installation using the ProLiant Essentials Integrated Lights-Out Advanced Pack, visit <http://h18013.www1.hp.com/manage/supported-servers.html>.

Red Hat Enterprise Linux 2.1 installation

The sections that follow contain procedures for installing Red Hat Enterprise Linux 2.1 as a new installation. Before beginning Red Hat Enterprise Linux 2.1 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

1. Configure the drive arrays using ORCA, if applicable. 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 2.1 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/enterprise/, to install Red Hat Enterprise Linux 2.1.
5. After installing the operating system, upgrade the drivers by running the ProLiant Support Pack located here: <http://h18000.www1.hp.com/support/files/server/us/locate/3415.html>.

Installing additional storage controllers

Before installing a storage option:

1. Verify support of this controller for the ProLiant server at www.hp.com/servers/proliant.
2. Verify that the controller is supported on the operating system by visiting <http://h18000.www1.hp.com/products/servers/linux/options-matrix-all.html>.
3. After inserting the new storage controller(s) into the ProLiant server, find the appropriate storage driver here: http://h18023.www1.hp.com/support/files/server/us/locoscat/88_61.html.
4. Select the latest version of the appropriate storage driver and download the file from this site. Follow the online instructions for installing the software.

Installing additional network interface controllers

Before installing a network interface controller (NIC):

1. Verify support of this controller for the ProLiant server at www.hp.com/servers/proliant.
2. Verify that the controller is supported on the operating system by visiting <http://h18000.www1.hp.com/products/servers/linux/options-matrix-all.html>.
3. After inserting the new NIC into the ProLiant server, find the appropriate NIC driver here: http://h18023.www1.hp.com/support/files/server/us/locoscat/88_58.html.
4. Select the latest version of the appropriate NIC 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. 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). However, HP provides software to enhance the capabilities of the adapter, which is available for download at http://h18023.www1.hp.com/support/files/server/us/locoscat/88_66.html.

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

Troubleshooting

This section describes common issues that might occur during installation. In this case, the problem statement and resolution is described in Table 1.

Table 1. Known issues

Issue 1	After upgrading the kernel, the system hangs while booting
Workaround	<p>When you reach the initial GRUB screen, perform the following steps:</p> <ol style="list-style-type: none">1. Highlight the kernel you want to boot and press the e key.2. Highlight the line that includes "root" and press the e key.3. At the end of the line, add one of the following:<ul style="list-style-type: none">• pci=noacpi• acpi=oldboot• acpi=off4. Press Enter.5. Highlight the line that includes "root" and press the b key.

For more information

The following links contain valuable information regarding Linux, ProLiant servers, software downloads, and additional technical documentation.

Table 2. HP 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://vcmpoapp02.compaq.com/aasizercode/aasizer.asp?L=no&SizerCountry=UnitedStates&SizerName=E_Catalog

The following links contain additional information for Red Hat Linux.

Table 3. Red Hat 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 the same guides that come with Red Hat's boxed products.	www.redhat.com/docs/
Red Hat Enterprise Linux Manuals contain information on how to customize your Red Hat Linux system to fit your needs.	www.redhat.com/docs/manuals/enterprise/

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.