

Overview

Linux simply runs better on ProLiant Servers!

HP & Red Hat are partnering across the Enterprise to give you solid operating system and product offerings, as well as support and certification.

HP and Red Hat are joint Open Source market and community leaders, thus bringing our customer ROI-based solutions on industry standard servers. With a single point of accountability for server, software and services, our customer have trusted the HP and Red Hat partnership for a number of years.

What's New

HP is pleased to announce support for Red Hat's newest commercial enterprise operating system Red Hat Enterprise Linux 5.

HP and Red Hat are joint Open Source market and community leaders, jointly bringing to our customers ROI-based Linux and open source solutions on industry standard servers. With a single point of accountability for server, software and services, our customers have trusted the HP and Red Hat partnership for a number of years.

At A Glance

- **One product, One solution** – HP offers single part numbers for Linux subscription and support for your ProLiant servers.
- **Single point of support accountability** – One stop shop support for your combined ProLiant server and Linux operating system solution.
- **Software Technical Support Excellence** – HP solves ~99% of calls before needing to engage a Linux vendor and has expertise in debugging hardware, software driver issues, as well as Linux OS support; 6500 service professionals.
- **Path to proactive support** – In addition to installation and start-up services, HP offers HP Proactive Essentials, HP Proactive 24 service, HP Critical Service and Integrated hardware/software support.
- **Subscription management** – HP offers Co-terminus subscriptions that can be pro-rated to expire at the same time as previously purchased subscriptions.
- **Renewal Process** – HP offers proactive assistance in ensuring you have up to date subscriptions and support.
- **Tailored Purchase Options** – HP offers a broad and affordable range of version-less subscription options including subscription only or the ability to add 9x5, 24x7 or incident based support.
- **Customization, configuration and integration** – HP Factory Express is a robust portfolio of flexible, pre-priced, pre-installed, configured, customized and integrated factory solutions and deployment services-supporting HP ProLiant servers with Linux.
- **High Performance computing** – HP provides subscriptions specifically tailored for HPC environments, and priced accordingly.
- **Financing** – HP helps you acquire Linux solutions cost-effectively, and manage that solution throughout its lifecycle.

Models

Red Hat Enterprise Linux – Bundled with HP Support; No Media

NOTE: HP is now offering version-less sku's. This gives our customers the ability to buy a subscription to the Red Hat Network (RHN) and download any supported version of Red Hat. Having problems deciding which version of Red Hat you should buy? Red Hat has now made it even easier to buy. Red Hat Enterprise formerly known as RHEL ES is now Red Hat Enterprise Linux 1-2 Sockets; RHEL AS is now Red Hat Enterprise Advanced Platform - unlimited sockets.

Red Hat Enterprise 1-2 Socket Offering; Standard – HP 9x5 Software Technical Support included in the purchase of each of these option kits.

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 1-yr RHN Subscription, No Media, 1-yr 445209-B21
9x5 Software Technical Support from HP included



Overview

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 3-yr RHN Subscription, No Media, 3 yr 9x5 Software Technical Support from HP included 445210-B21

Red Hat Enterprise 1-2 Socket Offering; Premium – HP 24x7 Software Technical Support Phone included in the purchase of these option kits.

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 1-yr RHN Subscription, No Media, 1 yr 24x7 Software Technical Support from HP included 445211-B21

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 3-yr RHN Subscription, No Media 3 year 24x7 Software Technical Support from HP included 445212-B21

Red Hat Enterprise Advanced Platform – Unlimited Socket Offering; Standard - HP 9x5 Software Technical Support Phone included in the purchase of these option kits.

Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 1-yr RHN Subscription, No Media,; 1 yr 9x5 Software Technical Support from HP included 445215-B21

Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 1-yr RHN Subscription, No Media,; 3yr 9x5 Software Technical Support from HP included 445216-B21

Red Hat Enterprise Advanced Platform – Unlimited Socket Offering; Premium - - HP 24x7 Software Technical Support Phone included in the purchase of these option kits.

Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 1-yr RHN Subscription, No Media,; 1 yr 24x7 Software Technical Support from HP included 445213-B21

Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 3-yr RHN Subscription, No Media,; 3 year 24x7 Software Technical Support from HP included 445214-B21

Media Kits

RHEL 5 Media Kit Only 452561-B21

RHEL 4 (1-2 Socket) Media Kit Only 445217-B21

Red Hat Enterprise Linux – HP Support NOT included; No Media

Red Hat Enterprise 1-2 Socket Offering; Standard – HP Support NOT included; must be purchased separately; For 24x7, 9x5 or Incident based offerings, see the HP Support section of this document

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 1-yr RHN Subscription, No Media, HP support not included 393332-B21

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 3-yr RHN Subscription, No Media, HP support not included 393333-B21

Red Hat Enterprise 1-2 Socket Offering; Premium – HP Support NOT included; must be purchased separately; For 24x7, 9x5 or Incident based offerings, see the HP Support section of this document.

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 1-yr RHN Subscription, No Media; HP support not included 445932-B21

Red Hat Enterprise Linux (RHEL), 1-2 sockets, 3-yr RHN Subscription, No Media; HP support not included 445933-B21

Red Hat Enterprise Advanced Platform – Unlimited Socket Offering; Standard – HP Support NOT included; must be purchased separately; For 24x7, 9x5 or Incident based offerings, see the HP Support section of this document.

Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 1-yr RHN Subscription, No Media; HP support not included 393328-B21

Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 1-yr RHN Subscription, No Media; HP support not included 393329-B21

Overview

Red Hat Enterprise Advanced Platform - Unlimited Socket Offering; Premium - - HP Support NOT included; must be purchased separately; For 24x7, 9x5 or Incident based offerings, see the HP Support section of this document.

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| Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 1-yr RHN Subscription, No Media,;HP support not included | 393330-B21 |
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| Red Hat Enterprise Linux Advanced Platform, Unlimited sockets, 3-yr RHN Subscription, No Media,; HP support not included | 393331-B21 |
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Media Kit

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| RHEL 5 Media Kit Only | 452561-B21 |
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| RHEL 4 (1-2 Socket) Media Kit Only | 445217-B21 |
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Product Features

Red Hat Network

What Is it?

- Red Hat Network is an easy-to-use systems management platform for your Linux infrastructure. It is built on open standards and uses a web-based graphical interface. Its services are provided through modules that allow you to add enhanced management capabilities.

What does it do?

- Simply stated, when you purchase a subscription from HP, you are entitled to download any version of the Red Hat operating system and any updates that HP supports. This eliminates that need for HP to provide update CD's. We encourage our customers to review our support matrix for versions of Red Hat's operating systems that HP supports - <http://www.hp.com/go/rhelcert>.
- Red Hat Network provides simple tools to efficiently manage the life cycle of systems on your network, including provisioning new systems, managing their updates and configuration changes, monitoring system performance, and eventually re-deploying the systems for a new purpose.

Why should I care?

- Your business benefits from increased productivity, reduced system life cycle costs, greater administration consistency, and enhanced security. Red Hat Network lowers deployment, configuration, and management costs and it enhances security via a single centralized tool, secure connection policies for remote administration, and secure content.

Visit the Red Hat Network for more information.

Red Hat Enterprise Linux Products

Red Hat Enterprise Linux products are available for purchase separately for use with an existing HP ProLiant server & HP BladeSystem Server. A secure, reliable platform for Linux and open-source computing in the enterprise.

Red Hat Enterprise Linux 5 with integrated virtualization delivers unbeatable value and flexibility as the industry's highest quality operating system bringing open source to every environment. New functionality adds virtualization, greater security, better manageability and higher performance.

Red Hat Linux 5 introduces a new and simplified server packaging. Simple product model eliminates AS and ES variants.

- Easy upgrade from previous Red Hat Linux releases provided
- Red Hat integrated virtualization provides a complete solution for consolidating multiple Linux, and third party operating systems onto one hardware platform
- Red Hat Enterprise Linux 5 provides application developers with tools for innovating rapid, secure, and stable applications utilizing the industry's latest technologies
- Latest generation of the world's leading commercial open source environment
- Comprehensive OEM and ISV certifications
- Leadership quality, performance and security
- Supports Intel & AMD 32-bit/64-bit
- Includes virtualization for x86 & x86-64 architecture

Red Hat Enterprise Linux (formerly RHEL ES):

- Small/medium servers (up to 2 sockets)
- Replaces Red Hat Linux ES
- Standard (9x5 support) or Premium (24x7 support) service levels

Product Features

Red Hat Enterprise Linux Advanced Platform (formerly RHEL AS)

- A new Red Hat Linux variant that provides additional capabilities
 - Extends the base product to provide a complete solution for virtualized environments
 - Integrates Server and Storage virtualization capabilities
 - The ideal solution for the Mainstream market
 - Replaces Red Hat Enterprise Linux AS and includes significant additional capabilities
 - Supports:
 - Any server size (unlimited sockets)
 - Unlimited virtual instances of any guest O/S
 - Multi-guest & multi-host logical volume management
 - Standard (9x5) or Premium (24x7) service levels
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Security

- SELinux enhancements to support MLS (Multi Level Security) profiles
 - Will permit US Government EAL4+/LSPP certification
 - GUI-based SELinux Troubleshooter assists system admins to respond to security alerts
 - SELinux is the only upstream MAC implementation and has a large development community, including: US Government NSA, HP, IBM, Tresys, Trusted Computer Solutions
 - ExecShield enhancements: Improved buffer isolation and PIE randomization Addition of canary" stack word to detect buffer overflow corruptions
 - System built with gcc fortify source
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Performance & Scalability

- Many features, based on kernel improvements between 2.6.9 and 2.6.18
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Performance

- Modular, per-queue, switchable on-the-fly, I/O schedulers
 - New pipe implementation uses circular buffers, delivers 30-90% bandwidth improvement
 - Kernel splice() feature permits high speed kernel-based data transfer
 - CacheFS permits local caching of remote data, improves client performance and reduces server & network load
 - Ipv4/IPv6 UDP fragmentation offload & buffer management enhancements
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Product Features

Virtualization

Guest OSs

- RHEL 5 para-virtualized
 - 32bit dom0 will support 32 bit guest
 - 4bit dom0 will support 64 bit guest
- RHEL 4 para-virtualized. (support will be 4.5 and forward)
 - 32bit dom0 will support 32 bit guest
 - 64bit dom0 will support 64 bit guest
- RHEL 4 full
 - 32bit dom0 will support 32 bit guest
 - 64bit dom0 will support 64 bit guest
 - 64bit dom0 will support 32 bit guest
- RHEL 3 full
 - 32bit dom0 will support 32 bit guest
 - 64bit dom0 will support 64 bit guest
 - 64bit dom0 will support 32 bit guest
- There is no support for RHEL 2.1

Scalability Examples

- Conversion to 4-level page tables for x86-64 permits vast virtual address space
- "Big Kernel Semaphore" reduces SMP lock contention, improves performance of large SMP systems
- Scheduler improvements for shared-cache multi-core systems

Development Environment

- Latest GCC compiler toolchain
- Gcc 4.1 - Glibc 2.4

SystemTAP

- Initial versions delivered in Red Hat Enterprise Linux 4 updates
- Provides kernel profiling/tracing equivalent to Solaris Dtrace
- Superior in several respects: more powerful scripting, unlimited probes

Frysk

- User mode execution analysis tool/ always-on debugger
- Multi-host, process, & thread debugging for optimized code
- Non-blocking, object-based

OpenMP

- 3 parts: Front End (FE), Intermediate Language (IL), RunTime Library

Elfutils

- Collection of utilities for handling of ELF and DWARF2 files

Gcj Java compiler General Enhancements AutoFS

- Support for direct maps and lazy mount/unmount
- Authenticated bind with LDAP servers using Kerberos & Digest-MD5
- Maps shareable with Solaris, HP/UX, IBM AIX, etc

Product Features

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| CacheFS | <ul style="list-style-type: none">• Local caching of remote data to improve client performance and reduce server & network load |
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| Samba | <ul style="list-style-type: none">• Improved interoperability with Microsoft Active Directory• More consistent user and group mapping; support for nested groups |
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| Monitoring features | <ul style="list-style-type: none">• Inotify - file system event monitoring• Process events connector - useful for accounting/auditing/resource management• Blktrace - monitor block device queues |
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| NFS | <ul style="list-style-type: none">• ACL support for v3 and v4 : Support for larger wire-level I/O |
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| Ext3 | <ul style="list-style-type: none">• Support for 16TB file systems |
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| HP ProLiant Linux Information | <ul style="list-style-type: none">• Additional information on ProLiant and BladeSystem Servers:<ul style="list-style-type: none">○ http://www.hp.com/go/proliantlinux |
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| HP & Red Hat Products | <ul style="list-style-type: none">• Additional information on ProLiant and BladeSystem Servers:<ul style="list-style-type: none">○ http://www.hp.com/go/proliantlinux |
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| HP ProLiant Server Support | <ul style="list-style-type: none">• Additional Product Information:<ul style="list-style-type: none">○ http://www.hp.com/go/proliantlinux |
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| HP ProLiant Server Support | <ul style="list-style-type: none">• Red Hat Certified and Support Matrix:<ul style="list-style-type: none">○ http://h18004.www1.hp.com/products/servers/linux/hplinuxcert.html |
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Service and Support Offering

Software Technical Support services are bundled with your RHEL 5 subscription; 9x5 support is bundled with RHEL standard subscriptions and 24x7 support is bundled with RHEL premium subscriptions. Below are the highlights of the Software Technical Support Service

- **24x7x365 access to technical resources** - Connect with HP Response Center engineers via telephone, electronic communication, or FAX for assistance in resolving software implementation or operations problems. Service is available around the clock every day, including all holidays.
- **Problem analysis and resolution** - HP Services provides corrective support to resolve identifiable and reproducible software product problems, and to help you identify problems that are difficult to reproduce. You can also receive assistance in trouble-shooting problems and setting configuration parameters.
- **Software features and operational support** - HP provides information on the latest product features and known problems and solutions, plus operational advice and assistance.
- **Escalation management** - Established escalation procedures enlist specialized expertise from HP to Red Hat
- **Installation advisory** - Advisory support is available for help with installation and updating of standalone applications or products installed in a network environment.
- **Software updates and licensing** - Complete HP and selected third-party software product and

Product Features

documentation updates through the Red Hat Network

- **Electronic software information** - Access HP's electronic support facility including symptom-solution database, product descriptions

NOTE: For additional information on these services please visit the following web site:

<http://www.hp.com/go/linuxservices>

Linux Installation and Startup Services

HP Installation and Startup for Linux takes the pressure off your people and helps shorten your time-to-benefits. Available in two versions, this HP Care Pack service encompasses all deployment activities necessary to get you up-and-running fast.

- Package 1, a fixed-price, fixed-content service, provides for operating system and TCP/IP network protocol installation and integration; network interface card configuration; printer queue setup; Remote Insight Lights-Out (RILO) or Management Processor board configuration; installation of HP Insight Management Agent software for servers; initiation of a one-time tape backup; and basic usage orientation.
- Package 2, a custom-quoted service, may include any or all Package 1 deliverables - plus more complex activities such as "send mail" configuration, DNS configuration of network applications, hard drive partitioning, and NFS client and server installation.

NOTE: For additional information on these services please visit the following web site:

<http://www.hp.com/go/linuxservices>

Supported Definition

HP supported indicates the server has been tested and is fully supported by HP. ProLiant and BladeSystem drivers/downloads are available if applicable. To obtain these drivers/downloads, click on the server with this matrix:

<http://h18004.www1.hp.com/products/servers/linux/value-add-software.html>

Red Enterprise Supported OS's: <http://www.hp.com/go/rhelcert>

Certified Definition

Vendor certified and HP supported indicates the server has been tested, is certified by our Linux Partner, and is fully supported by HP. Links to our certification partners' websites can be found by clicking on the server within this matrix.

Red Hat - Certified and Supported Matrix: <http://www.hp.com/go/rhelcert>

HP Web Sites

- HP's Red Hat Enterprise Linux Product Page: <http://www.hp.com/go/proliantrhel>
- How to Buy Red Hat Products from HP - <http://www.hp.com/buy/rhel>
- ProLiant Linux: <http://www.hp.com/go/proliantlinux>
- HP + Red Hat: <http://www.hp.com/go/redhat>
- Other Linux Products offered by HP: <http://www.hp.com/go/linuxproducts>

Related Options

Service and Support Offerings (HP Care Pack Services)

To compliment the 9x5 or 24x7 Software Technical support bundled with your subscription; additional service packages are available to help you achieve and maintain the highest level of system availability and performance.

Service Packages for 445209-B21

HP Support Plus - per server 24x7 STS unlimited HA109A1-78A

HP Proactive Essentials - per server 9x5 STS untd HA325A1-78A

Service Packages for 445210-B21

HP Support Plus - per server 24x7 STS unlimited HA109A378A

HP Proactive Essentials - per server 9x5 STS untd HA325A3-78A

Service Packages for 445211-B21

HP Support Plus 24 - per server 24x7 unlimited HA110A1-78C

HP Proactive Essentials 24x7- per server ulmtd STS HA324A1-78C

HP Proactive 24 - per server 24x7 STS untd HA111A1-78C

HP Critical Service - per server 24x7 STS untd HA112A1-78C

Service Packages for 445212-B21

HP Support Plus 24 - per server 24x7 unlimited HA110A3-78D

HP Proactive Essentials 24x7- per server ulmtd STS HA324A3-78D

HP Proactive 24 - per server 24x7 STS untd HA111A3-78D

HP Critical Service - per server 24x7 STS untd HA112A3-78D

Service Packages for 445215-B21

HP Support Plus - per server 24x7 STS unlimited HA109A1-78E

HP Proactive Essentials - per server 9x5 STS untd HA325A1-78E

Service Packages for 445216-B21

HP Support Plus - per server 24x7 STS unlimited HA109A378F

HP Proactive Essentials - per server 9x5 STS untd HA325A3-78F

Service Packages for 445213-B21

HP Support Plus 24 - per server 24x7 unlimited HA110A1-78G

HP Proactive Essentials 24x7- per server STS untd HA324A1-78G

HP Proactive 24 - per server 24x7 STS untd HA111A1-78G

HP Critical Service - per server 24x7 STS untd HA112A1-78G

Service Packages for 445214-B21

HP Support Plus 24 - per server 24x7 STS untd HA110A3-78H

HP Proactive Essentials 24x7- per server STS untd HA324A3-78H

HP Proactive 24 - per server 24x7 STS untd HA111A3-78H

HP Critical Service - per server 24x7 STS untd HA112A3-78H

Technical Specifications

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| Shipping Dimensions (HxVxD) | 7.25 x 10.00 x 1.5 in (18.41 x 25.4 x 3.81 cm) |
| Shipping Weight | 1.24 lb (0.56 kg) |

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| Environment-friendly Products and Approach | End-of-life Management and Recycling | Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to http://www.hp.com/go/green . To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. |
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The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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