



# HP ProLiant and BladeSystem Servers

## Supporting SUSE Linux Enterprise Server 10

### What's New

HP has announced a one stop shopping for Novell's recently announced SUSE Linux Enterprise 10. HP offers support and certification as well as the ability to buy SLES 10 for ProLiant and BladeSystem Servers. SLES 10 offers built-in application security, virtualization and integrated systems management.

Check the Linux certification matrix for the latest ProLiant & BladeSystem server support information <http://h18004.www1.hp.com/products/servers/linux/hplinuxcert-novell.html>.

### Features and Capabilities of SUSE Linux Enterprise Server 10

#### Security

- Includes Novell AppArmor application-level security to rapidly develop and enforce security policies
- Protects servers and applications from malicious threats
- Provides a lightweight network-intrusion detection system to enhance overall security

#### Virtualization

- First Linux platform to include fully integrated and supported version of Xen 3.1.
- Xen is supported with unique YaST-based management tools for quick and easy virtualization deployment.
- Minimizes IT costs by efficiently utilizing server capacity.

#### Reliability & Performance

- A mature platform to support and deploy end to end infrastructure using a common code base.
- Improved performance on multi-core servers.
- Decrease disaster recovery time with separated virtual environments to isolate problems.
- Increase business agility, responsiveness, and continuity with fewer physical servers and for lower cost.



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### Guaranteed data privacy

- Includes rich user management, authentication and access control
- Supports encrypted file systems, certificate management and VPN
- Features integrated firewall and proxy services, as well as automated monitoring and intruder detection capabilities

### Lower management costs

- YaST enables easy installation and configuration
- AutoYaST enables “no touch” deployments
- Build in support for ZENworks Linux Management provides an ideal solution for keeping servers and applications up-to-date and secure

### SLES + HP

- Save money in virtualized environments: run multiple instances of SUSE Linux Enterprise Server on the same physical server at no additional charge.
- Combine HP SIM with Novell Resource Management Solutions for lower deployment and life cycle management costs.
- Supports true HW virtualization through Intel VTx virtualization processor technology on ProLiant & BladeSystem servers & plans to support upcoming virtualization enhancements in AMD Opteron processors.
- Reduce costs and improve server utilization, with maximum performance and reliability, while maintaining a high level of security.
- Worldwide HP Services and Support offering one-stop shopping and a single point of contact

### HP Indemnification Program

- October 1, 2003, qualified customers can obtain indemnification from HP against legal action from SCO.
- HP is making this offer to protect customers to continue Linux deployments plans without unnecessary risk or distraction. For more info, go to <http://www.hp.com/go/linuxprotection>



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### HP Product SKU Offerings on ProLiant and BladeSystem Servers

- Full list of supported and certified servers [www.hp.com/go/slescert](http://www.hp.com/go/slescert)

#### 1 Year Subscription Offerings (no media)

- 416058-B21 – 1 CPU Server; 1 year subscription license
- 416060-B21 – 2-32 CPU Server ; 1 year subscription license
- \*\*416062-B21 – BladeSystem Server; 1 year subscription license

#### 3 Year Subscription Offerings (no media)

- 416059-B21 – 1 CPU Server; 1 year subscription license
- 416060-B21 – 2-32 CPU Server ; 1 year subscription license
- \*\*416063-B21 – BladeSystem Server; 1 year subscription license

### Media Only SKU Offering

- 416064-B21 Standalone media sku

\*\*Note: On the blade sku offering (sku #'s 416062-B21 & 416063-B21 –

For BladeSystem servers, customers have the option to purchase a SUSE subscription license for each blade or for the entire Blade Chassis.

- For a single blade: use the regular server price sku (416058-B21, 416059-B21, 416060-B21 or 416061-B21)
- For the Chassis: calculate the max # of blades per Chassis x regular server price divided by 2.

If a customer is populating more than ½ of the available chassis slots with the SUSE blade servers, the Blade Chassis license is best. If the customer is only installing 1 or 2 SUSE blade servers and using the other chassis slots for other blades, the individual SUSE licenses for each server is best.



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### HP Server Management

- HP ProLiant server management provides effective and flexible management for your IT environment.
- HP Systems Insight Manager (SIM) and systems management options are designed to simplify server management, increase productivity, and reduce the cost of deploying and managing multi-server environments.
- ProLiant Essentials is a portfolio of modular, flexible software tools that expand the capabilities of ProLiant servers, extend the reach and breadth of server manageability, and enhance the build-out of your IT infrastructure by lowering overall lifecycle costs and reducing demands on IT resources. More information <http://h18004.www1.hp.com/products/servers/proliant-advantage/management.html>



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### HP Management Shipped with Server

#### ProLiant Essentials Foundation Pack

- Essential software for installing, configuring, and managing ProLiant servers as part of an adaptive enterprise
- Includes HP Systems Insight Manager, Smartstart, System Management Homepage, ProLiant Support Packs, and Insight Diagnostics  
[http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00372139/c00372139.pdf?jumpid=reg\\_R1002\\_USEN](http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00372139/c00372139.pdf?jumpid=reg_R1002_USEN)

#### HP Systems Insight Manager

- Unifies infrastructure management of servers and storage, physical and virtual servers and multiple operating systems
- Reduces unplanned downtime by monitoring HP ProLiant and Integrity servers continually and proactively alerts administrators of systems needing attention
- Provides a web-based and command-line interface to closely match the preferences of a wide variety of administrators
- Enhances the experience managing HP BladeSystem servers and infrastructure by providing comprehensive and aggregate views of the servers and connected resources
- Co-exists with and can launch the HP Control Tower deployment environment  
<http://h18013.www1.hp.com/products/servers/management/hpsim/index.html?jumpid=go/hpsim>

#### ProLiant Support Pack Linux Deployment Utility (LDU)

- An application that locally deploys driver and management agent updates to Linux-based servers
- Provides a cost effective way to manage deployments of system software updates  
[http://h18013.www1.hp.com/products/servers/management/psp/index.html?jumpid=reg\\_R1002\\_USEN](http://h18013.www1.hp.com/products/servers/management/psp/index.html?jumpid=reg_R1002_USEN)



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### HP ProLiant and BladeSystem Management

#### HP Control Tower for BladeSystem

- A systems management and deployment software package that is specific for HP BladeSystem
- Linux friendly – built from ground up on open source and oriented to the Linux administrators
- Easy-to-use wizard interface to deploy one or hundreds of blade servers at a time – no complex set up required  
[www.hp.com/go/controltower](http://www.hp.com/go/controltower)

#### Integrated Lights-Out (iLO) Select Pack

- HP introduces Integrated Lights-Out Select providing Lights-Out management upgrades for selected ProLiant server environments. iLO 2 Select provides an easy upgrade to full Lights-Out functionality on iLO 2 Standard Blade Edition enabled servers. It also provides a cost-effective upgrade to advanced Lights-Out functionality on ProLiant 300 and 500 Series servers that are managed using iLO 2 Standard text based remote consoles. This is typically found in Linux environments.
- iLO 2 Select gives you the freedom of total remote control over ProLiant servers without compromise.
- iLO 2 Select upgrades are now available by purchasing the HP ProLiant Essentials Integrated Lights-Out Select Pack. The iLO Select Pack provides a license key that activates the security, power management and enhanced virtual media capabilities for new ProLiant servers with iLO 2 management processors.
- Additional information can be found  
<http://h18004.www1.hp.com/products/servers/management/ilo2-select/index.html>



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### Intelligent Networking Pack (INP) Linux Edition

- Networking software that provides virus throttle package supporting Linux servers
- Prevents the spread of viruses by detecting abnormal behavior in connection requests and throttles the network traffic to allow IT time for assessment

<http://h18004.www1.hp.com/products/servers/proliantessentials/inple/index.html>

### Novell Customer Center (formerly known as SUSE Linux Portal)

Is designed to ensure the customer can download the latest Operating System, security patches and updates when available from Novell. More information on Novell Customer Center

<http://www.novell.com/linux/suse/migration.html>

#### Features Include:

- Support Database/Product Support
- Support Request
- Software and Hardware Certification Database
- Patch Support Database
- Activation Registration
- User Administration



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### XEN

How does guest OS installation work?

SLES10 provides a Pattern based deployment for Xen VM Server. This is selected during initial deployment or future system configuration. A Pattern is a selection of programs to fulfill specific purposes, such as file & print, virtualization, web server setup. From here, the Yast configuration tool is used to install, start, stop, delete, and configure initial virtual machine resources (CPU, memory, and I/O connections).

How do guest OS entitlements work?

To encourage adoption of Xen, Novell offers unique pricing for SUSE Linux Enterprise Server. One subscription to SUSE Linux Enterprise Server covers all virtual images on the same physical server independent from the virtualization technology a customer is using. The customer purchases one license per physical server. For more information see:

<http://www.novell.com/linux/virtualization/>.

What guest OS's are currently supported?

As of August 2006, customers can run paravirtualized SLES 10 as a modified guest operating system on top of Xen-enabled SLES 10 with full support from Novell. For the latest information on guest OS support, see:

<http://www.novell.com/products/server/virtualization.html>

The following unmodified guest OS's are in the technical evaluation stage by Novell, but are not supported or certified on HP hardware:

- Microsoft Windows, including Windows NT, 2000, 2003 and Vista
- SUSE Linux Enterprise Server 8
- SUSE Linux Enterprise Server 9
- Sun Solaris x86
- Red Hat Enterprise Linux 3
- Red Hat Enterprise Linux 4

Does SLES10 Xen VM Server work with processor virtualization technology, Intel VT or AMD-V?

SLES10 uses Xen 3.0.2 which can support AMD and Intel processes with HW virtualization.

How is SLES10 Xen VM Server managed?

There are two modes for managing VM Server. The first is through a command line via the Xen daemen (a user space application which communicates to the Xen hypervisor). The other is via the YaST 2 Xen management interface module. Novell has integrated Xen into their YaST management interface, thus making it very easy to install SUSE Linux Enterprise Server 10 guests on top of the Xen-based SUSE Linux Enterprise hosts. The Yast configuration tool is used install, start, stop, delete, and configure initial virtual machine resources (CPU, memory, and I/O connections). Novell plans to provide a CIM provider for virtual machines life cycle management for future release.





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What Xen kernels are supported?

There are 3 Xen kernels used by SLES10

- 1) 32b Xen kernel (up to 4GB memory support)
- 2) 32b Xen-PAE kernel (up to 16GB memory support)
- 3) 64b Xen kernel (supports 30GB memory when using para virtualized guest OS's)

What are the maximum number of guest OS's that can be installed on a SLES10 host OS?

Up to 4 virtual machines per processor core are supported.

What HP servers & configurations are certified for SLES10 Xen VM Server?

HP supported and certified servers are listed on the HP support matrix [www.hp.com/go/slescert](http://www.hp.com/go/slescert)

This interactive matrix provides direct links into the Novell YES bulletin database as well as the applicable software downloads and documentation.



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### Additional Information

HP + SUSE Linux Product Information

[www.hp.com/go/proliantsles](http://www.hp.com/go/proliantsles)

How to buy Novell products from HP

[www.hp.com/buy/sles](http://www.hp.com/buy/sles)

HP ProLiant and BladeSystem Support Information

[www.hp.com/go/slescert](http://www.hp.com/go/slescert)

HP ProLiant and BladeSystem Support Information

[www.hp.com/go/slescert](http://www.hp.com/go/slescert)

HP North America

HP Linux Call Centre – 1-888-HPLinux (1-888-475-4689)

HP World Wide Sales and Services Directory

[http://welcome.hp.com/country/us/en/Worldwide\\_Dir5.pdf](http://welcome.hp.com/country/us/en/Worldwide_Dir5.pdf)

HP & Novell Partnership

[www.hp.com/go/novell](http://www.hp.com/go/novell)

HP High Performance Computing

[www.hp.com/go/hptc](http://www.hp.com/go/hptc)

HP Services for Linux

[www.hp.com/go/linuxsupport](http://www.hp.com/go/linuxsupport)

Novell & HP Partnership

<http://www.novell.com/partners/hp/>

SUSE LINUX Portal

<http://www.novell.com/linux/suse/migration.html>

HP ProLiant Server Management Software

<http://h18013.www1.hp.com/products/servers/management/index.html?jumpid=servers/proliant/manage>



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