

HP Personal Workstations Frequently Asked Questions



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The HP xw6400 Workstation

How is the HP xw6400 Workstation different from its predecessor the HP xw6200 which is also a dual Xeon system?

	HP xw6200 Workstation	HP xw6400 Workstation
Processor	Dual-socket Intel® Xeon®	Dual-socket. Dual-Core Intel® Xeon® Processor 5100 Sequence
Chipset	Intel® E7525	Intel 5000X
Expansion slots	6 slots 1 PCIe x 8 mechanically, x4 electrically, 1 PCIe x16 graphics 4 legacy PCI slots	6 slots 2 PCIe (x8 mechanically, x4 electrically), 1 PCIe x16 mechanically (x4 electrically), 1 PCIe x16 Graphics 2 legacy PCI slots
Memory	Up to 8GB	Up to 8 GB at launch Up to 16 GB with October 2006 availability of 4 GB DIMMs Enabled for 32 GB with the availability of 8 GB DIMMs (expected 2007)
Hard Drives	80 GB (7200 rpm) SATA 3.0-Gb/s , 160 GB (7200 rpm) SATA 3.0-Gb/s NCQ , 250 GB (7200 rpm) SATA 3.0-Gb/s , 500 GB (7200 rpm) SATA 3.0-Gb/s NCQ , 74 GB (10K rpm) SATA 1.5-Gb/s , 73 GB (10K rpm) Ultra320 SCSI , 146 GB (10K rpm) Ultra320 SCSI , 300 GB (10K rpm) Ultra320 SCSI , 36 GB (15K rpm) Ultra320 SCSI , 73 GB (15K rpm) Ultra320 SCSI	80 GB (7200 rpm) SATA 3.0-Gb/s , 160 GB (7200 rpm) SATA 3.0-Gb/s NCQ, 250 GB (7200 rpm) SATA 3.0-Gb/s NCQ, 500 GB (7200 rpm) SATA 3.0-Gb/s NCQ, 80 GB (10K rpm) SATA 1.5-Gb/s NCQ 160 GB (10K rpm) SATA 1.5-Gb/s NCQ 146 GB (10K rpm) SAS 73 GB (15K rpm) SAS 146 GB (15K rpm) SAS
Graphics offerings (All graphics cards are PCIe)	Professional 2D: NVIDIA Quadro NVS 285 with NVIDIA TurboCache technology NVIDIA Quadro NVS 440 Entry 3D: NVIDIA Quadro FX 540, ATI FireGL V3100 Midrange 3D: NVIDIA Quadro FX 1400, ATI FireGL V5100 High-end 3D: NVIDIA Quadro FX 3450,	Professional 2D: NVIDIA Quadro NVS 285 NVIDIA Quadro NVS 440 Entry 3D: NVIDIA Quadro FX 560, ATI FireGL V3300 Midrange 3D: NVIDIA Quadro FX 1500, ATI FireGL V7200 High-end 3D: NVIDIA Quadro FX 3500, NVIDIA Quadro FX 4500 with opt. Quadro G-Sync card
USB ports	6 USB 2.0	8 USB 2.0 including one internal
Power Supply	500 watts	575 watts

How is the HP xw6400 Workstation different from the HP xw8400?

	HP xw6400 Workstation	HP xw8400 Workstation
Processors	Dual-Core Intel Xeon 5100 Sequence Processors (available Q3, 2006)	Dual-Core Intel Xeon 5000 Sequence Processors Dual-Core Intel Xeon 5100 Sequence Processors (available Q3, 2006)
Expansion slots	6 slots	7 slots

	1 PCIe X16 graphics 1 PCIe X16 (X4 electrical) 2 PCIe X8 (x4 electrical) 2 legacy PCI	1 PCIe X16 graphics 1 PCIe X16 mechanical (x4 electrical) 1 PCIe X8 mechanically (x4 electrical) 3 PCI-X slots (one 133 MHz, two 100 MHz slots) 1 legacy PCI slot
Memory	Up to 8GB 16 GB with 4 GB DIMMs October, 2006 32 GB enabled (with expected availability of 8 GB DIMMs in 2007)	Up to 16GB at launch 32 GB with 4 GB DIMMs Q3, 2006 64 GB enabled (with expected availability of 8 GB DIMMs in 2007)
Memory slots	4	8
Expansion bays	2 internal 3 external	5 internal 3 external
IEEE 1394a	optional PCI card	integrated (frees up I/O slots for other use)
SAS	optional PCIe card	4 channels integrated (frees up I/O slots for other use)
Security	Optional Solenoid Hood Lock/Sensor Kit includes both chassis intrusion sensor and Solenoid Hood Lock	Chassis Intrusion Sensor optional Solenoid Hood Lock not supported
Chassis dimensions (h x w x d)	17.35 inches (44.1 cm) x 6.5 inches (16.5 cm) x 17.32 inches (44.0 cm)	17.9 inches (45.5 cm) x 8.3 inches (21.0 cm) x 20.7 inches (52.5 cm)

The HP xw8400 Workstation

How is the HP xw8400 Workstation different from its predecessor the HP xw8200 which is also an Intel Xeon Processor-based system?

	HP xw8200 Workstation	HP xw8400 Workstation
Processor	Dual-socket Intel® Xeon®	Dual-socket. Dual-Core Intel® Xeon® Processor 5000 and 5100 Sequence
Chipset	Intel® E7525	Intel 5000X
Expansion slots	7 slots 1 PCIe X16 graphics 1 PCIe X8 mechanical (x4 electrical) 3 PCI-X slots (one 133 MHz, two 100 MHz) 2 PCI slots	7 slots 1 PCIe X16 graphics 1 PCIe X16 mechanical (x4 electrical) 1 PCIe X8 mechanically (x4 electrical) 3 PCI-X slots (one 133 MHz, two 100 MHz slots) 1 legacy PCI slot
Max memory	Up to 16GB	Up to 16 GB at launch Up to 32 GB with Q3, 2006 availability of 4 GB DIMMs Enabled for 64GB with the availability of 8 GB DIMMs (expected availability 2007)
Memory speed supported	DDR2 Synch DRAM PC2-3200 (400 MHz) Registered ECC	4 channel 667 MHz Fully Buffered DIMM (Intel Xeon Processor 5100 Sequence)
Standard L2 cache	2 MB	4 MB
Front Side Bus	800 MHz	1066 MHz dual system bus (Intel Xeon 5000 Sequence Processor) 1333 MHz dual system bus (Intel Xeon 5100

		Sequence Processor available Q3, 2006)
Hard Drives	80 GB (7200 rpm) SATA 3.0-Gb/s , 160 GB (7200 rpm) SATA 3.0-Gb/s , 250 GB (7200 rpm) SATA 3.0-Gb/s , 500 GB (7200 rpm) SATA 3.0-Gb/s , 74 GB (10000 rpm) SATA 1.5-Gb/s , 300 GB (10000 rpm) Ultra320 SCSI , 36 GB (15000 rpm) Ultra320 SCSI , 73 GB (15000 rpm) Ultra320 SCSI , 73 GB (10000 rpm) Ultra320 SCSI , 146 GB (10000 rpm) Ultra320 SCSI	80 GB (7200 rpm) SATA 3.0-Gb/s , 80 GB (10000 rpm) SATA 3.0-Gb/s NCQ* 160 GB (7200 rpm) SATA 3.0-Gb/s NCQ, 160 GB (10000 rpm) SATA 3.0-Gb/s NCQ* 250 GB (7200 rpm) SATA 3.0-Gb/s NCQ, 500 GB (7200 rpm) SATA 3.0-Gb/s NCQ, 750 GB (7200 rpm) SATA 3.0 GB/s NCQ* 146 GB (10000 rpm) SAS 73 GB (15000 rpm) SAS 3.0 GB/s* 146 GB (15000 rpm) SAS 300 GB (15000 rpm) SAS 3.0-Gb/s*
		*Available Q3, 2006
SATA channels	2 channels of SATA 1.5 Gb/s	6 channels of SATA 3 Gb/s
SATA RAID	0,1	0,1,5,10
Graphics offerings (All graphics cards are PCIe)	Professional 2D: NVIDIA Quadro NVS 285 with NVIDIA TurboCache technology Entry 3D: NVIDIA Quadro FX 540, ATI FireGL V3100 Midrange 3D: NVIDIA Quadro FX 1400, ATI FireGL V5100 High-end 3D: NVIDIA Quadro FX 3450, NVIDIA Quadro FX 4500 with opt. Quadro G-Sync card	Professional 2D: NVIDIA Quadro NVS 285 Entry 3D: NVIDIA Quadro FX 560, ATI FireGL V3300 Midrange 3D: NVIDIA Quadro FX 1500, ATI FireGL V7200 High-end 3D: NVIDIA Quadro FX 3500, NVIDIA Quadro FX 4500 with opt. Quadro G-Sync card NVIDIA Quadro FX 5500*
		*available Q4, 2006
Power supply	600W	800W

How is the HP xw8400 Workstation different from the HP xw6400 Workstation which is also based on the Intel 5000X chipset and the Dual-Core Intel Xeon 5100 Sequence Processor?

	HP xw6400 Workstation	HP xw8400 Workstation
Processors	Dual-Core Intel Xeon 5100 Sequence Processors (available Q3, 2006)	Dual-Core Intel Xeon 5000 Sequence Processors Dual-Core Intel Xeon 5100 Sequence Processors (available Q3, 2006)
Expansion slots	6 slots 1 PCIe X16 graphics 2 PCIe X8 (x4 electrical) 1 PCIe X16 (X4 electrical) 2 legacy PCI	7 slots 1 PCIe X16 graphics 1 PCIe X16 mechanical (x4 electrical) 1 PCIe X8 mechanically (x4 electrical) 3 PCI-X slots (one 133 MHz, two 100 MHz slots) 1 legacy PCI slot
Memory	Up to 8GB at launch 16 GB with 4 GB DIMMs (expected availability Q4, 2006) 32 GB enabled (with expected availability of 8 GB DIMMs in 2007)	Up to 16GB at launch 32 GB with 4 GB DIMMs (expected availability Q3, 2006) 64 GB enabled (with expected availability of 8 GB DIMMs in 2007)
Memory slots	4	8
Expansion bays	2 internal 3 external	5 internal 3 external
IEEE 1394a	optional PCI slot	integrated (frees up I/O slots for other use)
SAS	optional PCIe card	4 channels integrated (frees up I/O slots for other use)
Security	Optional Solenoid Hood Lock/Sensor Kit includes both chassis intrusion sensor and Solenoid Hood Lock	Chassis Intrusion Sensor optional Solenoid Hood Lock NOT supported

Chassis dimensions (h x w x d)	17.35 inches (44.1 cm) x 6.5 inches (16.5 cm) x 17.32 inches (45.0 cm)	17.9 inches (45.5 cm) x 8.3 inches (21.0 cm) x 20.7 inches (52.5 cm)
Power Supply	575W	800W

What are the key differences between the HP xw8400 Workstation with Dual-Core Intel Xeon Processor 5000 Sequence and with the 5100 Sequence?

	HP xw8400 Workstation with Intel Xeon Processor 5000 Sequence (NetBurst micro-architecture)	HP xw8400 Workstation with Intel Xeon Processor 5100 Sequence (New micro-architecture)
Performance	<ul style="list-style-type: none"> Comparable performance to the HP xw8200. 	<ul style="list-style-type: none"> Significant performance boost. Dependent upon application, performance boosts can range from 20 – 100%.
ISV Certifications	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Full range of certifications
Availability	<ul style="list-style-type: none"> Limited to 4 SKUs (North America only) No CTO menu 	<ul style="list-style-type: none"> Multiple SKUs with a full CTO menu
Processor Options	<ul style="list-style-type: none"> Dual processor, dual core 	<ul style="list-style-type: none"> Single or dual socket, dual core
Frequency bin availability	<ul style="list-style-type: none"> 3.00, 3.20, 3.73 GHz 	<ul style="list-style-type: none"> 1.60, 1.86, 2.00, 2.33, 2.66 or 3.00 GHz
Front Side Bus	<ul style="list-style-type: none"> 1066 GHz 	<ul style="list-style-type: none"> 1333 GHz
Operating System	<ul style="list-style-type: none"> Preinstalled 32-bit: Microsoft® Windows® XP Professional 	<ul style="list-style-type: none"> Preinstalled 32-bit: Microsoft® Windows® XP Professional Preinstalled 64-bit: Microsoft Windows XP Professional x64 Edition (expected availability in July 2006) Preinstalled 64-bit: Red Hat Enterprise Linux® WS 4 (expected availability in July 2006) Optional 32-bit or 64-bit: Red Hat Enterprise Linux WS 3 or WS 4 and HP Linux Installer Kit (expected availability in July 2006)

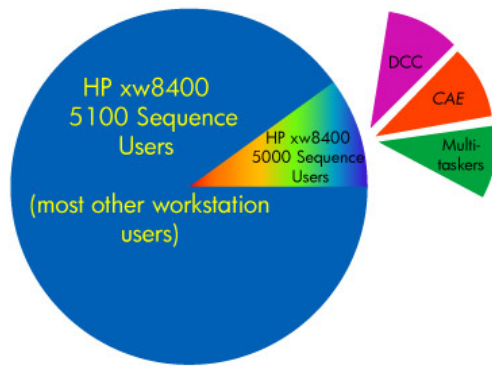
Would I benefit more from the HP xw8400 with Dual-Core Intel Xeon Processor 5000 Sequence OR the Intel Xeon Processor 5100 Sequence?

Customers running highly threaded CAE or DCC rendering applications or customers with heavy multi-tasking needs will see a performance improvement on the Intel Xeon Processor 5000 Sequence.

Almost all workstation users will see a significant performance boost with the Intel Xeon Processor 5100 Sequence relative to today's Intel-based workstations. Single threaded applications will experience a 20-40 percent performance boost while multi-threaded or multi-tasking applications could see a 50 to 100 percent increase.

Any customer who values ISV certifications on their applications should purchase the HP xw8200 Workstation or wait for the HP xw8400 with Intel Xeon Processor 5100 Sequence as ISV certifications will happen only on the HP xw8400 with the Intel Xeon Processor 5100 Sequence.

The pie chart below highlights the estimated share of workstation users who can benefit immediately from the HP xw8400 with Dual-Core Intel Xeon Processor 5000 Sequence and users who would benefit from the performance increases of the Intel Xeon Processor 5100 Sequence.



Dual Core Intel Xeon 5000 and 5100 Sequence Processors/Intel 5000X chipset

What new technology is being introduced with the HP xw6400/xw8400 Workstations?

The xw6400/8400 is based on the new Dual-Core Intel® Xeon® Processor 5000 and 5100 Sequence and the new Intel 5000X chipset. The HP xw6400/xw8400 Workstation with Dual-Core Intel Xeon Processor 5100 Sequence will be available July 24, 2006.

The Intel Xeon Processor 5000 Sequence is only available on the HP xw8400.

Is Hyperthreading Technology delivered on the new Dual-Core Intel Xeon 5000 and 5100 Sequence Processors-based workstations?

Hyperthreading Technology is offered on the 5000 Sequence only so is not available on the HP xw6400. The need for Hyperthreading has been nullified with true multi-core processors.

Dual-Core. Dual-Socket. Multi-Core. What do these terms mean?

Dual-socket: Two physical CPU sockets.

Dual Core: Each CPU has exactly two cores.

Multi-core: CPU has two or more cores.

Dual-processor: Previous terminology for a system with two processors in two sockets.

Will I have to change my golden image on the new HP Personal Workstations?

Yes. The HP xw6400 and xw8400 are completely new platforms based on new technology from Intel. Most of the system drivers are different than those used on the HP xw6200 or xw8200, therefore new golden images are necessary. Manageability software is provided to help with this image building process.

The HP xw6400 is "enabled" for 16 GB or 32 GB of memory. The HP xw8400 is "enabled" for 32 GB or 64 GB of memory. What does this mean?

HP Personal Workstations are enabled to achieve the largest memory configuration supported by the new Intel 5000X chipset. With 8 slots available for memory expandability and 4G DIMMs (expected to be available Q3, 2006), the HP xw8400 can achieve 32GB. 8 GB DIMMs are expected to be available in 2007. At that point the HP xw8400 Workstation will be able to support 64 GB of physical memory.

The HP xw6400 is "enabled" for 32GB of memory. Available initially with 8 GB of memory, the HP xw6400 will have a

maximum of 16 GB of memory with the availability of 4 GB DIMMs (expected in Q4, 2006). With the 2007 expected availability of 8 GB DIMMs, the HP xw 6400 will be able to support 32 GB of physical memory.

Do I have to recompile my applications to see the performance advantages of the new Intel Xeon 5000 and 5100 Sequence Processors?

No, HP testing and Intel data indicate that technical applications show immediate performance increases based on the new processor and memory architecture

How do I add the second processor to the HP xw6400 and xw8400 Workstations? Is a system board swap required?

CPU upgrades are field and customer installable without system board swaps using the HP xw6400 or HP xw8400 Workstation CPU upgrade kits. The second processor must be the same speed and stepping as the first.

Operating Systems

What Operating Systems will run on the HP xw6400 and xw8400 Workstations?

Preinstalled 32-bit: Genuine Windows XP Professional SP2 (WHQL certified)

Preinstalled 64-bit: Genuine Windows XP Professional x64 Edition (WHQL certified)*

Microsoft® Vista™ capable**

Preinstalled Red Hat Enterprise Linux WS 4*** (64-bit only) OR

HP Installer Kit for Linux** (includes drivers for both 32-bit and 64-bit OS versions of Red Hat Enterprise Linux 3 and 4)

Certified on Red Hat Enterprise Linux WS 3** and WS 4 (32-bit and 64-bit)

* Expected availability September, 2006

** System may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows Vista functionality.

***Red Hat Enterprise Linux WS 4 (64-bit), Red Hat Enterprise Linux WS 3 or WS 4 (32-bit or 64-bit), and the HP Installer Kit for Linux are expected to be available in July, 2006. Microsoft Windows XP Professional x64 Edition is expected to be available in September, 2006.

The HP xw8400 with Intel Xeon Processor 5000 Sequence is available with Preinstalled 32-bit: Microsoft® Windows® XP Professional

Is dual OS preload an option?

Dual OS preload will not be offered due to restrictions of licensing agreements.

Is Microsoft Windows 2000 supported on the new HP xw6400 and xw8400 Workstations?

Microsoft Windows 2000 is not supported on the new HP Workstations. Microsoft discontinued OEM sales of Windows 2000 on March 31, 2004. Tier 1 OEMs, such as HP, can no longer ship systems with this OS.

Is Windows NT supported on the new HP xw6400 and xw8400?

Microsoft discontinued OEM sales of Windows NT on June 30, 2002. Windows NT does not support many of the new technologies offered with the HP xw6400 and xw8400.

What is 64-bit extension technology (Intel EM64T)?

64-bit extension technology (Extended Memory 64 Technology or EM64T) is an enhancement Intel continues to provide to their IA-32 architecture line of processors. The enhancement allows the processor to run 64-bit code and access larger amounts of memory.

Is 64-bit extension technology the same technology used in the Itanium® processor?

No. 64-bit extension technology is an extension to Intel's processors based on the IA-32 architecture. The Itanium® processor family is based on the EPIC architecture. These are two separate families of processors based on two completely different architectures. The Itanium processor family is specifically designed for the most demanding server mission critical applications.

Will existing 32-bit software run, without being re-compiled, on an IA-32 processor with 64-bit extension technology?

If you are running a 32-bit O/S, yes. An IA-32 processor with 64-bit extension technology is compatible with existing 32-bit applications when running with an existing 32-bit O/S. If you are running a 64-bit O/S the Intel processor supports "compatibility" mode, where all 32-bit applications will continue to run under a 64-bit O/S without being modified or recompiled.

Are the HP xw6400 and xw8400 Windows Vista capable?

Yes they are. The HP xw6400 and xw8400 may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows Vista functionality.

Linux

Will the HP xw6400 and xw8400 Workstations support Linux?

Yes. Red Hat WS 3, Red Hat Enterprise Linux 4 and the HP Installer Kit for Linux will be available.

What is the HP Installer Kit for Linux?

The HP Installer Kit for Linux is a set of HP provided CD's to be used in conjunction with a Red Hat Enterprise Linux installation to complete your Linux workstation installation. The CD's in the HPIKL are:

- HP Driver CD for Red Hat Enterprise Linux WS 3 and 4.

This is a "post install" CD used at the end of a Red Hat Enterprise Linux installation which contains HP content for your Linux workstation. Content provided includes:

- NVIDIA and ATI accelerated graphics drivers that have passed HP quality standards and are compatible with the hardware platform and RHEL releases.
- HP Documentation links
- Additional hardware drivers provided by HP that are not part of the standard Red Hat Enterprise Linux releases.

All content provided on this CD is compatible with both RHEL WS 3 and RHEL WS 4.

- Red Hat Driver Disk – for a specific Red Hat Enterprise Linux Update

This is the "RED" CD and is not included in ALL versions of the HPIKL. It will be included with the HPIKL when a hardware driver is required for the workstation platform that has not yet become a part of a standard Red Hat Enterprise Linux release. The next subsequent Update from Red Hat removes the need for this CD.

For information on how to use the HP Driver CD or the Red Hat Driver Disk, refer to the HP Linux Workstation User manual at http://www.hp.com/support/linux_user_manual (See chapters 1-3).

Does the HP Installer Kit for Linux actually contain the Red Hat Box Sets?

No, you must obtain the Red Hat Box Set of your choice. The HP Installer Kit for Linux is a CD set to be used in conjunction with a RHEL install and supports both Red Hat Enterprise WS 3 or 4.

Red Hat requires that you purchase Red Hat Enterprise WS 3 or 4. It is available from HP as After Market Option (AMO) kits.

HP is only offering a preload of RHEL WS 4 (64 bit). What if I want to run the 32 bit OS instead?

Included with the preloaded RHEL WS 4 workstation is a Red Hat Network registration card. Use this card to register your workstation with the Red Hat Network. This enables you to download all versions of Red Hat Enterprise Linux WS 3 or 4 for your workstation, and get any future updates from Red Hat as well. You can choose the 32 bit OS instead of the 64 bit OS if desired.

Note: See the detailed hardware support matrix at http://www.hp.com/support/linux_user_manual for clarification of what minimum Red Hat release/update is required for Red Hat Enterprise Linux to functional correctly on your workstation platform.

Will I get recovery CD's with my preloaded Linux workstation?

The expected OS delivery model for Red Hat Enterprise Linux is electronic. This is because of the Red Hat Network that Red Hat uses to continually provide updates for their customers for their operating system releases.

As a result HP has found that creating a set of OS installation CD's has limited value for the customer. They quickly want to register to the Red Hat Network and obtain newer OS versions or build their own custom golden image. So instead HP is including the OS install CD's as ISO images on a hard disk drive partition. The customer can choose to create install CD's from the ISO images if he prefers. Or he can get them from the Red Hat Network as well.

What value does HP bring to Linux on personal workstations?

- HP has a dedicated Linux R&D team with 20+ years of experience in OS and driver development
- HP provides an engineered solution of Red Hat Linux
- HP provides a single point of support (for warranty and extended software support services)
- HP partners with multiple third-party partnerships to enable the complete Linux workstation solution
- HP engineering provides extensive pre-sales technical support
- HP publishes detailed documents, drivers, and white papers on the support website regarding Linux on HP workstations.

• Why would I choose Linux on HP workstations?

- HP Workstations deliver ROI-based solutions on industry standard platforms.
- HP partners with customers and key technology providers to deliver an HP engineered Linux workstation you can deploy quickly and with confidence.
- HP Workstations offer worry-free deployment through
 - HP worldwide service and support
 - HP accountability and indemnification

HP Workstations offers on-line technical white papers, drivers, and customer advisories enabling customers to support themselves more easily.

Why is HP supporting Linux on workstations?

Some of HP's technical workstation markets and customers rely on the UNIX operating environment, both in their infrastructure and the applications that they use. Linux on personal workstations is a very viable and attractive UNIX alternative. In addition, many OEMs are turning to Linux as a cost effective open source operating system for many different applications. This is especially true in the DCC, EDA, oil and gas, OEM, and some MCAD markets.

Offering HP workstations with Linux is part of HP's overall multi-OS strategy which provides HP-UX, Linux and Windows solutions to customers.

Where can I find (in detail) what workstation hardware is supported by Red Hat Linux?

At http://www.hp.com/support/linux_hardware_matrix is a detailed hardware support matrix that is kept up to date every month with the latest support information for hardware platforms and their components. This matrix will indicate the minimum RHEL update version required for the workstation platform to operate correctly. As well it will indicate what add-in components are supported by RHEL.

Where can I find technical information to guide my installation, configuring, or customizing of my Linux workstation solution?

At http://www.hp.com/support/linux_user_manual under "setup, install, and configure" you will find multiple white papers on Linux configuration tips such as enabling large memory configurations, hyper threading, multi-headed graphics configurations, and release notes for each Red Hat Enterprise Linux Update.

Why is HP enabling the Red Hat distribution?

HP has a strategic corporate relationship with Red Hat resulting in Red Hat solutions across all of HP product lines. As well, Red Hat has a market presence that results in customer demand for this distribution. The ISV's of importance to the Linux workstation market are certified on Red Hat Enterprise Linux as well.

Will Linux distributions other than Red Hat work on HP workstations?

Most likely they will work. However HP warranty support is only available for the Red Hat distribution. In addition HP has reviewed the performance, functionality, and reliability of the Red Hat distribution on the hardware platform and made any required adjustments.

At http://www.hp.com/support/linux_hardware_matrix you can find a detailed hardware support matrix that is kept up to date every month with the latest support information for hardware platforms and their components.

What is HP's Linux strategy in the future?

HP workstations are continually evaluating market trends along with customer requirements to determine solutions that best meet customer needs. HP's corporate strategy is strategic relationships with both Red Hat and Novell/SUSE and many of HP's products offer both Red Hat and SuSE distributions.

What does the future hold for HP and Linux?

HP simplifies the integration of open source and Linux! Our solutions are built with best-of-breed software from our industry leading partners, complemented by HP value-add in areas like management and high availability clustering, implemented on market-leading standards-based platforms, and supported by HP Services worldwide.

Known for its performance, scalability, reliability and low cost, Linux is proving to be the answer for workstation environments that were in the past traditionally a proprietary UNIX infrastructure. Such markets as Digital Content Creation (DCC), oil and gas, EDA, MCAD, and software development areas are adopting and using Linux in their infrastructures.

Why doesn't HP offer a dual boot with Windows and Linux?

HP cannot offer dual boots due to licensing agreements.

What version of Red Hat Linux supports 64-bit?

Red Hat Enterprise Linux WS3 and WS4 (RHEL WS3 and WS4) has both a 32-bit version and a 64-bit version. HP will preinstall the 64-bit version of RHEL WS4 and will also support the 32 and 64-bit versions with a Driver CD in the HP Installer Kit for Linux.

Are there other 64-bit distributions of Linux that will work on the HP Workstations?

It is very likely that other Linux distributions will work. However Red Hat Enterprise Linux is the distribution HP is choosing to do a full engineering evaluation and support for our customers.

Can I run 32-bit apps on a 64-bit Linux OS? How does this work?

Yes, you can run 32-bit apps on 64-bit Linux OS as the runtime support (mainly shared libraries) for the application exists on the system. The Linux convention for having 32-bit libraries and 64-bit libraries on the same OS is to have companion library directories. The 32-bit libraries are in the conventional locations... /lib, /usr/lib, /usr/X11R6/lib, etc whereas 64-bit libraries just append 64 to the directory name such as /lib64, /usr/lib64, and /usr/X11R6/lib64. This also includes 32-bit versions of the graphics libraries which HP has included from the graphics vendors.

What do I do if my 32-bit apps do not run due to missing shared libraries?

You will need to get the library from Red Hat's 32-bit RHEL 3 distribution and put it on your system in the appropriate directory and report the missing library to Red Hat through their Red Hat Network subscription. This will help Red Hat to get the right set of 32-bit libraries needed for most apps in future releases.

Once I have installed the 64-bit version of Linux, what do I have to do to build 64-bit apps?

Simple. Just rebuild from scratch and the compiler will build 64-bit by default. This is true for most apps. However, some apps must be made 64-bit clean which means that the developers must review the code to get rid of any assumptions about 32-bitness, such pointer arithmetic issues. Some makefiles that explicitly declare paths such as /lib, /usr/lib and /usr/X11R6/lib might need to be changed to append "64."

Chassis Design

What's special about the HP Personal Workstations' chassis design?

The HP Personal Workstations are housed in an intelligently designed chassis with tool-less access for servicing, upgrading and maintenance. Both workstations feature a quiet circuitry that allows the fans to run quieter at lower speeds when the system is idle or running low-power applications. Acoustic dampening hard drive rails minimize transmission of vibration from the hard drives into the chassis. This vibration isolation reduces system acoustics while protecting the hard drives from vibrations outside of the system.

The HP xw6400 is housed in one of the industry's smallest mid-range workstations allowing the HP xw6400 to fit under/in financial traders desks, OEM enclosures and in other space constrained environments. The HP xw6400 will support up to 8 monitors.

ISV Certifications

HP has very strong relationships with independent software vendors (ISV's). The software vendors recognize that HP is a critical partner in the industry, not only as a hardware OEM, but as a marketing and support partner. HP, in many cases, has engineering personnel located full-time on site at these software vendors' location providing technical support, application performance tuning, and graphics driver optimization.

ISV certification is a critical aspect of the workstation value proposition. Workstation customers are running very complicated, high-end, technical applications and reliability and stability are an absolute requirement. The entry workstation is targeted at specific technical applications, many of which were listed above. The following table outlines the application certifications that are planned for the HP xw6400 and the xw8400.

Some of the applications listed in the table do not certify hardware, but they are listed as "targeted" applications.

DCC	Applications	HP xw6400	HP xw8400
Adobe	Photoshop		X
Adobe	Premier/After Effects	X	X
Alias	Kaydara		X
Alias	Maya	X	X
Alias	Studio Tools	X	X
Autodesk M&E	3d Studio Max \ combustion \ toxik \ smoke \ MAYA	X	X
Autodesk M&E	Studio Tools	X	X
Avid	DNA Family (Nitris & Adrenaline)	X	
Avid	Xpress Family	X	X
Avid	Pinnacle Steinberg Audio	X	
Avid	Pinnacle Liquid Family	X	
Avid Computer Graphics	XSI	X	X
Canopus	DV Storm 2		X
Canopus	NX	X	
DigiDesign	Pro Tools	X	
eyeon	Digital Fusion	X	
Macromedia Director			X
Matrox	Digisuite apps	X	
Matrox	Infonet TV	X	
Matrox	RT-2500,		X
Matrox	RT.X100,	X	
Media100 844x			X
Pinnacle DV500+, Liquid Chrome			X
Side Effects	Houdini		X
Softimage 3D/XSI	XSI	X	X
US Animation	ToonBoom		X
ViewCast		X	
MCAD/MCAE	Applications	HP xw6400	HP xw8400
Alias Studio			X
Ansys	Ansys	X	X
Autodesk	Autodesk Vault	X	
Autodesk	Autodesk Inventor	X	X

Autodesk	Autodesk Revit	X	
Autodesk	Autodesk AutoCAD	X	X
Bentley	MicroStation	X	
Dassault	CATIA V5	X	X
Dassault	Solidworks	X	X
ICEM	ICEM Surf	X	
MSC	Nastran		X
MSC	Patran	X	X
PTC	ProE	X	X
PTC	ProM	X	
	FreeForm Modeling Plus, FreeForm Concept, PHANTOM Haptic Devices	X	
Sensible			
UGS	NX Nastran	X	
UGS	Solid Edge	X	X

Oil and Gas	Applications	HP xw6400	HP xw8400
Aveva-Cadcenter			X
CMT			X
CMG			X
Dynamic Graphics			X
EDS/T-Surf			X
Landmark	GeoGraphix GeoProbe Legacy		X
ModViz			X
Paradigm			X
Roxar			X
Schlumberger	Petrel GeoFrame/GeoViz	X	X
SMT			X
TGS			X
Voxelvision			X

Public Sector and Geospatial	Applications	HP xw6400	HP xw8400
Ardence	Ardence Secure and others	X	X
ESRI	ArcGIS	X	X
Paragon	ELT5500	X	X
Sensor	RemoteView	X	X

Scientific Research/Life Management Sciences	Applications	HP xw6400	HP xw8400
Accelrys	Cerius and others	X	X
Gaussian	Gaussian	X	X
Lion Biosciences	Scout ? And others	X	X
Tripos	SYBYL and others	X	X

Visualization	Applications	HP xw6400	HP xw8400
CEI	Ensignt v7.6	X	X
RTT RealTime Tech	DeltaGen, DeltaView	X	X
VRGO	VGEO	X	X

Security

What security features are available on the HP xw6400 and xw8400 Workstations?

Security Feature	HP xw6400	HP xw8400
Padlock Support	X (Standard – padlock optional)	X (Standard – padlock optional)
Access Panel Key Lock	X (Standard)	X (Standard)
Chassis Intrusion Sensor	X (Standard)	X (Optional)
Kensington Cable Lock	X (Optional)	X (Optional)
Trusted Platform Module 1.2	X (available Q4, 2006 for Microsoft Windows environments only)	X (available Q4, 2006 for Microsoft Windows environments only)

Manageability

What manageability features are available on HP Personal Workstations *?

HP Client Management Solutions help you simplify management of our workstations and reduce total ownership costs. These integrated solutions are a result of extensive work between HP and its partner, Altiris, a leading provider of manageability solutions. HP Client Manager Software is a free of charge download available with all HP Personal Workstations. It allows you to centrally track, monitor and manage the hardware aspects of HP client systems on your network. Other benefits include:

Ability to get valuable hardware information such as CPU, memory, video and security settings

- Monitor system health to fix problems before they occur
- Install drivers and BIOS updates without visiting each workstation
- Remotely configure BIOS and security settings
- Automate processes to quickly resolve hardware problems
- Local recovery

* Available on Microsoft Windows-based systems.

What is the HP Performance Tuning Framework*?

The HP Performance Tuning Framework is a free, preloaded utility which enables the most favorable configuration of HP Personal Workstations delivering stability and best performance. The Framework will guide your system setup, allowing a "custom" configuration that best matches the workstation to user requirements. This customization facilitates availability of the latest graphics cards and drivers and removes some memory restraints. The Framework's extensible design permits new configuration functionality and application support be easily integrated over time. To facilitate the delivery of such new features, the Framework automatically updates itself when newer versions become available. The Performance Tuning Framework, available only from HP, can help save both time and money and increase overall productivity.

For more information on the HP Performance Tuning Framework, go to:

<http://h20331.www2.hp.com/hpsub/cache/285683-0-0-225-121.html>

* Available without charge on Microsoft Windows-based systems.

Options and Accessories

What options are available on HP Personal Workstations?

For a complete list of all options for HP Workstations, go to: <http://www.hp.com/accessories/workstations>

Warranty and Support

What is the warranty and support for HP Workstations with Windows?

The standard warranty for the HP Personal Workstations is 3-3-3 (3-years parts, 3-years labor and 3-years next business day on-site).

- **What is the warranty and support for HP Workstations with Linux?**

The warranty for HP Workstations with Linux is the standard 3-3-3 with ninety days of OS configuration and installation assistance.

- **Will HP stand behind Linux when I have problems?**

HP is the first place for support. Hardware and software warranties for the workstations with Linux will be the same as that of the Windows workstations. Extended hardware warranties and software support options will also be available for purchase for if you need extended coverage.

Why should you use HP support instead of Red Hat?

HP Linux support services are available on a global basis. HP offers predictable multi-platform expertise providing you with a single vendor who can effectively support Linux and Windows environments. HP has leveraged its proven support processes and extensive UNIX expertise to open source environments. HP offers a full portfolio of Linux services, ranging from phone-in assistance through proactive and mission critical services. In addition, a global education, installation and integration services and multi-vendor network services are available to meet Linux and multi-platform support