

Solutions for the adaptive enterprise.



The HP Integrity server family

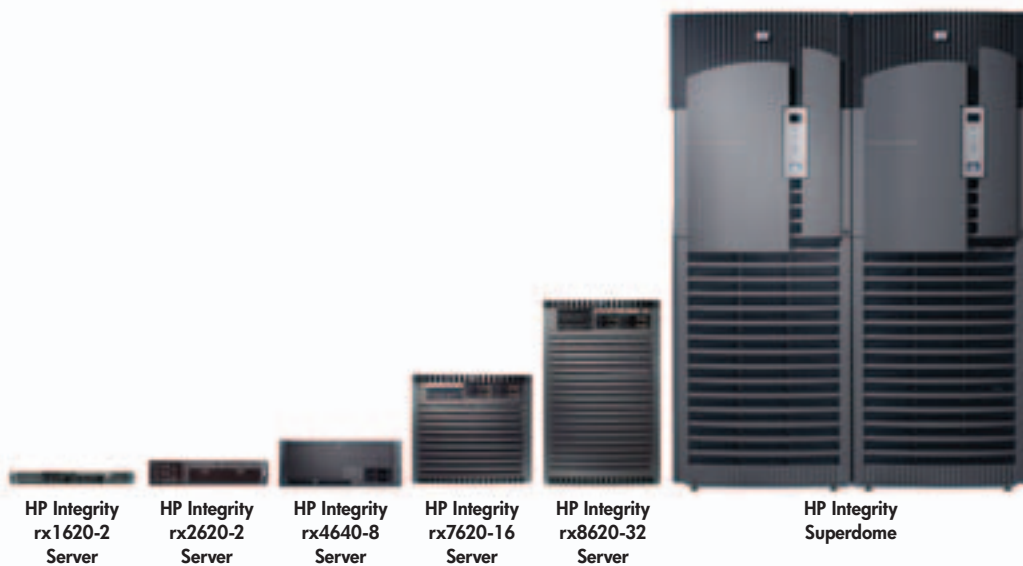
Innovation based on standards

Trust HP Integrity servers for your most demanding workloads

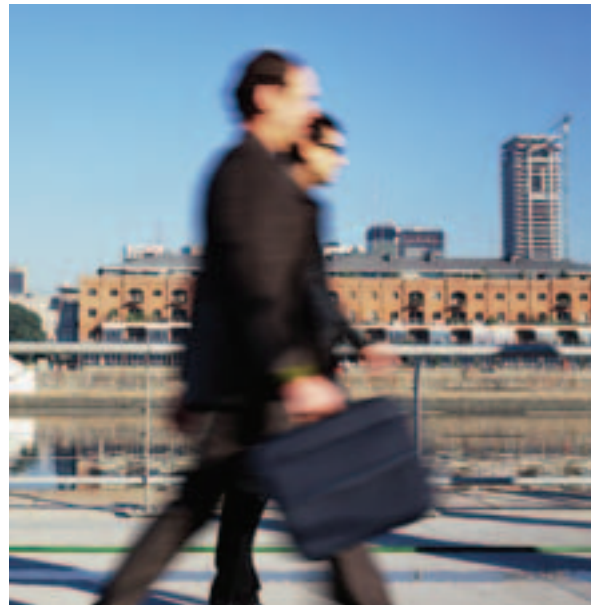
change + hp



The HP Integrity server portfolio—
based on industry-standard Intel®
Itanium® 2 processors—offers
superior choice, focused innovation,
and world-class experience.



change
+
hp



HP Integrity servers help build the foundation for an Adaptive Enterprise, where business and IT are synchronized to capitalize on change.

In a world where business conditions can change in an instant, your IT infrastructure has to be flexible. The success of your enterprise depends on deploying solutions that maximize return, mitigate risk, improve performance, and increase agility. The HP Integrity server family—based on industry-standard, modular building blocks—helps you to achieve those goals by providing simplicity, agility, and value.

HP Integrity servers create a foundation of growth for an Adaptive Enterprise. As the world's broadest industry-standard server portfolio supporting your most demanding business needs, Integrity servers offer you **superior choice**. They're engineered with **focused innovation**, delivering breakthrough value within and beyond the system. And they provide a **world-class experience** in a collaborative approach to designing and building your agile infrastructure, which enables you to embrace change and expand your business.

When you invest in the right systems to form the foundation of your infrastructure, you achieve peace of mind knowing that the value of your investments will grow as your needs grow. HP's server innovation based on standards, and its strong partnerships with industry-leading independent software vendors (ISVs), combine to produce a wide range of solutions that allow you to adapt easily and cost-effectively.

Consider that with Integrity servers, you can run your choice of operating systems instead of being locked in to proprietary solutions—providing outstanding investment protection and lower total cost of ownership (TCO). Our innovative virtualization and management solutions improve resource utilization, simplify your operations and reduce cost. HP also believes in embracing standardized solutions, creating strong partnerships, and offering comprehensive services, consulting, and support. Combined with renowned industry-leading performance and mission-critical reliability, HP Integrity servers are engineered for your most demanding workloads, helping you create a cohesive IT and business environment.

“HP proved its mettle in high-performance enterprise computing by not only providing us with a complete architectural approach but also by delivering an extensive set of world-class services and support.”

Larry Godec, Chief Information Officer,
First American Title Insurance Company

HP Integrity servers = trust

Successful enterprises are able to adjust to internal and external conditions quickly, seamlessly, and cost-effectively. That's why we design HP Integrity servers with industry-standard architectures and built-in modularity so that our systems are built to meet your needs now and in the future. With HP Integrity servers, you can count on having a choice of innovative solutions for a world-class experience that will solve your business needs.

Superior choice

In a world that never stands still, your challenge is to achieve the agility to change and grow with your business. HP Integrity servers provide the performance to match your most demanding workloads, the broadest choice in operating environments to meet your changing business needs, and best-in-class availability for every workload.

In addition to price/performance leadership, the ability of Integrity servers to support the industry's leading operating environments—HP-UX 11i, Linux®, Microsoft® Windows® Server 2003, and OpenVMS—enables you to conduct business on your terms. That means these high-performance platforms offer even more simplicity, agility, and value by helping you deploy new solutions easily and quickly while facilitating the consolidation of demanding workloads across multiple operating environments.

HP Integrity servers also offer outstanding investment protection. As your future business requirements change, you can redeploy Integrity servers to run a different IT solution on a different operating system. Your existing HP 9000 Servers and HP Integrity servers can be easily upgraded to the latest Itanium 2 technologies at your pace over time with in-box upgrades. And, with a lifecycle averaging between 5–10 years, Integrity servers are built to last as well.

Focused innovation

HP and innovation are practically synonymous. HP Integrity servers are engineered with a variety of innovative technologies that provide you with:

- Leading virtualization solutions that pool and share resources so your IT supply automatically meets business demands
- Simplified management tied to your business goals
- Optimized asset utilization so you can do more with less

Integrity server virtualization solutions include the Virtual Server Environment, which can marshal your resources where and when you need them for the most flexible and efficient operation. HP also leverages its vast high-availability solutions experience by adding clustering capabilities into Integrity servers to enhance the Itanium 2 processor's built-in high reliability, availability, and serviceability (RAS) features.

In addition, Integrity servers' innovative system design helps you get even more performance out of the new generation of Itanium 2–based systems. The HP mx2 Dual-Processor Module gives you twice as many Itanium 2 processors that can be deployed in the same chassis for all but entry-level Integrity servers. Developed by HP, the mx2 Dual-Processor Module practically doubles the workload capacity and performance density compared to previous single Itanium 2–based Integrity servers. Also, HP's scalable processor chipsets increase the memory and I/O subsystem scalability of Itanium 2 processors. And with hard partitioning on the cell-board architectures of midrange and high-end Integrity servers, you can mix single Intel Itanium processors alongside the mx2 Dual-Processor Modules in the same chassis.

“BECU is reducing IT costs and complexity with a simpler, more reliable and agile IT infrastructure...HP is committed to BECU’s success, and the ultimate result is a sustained competitive advantage for BECU.”

Scott Wolfe, IT Enterprise Architect, BECU



The superior compute power of HP Integrity servers with the mx2 Dual-Processor Module makes resource management simple and effective through application and server consolidation, leading to greater overall performance and lower costs. Consolidation simplifies system management, frees up resources for business processes rather than IT maintenance, and enables a more streamlined infrastructure that adapts to and handles change quickly and easily. What’s more, consolidation reduces costs in terms of hardware, software licenses, and physical space.

HP has joined with key technology leaders to create innovative, industry-standard solutions to deliver breakthrough value within and beyond the system. Because you’re not locked in to proprietary technologies, you derive the benefits of lowered costs and reduced risk.

World-class experience

Known around the world as a reliable partner dedicated to supporting your growth, HP is committed to rapidly assembling the best solution for your business needs.

HP is your trusted advisor. When you choose HP Integrity servers, you gain the scalable performance, reliability, and peace of mind of a trusted platform. HP’s world-class partnerships enable us to offer a robust portfolio of enterprise applications along with a global network of certified channel partners and solution providers. With more than 65,000 employees worldwide, HP Services provides global consistency, one-stop accountability, complete mission-critical services ranging from consulting to full-fledged IT outsourcing, and a comprehensive range of support offerings. And our range of flexible financing options are designed to help you build the foundation of an Adaptive Enterprise, enabling you to capitalize on change.

Standardization provides a simplified IT environment that increases your business agility and delivers better value

With such a high emphasis being placed on achieving the greatest value from your IT investments, it has never been more important to build an infrastructure that can grow and adapt with your business needs. That’s why HP models its IT solutions based on the principles of standardization.

Standardization is an approach to business and IT—based on modular building blocks, consistent implementation, and the right customization—that enables you to unlock the value of your assets. By adopting an industry-standard approach to people, process, and technology, you build the basis of an Adaptive Enterprise. When you standardize your IT and business processes, you gain a high level of business agility that enables a fast, flexible response to change. Together with our strong industry partnerships, HP can help you deploy standardized solutions and transform changing business need into competitive advantage.

With HP Integrity servers at the core of your standardized infrastructure, you gain the simplicity, agility, and value your enterprise needs to keep its competitive edge.

“By upgrading to the HP Integrity platform and SAP, we are moving to a foundation that will bring us into the future with lower cost of ownership. HP and SAP provide the price/performance and scalability to support continued growth and the flexibility to adapt to ever-changing business requirements.”

Ian Turner, IT Manager,
Saint-Gobain Solaglas

Take advantage of all that HP offers with its Itanium-based platforms

As a comprehensive solutions provider, HP has created an entire ecosystem to suit your specific needs—including mixed-architecture support. Among the many value-adds designed for you to get the most out of your HP Integrity servers are virtualization capabilities, simplified management tools, complete storage offerings, racking solutions, and comprehensive services and support—including flexible financial options that can help you begin to reap the many benefits of HP Integrity servers as quickly as possible.

Virtualization: for optimal resource utilization

Virtualization is an approach to IT that pools and shares your IT resources so utilization is optimized and supply automatically meets demand. This allows you to reduce costs while increasing your business agility. By creating a virtualized environment, your people, business processes, and technology are focused on providing IT service based on business demand. In addition, capacity is allocated dynamically, resources are optimized, and your entire infrastructure is simplified and flexible. By using the innovative server virtualization capabilities that are part of the HP Virtual Server Environment—including partitioning, leadership workload management, and high-availability and utility pricing offerings—you can adapt your system resources dynamically while also maintaining service levels and aligning resources with your business needs and budget.

Management: a simplified approach to increase efficiency

HP Systems Insight Manager and HP OpenView tools offer intelligent management capabilities across the multiple operating systems offered throughout the HP server portfolio, helping you to further reduce costs, minimize complexity, and increase efficiency. HP OpenView software allows you to manage your IT infrastructure and troubleshoot networks with a unified and integrated enterprise-wide management solution for reduced total cost of ownership (TCO).

HP StorageWorks solutions: delivering more for the Adaptive Enterprise

It's not about where information lives, it's about putting information to work, in real time, throughout its lifecycle, in order to unleash the value of information, improve competitiveness, and create new business opportunities. Today, HP StorageWorks helps businesses put information to work with an industry-leading portfolio of network storage solutions that helps customers grow without limits, change without chaos, and simplify without compromise.

HP StorageWorks is also transforming storage with the advent of the StorageWorks Grid—an architecture that will deliver unprecedented capabilities that no other storage vendor can offer and will create new and exciting ways to put information to work. With the HP StorageWorks Grid, organizations can extend their network storage capabilities to unprecedented levels and expand the benefits of Information Lifecycle Management (ILM) and other processes to new levels.

For more information, contact your HP sales representative or visit: www.hp.com/storage

Racking solutions: facilitate your integration and installation

Integrity servers are supported by HP rack infrastructure products and are designed and built to the highest HP quality standards, offering ease of use during integration and installation. The HP Rack System/E comes with enhanced ventilation and fully perforated top, front, and rear doors, eliminating the need for additional fans. You can choose from a wide variety of products to power your rack and protect your data. Integrity servers are available with factory integration into HP Rack System/E.



HP Services: evolve your infrastructure confidently with a partner that stands accountable

HP Services professionals take a collaborative approach to help you reduce IT complexity. We will work with you to design, deploy, integrate, and manage an agile IT infrastructure that can respond to change and more closely align IT with business goals. Drawing from our broad portfolio of global services, we can help you build an Adaptive Enterprise that provides greater business value with reduced risk. You'll realize higher, more predictable service levels and lower total cost of ownership while maximizing the value of your IT investments.

We understand that every IT organization has a mixture of products from a variety of vendors. We can deliver services for your entire IT infrastructure and tailor them to your specific needs. We're trained to support products from more than 1,300 vendors, and our extensive expertise includes multiple operating systems—including UNIX®, OpenVMS, Windows, and Linux—as well as industry-standard platforms and networks. More companies trust HP Services with their mission-critical support than any other organization. Our services include:

- Assessment services that precisely define porting requirements and chart a course for deployment
- Implementation services that install and configure equipment rapidly and reliably
- Education services that provide your staff with the expertise required to achieve optimal system performance

For more information, contact your HP sales representative or visit: www.hp.com/hps/support

HP Financial Services: reduce your costs even further

In addition to having the industry's strongest portfolio of products, services, people, tools, methodologies, and world-class partnerships, HP makes it easy on the balance sheet to put the power of the HP portfolio to work for you through HP Financial Services.

No matter which combination of reliably innovative HP solutions a customer needs, HP Financial Services makes it easier on the customer's budget with financial solutions to help:

- Make the transition from legacy equipment
- Acquire new HP Adaptive Enterprise solutions
- Cost-effectively manage the solution
- Safely dispose of equipment at the end of its lifecycle

Pay per use, a metered utility pricing solution, is available for selected HP Integrity server platforms running the HP-UX or Windows operating systems, giving you the advantage of paying for the capacity as you use it.

For more information, contact your HP sales representative or visit: www.hp.com/go/hpfinancialservices



Integrity servers offer you superior choice, and they are engineered with focused innovation.

HP Integrity servers: more powerful than ever

From the exceptional price/performance of the entry-level Integrity rx1620-2 Server to the top-of-the-line, record-setting HP Integrity Superdome, HP Integrity servers lead the industry in performance, flexibility, and reliability.

HP Integrity rx1620-2 and rx2620-2 Servers: enterprise-grade features at an entry-level price

Featuring up to two Intel Itanium 2 processors, the Integrity rx1620-2 and rx2620-2 Servers provide the industry's best combination of price/performance, ultra-high-density form factor, and low TCO in enterprise HP-UX 11i, Linux, Windows Server 2003, and OpenVMS operating environments. Both servers offer a highly flexible, scalable, affordable entry into Itanium-based solutions, and are ideal for increasing performance and reducing cost and complexity in commercial application areas such as software development, Internet infrastructure, financial services, and Java™ applications. These servers empower technical computing users to perform more simulations and more in-depth analyses, to run complex models faster, and to render high-quality images with greater performance.

The Integrity rx1620-2 Server is designed specifically to reduce power consumption and to fit in the smallest possible physical footprint. The Integrity rx2620-2 Server offers leading price/performance and scalability by utilizing the broadest range of Intel Itanium processors, both low-voltage and high-performance CPUs. Both platforms are ideal for ISVs planning to migrate and develop their applications because of their ability to support multiple operating systems and graphics.

The Integrity rx2620-2 Server offers tremendous growth potential by enabling in-chassis upgrades to future Intel Itanium processors. In addition, the benefits of the Integrity rx1620-2 and the Integrity rx2620-2 Servers can be enhanced further with a clustering solution. Up to 40 Integrity rx1620-2 Servers and up to 20 Integrity rx2620-2 Servers can be clustered in an industry-standard cabinet, providing a densely racked configuration that offers greater efficiency and high availability through consolidation of system resources.

By choosing the HP Integrity rx1620-2 or rx2620-2 Servers now, you are sure of long-term performance gains and seamless upgrades to meet your changing business needs.

“As a mid-sized business, SAI Global wanted advanced technology that would take us into the future, but we also needed to optimize the value of our IT investment. The main benefit of HP Integrity servers...is that this solution supports our growing business and frees up more time to give our users insight into our data to make more informed decisions and react faster to changing market conditions.”
Rohit Dass, Group Director, Information Technology and Telecommunications, SAI Global Limited

HP Integrity rx4640-8 Server: increased business agility with leading entry-class server performance and availability

The HP Integrity rx4640-8 Server extends the performance of entry-class servers, with up to 8 processors and 128 GB of memory. Powered by new Intel Itanium 2 processors, the Integrity rx4640-8 Server is ideal for enterprise resource planning (ERP), customer relationship management (CRM), business intelligence, and e-commerce applications. And with the mx2 Dual-Processor Module, this server can scale to as many as 8 processors without sacrificing the rack-dense (4U) form factor, helping you to reduce costs by conserving expensive data-center space. The power and scalability of the Integrity rx4640-8 Server is further strengthened when used in a high-availability clustering solution, which improves application availability, provides data protection, and reduces planned maintenance time.

With a variety of leading operating environments—including HP-UX 11i, Linux, Windows Server 2003, and OpenVMS—the Integrity rx4640-8 Server brings exceptional flexibility, price/performance, reliability, and availability in a compact, rack-optimized design to meet demanding enterprise-level computing requirements. This server also gives you investment protection with an in-chassis upgrade to the next generation of Intel Itanium 2 processors.

HP Integrity rx7620-16 and rx8620-32 Servers: industry-leading midrange servers with high-end mission-critical performance and capabilities

The Integrity rx7620-16 and rx8620-32 Servers provide enterprises and high-performance computing centers with the flexibility, reliability, and scalability they need from their IT to drive business results. The flexibility and scalability of the Integrity rx7620-16 Server enable the agility and investment protection needed to meet today's commercial and technical computing demands—all while cutting costs. The Integrity rx8620-32 Server, with its outstanding performance and broader partitioning capacity, is an ideal entry into high-end computing.

The Integrity rx7620-16 and rx8620-32 Server models will achieve even higher performance levels across numerous workloads with the new Intel Itanium 2 processors. And with the current HP mx2 Dual-Processor Module, these systems open the door for unprecedented multi-OS consolidation opportunities and outstanding TCO.

Current midrange HP 9000 system customers have opportunities for easy in-chassis upgrades to Itanium 2 processors to enjoy the numerous benefits of Integrity rx7620-16 and rx8620-32 Servers. Both models provide tremendous investment protection with in-chassis upgradability to future high-performance Itanium processors. They also offer the broadest choices of operating systems, including HP-UX 11i, Linux, Windows Server 2003, and, by 1H 2006, OpenVMS—as well as partitioning capabilities to increase utilization, return on IT investment, and uptime.

Overall, these two models provide a level of performance, agility, functionality, and value unmatched in their class.



HP Integrity Superdome: unrivaled performance, flexibility, and reliability

The HP Integrity Superdome is a high-end enterprise computing solution that continues to demonstrate its leading performance, operating system flexibility, and simplified management architecture, as well as best-in-class solution deployment. The Integrity Superdome has set numerous world-record benchmark results. By supporting the next-generation Intel Itanium 2 processor, the Integrity Superdome now provides up to 25% performance improvement over previous models. You have the performance you need to dramatically improve your response times and to complete mission-critical tasks—such as shorter queries or simulations.

With the mx2 Dual-Processor Module making 128-way configurations possible, the Integrity Superdome delivers leading performance density and provides an ideal platform to reduce complexity through enhanced server consolidation. The Integrity Superdome is ideally suited to heterogeneous environments, further driving down your TCO. It offers high-end multi-OS capability, allowing you to run all of the leading operating systems—HP-UX 11i, Linux, Windows Server 2003, and, by 1H 2006, OpenVMS—on the same system, even simultaneously in a consolidated environment with hard partitioning. Flexibility is enhanced even further with the option to turn on extra computing based on needs, using Pay per use utility pricing—enabling you to optimize Integrity Superdome utilization for growth or peak demands, instead of having unused capacity.

With in-chassis processor upgrades for existing PA-RISC processor-based HP 9000 Superdome Servers, HP offers unmatched investment protection. The Integrity Superdome delivers a significant performance increase over the existing PA-8700+ servers, plus it offers 1 terabyte of memory capacity for running larger enterprise applications.

HP Services delivers an end-to-end solution that offers consistent quality and service levels for the Integrity Superdome. The integrated solution is tailored to meet customers' unique business needs and helps transition the new Integrity Superdome in a more timely and efficient manner to achieve operational readiness. Plus, the new Microsoft Business Critical services provide the necessary support to assist in the transition to Integrity Superdome.

Whether it's for ERP, database hosting, telecom billing, HR, financial applications, data warehousing, high-performance computing, or any type of mission-critical enterprise application, the HP Integrity Superdome is a proven solution for the Adaptive Enterprise.

For more information

For more information on Integrity servers, contact your HP sales representative or visit:

www.hp.com/go/integrity

HP Integrity server family at a glance (entry-level servers)

	HP Integrity rx1620-2 Server	HP Integrity rx2620-2 Server	HP Integrity rx4640-8 Server
CPUs supported (frequency/cache)	Intel Itanium 2 processor: 1.6 GHz/3 MB 1.3 GHz/3 MB	Intel Itanium 2 processor: 1.6 GHz/6 MB 1.6 GHz/3 MB 1.3 GHz/3 MB	Intel Itanium 2 processor: 1.6 GHz/9 MB 1.6 GHz/6 MB 1.5 GHz/4 MB HP mx2 Dual-Processor Module
Number of processors	1–2	1–2	1–8
Scalable processor chipset	zx1	zx1	zx1
Operating systems supported	HP-UX 11i v2 Microsoft Windows Server 2003, Enterprise Edition for 64-bit Itanium-based systems Red Hat Enterprise Linux AS 3 SUSE LINUX Enterprise Server 9 OpenVMS v8.2	HP-UX 11i v2 Microsoft Windows Server 2003, Enterprise Edition for 64-bit Itanium-based systems Red Hat Enterprise Linux AS 3 SUSE LINUX Enterprise Server 9 OpenVMS v8.2	HP-UX 11i v2 Microsoft Windows Server 2003, Enterprise Edition for 64-bit Itanium-based systems Red Hat Enterprise Linux AS 3* SUSE LINUX Enterprise Server 9* OpenVMS v8.2
Maximum memory	16 GB	24 GB (32 GB in 2005)	128 GB
I/O slots	2	4	6
Internal hard disk drives	2	3	2
Manageability	HP Systems Insight Manager	HP Systems Insight Manager	HP Systems Insight Manager
EIA unit height	1	2	4

HP Integrity server family at a glance (midrange and high-end servers)

	HP Integrity rx7620-16 Server	HP Integrity rx8620-32 Server	HP Integrity Superdome
CPUs supported (frequency/cache)	Intel Itanium 2 processor: 1.6 GHz/6 MB 1.5 GHz/4 MB HP mx2 Dual-Processor Module	Intel Itanium 2 processor: 1.6 GHz/6 MB 1.5 GHz/4 MB HP mx2 Dual-Processor Module	Intel Itanium 2 processor: 1.6 GHz/9 MB 1.5 GHz/6 MB HP mx2 Dual-Processor Module
Number of processors	2–16	2–32	2–128
Scalable processor chipset	sx1000	sx1000	sx1000
Operating systems supported	HP-UX 11i v2 Microsoft Windows Server 2003, Enterprise Edition for 64-bit Itanium-based systems Microsoft Windows Server 2003, Datacenter Edition for 64-bit Itanium-based systems Red Hat Enterprise Linux AS 3* SUSE LINUX Enterprise Server 9* OpenVMS (1H 2006)	HP-UX 11i v2 Microsoft Windows Server 2003, Enterprise Edition for 64-bit Itanium-based systems Microsoft Windows Server 2003, Datacenter Edition for 64-bit Itanium-based systems Red Hat Enterprise Linux AS 3* SUSE LINUX Enterprise Server 9* OpenVMS (1H 2006)	HP-UX 11i v2 Microsoft Windows Server 2003, Datacenter Edition for 64-bit Itanium-based systems Red Hat Enterprise Linux AS 3* SUSE LINUX Enterprise Server 9* OpenVMS (1H 2006)
Maximum memory	128 GB	256 GB	1 TB
I/O slots	15	16 (32 with SEU**)	192 (with I/O expansion)
Internal hard disk drives	4	4 (8 with SEU**)	N/A
nPartitions	1–2	1–2 (1–4 with SEU**)	1–16
Manageability	HP Systems Insight Manager	HP Systems Insight Manager	HP Systems Insight Manager
EIA unit height	10	17 (26 with SEU**)	N/A

* Linux is supported on single Intel Itanium 2 processors. There are no current plans to support Linux on the HP mx2 Dual-Processor Module.

** SEU = Server Expansion Unit

To learn more, visit www.hp.com/go/integrity

© 2004 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Itanium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Java is a U.S. trademark of Sun Microsystems, Inc. Linux is a U.S. registered trademark of Linus Torvalds. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. UNIX is a registered trademark of The Open Group.

Financing available through Hewlett-Packard Financial Services Company or one of its affiliates is subject to credit approval and execution of standard HP Financial Services documentation. Other restrictions may apply. HP Financial Services reserves the right to change or cancel this program at any time without notice.

5983-0162ENN, 12/2004

