

Microsoft® Windows® Server 2003 for 64-bit Itanium®-based systems



Microsoft Windows Server 2003, combined with HP Integrity Servers and services from HP and HP partners, provides choices that help you build an adaptive enterprise, enabling you to demand more—more accountability, more agility, and a better return on IT.

Microsoft Windows Server 2003 is the next-generation Windows operating system that takes the best of Windows Server 2000 technology and makes it easier to deploy, manage, and use. It includes all the functionality you expect from a mission-critical Windows server operating system and improves upon it—by enabling

your organization to experience the benefits of Microsoft software for connecting information, people, systems, and devices. Windows Server 2003 is the first full-release 64-bit version of Windows Server specifically for Itanium®-based servers.

The major new enhancements in Windows Server 2003 include:

- Dramatically improved scalability means support for up to 64 processors and 512 GB of memory in systems such as the Itanium 2-based HP Integrity Superdome server.
- Active directory enhancements allow drag-and-drop directory tree editing, multi-object selection, the ability to rename domains, and the ability to save and reuse queries.
- The Group Policy Management Console makes it much easier to view and manage group policy, saving time, training cost, and errors.
- The new resultant set of policy tools allows administrators to see the effect of group policy changes, making it easier to plan, monitor, and troubleshoot group policy.
- The Volume Shadow Copy/Restore service lets administrators configure point-in-time backup of critical data volumes without interrupting service. Shadow Copy also supports open file backup, permitting applications to continue running while backup is in progress.
- The re-architected Internet Information Services (IIS) 6.0 provides improved performance, scalability, and security over that of Windows 2000.
- Up to 8-node clustering provides enhanced reliability—if one of the nodes in the cluster becomes unavailable, another node begins providing service.
- Non-Uniform Memory Access (NUMA) architecture enhancements improve performance for systems such as the HP Integrity Superdome server.
- Secure Wireless LAN (802.1X) enhancements improve privacy and security over that provided by Windows 2000.
- Headless Server Support and Command Line Management extensions enable administration from a command line console or scripts, improving flexibility and productivity.

Two 64-bit editions to choose from

- **Datacenter Edition** for Itanium-based systems is designed for businesses that demand the highest levels of scalability, availability, and reliability. It's the platform for mission-critical databases, enterprise resource planning, high-volume real-time transaction processing, and server consolidation. It supports from 8 to 64 processors and up to 512 GB of memory on Itanium 2-based servers.
- **Enterprise Edition** for Itanium-based systems is the Microsoft recommended operating system for servers running applications such as networking, messaging, inventory and customer service systems, databases, and e-commerce Web sites in medium and large enterprises. It supports up to 8 processors and 64 GB of memory on Itanium 2-based servers.

Inside Microsoft Windows Server 2003

Dependable

Windows Server 2003 is the fastest, most reliable, most secure Windows server operating system ever.

- **Availability**—The Windows Server 2003 family provides improved availability through enhanced clustering support. Clustering installation and setup is easier and more robust, while enhanced network features provide greater failover capabilities and high system uptime. The Windows Server 2003 family supports clusters of up to eight nodes as well as network load balancing (NLB), which balances incoming Internet Protocol (IP) traffic across nodes in a cluster.

- **Scalability**—The Windows Server 2003 family provides scalability through scale-up, enabled by symmetric multiprocessing (SMP), and scale-out, enabled by clustering. Compared to Windows 2000 Server, Windows Server 2003 delivers better performance in the file system, Microsoft Active Directory service, Web server, and Terminal Server components. Windows Server 2003 scales up to 64 processors on Itanium 2-based servers from HP.

- **Reliability**—The Windows Server 2003 Editions for 64-bit Itanium-based systems support Machine Check Architecture (MCA). Intel® Itanium processors offer improved reliability through MCA, which allows the processor, chipset, firmware, and operating system to cooperate interactively.

- **Security**—Microsoft has intensely reviewed the Windows Server 2003 family to identify possible points of failure and exploitable weaknesses. Windows Server 2003 provides many important new security features and improvements, including:

- **Internet Information Services 6.0**—Internet Information Services (IIS) 6.0 is configured for maximum security out of the box—its default installation is “locked down.” IIS 6.0 and Windows Server 2003 provide the most dependable and integrated Web server solution with fault tolerance, request queuing, application health monitoring, automatic application recycling, caching, and more.

- **System Security Improvements**—In Windows Server 2003 the Secure Sockets Layer (SSL) session cache can be shared by multiple processes. Performance improvement can increase over 35 percent when using the SSL. Buffer checking capability in Microsoft Visual Studio helps prevent hackers from using buffer overruns to exploit a system.

Windows Server 2003 is the fastest, most reliable, most secure Windows server operating system ever, enabling you to deploy, manage, and use your network infrastructure for maximum productivity.

Productive

Windows Server 2003 provides the tools that enable you to deploy, manage, and use your network infrastructure for maximum productivity. These tools help match your design and deployment to your organizational needs, allowing you to manage your network proactively by enforcing policy, automating tasks, and simplifying updates. Some of the enhancements in Windows Server 2003 that improve productivity include:

- **File and print services**—Automated System Recovery (ASR) provides one-step restoration of the operating system, system state, and hardware configuration in disaster recovery situations. The Shadow Copy feature allows users to quickly restore their own accidentally deleted files without having to call the IT department. The Print Cluster feature makes print server administration easy by automatically replicating updates to a single print server across all servers in the virtual cluster.
- **Active Directory**—The Active Directory service provides single-logon capability and a central repository for information for your entire infrastructure, vastly simplifying user and computer management and providing superior access to networked resources. Active Directory allows you greater flexibility to design, deploy, and manage your organization's directory. These tools bring drag-and-drop capabilities, multi-object selection, and the ability to save and re-use queries, saving you time and errors.
- **Management services**—Windows Server 2003 contains several important new automated management tools, including Microsoft Software Update Services (SUS) and server configuration wizards to help automate deployment. Managing group policy is easier with the new Group Policy Management Console (GPMC), enabling more organizations to utilize the Active Directory service and take advantage of its powerful management features.
- **Storage management**—Windows Server 2003 introduces new and enhanced features for storage management, making it easier to manage and maintain disks, back up and restore data, and connect to storage area networks (SANs). The Volume Shadow Copy service facilitates point-in-time backup with little overhead and supports open file backup, so applications can continue running while backup is in progress.
- **Terminal Services**—The Terminal Services component of Microsoft Windows Server 2003 lets you deliver Windows-based applications, or the Windows desktop itself, to virtually any computing device—including those that cannot run Windows.

A perfect fit with the Microsoft .NET initiative

Windows Server 2003 provides the infrastructure and application development platform to take full advantage of the emerging interconnected world of XML Web services.

With Windows Server 2003, there will be no need to download or deploy additional software. As the foundation for deploying, managing, and orchestrating XML Web services, Windows Server 2003 provides a singular, all-important benefit: the ability to significantly reduce the time it takes to develop products and bring them to market.

And with the powerful combination of 64-bit Windows for Itanium-based systems and HP Integrity Servers, HP and Microsoft enable Windows throughout the data center for enterprise customers.

Connected

Windows Server 2003 helps you create the business solutions infrastructure to better connect employees, partners, systems, and customers. An integrated Web server and streaming media server help you quickly and securely create dynamic Web sites. An integrated application server helps you easily develop, deploy, and manage XML Web services. And new tools allow you to connect XML Web services to internal applications, suppliers, and partners. Enhancements in Windows Server 2003 include:

- **XML Web Services**—IIS 6.0 is an important component of the Windows Server 2003 family. It features significant architectural improvements over previous versions, including a new process model that greatly improves reliability, scalability, and performance. Security is increased because the system administrator enables or disables system features based on application requirements. In addition, direct editing support of the XML metabase improves management.
- **Networking and communications**—Microsoft has built significant networking enhancements into Windows Server 2003, including Internet Protocol version 6 (IPv6), Point-to-Point Protocol over Ethernet (PPoE), and Internet Protocol Security (IPSec) over network address translation (NAT).
- **Enterprise UDDI services**—This dynamic and flexible infrastructure for XML Web services enables companies to run their own universal description, discovery, and integration (UDDI) service for intranet or extranet use. It allows developers to easily find and re-use Web services within the organization and helps IT administrators catalog and manage programmable resources in their network. With Enterprise UDDI services, companies can build and deploy smarter, more reliable applications.

Best economics

Windows Server 2003, combined with products and services from HP and HP partners, provides choices that help you get the greatest return on your infrastructure investments.

With industry-standard technology providing the most cost-effective hardware platform, Itanium-based platforms are—on their own—a considerable economic incentive to adopt Windows Server 2003. But that is only the beginning of the story. What makes Windows Server 2003 such a cost-effective choice is the fact that so many essential services and components are included in the overall package. This allows organizations to quickly benefit from an integrated platform that is easy to deploy, manage, and use.

When you adopt Windows Server 2003, you become part of the global network that has helped make the Windows platform so productive. This network provides the following benefits:

- **Certified solutions**—Windows software has the largest number of independent software vendors (ISVs) worldwide. These ISVs support Microsoft applications and build certified custom applications on Windows, leading to more cost-effective solutions to your business problems.
- **Best hardware options**—HP provides the most complete line of industry-standard servers for Windows-based solutions—from uniprocessor 32-bit blade servers through 64-processor Itanium-based enterprise servers—to meet your full range of computing requirements.

System requirements

Configuration parameter	Enterprise Edition	Datacenter Edition
Minimum recommended CPU speed	733 MHz	1.5 GHz
Minimum recommended RAM/CPU	512 MB	1 GB
Maximum RAM supported per server	64 GB	512 GB
Multiprocessor support	Up to 8 processors	Up to 64 processors
Disk space for setup	2 GB	2 GB
Cluster capability	8-node	8-node

- **Worldwide services**—HP Services has the largest and most experienced Microsoft-trained workforce in the industry, focused on building and supporting Windows-based solutions in over 160 countries around the world.
- **Training options**—Microsoft and HP offer a wide range of IT training delivered directly and through channel partners, so IT staff can continue developing their skills at a reasonable cost.
- HP and Microsoft executives, engineers, and sales and service teams have worked side-by-side to develop, implement, and support solutions that meet customers' business objectives.
- From the beginning, Microsoft and HP have shared technology and engineering resources to develop and advance the Windows® 95/98, Windows NT®, and Windows 2000 operating systems; Exchange 2000; Datacenter Server; the complete suite of .NET Enterprise Servers; the new SQL Server 2000 Enterprise Edition (64-bit); and the new Windows Server 2003 operating system family.

HP is your best partner for Windows Server 2003 solutions.

Trust

- Collaboration between HP and Microsoft is a benchmark in the IT industry with over twenty years of successful engagements. The Frontline Partnership (the moniker for the relationship between the two industry leaders) is dedicated to developing and delivering industry-standard information technology in both core businesses and new strategic markets.
- HP and Microsoft combine their respective strengths to bring customers integrated technology solutions that install easily, perform reliably, and deliver world-class service on demand.

Product leadership

- Itanium 2-based HP Integrity Servers are used at Microsoft as the primary 64-bit development platform for Microsoft operating systems and applications. In addition, joint development, testing, and support by HP and Microsoft ensure HP Integrity Servers are the best performing and most reliable platform for Microsoft operating systems and applications.
- The complete roadmap of Itanium-based HP Integrity Servers, software, storage, and solution tools is founded on industry-defining technologies based on unifying industry standards. This model enables HP to extend enterprise-class capabilities more quickly and cost-effectively to a broader segment of customers.

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Infrastructure for the Adaptive Enterprise

- Both HP and Microsoft are committed to increasing agility in your business by providing technologies that intelligently and flexibly adapt to the changing demands of your users, customers, and markets. This requires technologies that ensure continuous uptime, improve management of complex environments, automate time and resource-intensive tasks, and dynamically allocate resources on demand. These core capabilities are at the heart of HP's vision for the Adaptive Enterprise.
- HP delivers these capabilities through technologies ranging from components embedded in every server and storage resource to management software and solution tools. ProLiant and Integrity servers implement the Adaptive Enterprise design principles across the portfolio.

Confidence

- HP offers unmatched services and support for Windows Server 2003-based solutions.
- HP is the only Microsoft-designated worldwide prime integrator for Microsoft technologies, including .NET solutions. With over 23,000 service professionals trained on Microsoft technologies—including 5,000 with MCSE/MCSD certification—HP has more resources than any other solutions provider.
- HP recently embarked with Microsoft on a \$50M+ joint venture to train thousands more consultants and sales personnel in selling and delivering services based on Microsoft technologies.

For more information

If you'd like more information about Windows Server 2003 for 64-bit Itanium-based systems, contact your local HP sales representative or visit www.microsoft.com/windowsserver2003/default.msp

If you'd like to find out which HP servers have been certified for Windows Server 2003, visit www.microsoft.com/hwdq/hcl/search.asp

If you'd like more information about HP Integrity Servers, contact your local HP sales representative or visit www.hp.com/go/itanium

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