



The Windows Server 2003 family comes out with the best of Windows 2000 Server technology and makes it easier to deploy, manage, and use.

Improvements to Windows 2000

Windows Server 2003 includes all the functionality customers need today from a Windows server operating system to do more with less, such as security, reliability, availability, and scalability. In addition, Microsoft has improved and extended the Windows server operating systems to incorporate the benefits of Microsoft .NET for connecting information, people, systems, and devices.

Dependable

Windows Server 2003 has the availability, scalability, and security that make it a highly dependable platform.

Availability: The Win Server 2003 family provides improved availability through enhanced clustering support. It also supports network load balancing (NLB), which balances incoming Internet Protocol (IP) traffic across nodes in a cluster.

Scalability: The Win Server 2003 family provides scalability through scale-up, enabled by symmetric multiprocessing (SMP), and scale-out, enabled by clustering. Internal tests indicate that compared to Win2K Server, Win Server 2003 delivers up to 140 % better performance.

Security: Increased system security is now more critical than ever before. Win Server 2003 provides many important new security features & improvements including:

✍ **The common language runtime.** It reduces the number of bugs and security holes caused by common programming mistakes. As a result, there is less vulnerability for attackers to exploit.

✍ **Internet Information Services 6.0.** To increase Web server security, IIS 6.0 is configured for maximum security out of the box. IIS 6.0 and Windows Server 2003 provide the most dependable, productive, connected, and integrated Web server solution with fault tolerance, requesting queuing, application health monitoring, automatic application recycling, caching, and more.

Productive

File and print services: The Windows Server 2003 family delivers intelligent file and print services with increased performance and functionality, allowing you to reduce TCO.

Active Directory: Windows Server 2003 brings many improvements to Active Directory, making it more versatile, dependable, and economical to use. In Windows Server 2003, Active Directory provides increased performance and scalability.

Management services: Windows Server 2003 contains several important automated management tools, including Software Update Services (SUS) and server configuration wizards. Managing Group Policy is made easier with the new Group Policy Management Console (GPMC). In addition, command-line tools let administrators perform most tasks from the command console. GPMC is available as a separate component.

Storage management: Windows Server 2003 introduces new and enhanced features for storage management, making it easier and more reliable to manage and maintain disks and volumes, backup and restore data, and connect to storage area networks (SANs).

Terminal Services: Terminal Services let you deliver Windows-based applications, or the Windows desktop itself, to virtually any computing device—including those that cannot run Windows.

Stay Connected Windows Server 2003 contains new features and improvements to make sure your organization and users stay connected:

XML Web Services: Significant improvements in IIS include a new process model that greatly improves reliability, scalability, & performance. IIS is installed by default in a locked-down state.

Enterprise UDDI services: UDDI (Universal Description, Discovery, and Integration) services is a dynamic and flexible infrastructure for XML Web Services. This standards-based solution enables companies to run their own internal UDDI service for intranet or extranet use.

Windows Media Services: These services are part of the next version of the Microsoft Windows Media technologies platform that also includes a new Windows Media Player, Media Encoder, audio / video codecs, Windows Media Software Dev. Kit.

The 4 Products of Windows Server 2003 **Windows Server 2003, Standard Edition**

✍ This flexible server is the ideal choice for small businesses and departmental use.

- ✍ Internet Authentication Service (IAS)
- ✍ Internet Connection Sharing (ICS).
- ✍ Offers secure Internet connectivity.
- ✍ Allows centralized desktop application deployment.
- ✍ 4-way symmetric multiprocessing (SMP).
- ✍ 4 gigabytes (GB) of RAM.

Windows Server 2003, Enterprise Edition

- ✍ Designed for medium to large businesses
- ✍ It is the platform of choice for applications, Web services, and infrastructure, delivering high reliability, performance & superior business value.
- ✍ Is a full-function server operating system that supports up to 8 CPUs.
- ✍ Eight-node clustering and support for up to 32 GB of memory.
- ✍ Is available for Intel Itanium-based computers.
- ✍ 64-bit Version supports upto 64GB of RAM
- ✍ Includes Windows System Resource Manager to facilitate consolidation and system management

Windows Server 2003, Datacenter Edition

It is built for business-critical and mission-critical applications that demand the highest levels of reliability, availability, and scalability.

Supports up to 32-way SMP and 64 GB of RAM with the 32-bit version.

Supports up to 64-way SMP and 512 GB of RAM with the 64-bit version.

Provides both eight-node clustering and load balancing services as standard features.

A critical and exclusive component of the high-end server offering is the Datacenter High Availability Program of support and services.

Windows Server 2003, Web Edition

Designed for building and hosting Web applications, Web pages, and XML Web services

Is designed to be used primarily as an IIS 6.0 Web server.

Supports 2-way SMP and 2GB of RAM

Provides a platform for rapidly developing and deploying XML Web services & applications that use ASP.NET technology, a key part of the .NET Framework.

Cannot become a Domain Controller in a Domain

Key Features

Expanded physical memory space: On 32-bit Intel platforms, Datacenter Edition, supports Physical Address Extension (PAE), which extends system memory capability to 64 GB of physical RAM. On 64-bit Intel platforms, memory support increases to an architectural maximum of 16 terabytes. The max memory supported by Datacenter Edition, on 64-bit Intel platforms, is 512 GB.

Intel Hyper-Threading support: Intel Hyper-Threading Technology allows a single physical processor to execute multiple threads (instruction streams) simultaneously, potentially providing greater throughput and improved performance.

Non-Uniform Memory Access (NUMA) support: System firmware can create a table called the Static Resource Affinity Table that describes the NUMA topology of the system. Win Server 2003, Datacenter Edition, uses this table to improve the efficiency of the operating system by applying NUMA awareness to application processes, default affinity settings, thread scheduling, & memory management.

Cluster service: Server clusters provide high availability and disaster tolerance for mission-critical database management, file sharing, intranet data sharing, messaging, and general business applications.

With Datacenter Edition and Enterprise Edition, cluster service size has increased to eight-node clusters. This provides increased flexibility for adding and removing hardware in a geographically dispersed cluster environment, as well as providing improved scaling options for applications. Windows Server 2003, Datacenter Edition, also allows server clusters to be deployed in a variety of different configurations, in particular:

Single cluster configurations with dedicated storage.

Multiple clusters on a SAN—potentially with other Windows servers or operating systems.

64-bit support: Windows Server 2003, Datacenter Edition, is available in both 32-bit and 64-bit versions. The 64-bit version is optimized for intensive memory or computational tasks, such as mechanical design, computer-aided design (CAD), professional graphics, high-end database systems, and scientific applications. The 64-bit version includes support for Itanium-based processors.

Multiprocessor support: The 32-bit product version supports systems with up to 32-way SMP, and the 64-bit version supports up to 64-way SMP. To support more than 32 processors, the 64-bit version is required. For support of 128-processor systems, Microsoft offers a 128-way version of Win Server 2003, Datacenter Edition. However, the largest partition supported is 64 processors.

Direct access for SANs with Windows Sockets: Windows Sockets applications that use TCP/IP can now

obtain the performance benefits of SANs without making application modifications. The fundamental component of this technology is a Windows Sockets layered service provider that emulates TCP/IP semantics over native SAN service providers.

Terminal Services Session Directory is a load balancing feature that allows users to easily reconnect to a disconnected session on a server farm running Terminal Services. Session Directory is compatible with the Win Server 2003 load balancing service, and is supported by third-party, external load balancer products.

Windows System Resource Manager: In Enterprise Edition & Datacenter Edition, the Windows System Resource Manager (WSRM) feature enables an administrator to allocate CPU and memory utilization on a per-application basis. This is a useful tool for server consolidation.

Hot Add Memory: Hot Add Memory allows ranges of memory to be added to a computer and made available to the operating system and applications as part of the normal memory pool. No rebooting and no downtime are required. This feature currently operates only on servers that have hardware support for adding memory while the server is operating. For these servers, the act of installing memory automatically invokes the Hot Add Memory feature in Windows Server 2003 Enterprise edition and Datacenter Edition.

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