Enterprise Solutions

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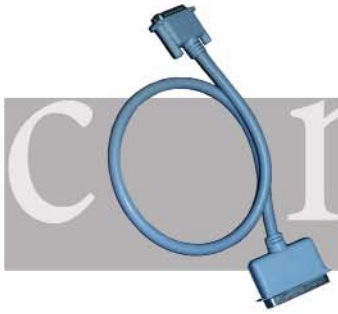
From Microsoft and Trend Micro



connection

collaboration

integration

Contents

Microsoft and Trend Micro Incorporated have long enjoyed a close relationship over the years. During the past year, Microsoft and Trend Micro have collaborated to create a great application experience on Windows Server™ 2003. Not only are Trend Micro's flagship applications ready to run on and support Windows Server 2003, they can also provide customers great assurance by meeting the rigorous standards of Microsoft's "Certified for Windows®" program.

Microsoft's "Certified for Windows" program is designed to provide high levels of availability, reliability, security, and supportability on Windows Server platforms. In order to meet these high standards, Microsoft and participating ISVs work closely so that key applications can meet these certification criteria. The final validation is delivered through VeriTest, a third-party independent testing company who performs the actual testing based on Microsoft's specifications. Customers will soon find Trend Micro™ ServerProtect™ on the certified application list.

Microsoft and Trend Micro invite you to discover how we can create a better business environment and solution through Trend Micro ServerProtect running on Windows Server 2003.

David Rowe
Executive Vice President, Marketing
Trend Micro, Incorporated

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Microsoft Server Products Provide Reliable, Scalable Platforms for Mission-Critical Applications

Windows Server 2003 is designed to help customers do more with less. It builds on the strengths of the Windows 2000 Server Family to take application and hardware performance to new heights.

With Windows Server 2003 you receive:

- The most secure Windows Server release yet
- Scalability extending to 64 processors
- Overall enhancements in reliability, availability, and manageability

With Windows Server 2003, customers receive a Windows server environment that supports up to 64 processors and 512 GB of RAM on IA64 platforms (the 64-bit technology is offered on Windows Server 2003 Enterprise and Datacenter Editions), and 32 processors and 64 GB of RAM on IA32 platforms. The Windows Server 2003 family is comprised of the following four SKUs: Web, Standard, Enterprise, and Datacenter Editions.

Microsoft Windows Server 2003 Family

Windows Server 2003, Standard Edition Windows Server 2003 Standard Edition is the reliable network operating system that delivers business solutions quickly and easily. This flexible server is the ideal choice for small businesses and departmental use.	• Supports file and printer sharing. • Supports secure Internet connectivity. • Allows centralized desktop application deployment.
Windows Server 2003,Enterprise Edition Windows Server 2003 Enterprise Edition is built for the general-purpose needs of businesses of all sizes. It is the platform of choice for applications, Web services, and infrastructure, delivering high reliability, performance, and superior business value.	• Is a full-function server operating system that supports up to 8 processors. • Provides enterprise-class features such as 8-node clustering and support for up to 32 GB of memory. • Is available for Intel Itanium-based computers. • Will be available for 64-bit computing platforms capable of supporting 8 processors and 64 GB of RAM.
Windows Server 2003, Datacenter Edition Windows Server 2003 Datacenter Edition is built for business-critical and missioncritical applications that demand the highest levels of scalability and availability.	• Is the most powerful and functional server operating system Microsoft has ever offered. • Supports up to 32-way SMP and 64 GB of RAM. • Provides both 8-node clustering and load balancing services as standard features. • Is available for 64-bit computing platforms capable of supporting 64 processors and 512 GB of RAM.
Windows Server 2003, Web Edition A new product within the Windows operating systems, Windows Server 2003 Web Edition is provided for both Web serving and hosting.	• Is provided 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. • Provides a platform for rapidly developing and deploying XML Web services and applications that use ASP.NET technology, a key part of the .NET Framework. • Is easy to deploy and manage.

Security

Microsoft has invested heavily in the Secure Windows Initiative with the goal of delivering systems that are secure by design, default, and deployment. In addition, Windows Server 2003 is the first Windows operating system to ship under the Trustworthy Computing initiative (launched by Bill Gates in January 2002) which is based on four pillars: security, privacy, reliability, and business integrity.

Secure by Design

The improved security of Windows Server 2003 reflects Microsoft's $200 million investment in 2003 to reduce code vulnerabilities in its platform, modify the development process, and improve accountability at every level for security. Focusing on security improvements, Windows Server 2003 includes a redesigned IIS, strong authentication protocols such as 802.1x and PEAP, and common language runtime (CLR) to create a safer computing environment.

Secure by Default

To secure Windows Server 2003 by default, the attack surface area was reduced by creating stronger default policies (e.g., file system Access Control Lists); redesigning IIS; and reducing the total number of services, reducing the number of services running by default, and reducing the number of services running as System.

Secure in Deployment

In addition to the more secure architecture design and added security features in Windows Server 2003, Microsoft offers its customers tools, prescriptive guidance, training, and services to help them deploy a secure, connected infrastructure.

Tools

- **Software Restriction Policy** (SRP) is a new feature in Windows Server 2003 and Windows XP that gives administrators a policy-driven mechanism to identify software running in their domain and control its ability to execute.
- **Security Configuration Editor** (SCE) is designed to help businesses secure Windows systems operating in various roles and deployment scenarios, such as a Web server that is connected both to the Internet and to a secure internal network. The goal of SCE is to help customers maximize the security of such systems without sacrificing functionality.
- **Microsoft Audit Collection Services** (MACS) is a tool used to monitor and audit systems. MACS collects security events in a compressed, signed, encrypted manner and loads them into a SQL database for analysis.

Internet Information Services (IIS) 6.0

One of the key highlights of the security enhancements in Windows Server 2003 is the complete redesign of IIS 6.0. This powerful Web service is available in all versions of Windows Server 2003. It helps to provide a highly reliable, manageable, scalable, and secure Web application infrastructure. IIS 6.0. makes it possible for organizations of all sizes to quickly and easily deploy powerful Web sites and applications, and IIS 6.0. provides a high-performance platform for all applications.

Because of the integration of the .NET framework into the IIS 6.0. process model, applications built with the Microsoft .NET framework are faster and more reliable.

The benefits of choosing IIS 6.0 include:

- less planned and unplanned system downtime
- increased Web site and application availability
- lower system administration costs
- server consolidation (reduced staffing, hardware, and site management costs)
- a significant increase in Web infrastructure security

Scalability

Windows Server 2003 takes the scalability gains found in the Windows 2000 Server Family to new heights. It is designed for both scale-up and scale-out scenarios-with scale-up scenarios enabled by symmetric multiprocessing (SMP) and Cache Coherent Non-Uniform Memory Access (CC-NUMA) optimizations, and scale-out by the various types of clustering provided by Microsoft.

Internal tests indicate that, compared to Windows 2000 Server, Windows Server 2003 delivers up to 140 percent better performance in the file system as well as significantly better performance in various other features, including Microsoft Active Directory service, Web server, Terminal Server components, and networking services.

Key scalability enhancements include:

- 64-Bit Support. Support for 64-bit architecture with Enterprise and Datacenter Editions and 512 GB of RAM.
- Support for Intel Hyper-Threading. Allows a single physical processor to execute multiple threads (instruction streams) simultaneously, potentially providing greater throughput and improved performance.
- NUMA Optimization. Most Windows applications will perform optimally without modification on NUMA systems running Windows Server 2003 because of automated NUMA features in the operating system (offered only on Enterprise and Datacenter Editions).
- Hot Add Memory. Allows ranges of memory to be added to a computer that supports this feature. This was made available to the operating system and applications as part of the normal memory pool-without requiring downtime or rebooting the computer (offered only on 32-bit versions of Enterprise and Datacenter Editions).

Reliability, Availability

Reliability and availability are woven into every aspect of Windows Server 2003 design to provide for a better customer experience. Key highlights include:

- 8-Node Clustering. Increasing the number of nodes in a server cluster gives administrators more options for deploying applications and providing failover policies that match business expectations and risks. (8-node clustering is supported on the 32-bit and 64-bit Enterprise and Datacenter Editions.)
- Network Load Balancing Manager. This new utility in Windows Server 2003 provides a single point of configuration and management for NLB clusters.
- Datacenter High Availability Program. The Datacenter Program has been expanded to meet the growing customer demand for higher availability on Windows.

Windows Server 2003 Features

Features	Datacenter Edition	Enterprise Edition	Standard Edition	Web Edition
32-bit Max Processors	32	8	4	2
32-bit Max RAM	64GB	32GB	4GB	2GB
64-bit Max Processors	64	8	No Support	No
64-bit Max RAM	512GB	64GB	No Support	No
File Sharing Connections	Unlimited	Unlimted	Unlimted	Limited to 10; No CALs
Print Server	Yes	Yes	Yes	No
Active Directory	Domain Controller or Member Server	Domain Controller or Member Server	Domain Controller or Member Server	No
Terminal Services	App and Admin Mode	App and Admin Mode	App and Admin Mode	Admin Mode Only
Terminal Services Session Directory	Yes	Yes	No	No
UDDI	Yes	Yes	Local DB Only	No
Fail-over Clustering	8-Node	8-Node	No	No
Windows Media Server	Enterprise	Enterprise	Basic	No
VPN Connections	Unlimited	Unlimited	1,000 Maximum	1 Per Media Type
Internet Authentication Service (IAS)	Yes	Yes	Limited to 50 Devices	No
Certificate Server	Yes	Yes	Windows 2000 Level	No
Windows System Resource Manager	Yes	Yes	No	No
Datacenter High Availability Program	Yes	No	No	No

Manageability

Windows Server 2003 delivers enhanced management capabilities designed to simplify and automate the management of Windows environments, while providing the flexibility and reliability to meet customers' business needs.

Key highlights include:

- Automated Deployment. New and enhanced capabilities to automate the deployment and redeployment of the operating systems and applications.
- Policy Based Management. Provides fine-grained control over the definition and enforcement of IT policies.
- Effective User Service Management. IntelliMirror® gives users consistent access to their applications, roaming user profiles, and user data, from any managed computer (even when they are disconnected from the network). IntelliMirror also gives centralized backup of user data and configuration files department.
- Enhanced Security Management. Powerful tools to establish and manage the security of their Windows environments.
- Scalable Operations Management. Remote administration is enabled via Terminal Server, Windows Script Host, and Windows Management Instrumentation (WMI), the management infrastructure that provides access to more than 10,000 system objects in Windows Server 2003 via application, scripting, and command line interfaces.
- Windows System Resource Manager (WSRM). WSRM enhances application availability and quality of service by providing control over application CPU and memory utilization, making it easier to run mixed application workloads on a single server.
- Active Directory Enhancements. Increased flexibility and manageability enhancements, such as secure credential and certificate management, provide a consistent single sign-on experience and health monitoring visibility to easily monitor trusts and replication activity.

Virtual Server

Virtual Server (acquired from Connectix) addresses customer needs for application migration and server consolidation. Virtual Server enables customers to run multiple operating systems and applications in Virtual Machine (VM) environments (a VM is essentially a computer-implemented in software-running in isolated software partitions on a physical computer).

The benefits of VM technology for application migration and server consolidation include:

- Simplicity: Virtual Server supports every major x86 Microsoft provided operating system running in the VM environment, leveraging industry-standard device drivers. This capability enables customers to run their Windows NT™ 4-based applications (for example), without change or disruption in usage or management, on more powerful and more resilient hardware that takes advantage of the performance and reliability enhancements of Windows Server 2003.
- Automation: Virtual Server is fully extensible through a COM API that enables scripted or programmatic control over the configuration, operation, management, and integration of VM environments.
- Flexibility: Virtual Server can be configured on desktop systems and deployed on high-end Intel-based servers. Virtual Hard Drives (VHDs) are highly portable and system integrators can integrate and enrich XML configuration files for fast, economic deployment.
- Security - Virtual Server provides separate security contexts for each Virtual Server, allowing internal and external hosting environments to provide complete control of the VM to 'owners', without compromising the security of other VMs, or the system overall.

Company Overview

Trend Micro Incorporated is a global leader in antivirus and Internet content security software and services. The company led the migration of virus protection from the desktop to the network server and the Internet gateway, gaining a reputation within the industry for both its vision and technological innovation along the way. Today, Trend Micro focuses on providing customers with a comprehensive approach to managing the impact of mixed threats to customers' productivity and information flow through such initiatives as Trend Micro Enterprise Protection Strategy.

As a Gold Certified Partner, Trend Micro provides extensive antivirus and content security products for Microsoft platforms, including the gateway, messaging environments, desktops, PDA devices, and corporate portals. Trend Micro continues its support for Microsoft environments with the certification of Trend Micro ServerProtect for the Microsoft Server 2003 platform. ServerProtect provides centrally-managed content security for enterprise-class file and application servers. Through the use of ServerProtect, customers adopting the Windows Server 2003 platform can immediately benefit from the additional outbreak prevention and cleanup services offered as part of Trend Micro Enterprise Protection Strategy.

Reality: File servers can be a vulnerable, centralized point of information exchange. Even from inside the network, users without adequate protection can upload infected files to the server, which can spread to other users who access these files. Additionally, large organizations may have hundreds or thousands of individual server machines that require monitoring, configuration, and maintenance that demands consistency with minimal time and effort. More importantly, today's mixed-threat attacks can target multiple points on the network and leave unseen trails of damage and the potential for re-infection. For the IT security administrator, dealing with viruses and other malware has moved beyond detection to encompass minimizing the damage and costs of an outbreak through a systematic strategy for prevention, detection and cleanup.

A Real Solution: ServerProtect delivers innovative real-time virus protection for Microsoft file and applications servers. Featuring a three-tier architecture, ServerProtect can be deployed and managed through a centralized, Web-based management console, and can scale from a simple multi-system network to a globally dispersed organization. Through Trend Micro Control Manager™, IT security administrators can consolidate ServerProtect with other Trend Micro solutions across the network and deliver policies for outbreak prevention along with the latest scan engines and virus pattern files to quickly and consistently minimize the impact of new threats. Within ServerProtect, administrators can minimize damage via port blocking and deny write and shared folder blocking capabilities; they can also deploy cleanup templates through Trend Micro™ Damage Cleanup Services to remove remnants of an attack from systems during the restoration phase.

The Bottom Line

ServerProtect enables not only the technology, but also the necessary strategy and services to effectively protect an enterprise's most precious asset: its information.

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Highlights

- **Centralized Management and Reporting.** ServerProtect provides centralized management of multiple servers in one site from a Windows-based console. The console enables administrators to deploy programs and updates to servers simultaneously and monitor server status in real time. Administrators can also use a Web-based console with Trend Micro Control Manager, an optional feature that facilitates centralized management of antivirus strategies deployed throughout a multiple-site network.

- **Reliable and Efficient Virus Protection.** ServerProtect combines rule-based and pattern-recognition technologies for efficient virus detection. The scan engine has been certified by both the International Computer Security Association (ICSA) and Virus Bulletin (VB) for reliable scanning.

- **Support for Trend Micro Enterprise Protection Strategy.** ServerProtect for Microsoft Windows™ is a key component of the Trend Micro Enterprise Protection Strategy, which provides Outbreak Prevention Services and Damage Cleanup Services to address mixed threat attacks.

- **24x7 Antivirus Support.** TrendLabs™, Trend Micro's global antivirus research and support center, backs Trend Micro products with timely, high-quality service. A team of engineers work around the clock to monitor virus activity, develop information on new threats, and deliver effective solutions.

Inside ServerProtect and Windows Server 2003

ServerProtect works closely with core Microsoft technologies to protect enterprise-level networks supporting Windows Server 2003. It performs kernel-level scanning for viruses and malicious code via Microsoft APIs to minimize performance degradation, and uses a multi-threaded scan engine to enhance the speed of scanning files and minimize the impact to the server.

ServerProtect displays the virus and system events of servers in a central log file, which can be exported to other applications for further analysis. ServerProtect notifies predefined recipients of virus outbreaks and program events. Administrators can send notifications in multiple ways - via message box, pager, printer, Internet email, SNMP trap, or Windows event log.

ServerProtect employs a three-tier architecture: the Management Console, the Information Server, and the Normal Server. A Normal Server can be any server on the network on which ServerProtect is installed—for example, a file server or FTP server. The Management Console is used to configure dedicated Information Servers, which then control the Normal Servers.

ServerProtect can be configured to download virus pattern files and scan engine updates automatically and then distribute them to designated servers. It uses an incremental update mechanism so that the designated servers only download the new virus pattern files that have been added since the last version, saving download time and preserving network bandwidth.

Real World Scenarios

Financial Services Corporation Unifies Virus Protection

A national financial services company has several hundred remote branch offices across the U.S., in addition to its New York-based headquarters. Its data protection policies have been previously set by regional IT management, resulting in a hodgepodge of vendor software, security levels, and virus protection and removal processes. The incoming CIO assigned a team to research a centralized management solution to standardize all antivirus software installations and policies, timed to coincide with a system wide OS upgrade to Windows Server 2003.

The company chose to implement the Trend Micro Enterprise Protection Strategy, using a combination of ServerProtect, OfficeScan™, and ScanMail™, coherently integrated under a central console to protect its whole IT infrastructure. A single instance of Control Manager in the New York office now monitors clients, servers and messaging activity companywide, automatically sending alerts and pushing updates and outbreak prevention policies to every system in the network. The company's antivirus solution is now unified, providing improved security that scales as the network expands.

ASP Gets Timely Reports and Substantial Savings

The IT manager of a mid-size application service provider has recently encountered a large number of virus attacks. The manager needs improved virus prevention, as well as a simplified way to monitor and manage a virus attack at every point of entry and every stage of attack. Another requirement: detailed reporting of cleaned systems and precise vulnerability locations in order to prevent future outbreaks.

The manager decided on Trend Micro Enterprise Protection Strategy for its ability to deflect and isolate attacks, rid the network of virus remnants, and report the pre-and post-pattern outbreak. Centrally managed, timely pattern file update delivery was another important factor in the decision to adopt the Trend Micro solution. The IT department can now deploy attack-specific policy recommendations that block, isolate, and contain a virus without requiring an administrator to block ports or devices. This feature adds another benefit: improved response time, which translates into substantial savings in network and administrative costs.

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Microsoft Links

Microsoft Windows Server 2003
www.microsoft.com/windowsserver2003/default.mspx

Security Services in Windows Server 2003
www.microsoft.com/windowsserver2003/technologies/security/default.mspx

Internet Information Services 6.0
www.microsoft.com/windowsserver2003/evaluation/overview/technologies/iis.mspx

Active Directory Enhancements
www.microsoft.com/windowsserver2003/evaluation/overview/technologies/activedirectory.mspx

Windows System Resource Manager
www.microsoft.com/windowsserver2003/downloads/wsrm.mspx

Microsoft Virtual Server Technology
www.microsoft.com/windowsserver2003/techinfo/overview/virtualization.mspx

Windows Datacenter OEMs
www.microsoft.com/windowsserver2003/partners/oems/default.mspx

Windows Server 2003 Datacenter Certified ISVs
www.microsoft.com/windowsserver2003/partners/isvs/isvs.mspx

"Certified for Windows" Homepage
www.microsoft.com/windowsserver2003/partners/isvs/cfw.mspx

"Certified for Windows" Applications List
cert.veritest.com/CfWreports/server/

Trend Micro Links

Trend Micro and Microsoft
www.trendmicro.com/en/partners/alliances/profiles/profiles/microsoft.htm

Trend Micro Server Protect
www.trendmicro.com/en/products/file-server/sp/evaluate/overview.htm

Trend Micro Partners
www.trendmicro.com/en/home/us/partners.htm

Company Description

Trend Micro, Inc. is a global leader in network antivirus and Internet content security software and services. The company led the migration of virus protection from the desktop to the network server and the Internet gateway, gaining a reputation within the industry for both its vision and technological innovation. Today, Trend Micro focuses on providing customers with comprehensive security strategies to manage the impacts of known and unknown threats to information, through such initiatives as Trend Micro Enterprise Protection Strategy. Headquartered in Tokyo, Japan, Trend Micro has grown to over 1,800 employees in 25 countries, with stock traded on the Tokyo Stock Exchange and NASDAQ.

Where To Learn More

Microsoft's Certified for Windows program is sponsored by industry-leading companies such as Intel and Unisys. Microsoft and VeriTest are working closely with these sponsors to provide a better testing environment for independent software vendors who participate in the Certified for Windows program.

The objective of this certification program is to provide customers the highest level of assurance when choosing applications running on Windows 2000 Server and Windows Server 2003. In order to have an application certified, an independent software vendor and Microsoft work together to ensure that the application meets the highest standards for reliability, availability, security and supportability. These standards apply to Microsoft and third-party applications.

www.intel.com www.veritest.com www.unisys.com

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