Enterprise Solutions
From Microsoft and NetIQ
Microsoft and NetIQ have long enjoyed a close relationship over the years. During the past year, Microsoft and NetIQ have collaborated to create a great application experience on Windows Server™ 2003. Not only are NetIQ’s flagship applications ready to run on and support Windows Server 2003 but 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 in ensuring that key applications meet the certification criteria. The final validation is delivered through VeriTest, a third-party independent testing company who does the actual testing based on Microsoft’s specifications. Customers will soon find NetIQ’s AppManager on the certified application list.

Microsoft and NetIQ invite you to discover how we can create better business environment and solutions through NetIQ’s AppManager running on Windows Server 2003.

Rick Shell
General Manager
System Management
NetIQ

Bill Veghte
Corporate Vice President
Windows Server Group
Microsoft Corporation
# 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

<table>
<thead>
<tr>
<th>Product</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Supports secure Internet connectivity.</td>
</tr>
<tr>
<td></td>
<td>- Allows centralized desktop application deployment.</td>
</tr>
<tr>
<td><strong>Windows Server 2003, Enterprise Edition</strong></td>
<td>- Is a full-function server operating system that supports up to 8 processors.</td>
</tr>
<tr>
<td></td>
<td>- Provides enterprise-class features such as 8-node clustering and support for up to 32 GB of memory.</td>
</tr>
<tr>
<td></td>
<td>- Is available for Intel Itanium-based computers.</td>
</tr>
<tr>
<td></td>
<td>- Will be available for 64-bit computing platforms capable of supporting 8 processors and 64 GB of RAM.</td>
</tr>
<tr>
<td><strong>Windows Server 2003, Datacenter Edition</strong></td>
<td>- Is the most powerful and functional server operating system Microsoft has ever offered.</td>
</tr>
<tr>
<td></td>
<td>- Supports up to 32-way SMP and 64 GB of RAM.</td>
</tr>
<tr>
<td></td>
<td>- Provides both 8-node clustering and load balancing services as standard features.</td>
</tr>
<tr>
<td></td>
<td>- Is available for 64-bit computing platforms capable of supporting 64 processors and 512 GB of RAM.</td>
</tr>
<tr>
<td></td>
<td>- Is designed to be used primarily as an IIS 6.0 Web server.</td>
</tr>
<tr>
<td></td>
<td>- 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.</td>
</tr>
<tr>
<td></td>
<td>- Is easy to deploy and manage.</td>
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</tbody>
</table>
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 feature 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.
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.

Windows Server 2003 Features

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

Features Table:

NetIQ AppManager Suite (AppManager) allows systems managers to take control of their e-business environments by pinpointing problems, providing critical diagnostic information for troubleshooting, and enabling easy service level and performance reporting. Its ability to respond to and automatically resolve performance and availability problems not only minimizes downtime, but also enables IT personnel to concentrate on higher value projects.

AppManager provides a comprehensive solution for centrally managing the health, performance, and availability of over 65 distributed systems and server applications such as Windows Server 2003, Exchange, and SQL Server. No other solution gives customers more breadth and depth in their management of Windows Server 2003 infrastructure as does AppManager.

AppManager 5.0.1 adds support and integration with five new Windows-based applications as well as feature support for Windows Server 2003. This brings the total of applications managed on the Windows platform by AppManager to well over 65—more than any other vendor in the industry.

Company Description
NetIQ provides systems and security management solutions to assure and optimize the performance, availability, and security of your IT infrastructure. NetIQ AppManager Suite (AppManager) allows systems managers to take control of their e-business environments by pinpointing problems, providing critical diagnostic information for troubleshooting, and enabling easy service level and performance reporting. Its ability to respond to and automatically resolve performance and availability problems not only minimizes downtime, but also enables IT personnel to concentrate on higher value projects.

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Company Description
NetIQ provides systems and security management solutions to assure and optimize the performance, availability, and security of your IT infrastructure.

The Bottom Line
AppManager is the industry’s leading solution for managing, diagnosing, and analyzing the health, performance, and availability of major infrastructures—all from the same management console.

Inside AppManager and Windows Server 2003
NetIQ’s AppManager keeps your hardware and applications available and performing by knowing how system and application software works.

The 65 applications and operating systems that AppManager already knows when you install it include, of course, Windows Server 2003, as well as many other major services from Microsoft that are key to enterprise users. Among them you’ll find Active Directory, Terminal Services, and even Microsoft Cluster Service, which allows you to hook multiple servers into a combination that your users will still see as only a single server.

This familiarity of with Microsoft systems comes from years of partnership, and culminates in the intimate connections between AppManager and Windows Server 2003. For example, competing products often settle for information they can get from PerfMon and the event log—the low-hanging fruit of Windows operating systems. In contrast, these are just a few of AppManager’s features:

- Use of Active Directory API calls to give you enumeration of objects in the AD schema, information not available from the AD application itself
- Examination of processor queue length before alerting you that the CPU has hit 100% usage, in case the load is purely transient
- Burrowing into the SQL Server table to not only show you the top SQL IO users, but the queries they’re making
- Examination of processor queue length before alerting you that the CPU has hit 100% usage, in case the load is purely transient

In addition to its continued support for Windows 2000 features that carry over to the new OS, AppManager supports the following features that are new to Windows Server 2003:

- Auto Update Service
- Fax Service
- System Restore Service
- Plug and Play
- Background Intelligent Transfer Service (BITS)

And finally, because your enterprise doubtless has proprietary and legacy line of business applications, AppManager offers you ways to monitor and manage them as well:

- You can create your own DLL in VBScript
- You can create a simpler “extension” or “instrumentation”
- You’ll have access to a large and active user community, where you can share ideas, scripts, instrumentation, and extensions.

Highlights
- **ResponseTime modules** add user experience to AppManager, monitoring response time for critical Windows server applications.
- AppManager delivers **comprehensive performance, availability and service level agreement reporting**, including advanced analytics using a SQL Server 2000-based data warehouse with OLAP capabilities, and new reporting engines.
- AppManager’s **comprehensive automation capabilities**—such as management by policy, dynamic views, and Knowledge Script Groups—help customers manage their servers the way they choose, with minimum effort.
- AppManager’s **robust and flexible architecture** can scale from the smallest to the largest deployments of Windows servers.
- AppManager **exploits Microsoft technologies** such as WMI, VBA, COM and SQL Server. AppManager’s user interface looks, feels and operates in the same way that Microsoft products do, and you can easily customized extended it to meet your specific management needs without having to learn proprietary languages or technologies.
- AppManager provides **seamless integration with systems and network management products** like Microsoft Operations Manager 2000 (MOM), CA Unicenter, Tivoli, HP OpenView, Micromuse Netcool, and Remedy AR System.

The Bottom Line
AppManager is the industry’s leading solution for managing, diagnosing, and analyzing the health, performance, and availability of major infrastructures—all from the same management console.
AppManager Sells Architecture Upgrade

A wireless vendor representative of a typical NetIQ customer, with offices and customers on multiple continents, currently uses NetIQ’s AppManager product for internal systems management. Walking it like they talk it, the company uses wireless technology for their infrastructure, which includes sales automation, email, Web-based customer support, and more.

The company’s IT Director has planned to deploy Active Directory for over a year now, but delays both technical and political have repeatedly pushed deadlines back. Windows Server 2003 looks as though it will provide the compelling reason to finally move the AD forest outside of the lab. One key point of resistance has been nervousness about AD’s schema (its set of defined objects), which could not be erased or modified. This company, like so many others, was paralyzed with fear of forgetting something that would haunt them in years to come, and Windows Server 2003 has finally put those fears to rest by letting users modify their schemas.

Evaluations of pre-release versions of Windows Server 2003 have been positive. The company used AppManager to test deployments by gathering system metrics for uptime, performance, and application stability. The lab team used AppManager reports both to tweak the environment and to prove to upper management that the time had come to roll out a new architecture.

This spring, the company will deploy Windows 2003, including an Active Directory forest, for the entire company. NetIQ’s migration tools will be a part of this rollout, ensuring that end-users won’t suffer any hardware or software downtime.

AppManager Helps Cut ASP Costs

One of the most successful Windows platform hosting companies in North America is looking forward to rolling out Windows Server 2003 for its customers. For modern ASPs, simplicity and cost-cutting have become the driving forces in keeping their businesses alive.

The slimmed down Windows Server 2003, Web Edition, provides the benefit of an inexpensive, Web-only application server with improved default Security settings that reduce the hosting company’s risk.

This ASP has been a longtime NetIQ customer, crediting AppManager with keeping them from becoming “Dot-Gone” years ago. In a typical incident, the company nearly lost a customer when a decision maker worried at the sheer size of the company’s server farm, believing no one could adequately supervise thousands of servers. A brief demo of the AppManager interface and a look at some standard reports clinched the sale.

As the company looks toward rolling out Windows Server 2003, they’re also planning to expand their use of AppManager. NetIQ is helping deploy two key technologies that should differentiate this host from its competitors. The first, ResponseTime modules, provide client-side metrics for availability and responsiveness. These modules automatically generate a report for every customer, showing sample transaction times and an uptime chart.

The second new technology allows the company to monitor its new mobile infrastructure. NetIQ now monitors the health of the internal IT system for mobile access. Further, by introducing partner vendors, the company is now using PocketPCs, cell phones, and BlackBerry devices to handle AppManager alerts and to actually fix the problems.

In a cutthroat business, NetIQ provides the vital management tools that make trustworthy hardware and a stable operating system into an unbeatable combination.
Microsoft Links

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

Security Services in Windows Server 2003

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

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/

NetIQ Links

NetIQ Products and Solutions
www.netiq.com/solutions/default.asp?tab=Solutions

NetIQ’s AppManager Suite Overview
www.netiq.com/products/am/default.asp

AppManager Supported products page
www.netiq.com/products/am/modules/default.asp

AppManager for Windows NT, 2000 and 2003 Server

AppManager ResponseTime Modules
www.netiq.com/products/am/modules/responsetime/default.asp

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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.