



# **Windows Server 2008 Hardware Assessment**

Summary Report

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# Executive Overview

The following document provides you with a summary of the assessment results from the Windows Server 2008 Hardware Assessment. The following Microsoft Excel workbooks accompany this document:

- Windows Server 2008 Hardware Assessment Report
- Windows Server 2008 Role Assessment Report

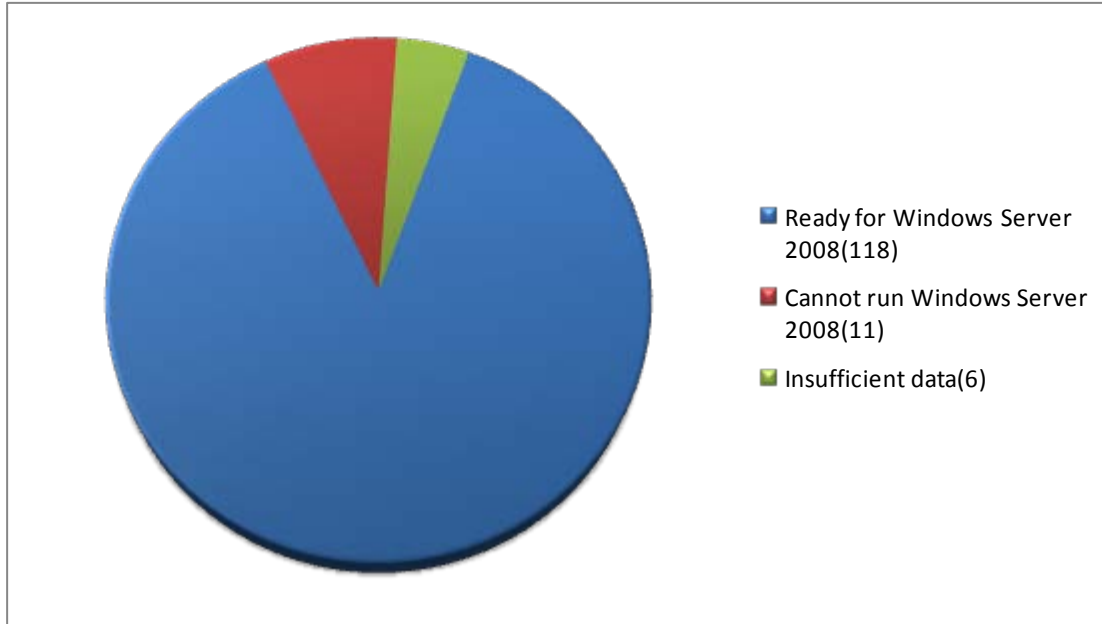
These provide detailed information about each inventoried computer on your organization's network, allowing you to perform "what if" analysis of your existing computer hardware.

This report identifies computers that meet the minimum and recommended requirements for at least one edition of Windows Server 2008. The actual system requirements vary depending on which edition of Windows Server 2008 is installed and the system resources required by each server to handle user workloads in your organization. This version of the Microsoft Assessment and Planning Toolkit does not detect support for the Windows BitLocker™ Drive Encryption feature. For the most up-to-date information about the [Windows Server 2008 system requirements](http://go.microsoft.com/fwlink/?LinkID=105557), see <http://go.microsoft.com/fwlink/?LinkID=105557>.

Inventory results (data, charts, and tables) shown in this summary document are based on computers that are already running a Windows Server operating system, such as Windows 2000 Server or Windows Server 2003. The totals for computers reported with "Insufficient Data" are computers on which the assessment was not performed. This list may include client and server computers if client computers were targeted for computer discovery by the Assessment Wizard, but a detailed inventory could not be performed.

## *Where Is Your Organization Now?*

The Microsoft Assessment and Planning Toolkit found 135 servers. Within this group, it was able to complete a detailed assessment on 129 existing server computers. Without any hardware changes to these computers, a total of 55 servers meet the Windows Server 2008 minimum requirements and 63 servers meet the recommended requirements. The detailed assessment could not be completed on 6 server computers ("Insufficient Data") due to invalid logon credentials or because machines were not accessible over the network.



**Figure 1. Windows Server 2008 Ready Computers**

The hardware in some of the computers in your organization can be upgraded to meet the minimum or recommended requirements for Windows Server 2008, for example by adding more system memory or upgrading a hard drive. This document does not provide recommendations for hardware upgrades to existing servers that cannot run Windows Server 2008.

## *Why Migrate to Windows Server 2008?*

Windows Server 2008 is the most flexible and robust Windows Server operating system to date. With new technologies and features such as Server Core, PowerShell, Windows Deployment Services, and enhanced networking and clustering technologies, Windows Server 2008 provides the most versatile and reliable Windows platform for all of your workload and application requirements. These advantages include:

- Increased dependability with improved failover clustering to reduce loss of access, work, time, data, and control.
- Simplified management of your servers by using new tools that provide a one-stop interface for server configuration and monitoring, as well as the ability to automate routine tasks.
- Streamlined installation and management of Windows Server 2008 by installing only the roles and features you need. The customization of the server configuration simplifies ongoing maintenance by minimizing the attack surface area and reducing the need for software updates.
- Effectively pinpoint and resolve problems with powerful diagnostic tools that give you ongoing visibility into your server environment, both physical and virtual.
- Increased control over servers located in remote locations, such as the branch office. With optimized server administration and data replication, you can provide users with better service while reducing management headaches.

## **Built for the Web**

Simplify Web server management with Internet Information Services 7.0, which is a powerful Web platform for applications and services. This modular platform provides a simplified, task-based management interface, greater cross-site control, security enhancements, and integrated health management for Web Services.

Internet Information Services (IIS) 7 and .NET Framework 3.0 provide a comprehensive platform for building applications that connect users to each other and to their data, enabling them to visualize, share, and act on information.

## Virtualization

Virtualize multiple operating systems - Windows, Linux and others - on a single server, with virtualization built into the operating system. With simpler and more flexible licensing policies, it's now easier than ever to take advantage of all the benefits and cost savings of virtualization.

Microsoft server virtualization technologies allow you to enjoy the many benefits of consolidating the servers in your environment. This can reduce your hardware and maintenance costs, reduce the total power consumed by your data center, and save precious rack space. In addition, consolidated servers can simplify your management and business continuity processes. Together, virtualization and server consolidation enable you to improve the efficiency of your data center and reduce total cost of ownership.

In addition to server virtualization, Terminal Services Gateway and Terminal Services RemoteApp are designed for easy remote access and application integration with the local desktop, enabling secure and seamless application deployment and presentation virtualization without the need for a VPN.

## Security

Windows Server 2008 is the most secure Windows Server ever. Its hardened operating system and security innovations, including Network Access Protection, Federated Rights Management, and Read-Only Domain Controller, provide unprecedented levels of protection for your network, your data, and your business.

- A Read-Only Domain Controller allows you to deploy Active Directory Domain Services while restricting replication of the full Active Directory database in order to better protect against server theft or compromise.
- Windows BitLocker Drive Encryption allows you to encrypt the entire Windows operating system volume and prevent the theft and disclosure of critical data on servers.
- Server Message Block (SMB) 2.0 improves security through the use of mutual authentication and message signing.
- Network Access Protection gives you the power to isolate computers that don't comply with your organization's security policies and provides network restriction, remediation, and ongoing compliance checking.
- Federated Rights Management Services provides persistent protection for sensitive data, helps reduce risks and enables compliance and provides a platform for comprehensive information protection.
- As you plan for your Windows Server 2008 deployment, we recommend installation of Microsoft Forefront Server Security Console to provide unified virus and spyware protection. You can find out more information about [Microsoft Forefront](http://go.microsoft.com/fwlink/?LinkID=105631) at <http://go.microsoft.com/fwlink/?LinkID=105631>.

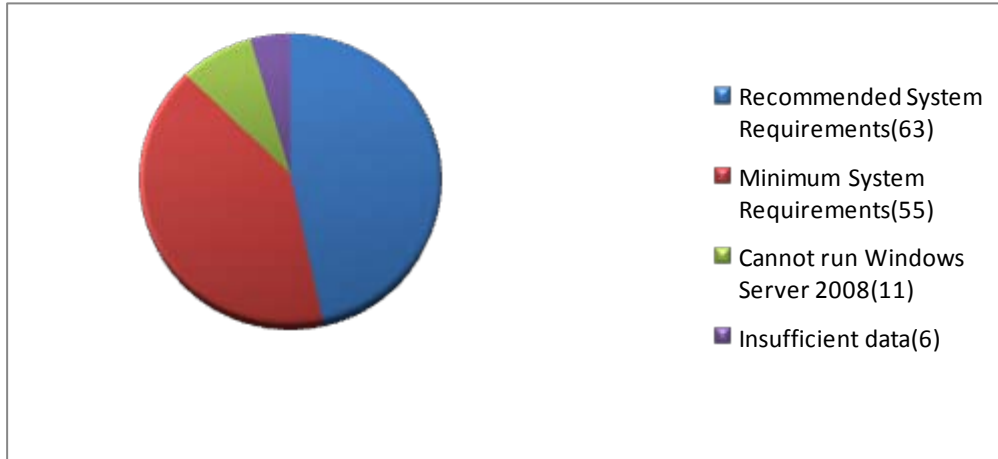
## Assessment Results Summary

With the results of the Windows Server 2008 Hardware Assessment, you can now make informed decisions about the deployment of Windows Server 2008 in your organization. The information in this section summarizes the results of the assessment conducted on your network and what is required to make Windows Server 2008 work for your organization.

### *Windows Server 2008 Ready Computers*

This section provides summary information about assessed computers on your network that are currently running a Windows Server operating system. It identifies servers that meet both the minimum and recommended system requirements for installation of Windows Server 2008. This section uses the term “Windows Server 2008 Ready” to identify servers that can run Windows Server 2008 meeting the minimum or recommended system requirements.

The Windows Server 2008 Hardware Assessment Report workbook accompanies this report and provides detailed information about each of the servers inventoried.



**Figure 2: Windows Server 2008 Ready Computers**

**Table 1: Windows Server 2008 Ready Computers**

Windows Server 2008 Ready Computers	Computer Count	Percentage
Recommended System Requirements	63	47%
Minimum System Requirements	55	41%
Cannot run Windows Server 2008	11	8%
Insufficient Data	6	4%
Total	135	100%

## *Software and Workload Analysis*

The software analysis provides the following information:

- Summary of devices and how to obtain drivers for the devices.
- Current server operating systems.
- Summary of the top installed software applications.
- Summary of the server roles configured on servers.

## **Device Driver Summary**

In order for installed devices to function with Windows Server 2008, compatible device drivers must be loaded on the computer. There are three sources of these device drivers: 1) included on the Windows Server 2008 DVD, 2) available from Microsoft Update and 3) available from the device manufacturer

(unknown source or incompatible). The following table describes the number of devices and the percentage of devices where the device driver is available through the specified source.

**Table 2. Count of Device Drivers by Driver Sources**

Device Drivers for Windows Server 2008	Hardware Devices	Percentage
Included on the Windows Server 2008 DVD	2910	82%
Available from Microsoft Update	1	0%
Contact the Device Manufacturer (unknown driver or incompatible)	626	18%
Total	3537	100%

## Operating System Summary

Table 3 shows the server operating systems found through the assessment and the number of installations for each operating system.

**Table 3. Operating Systems Found Through the Assessment**

Operating System Name and Version	Computer Count	Percentage
Microsoft(R) Windows(R) Server 2003 Enterprise x64 Edition Service Pack 2	1	1%
Microsoft(R) Windows(R) Server 2003, Enterprise Edition Service Pack 1	1	1%
Microsoft(R) Windows(R) Server 2003, Enterprise Edition Service Pack 2	2	1%
Windows 2000 Server Service Pack 4	3	2%
Windows 2000 Server Unknown Service Pack Level	1	1%
Windows Server 2003 Service Pack 1	11	8%
Windows Server 2003 Service Pack 2	111	82%
Windows Server 2003 Unknown Service Pack Level	5	4%
Total	135	100%

## Server Role Summary

Table 4 lists the server roles identified through the assessment and the number of servers filling each role. Note that more than one role may be installed on a particular server. Also, this report only shows servers that have the role installed and actually running at the time of inventory. The Windows Server 2008 Role Assessment Report (Microsoft Excel workbook) provides a complete list of all roles installed on each server.

**Table 4. Server Roles Found Through the Assessment**

Role Name	Computer Count
Active Directory	8
Active Directory Certificate Services	3

Role Name	Computer Count
DHCP Server	7
DNS Server	10
Remote Access\VPN Server	1
Terminal Server	8
Virtual Server	1
Web Server	77
WINS Server	6
Windows SharePoint Services	8
Windows Server Update Services	3
Terminal Services Licensing Server	2
Total	134

## Installed Server Applications

Table 5 lists the most common applications installed on the servers. Note that more than one role may be installed on a particular server. The Windows Server 2008 Hardware Assessment Report workbook provides a complete list of the applications installed on each server.

**Table 5. Server Applications Found Through the Assessment**

Application Name	Application Version	Number of Installations
Symantec AntiVirus	10.1.7000.7	90
Microsoft .NET Framework 2.0	2.0.50727	43
Microsoft .NET Framework 2.0 Language Pack - JPN	2.0.50727	40
Security Update for CAPICOM (KB931906)	2.1.0.2	35
Microsoft .NET Framework 2.0 Service Pack 1	2.1.21022	31
HP Insight Diagnostics	7.4.0	31
J2SE Runtime Environment 5.0 Update 7	1.5.0.70	28
Microsoft Office 2003 Web Components	11.0.6558.0	28
MSXML 4.0 SP2 (KB927978)	4.20.9841.0	28
Microsoft SQL Server Native Client	9.00.3042.00	26
MSXML 6.0 Parser	6.10.1129.0	25
Microsoft SQL Server VSS Writer	9.00.3042.00	25
J2SE Runtime Environment 5.0 Update 12	1.5.0.120	24
Microsoft Visual Studio 2005 Premier Partner Edition - JPN	8.0.50727.42	24
Microsoft SQL Server 2005 Books Online (日本語版)	9.00.1399.06	24
MSXML 4.0 SP2 (KB925672)	4.20.9839.0	22

Application Name	Application Version	Number of Installations
HP ProLiant インテグレートド マネジメント ログ ビューア	5.20.0.0	22
HP ProLiant リモート モニタ サービス	5.20.0.0	22
Symantec Backup Exec Remote Agent for Windows Servers	10.1.5629	21
HP Insight マネジメント エージェント	8.0.0.0	21
Microsoft SQL Server セットアップ サポート ファイル (英語)	9.00.3042.00	20
MSXML 4.0 SP2 (KB936181)	4.20.9848.0	19
HP アレイ診断ユーティリティ	8.0.14.0	19
HP Lights-Out Online Configuration Utility	1.7.1.0	18
Windows Presentation Foundation	3.0.6920.0	18

In addition to evaluating the hardware readiness of your organization's computers, we recommended that you evaluate the application compatibility of the software that your organization uses. We recommend that you contact the vendors who have supplied your server applications and the Microsoft Web site (Microsoft applications) to verify compatibility of your software with Windows Server 2008 Full and Server Core installations.

## Next Steps

With this summary report and the accompanying Excel workbooks, you can identify the servers that can be migrated to Windows Server 2008 and determine any hardware upgrades you wish to complete so that additional servers can be migrated to Windows Server 2008.

To get ready for your deployment of Windows Server 2008, you will need to do the following:

1. Decide which edition of Windows Server you intend to deploy.
2. Decide whether you will install the Full or Server Core versions of Windows Server 2008.
3. Perform application compatibility analysis and determine the compatibility of commercial software, custom developed applications, and deployed server roles. The Windows Server 2008 Role Assessment Report lists which servers in your organization are running common server roles and provides migration information for each role to assist you in planning.
4. Perform any hardware upgrades that may be required. After completing the upgrades, you can run the Windows Server 2008 Hardware Assessment again to verify that computers are ready for the migration.
5. Verify the availability of all required device drivers and their compatibility with Windows Server 2008, using the Windows Server 2008 Hardware Assessment Report workbook.
6. Decide on how you are going to acquire the Windows Server 2008 software licenses, such as through Volume Licensing.
7. Start deployment. The [Microsoft Toolkit for Windows Server Deployment](http://go.microsoft.com/fwlink/?LinkID=105753) provides comprehensive guidance and tools to deploy Windows Server 2008. WSD is available at <http://go.microsoft.com/fwlink/?LinkID=105753>.
8. Visit the [Infrastructure Planning and Design Guide](http://go.microsoft.com/fwlink/?LinkID=106686) site to download the free planning guidance for deploying a Windows Server 2008 infrastructure at <http://go.microsoft.com/fwlink/?LinkID=106686>.
9. Secure your servers. Security is always a consideration in the deployment and configuration of systems. Microsoft provides the [Windows Server 2008 Security Guide](http://go.microsoft.com/fwlink/?LinkID=105754) for the secure configuration of Windows Server 2008 at <http://go.microsoft.com/fwlink/?LinkID=105754>.
10. As you plan for your Windows Server 2008 deployment, we recommend installation of Microsoft Forefront Server Security to provide unified virus and spyware protection. You can find out more information about [Microsoft Forefront](http://go.microsoft.com/fwlink/?LinkID=105631) at <http://go.microsoft.com/fwlink/?LinkID=105631>.
11. Ensure that all of your Windows Server-based servers have the latest service packs and patches installed. You can find more information about [Windows Server Update Services](http://go.microsoft.com/fwlink/?LinkID=105601) at <http://go.microsoft.com/fwlink/?LinkID=105601>.

# Appendix A: Windows Server 2008 Hardware Assessment Report

The following information is provided in the detailed Windows Server 2008 Hardware Assessment Report (Microsoft Excel workbook).

- **Summary.** This worksheet provides a quick summary of the computers currently running a Windows Server operating system and that are Windows Server 2008 Ready.
- **Server Assessment.** This worksheet provides a printable assessment report for each server that was found in the inventory. This worksheet is provided to help you find server computers that may have the potential to run Windows Server 2008.
- **Server Inventory.** This worksheet describes the complete inventory and assessment results. This includes the following information: basic information about the computer, Windows Server 2008 readiness information, domain information, asset tracking information, and system hardware details.
- **Server Device Summary.** This worksheet describes each unique hardware device found during assessment and provides information on how to obtain Windows Server 2008 drivers for the device.
- **Server Device Details.** This worksheet reports all of the devices found for each computer and how to obtain Windows Server 2008 drivers.
- **Server Discovered Applications.** This worksheet provides a list of applications found on the servers and the number of installed copies found.

## Appendix B: Windows Server 2008 Role Assessment Report

The following information is provided in the detailed Windows Server 2008 Role Assessment Report (Microsoft Excel workbook).

- **Summary.** This worksheet provides an overall view of the server roles deployed in your organization and details on the migration path to upgrade that role to Windows Server 2008.
- **Server Inventory.** This worksheet shows the currently installed operating system on each server discovered during inventory and lists all roles currently deployed on the server.
- **Active Directory.** This worksheet lists all servers configured with Active Directory services and includes the current operating system for each server.
- **AD Certificate Services.** This worksheet lists all servers configured as an Active Directory Certificate Services server.
- **AD Rights Mgmt Server.** This worksheet lists all servers configured to run as an Active Directory Rights Management server.
- **DHCP Server.** This worksheet lists all Microsoft servers configured to run as a DHCP server.
- **DNS Server.** This worksheet lists all Microsoft servers configured to run as a DNS server.
- **Application Server.** This worksheet lists all servers configured to run as an Application server.
- **Hyper-V Server.** This worksheet lists all servers configured to run Hyper-V technology.
- **Remote Access Server.** This role lists all servers configured to run as a remote access or VPN server.
- **Streaming Media.** This worksheet lists all Microsoft servers configured to run as a streaming media server.
- **Terminal Services Licensing Server.** This worksheet lists all servers configured to run as a Terminal Services Licensing server.
- **Terminal Services Server.** This worksheet lists all servers configured to run as a Terminal Services server.
- **Virtual Servers.** This worksheet lists all servers configured to run Microsoft Virtual Server R2.
- **Web Server.** This worksheet lists all servers configured to run as a Web server and includes the current operating system for each server.
- **WINS Servers.** This worksheet lists all servers configured to run as a WINS Server.
- **WDS Server.** This worksheet lists all servers configured to run as a Windows Deployment Services server.
- **WSS Server.** This worksheet lists all servers configured to run as a Windows SharePoint Services server.
- **WSUS.** This worksheet lists all servers configured to run Windows Server Update Services server.
- **Not Determined.** This worksheet lists all machines with a Windows Server operating system whose roles could not be determined at this time.