



Implementing Microsoft® Windows Server® 2008 R2 Foundation on HP ProLiant servers

integration note

Abstract.....	2
Introduction to Windows Server 2008 R2 Foundation	2
Understanding Windows Server 2008 R2 Foundation	2
Obtaining Windows Server 2008 R2 Foundation	3
Comparing Windows Server 2008 R2 editions	3
Upgrading Windows Server 2008 R2 Foundation to Windows Server 2008 R2 Standard Edition.....	3
Supported configurations.....	4
Recommended system configuration	4
Recommended ProLiant server platforms.....	5
Supported components for ProLiant servers	6
Installing Windows Server 2008 R2 Foundation overview	6
Pre-installation tasks.....	6
HP ProLiant Support Pack.....	6
Obtaining the PSP	7
Installing the PSP.....	7
Installing HP ProLiant ML/DL 300 Series using the SmartStart Media.....	8
Installing Windows Server 2008 R2 Foundation.....	8
For more information.....	9
Call to action	9

Abstract

This integration note describes the level of support available for Microsoft® Windows Server® 2008 R2 Foundation on HP ProLiant servers. The purpose of this paper is to assist customers during installation of the Windows Server 2008 R2 Foundation operating system (OS). For more information, visit the HP website:

http://h18004.www1.hp.com/products/servers/software/microsoft/os/windows2008f/questionsanswers.html?jumpid=reg_R1002_USEN.

Several topics are addressed in this paper:

- Supported configurations of ProLiant servers
- Recommended system configuration and server platforms
- Procedures for new installations
- Known issues with workarounds

Introduction to Windows Server 2008 R2 Foundation

Windows Server 2008 R2 Foundation, built on the reliable technology of Windows Server 2008 R2, offers on a dependable and affordable operating system for running business applications and accessing shared information and resources. Windows Server 2008 R2 Foundation accommodates business growth and provides an easy upgrade path to Windows Server 2008 R2 standard edition.

Windows Server 2008 R2 Foundation is a 64-bit OS for systems with either of the following processors:

- Intel Xeon® Processors with Intel Extended Memory 64 Technology (EM64T)
- Advanced Micro Devices, Inc. (AMD64) Opteron® TM Series Processors

Understanding Windows Server 2008 R2 Foundation

Windows Server 2008 R2 Foundation is a technology that enables core IT resources:

- File and print sharing
- Remote access
- Security

Windows Server 2008 R2 Foundation provides a network foundation to centrally manage operating system-based settings and run business applications. It also provides a familiar Windows user experience that helps manage users and safeguard business information.

Windows Server 2008 R2 Foundation is recommended for use in the following environments:

- **Core Infrastructure:** Windows Server 2008 R2 Foundation is an excellent operating system for environments with single or multiple workloads such as file and print sharing, network access, remote desktop services and connections, web services, and other server roles.
- **Active Directory Domain Controller:** Windows Server 2008 R2 Foundation can function as a domain controller or join a domain as a member server.

NOTE

There is a 15 user limit across Active Directories.

- **Remote Desktop Services (Formerly Terminal Services):** Windows Server 2008 R2 Foundation is ideal for multiple-user computing, such as sharing Microsoft Office or using Remote Desktop Services.
- **Line of Business Applications:** Applications for the Windows Server 2008 R2 family of products have the “Certified For” or Works With” accreditation for Windows Server 2008 R2 and can be deployed on a Windows Server 2008 R2 Foundation server.

Obtaining Windows Server 2008 R2 Foundation

Windows Server 2008 R2 Foundation is an original equipment manufacturer (OEM) offering that is available through pre-installation services from HP or an authorized HP reseller.

Comparing Windows Server 2008 R2 editions

Although the core features are the same, important differences exist between Windows Server 2008 R2 Foundation and other editions of Windows Server 2008 R2.

Table 1 details the key differences between Windows Server 2008 R2 editions:

- Microsoft® Windows Server® 2008 R2 Foundation
- Microsoft® Windows Server® 2008 R2 Standard Edition
- Microsoft® Windows® Web Server 2008 R2
- Microsoft® Windows Server® 2008 R2 Enterprise Edition

Table 1. Comparison of Windows Server 2008 R2 Foundation with other editions of Windows Server 2008 R2

Feature	Foundation Server R2	Standard Server R2	Web Server R2	Enterprise Server R2
x64 Sockets	1	4	4	8
RAM	8 GB	32 GB	32 GB	2 TB
Failover Cluster Nodes	0	0	0	16
Network Access Connections (RRAS)	50	250	0	Unlimited
Network Access Connections (IAS)	10	50	0	Unlimited
Remote Desktop Services Gateway Connections	50	250	0	Unlimited

Microsoft provides a comparison of Windows Server 2008 R2 Foundation and other editions of Windows Server 2008 R2 on the Microsoft website at www.microsoft.com/windowsserver2008/en/us/r2-differentiated-features.aspx.

Upgrading Windows Server 2008 R2 Foundation to Windows Server 2008 R2 Standard Edition

Microsoft supports upgrading Windows Server 2008 R2 Foundation to Windows Server 2008 R2 Standard.

Microsoft does not support upgrades from the following OSs to Windows Server 2008 R2 Foundation:

- Windows Server 2008
- Windows Server 2003
- Windows Server 2000

The following restrictions apply to upgrades:

- Cross-architecture (for example, x86 to x64) and cross-language upgrades are not supported.
- There are no supported upgrade paths for Windows Server 2008 R2 Foundation to Windows Server 2008 R2 for Itanium-Based Systems edition or Windows Web Server 2008 R2 edition.

Supported configurations

Windows Server 2008 R2 Foundation should load and run on any HP server listed in “Recommended ProLiant server platforms” section of this document when the server meets the recommended hardware and software configuration established by Microsoft.

Carefully review this document for the recommended system configuration and possible issues that might be encountered. Do not use this paper as the sole source of information. In addition to the websites mentioned throughout this paper, visit the Windows Server 2008 R2 Foundation support page: <http://www.microsoft.com/windowsserver2008/en/us/foundation.aspx>.

Recommended system configuration

The recommended system configurations listed in this section are established by Microsoft for Windows Server 2008 R2 Foundation base OS installations is listed in Table 2.

IMPORTANT

Windows Server 2008 R2 Foundation uses DVD media and requires a server configured with either a USB DVD-ROM or an IDE DVD-ROM for local installations.

IMPORTANT

Windows Server 2008 R2 Foundation supports only a single processor socket.

Table 2. Recommended system configuration as established by Microsoft

Component	Requirement
Processor	<ul style="list-style-type: none"> • Minimum: 1.4 GHz • Recommended: 2 GHz or faster
Memory	<ul style="list-style-type: none"> • Minimum: 512 MB • Recommended: 2 GB or RAM or greater • Maximum (64-bit systems): 8 GB
Available disk space	<ul style="list-style-type: none"> • Minimum: 10 GB • Recommended: 40 GB
Drive	<ul style="list-style-type: none"> • DVD drive

Table 2. Recommended system configuration as established by Microsoft

Component	Requirement
Display	<ul style="list-style-type: none">• Super VGA (800 × 600) or higher resolution monitor
Other	<ul style="list-style-type: none">• Keyboard and Microsoft mouse or compatible pointing device

NOTE

- Available disk space refers to the free disk space on the partition to contain the system files. Additional space is required to copy the Windows Server 2008 Foundation CD contents to the hard disk during installation.
- Refer to the Microsoft website for any system requirement updates: <http://www.microsoft.com/windowsserver2008/en/us/system-requirements.aspx>.

Recommended ProLiant server platforms

Table 3 lists the ProLiant server platforms that support Windows Server 2008 R2 Foundation.

Table 3. ProLiant server platforms that support Windows Server 2008 R2 Foundation

Server platform	ROM family	ROM date (minimum)
ProLiant DL servers:		
ProLiant DL120 G5	022	02/26/08
ProLiant DL320 G5p*	W05	07/02/08
ProLiant DL320 G6	W07	04/01/09
ProLiant ML servers:		
ProLiant ML110 G5	015	07/22/08
ProLiant ML115 G5	018	06/03/08
ProLiant ML310 G5*	W05	07/02/08
ProLiant ML310 G6*	W07	04/01/09

*HP SmartStart-supported servers

IMPORTANT

iLO 2 firmware must be updated to Version 1.79 (or later) before Windows Server 2008 R2 Foundation is installed.

For additional information and updates on supported servers, refer to the following websites:

- ProLiant server platforms OS matrix:

- <http://h71028.www7.hp.com/enterprise/cache/458915-0-0-0-121.html>
- Software and drivers:
 - <http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp?lang=en&cc=us&taskId=135>
- Windows on ProLiant support matrix at either of the following links:
 - <http://h10018.www1.hp.com/wwsolutions/windows/index.html>
 - <http://h71028.www7.hp.com/enterprise/cache/458915-0-0-0-121.html>

Supported components for ProLiant servers

HP recommends using the drivers available on the Windows Server 2008 R2 Foundation media.

The HP ProLiant Support Pack for Microsoft Windows Server 2008 R2 Foundation Version 8.30 is supported with Windows Server 2008 R2 Foundation on the following ProLiant series servers:

- ProLiant DL300 series servers
- ProLiant ML300 series servers

NOTE

Support for installing HP ProLiant ML/DL 100 Series Servers using the Easy Setup CD is scheduled for a future release.

To see information about supported configurations of Storage Arrays, Host Bus Adapters, switches, and other SAN components, visit the SPOCK (Single Point of Connectivity Knowledge) website at <http://www.hp.com/storage/spock>.

Installing Windows Server 2008 R2 Foundation overview

Windows Server 2008 R2 Foundation can be installed using SmartStart 8.30 or later. Server deployment of Windows Server 2008 R2 Foundation is supported through SmartStart manual and assisted path installation options.

Pre-installation tasks

To prepare for installation, ensure that the following conditions are met:

- The server selected for installation is listed as a recommended ProLiant server platform in Table 3.
- Go to www.hp.com/go/bizsupport to obtain the supported ROM for Windows Server 2008 R2 Foundation installations.
- Use the ROM-Based Setup Utility (RBSU) to set date/time and configure the boot controller order (if necessary).
- Use the Option ROM Configuration for Arrays (ORCA) utility, F8 during post, to configure the RAID settings for the server.
- Update iLO 2 firmware to Version 1.79 (or later).

HP ProLiant Support Pack

The HP ProLiant Support Pack (PSP) includes operating system-specific bundles of drivers, utilities, and management agents optimized for ProLiant systems. The PSP is a predefined and tested bundle that includes setup and software maintenance tools designed to help efficiently install, upgrade, and manage system software.

PSP makes software maintenance easier by:

- Increasing server manageability
- Enabling administrators to update systems remotely
- Reducing server maintenance costs
- Saving time

For more information and to download the latest PSP, see the HP ProLiant Support Pack website at www.hp.com/servers/psp.

NOTE

The PSP installs automatically at the end of the assisted path installation. It does not need to be initiated to perform a manual installation of Windows Server 2008 R2 Foundation.

Obtaining the PSP

The latest PSP and individual components for supported Windows operating systems are available at the HP website: www.hp.com/servers/psp.

Installing the PSP

To download the PSP self-extracting executable, complete the following steps:

1. Go to the directory where the PSP executable is saved.
2. Double-click the executable and extract the PSP to a desired location.
3. Go to the directory where the extracted PSP is located.
4. Double-click setup.exe to start the PSP deployment.
5. As the PSP deployment starts, the **Source Selection** screen displays and allows you to enter a directory where the components to be installed are located. You can also specify that you want to get the latest components from ftp.hp.com. Selecting the **Start Inventory** button performs an inventory of the available updates.
6. After the inventory process finishes, the **Select Installation Hosts** screen displays. Select either the local host, a remote host, or multiple hosts for PSP deployment.
7. After you select the host(s), the discovery process for each selected host occurs. Each system is checked for installed hardware, software, and services.
8. Once the discovery process has completed, the **Select Bundle Filter** screen displays information about the PSP bundle that requires installation. Select the bundle and the appropriate filter options. For remote deployments, additional screens allow you to update information on a per-host basis.
9. After selecting the bundle for all hosts being updated, open the **Select Items to be Installed** screen to complete the following tasks:
 - Select the components for installation
 - Configure the components, if necessary.
 - Review and address failed dependencies before installation.
 - Review the revision history of the components.
10. After selecting the components to install, click **Install** to proceed with the installation. Once the installation completes, the **Installation Results** screen appears. If the PSP installs successfully, the process is complete.
11. If any components did not install successfully, complete the following steps:

- Exit HP Smart Update Manager.
- Make corrections to your environment.
- Restart the application to install the components that had problems.

Installing HP ProLiant ML/DL 300 Series using the SmartStart Media

1. Make sure that the server has a DVD drive (either native to the system or attached).
2. Place the HP SmartStart CD into the CD-ROM drive and boot the server to the CD to begin the installation.
3. Select the language and keyboard settings.
4. If you agree to the HP end user license agreement, click **Agree**.
5. Select **Install** to begin the OS installation.
6. Select the controller and drive for the OS installation.
7. Select the OS to install.
8. Follow the on-screen instructions to complete the SmartStart installation.
9. When prompted, remove the SmartStart CD and replace with Windows Media CD.
10. Follow the on-screen instructions to complete the OS installation.

Installing Windows Server 2008 R2 Foundation

To install Windows Server 2008 R2 Foundation, complete the following steps:

1. Make sure that the server has a DVD drive (either native to the system or attached).

NOTE

A license key may be required to use iLO virtual media with HP ProLiant ML or HP ProLiant DL servers.

2. Place the Windows Server 2008 R2 Foundation media into the DVD drive and boot the server to the DVD to begin the installation.
3. Follow the on-screen instructions to complete the installation.

IMPORTANT

The F6 option for updating drivers is not available during the Windows Server 2008 R2 Foundation installation. If a boot controller driver is not found, add the driver during the installation by clicking the Update Driver button, and then selecting the driver from the USB media, diskette drive, or CD-ROM drive.

For more information

For additional information, refer to the resources listed below.

Source	Hyperlink
HP and Microsoft Frontline Partnership website	www.hp.com/go/microsoft
Microsoft website	www.microsoft.com
Windows Server 2008 R2 Foundation Home page	http://www.microsoft.com/windowsserver2008/en/us/foundation.aspx

Call to action

Send comments about this paper to: TechCom@HP.com.

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