



Implementing Microsoft® Windows® Essential Business Server 2008 on HP ProLiant servers

integration note

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Abstract

This integration note describes the level of support available for Microsoft® Windows® Essential Business Server 2008 on HP ProLiant servers. The purpose of this paper is to assist customers during installation of Windows Essential Business Server 2008. For more information, visit the HP Windows Essential Family website at www.hp.com/go/winessentialfamily.

Key topics addressed in this paper:

- Supported configurations of ProLiant servers
- Recommended system configuration and server platforms
- Supported software, storage options, and network adapters
- Procedures for new installations

Windows Essential Business Server 2008 provides an integrated server and management system for mid-size networks.

Introduction to Windows Essential Business Server 2008

Designed for the mid-size customer (up to 300 clients), Windows Essential Business Server 2008 is a multi-server solution that provides the essential technology needed for a highly secure and reliable infrastructure. Windows Essential Business Server 2008 has an integrated setup with out-of-the-box configuration settings based on best practices for midsized businesses, making it easy to install and maintain while providing optimal protection and a new management experience.

NOTE:

Windows Essential Business Server 2008 is derived from Windows Server 2008 x64 Standard Edition. Microsoft does not plan to release a 32-bit version of Windows Essential Business Server 2008.

Windows Essential Business Server 2008 is available in the following editions:

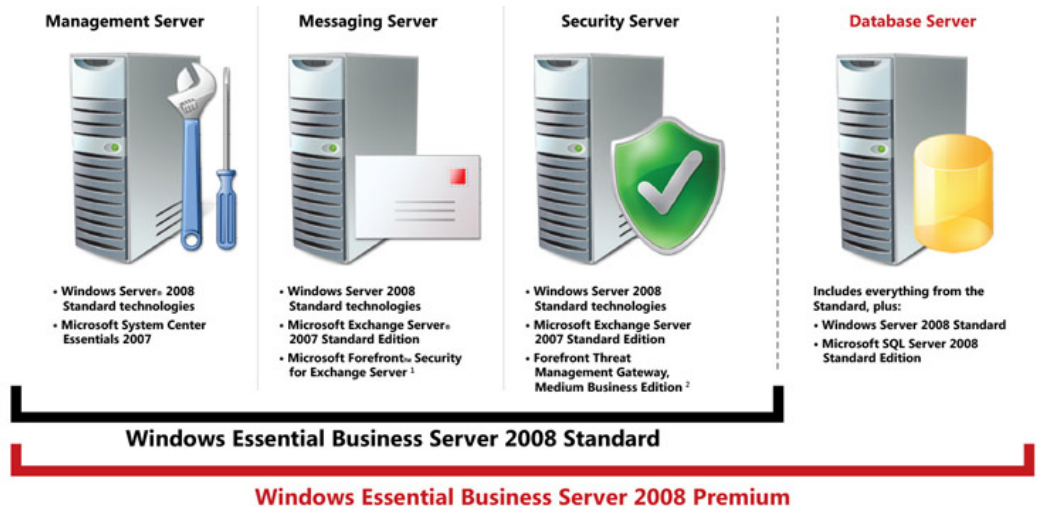
- Standard edition, which requires a three-server deployment
- Premium edition, which requires a four-server deployment

Windows Essential Business Server 2008 Standard Edition is an optimized network of three physical servers:

- Management Server
- Messaging Server
- Security Server

Windows Essential Business Server 2008 Premium Edition includes an additional Database Server.

Figure 1. Windows Essential Business Server 2008 server infrastructure



¹ One year Microsoft Forefront Security for Exchange Server subscription included in the product.

² One year Web Antimalware Subscription for Forefront Threat Management Gateway, Medium Business Edition included in product.

Benefits of Windows Essential Business Server 2008

Benefits of Windows Essential Business Server 2008:

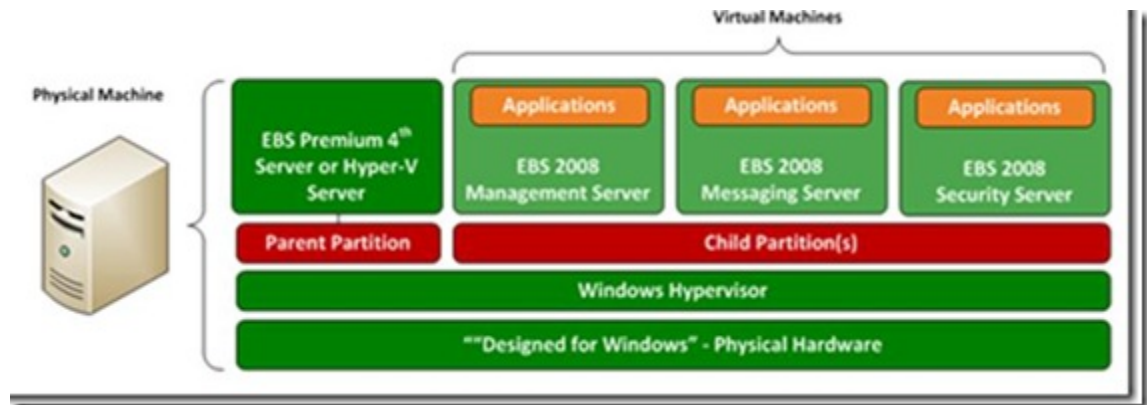
- **Simplified installation and configuration**—Windows Essential Business Server 2008 installs and licenses Windows Server 2008, Microsoft Exchange, and several other essential security and IT management products. This simplifies installations and implements networks quickly.
- **Simplified management**—IT administrators can add users or review and act on system alerts from a central Administration Console. This offers a consistent interface to perform most management tasks, accelerating the learning curve and saving time.
- **Improved performance**—The Windows Essential Business Server 2008 architecture includes Microsoft technologies that provide services essential to medium-sized businesses. It is optimized to enhance business performance.
- **Enhanced security**—The Windows Essential Business Server 2008 Security Server employs the latest Microsoft technologies to reduce network security risks and to help block unwanted commercial e-mail messages, or "spam."

Windows Essential Business Server 2008 and Microsoft Windows Server 2008 Hyper-V

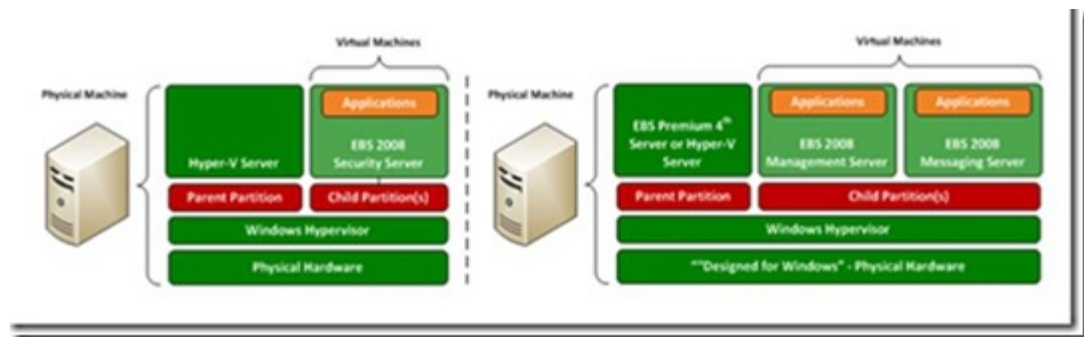
Microsoft offers flexibility of deployment for Windows Essential Business Server 2008. Customers may choose to virtualize their installations in order to reduce the number of physical servers deployed within their organizations.

Microsoft supports virtualized Windows Essential Business Server 2008 installations in the following scenarios:

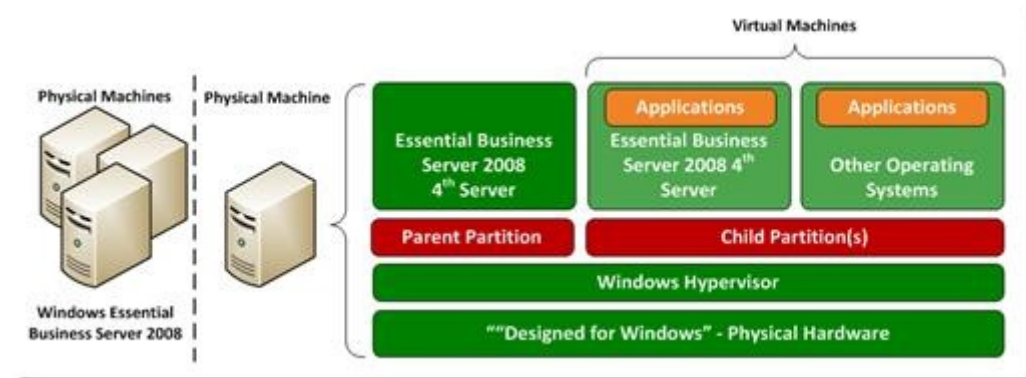
Scenario 1: Fully Virtualized Windows Essential Business Server 2008 on one physical server



Scenario 2: Fully-Virtualized Windows Essential Business Server 2008 on multiple physical servers



Scenario 3: Physical Installation of Windows Essential Business Server 2008 on three separate servers, Windows Server 2008 Hyper-V enabled on fourth physical server (Premium Server Hyper-V parent)



Evaluate the different virtualization scenarios offered by Microsoft to determine the best solution for your organization.

More information on how to virtualize a Windows Essential Business Server 2008 installation is available on the Microsoft website at <http://technet.microsoft.com/en-us/library/cc947757.aspx>. Virtualization scenarios are available on the Microsoft website at <http://technet.microsoft.com/en-us/library/cc512483.aspx>.

Not all HP ProLiant servers that support Windows Essential Business Server 2008 also support Windows Server 2008 Hyper-V. Table 2 lists the ProLiant server platforms that support Windows Essential Business Server 2008.

System requirements

Windows Essential Business Server 2008 should load and run on any ProLiant server listed in the “Recommended system platform” section of this document when the server meets the recommended hardware 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 Essential Business Server 2008 support page at www.microsoft.com/windowsserver/essential/ebs/default.aspx.

Recommended system configuration

Microsoft has established the recommended system configurations listed in Table 1 for Windows Essential Business Server 2008 installations.

Table 1. Recommended system configuration

Component	Requirement		
	Management Server	Security Server	Messaging Server
Processor (64-bit)	Single-core CPU: 2.5 GHz (minimum)	Single-core CPU: 2.5 GHz (minimum)	Single-core CPU: 2.5 GHz (minimum)
	Multi-core CPU: 1.5 GHz (minimum)	Multi-core CPU: 1.5 GHz (minimum)	Multi-core CPU: 1.5 GHz (minimum)
	Multiple physical CPUs: 1.5 GHz (minimum)	Multiple physical CPUs: 1.5 GHz (minimum)	Multiple physical CPUs: 1.5 GHz (minimum)
RAM per processor	4 GB	2 GB	4 GB
Hard drive (10K RPM minimum)	OS partition: 45 GB (minimum free space) stored on RAID 1 volumes	OS partition: 45 GB (minimum free space) stored on a single RAID 1 volume	OS partition: 45 GB (minimum free space) stored on RAID 1 volumes
	Application partition: 50 GB (minimum free space) stored on RAID 5 volumes	Application partition: 50 GB (minimum free space) stored on a single RAID 1 volume	Application partition: 50 GB (minimum free space) stored on RAID 5 volumes
Hard drive configuration	Eight hard disk drive bays (provides for in-server storage expansion)	Two or more hard disk drive bays	Eight hard disk drive bays (provides for in-server storage expansion)

Table 1. Recommended system configuration

Component	Requirement		
	Management Server	Security Server	Messaging Server
NICs	One, 100 Mbps (minimum)	Two, 100 Mbps (minimum)	One, 100 Mbps (minimum)
DVD-ROM	DVD-ROM drive that can boot from the system BIOS or a peripheral connection such as a USB port		
Failover drive	Dedicated hot swap hard disk drive configured for RAID 1 or RAID 5 volume failover		
Power	Redundant power supply for each server		

Supported ProLiant platforms

Table 2 lists the ProLiant servers that support Windows Essential Business Server 2008. ROM version and ROM date are included. Refer to the following web resources to assist in determining the ROM version and family of the supported ProLiant server.

- Software and drivers: <http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp?lang=en&cc=us&taskId=135>.
- Windows on ProLiant support matrix: <http://h71028.www7.hp.com/enterprise/cache/605841-0-0-0-121.html>.

Table 2. ProLiant server platforms that support Windows Essential Business Server 2008

Server platform	ROM family	ROM date (minimum)	Supports Windows Server 2008 Hyper-V
ProLiant BL servers:			
ProLiant BL260c G5	I20	02/14/08	Yes
ProLiant BL460c	I15	08/21/07	Yes
ProLiant BL465c	A13	09/20/07	Yes
ProLiant BL465c G5	A13G5	09/20/07	Yes
ProLiant BL480c	I14	08/21/07	Yes
ProLiant DL servers:			
ProLiant DL120 G5*	2008.07.03	07/03/08	No
ProLiant DL160 G5*	2008.08.22	10/06/08	Yes
ProLiant DL160 G5p	2008.08.22	10/06/08	Yes
ProLiant DL165 G5*	2008.08.15	09/10/08	Yes
ProLiant DL180*	DL180	06/18/06	No

Table 2. ProLiant server platforms that support Windows Essential Business Server 2008

Server platform	ROM family	ROM date (minimum)	Supports Windows Server 2008 Hyper-V
ProLiant DL180 G5*	2008.03.08	03/08/2008	No
ProLiant DL185 G5*	2008.04.23	04/30/08	No
ProLiant DL320 G5	W04	08/21/07	No
ProLiant DL360 G5p	W05	11/15/07	Yes
ProLiant DL365	A10	09/20/07	Yes
ProLiant DL365 G5	A10	09/20/07	Yes
ProLiant DL380 G5	P56	08/21/07	Yes
ProLiant DL385 G2	A09	09/20/07	No
ProLiant DL385 G5	A09	09/20/07	Yes
ProLiant ML servers:			
ProLiant ML110 G5*	ML110G5	06/05/06	No
ProLiant ML115*	ML115G1	03/10/07	No
ProLiant ML115 G5*	ML115G5	03/10/07	No
ProLiant ML150 G5*	ML150G5	05/30/06	No
ProLiant ML310 G3	W03	08/21/07	No
ProLiant ML310 G4	W03	08/21/07	No
ProLiant ML310 G5	W05	11/15/07	No
ProLiant ML350 G4	D17	07/16/07	No
ProLiant ML350 G5	D21	08/21/07	Yes
ProLiant ML370 G4	P50	07/19/07	No
ProLiant ML370 G5	P57	08/21/07	Yes

* The ProLiant Support Pack 8.11 does not include drivers for ProLiant 100 series servers. Download the required drivers from the appropriate product page on www.hp.com.

Windows Essential Business Server 2008 management strategy

Windows Essential Business Server 2008 includes MS System Center Essentials (SCE), and all services are managed through a single, common console.

For more information on MS System Center Essentials and Windows Essential Business Server integration, please visit www.microsoft.com/Systemcenter/essentials/en/us/essential-business-server.aspx.

Supported components

ProLiant components

Software

HP recommends that administrators use the drivers on the Windows Essential Business Server 2008 media for the installation. The HP ProLiant Support Pack for Microsoft Windows Server 2008 X64 editions, version 8.11 or later may be used with Windows Essential Business Server 2008.

Storage options

Table 3 lists supported ProLiant storage options and recommended driver revisions needed to interface with Windows Essential Business Server 2008. HP has updated the ProLiant Support Pack 8.10 for Windows Essential Business Server 2008 with the latest drivers (see the “Installing the PSP” section for the download location).

Table 3. Supported ProLiant storage controller options

Option	Driver	Location	
		PSP 8.11	Windows media
Management drivers:			
Notification driver, Smart Array 5xxx	CPQCISSE.SYS	✓	
SAS/SATA Notification Service	CISSESRV.EXE	✓	
StorageWorks Fibre Channel Array Notification Driver for Windows 2000/Server 2003	CPQFCAC.SYS	✓	
6-Port SATA RAID Controller	AAC.SYS	✓	
Smart Array:			
E200	HPCISS2.SYS (full-feature)	✓	
E200i	HPCISS2.SYS (full-feature)	✓	
E500	HPCISS2.SYS (full-feature)	✓	

Table 3. Supported ProLiant storage controller options

Option	Driver	Location	
		PSP 8.11	Windows media
P400	HPCISS2.SYS (full-feature)	✓	
P400i	HPCISS2.SYS (full-feature)	✓	
5i	HPCISS.SYS (full-feature)	✓	
5i Plus	HPCISS.SYS (full-feature)	✓	
6i	HPCISS.SYS (full-feature)	✓	
6402	HPCISS.SYS (full-feature)	✓	
641	HPCISS.SYS (full-feature)	✓	
642	HPCISS.SYS (full-feature)	✓	
P600	HPCISS2.SYS (full-feature)	✓	
P800	HPCISS2.SYS (full-feature)	✓	
Ultra 320 SCSI:			
Integrated Dual Channel Ultra320 SCSI Controller	SYMMPI.SYS		✓
64-bit/13-MHz Single Channel Ultra320 SCSI Host Bus Adapter	SYMMPI.SYS		✓
64-bit/13-MHz Dual Channel Ultra320 SCSI Host Bus Adapter	SYMMPI.SYS		✓
Fibre Channel Host Bus Adapters:			
QLogic:			
QLA24xx	QL2300.SYS		✓
QLE24xx	QL2300.SYS		✓
QMH2462	QL2300.SYS		✓

Emulex:			
LP1050	ELXSTOR.SYS	✓	✓
1050DC	ELXSTOR.SYS	✓	✓
LP11002	ELXSTOR.SYS	✓	✓
LP1150	ELXSTOR.SYS	✓	✓
LPe11002	ELXSTOR.SYS	✓	✓
LPe11050	ELXSTOR.SYS	✓	✓

NOTE: Firmware upgrades are available for many of these devices through variations of the Options ROMPaq. The latest version of each Options ROMPaq is available on the software and drivers website: www.hp.com/cgi-bin/hpsupport/index.pl.

Network interface controllers

Table 4 lists ProLiant NICs supported by Windows Essential Business Server 2008.

All NIC drivers are available on the PSP and have a digital signature. HP-branded drivers are not available on the Windows Essential Business Server 2008 media. However, corresponding NIC drivers from Intel and Broadcom are on the media and can be used instead. Drivers for HP multi-function adapters, including support for HP ProLiant G5 LAN on Motherboard (LOM) and the NC370T/F and NC380T, are available only on the web.

Table 4. Supported ProLiant Gigabit Ethernet NICs available on PSP 8.11 and the Windows media

Gigabit NIC	Driver
NC1020	Q57AMD64.SYS
NC150T	Q57AMD64.SYS
NC310	N1G5132E.SYS
NC320m	Q57AMD64.SYS
NC320T	Q57AMD64.SYS
NC325m	Q57AMD64.SYS
NC326m	Q57AMD64.SYS
NC340T	N1G5132E.SYS
NC360T	N1E5132E.SYS
NC360T	N1E5132E.SYS
NC370T/F/i	BXVBDA.SYS

Table 4. Supported ProLiant Gigabit Ethernet NICs available on PSP 8.11 and the Windows media

Gigabit NIC	Driver
NC371i	BXVBDA.SYS
NC373T/F/M/i	BXVBDA.SYS
NC374M	BXVBDA.SYS
NC380T	BXVBDA.SYS
NC6170	N1G5132E.SYS
NC7170	N1G5132E.SYS
NC7761	Q57AMD64.SYS
NC7771	Q57AMD64.SYS
NC7781	Q57AMD64.SYS
NC7782 PCI-X	Q57AMD64.SYS

Deploying Windows Essential Business Server 2008 on ProLiant servers

Pre-installation tasks

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

- The server selected for installation is listed in Table 1 as having the necessary support.
- Ensure the latest ROM is installed on the server.
- Any additional storage options added to the server are listed as supported ProLiant storage options.
- Any additional NICs added to the server are listed as supported ProLiant Gigabit Ethernet NICs.
- Go to the support and drivers page at www.hp.com/support to obtain the supported ROM for Windows Server 2008 installations for the server.
- Use the RBSU to set date/time and configure the boot controller order (if necessary).
- Use the Online RAID Configuration Utility (ORCA) to configure the RAID settings for the server.

Installation tips

The following tips may help you plan and install Windows Essential Business Server 2008 more efficiently:

- Before beginning the installation, plan the structure of the EBS servers including the IP address and host names, and then create the Planning DATA.xml file accordingly.
- To minimize installation time, install the base OS in parallel on the Management, Security, and Messaging servers. After the base OS installation completes on all three servers, start the Windows Essential Business Server 2008 configurations in the pre-defined order (Management, Security, and then Messaging server).

Install Windows Essential Business Server 2008

Windows Essential Business Server 2008 can be installed using either a network connection or a DVD drive.

IMPORTANT:

Enclosure DVD or iLO-mounted DVD installation methods should not be used with Windows Essential Business Server 2008 unless there is no alternative. The installation time for these methods is significantly longer.

NOTE:

HP recommends administrators follow the Microsoft documentation when installing Windows Essential Business Server 2008 on the ProLiant Server platforms. Refer to the Getting Started documentation:

www.microsoft.com/windowsserver/essential/ebs/default.aspx.

Windows Essential Business Server 2008 can be installed most efficiently using a network installation of a Windows Preinstallation Environment (PE) boot image that is located on an existing file server or laptop. This installation method requires approximately 20 minutes per Windows Essential Business Server 2008 server (Management Server, Messaging Server, and Security Server).

Table 5 lists the installation methods and associated installation times for the Windows Essential Business Server 2008 Management server installation (Windows Essential Business Server 2008 DVD1). The time duration listed in the table is only for the Management server; the Messaging Server and Security Server will each require the same installation time.

NOTE:

The USB DVD installation method does not support concurrent installation of the three servers; however, certain installation methods may support concurrent installation of EBS on all three servers.

Table 5. Windows Essential Business Server 2008 installation time

Installation method	Required installation time*
HP BladeSystem c3000 Enclosure DVD	3 hours, 47 minutes
iLO-mounted DVD	approximately 3 hours
ProLiant server blade I/O cable with USB DVD	25 minutes
Windows PE network installation	10 minutes (from server, not laptop)
ProLiant ML150 G5 Internal DVD (IDE)	15 minutes – for non-blade comparison

*The duration from the disk partition selection (when the file copy begins) to the first event in system log.

Install the ProLiant Support Pack (PSP)

ProLiant Support Pack for Microsoft Windows Server 2008 x64 Editions Version 8.11 may be used with Windows Essential Business Server 2008; however, official support will be available when the product is released from Microsoft.

PSP requirements

ProLiant servers support the combination of Windows Essential Business Server 2008 and PSP for Windows Server 2008 x64 Editions Version 8.11.

NOTE:

The ProLiant Support Pack 8.11 does not include drivers for ProLiant 100 series servers. Download the required drivers from the appropriate product page on www.hp.com.

Installing the PSP

To download the ProLiant Support Pack for Microsoft Windows Server 2008 x64 Editions, follow these steps:

1. Go to the HP website, www.hp.com.
2. Select **Support and Drivers**.
3. Enter the ProLiant server model (for example, ProLiant DL380 G5).
4. Select the appropriate server model from the Product Search List.
5. Select **Windows Server 2008 x64** as the operating system.
6. Select **Software - Support Pack** for the quick jump selection.
7. Select ProLiant Support Pack for Microsoft Windows Server 2008 x64 Editions.

To deploy the PSP:

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.

NOTE:

All PSP files must be present in the same directory as the setup.exe program for the PSP to be properly installed.

5. As the PSP deployment starts, it performs an inventory of the available updates and checks the local system to see what hardware and software is installed.
6. After the inventory and discovery processes finish, the “Select Installation Hosts” screen displays. Select either the local host or one (or more) remote hosts for PSP deployment.
7. After selecting the host(s), the “Select bundle filter” screen displays information about the PSP bundle to be installed. Select the bundle and the appropriate filter options. For remote deployments, additional screens allow users to update information on a per-host basis.
8. 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 to be installed.
 - Configure the components, if necessary.
 - Review failed dependencies before installation.
 - Review the revision history of the components.
9. After selecting the components to install, click **Install** to proceed with the installation. Once the installation completes, the Installation Results screen displays. If the PSP installs successfully, the process is complete.
10. If any components did not install successfully, exit HPSUM. If necessary, make any corrections to your environment.
11. Restart the application to install the components that had problems.

Appendix A: Known issues and workarounds

Table A-1 lists the known issues with ProLiant servers and Windows Essential Business Server 2008.

Table A-1. Known issues on ProLiant servers

Issue	Details
Issue 1	<p>After installing the ProLiant Support Pack 8.10 on Windows Essential Business Server the System Management Homepage may not load.</p> <hr/> <p>Description: The System Management Homepage uses https://127.0.0.1:2381 to launch the application. If this is not listed in the Trusted Sites it will fail to load.</p> <hr/> <p>Workaround: Use https://localhost:2381 to launch the System Management Homepage.</p> <hr/>
Issue 2	<p>The Windows Server 2008 SATA Software RAID driver for the ProLiant 100 series servers is not on the Windows Essential Business Server 2008 media.</p> <hr/> <p>Description: The driver was not available for inclusion on the Windows Essential Business Server 2008 media.</p> <hr/> <p>Workaround: Download the Windows Server 2008 SATA Software RAID driver from the HP product page for your ProLiant 100 series server and install the driver during the installation.</p> <hr/>

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
Windows Essential Server Solutions Family website	www.hp.com/go/winessentialfamily
HP ProLiant Support Pack for Microsoft Windows Server 2008 x64 Editions	http://h20000.www2.hp.com/bizsupport/TechSupport/SoftwareDescription.jsp?lang=en&cc=US&swItem=MTX-60db08ae0a914c359406c839e8&prodTypeId=15351&prodSeriesId=1121516
HP reference configuration for Microsoft Windows Essential Business Server on HP BladeSystem c3000 enclosure white paper	http://h71028.www7.hp.com/ERC/downloads/4AA1-8230ENW.pdf?jumpid=reg_R1002_USEN
Microsoft website	www.microsoft.com
Microsoft Windows Server 2008 Home page	www.microsoft.com/windowsserver2008/default.aspx
Microsoft Windows Essential Business Server 2008 product documentation	http://go.microsoft.com/fwlink/?LinkId=77645
Microsoft Windows Essential Business Server 2008 newsgroups	http://go.microsoft.com/fwlink/?LinkId=93376

Call to action

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TC081006IN, October 2008

