

Implementing Microsoft Windows Server 2012



on HP ProLiant servers and HP ProLiant server blades, 3rd edition

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Abstract

This paper identifies the HP ProLiant servers, HP ProLiant server blades, and options that we support with Microsoft Windows Server 2012 and provides information that can assist you during your OS installation. The information applies to Microsoft Windows Server 2012 and Microsoft Hyper-V Server 2012. Differences in virtualization support make them appropriate for different environments:

- Windows Server 2012 Datacenter Edition provides unlimited virtual instances, making it ideal for highly virtualized private and hybrid cloud environments.
- Windows Server 2012 Standard Edition provides two virtual instances, making it ideal for low density or non-virtualized environments.
- Hyper-V Server 2012 provides a focused virtualization environment, making it ideal to fit into existing environments improving server utilization and reduced costs.

Although the core features are identical, important differences exist between the different Windows Server 2012 editions. To determine what edition is right for your environment, Microsoft provides a comparison on the Microsoft website at microsoft.com/en-us/server-cloud/windows-server/buy.aspx.

This paper addresses the following key topics:

- Recommended system configurations
- Supported ProLiant servers
- Supported ProLiant server platform options, including:
 - Software and drivers
 - Storage options
 - NICs
- Procedures for a new installation
- Known issues and workarounds

Windows Server 2012 overview

Windows Server 2012 delivers a dynamic, available, and cost-effective server platform for the private cloud. It offers a scalable, flexible, and multi-tenant-aware cloud infrastructure. This infrastructure lets you connect across locations securely so that you can respond to your business needs faster and more efficiently.

Windows Server 2012 is a 64-bit server operating system that delivers value in four key areas:

- Virtualization
- Microsoft manageability
- Scalability
- Accessibility

Virtualization

A virtualized environment lets you scale and secure workloads, build clouds cost-effectively, and connect to cloud services securely.

- Hyper-V Server 2012: Hyper-V Server 2012 is a full-featured, standalone virtualization environment that supports the existing features of Hyper-V Server 2008 R2 along with the following: large-scale virtual machines, resource metering, storage migration, virtual Fibre Channel, and SR-IOV. It is a Microsoft solution for Virtual Desktop Infrastructure (VDI), Linux, or servers hosting Virtual Machines. For more information, see the Microsoft TechNet Library for Microsoft Hyper-V Server 2012 at technet.microsoft.com/en-us/library/hh833684.aspx.

Standalone Live Migration of a virtual machine (VM):

Live migration of virtual machines is supported between virtualized environments. Enable live migration by running the following PowerShell commandlet on both environments:

```
Enable-VMMigration
```

For details on configuring constrained delegation and remote management, see the following resources:

- Microsoft TechNet Library article “Configure and Use Live Migration on Non-clustered Virtual Machines” at technet.microsoft.com/en-us/library/jj134199.aspx
- Any of the following blog posts:
 - blogs.msdn.com/taylorb - [Enabling Hyper-V Remote Management - Configuring Constrained Delegation For Non-Clustered Live Migration](#)
 - blogs.msdn.com/taylorb - [Enabling Hyper-V Remote Management - Configuring Constrained Delegation For SMB and Highly Available SMB](#)
 - blogs.msdn.com/taylorb - [Scripting Constrained Delegation Settings](#)
 - blogs.msdn.com/taylorb - [Hyper-V Remote Management With PowerShell](#)
 - blogs.msdn.com/taylorb - [Performing Storage Migrations With Move-VMStorage](#)
- Single Root Input/Output Virtualization (SR-IOV) for networking: SR-IOV is a PCI-SIG specification for partitioning PCIe adapter bandwidth. Currently, Windows Server 2012 supports SR-IOV with network adapters. SR-IOV lets you assign a network adapter that supports SR-IOV directly to a virtual machine. This improves the network throughput by minimizing the network latency and CPU overhead that occurs while processing network traffic.

For technical details about SR-IOV, see the following resources:

 - Hyper-V SRIOV Overview at social.technet.microsoft.com/wiki/contents/articles/9296.hyper-v-sr-iov-overview.aspx
 - Microsoft Developer’s Network Single Root I/O Virtualization (SR-IOV) [msdn.microsoft.com/en-us/library/windows/hardware/hh440235\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/windows/hardware/hh440235(v=vs.85).aspx)
- SR-IOV support: For information about our support for SR-IOV, see the integration note [Implementing Windows Server 2012 SR-IOV on HP ProLiant Servers or the HP Windows Server 2012 Home Page at hp.com/go/ws2012](#).

Microsoft manageability

With Microsoft manageability, you can manage multiple servers as easily as managing a single server.

Remote Desktop Services (RDS): Windows Server 2012 includes Remote Desktop Services (RDS). Through the Server Manager in Windows Server 2012, RDS lets you deploy roles and features to remote physical and virtual servers. It provides session virtualization and Virtual Desktop Infrastructure (VDI) technologies allowing you to access sessions and virtual desktop collections. New management features of Server Manager also simplify RDS deployment and management in multi-server configurations. For more information, see the Microsoft document [Remote Desktop Services Overview](#).

Scalability

Scalability enables you to use a consistent set of tools and frameworks to build and deploy applications and websites on premises, in the cloud, and in a hybrid environment.

- Microsoft RemoteFX: Microsoft RemoteFX now adapts to your wide area network’s bandwidth. If you have low bandwidth or high-latency connections, this feature initiates the network auto-detect feature. This feature helps determine the bandwidth between the client and the server.
- Microsoft RemoteFX support: We will support this feature and provide additional documentation after the Windows Server 2012 commercial release. Upon availability, documentation will be made available on the HP Windows Server 2012 Home Page at hp.com/go/ws2012.

Accessibility

Regardless of your location, you can access data and applications from the cloud on any device.

Storage Spaces: Storage Spaces is a new technology in Windows Server 2012 that facilitates aggregation of different types of storage into highly available volumes. Storage Spaces does not currently support Smart Array controllers.

HP has elected not to support Storage Spaces at this time. We will continue to drive joint innovation with Microsoft in the storage resource management area. If you wish to create high performance, highly available pools of internal or mixed internal and external storage should continue to use HP Smart Array and SAN storage products for this purpose.

Windows Server 2012 features

Windows Server 2012 offers several new features. We support the following key features with the servers listed in the “Recommended ProLiant servers” section:

- **Consistent Device Naming (CDN):** Uses firmware-supplied NIC names for easier identification of each NIC and server. To use the CDN feature, you must use a ProLiant Gen8 server with one of the following Flexible LAN on motherboard (LOM) NICs:
 - HP Ethernet 1 Gb 4-Port 331FLR Adapter (for select ProLiant ML/DL/SL servers)
 - HP Ethernet 10 Gb 2-Port 530FLR SFP+ Adapter (for select ProLiant ML/DL/SL servers)
 - HP FlexFabric 10 Gb 2-Port 554FLR SFP+ Adapter (for select ProLiant ML/DL/SL servers)
 - HP Ethernet 10 Gb 2-Port 560FLB Adapter (for ProLiant BL Gen8 servers)
- **Cluster-Aware Updating (CAU):** Allows system administrators to update clustered servers with little or no loss in availability during the update process.
- **Windows Management Instrumentation (WMI) V2:** Provides an operating system interface through which instrumented components provide information and notification
- **Hyper-V virtual switch:** Provides programmatically managed and extensible capabilities to connect VMs to a physical network.
- **Load Balance/Failover (LBFO):** Separates traffic that is using a Virtual LAN (VLAN) to provide fault protection through failover.
- **Network Driver Interface Specification 6.30 (NDIS 6.30):** Incorporates the following NDIS enhancements into Windows Server 2012:
 - Virtualized Networking Enhancements
 - Power Management Enhancements
 - Quality of Service Support
 - Windows Filtering Platform Enhancements
 - Scalable Networking Enhancements

For detailed information or to download Windows Server 2012, see the Microsoft Windows Server 2012 home page at microsoft.com/en-us/server-cloud/windows-server/default.aspx.

Recommended system configurations

Microsoft has established the recommended system configurations listed in this section for Windows Server 2012 installations. Carefully review this document for the recommended system configurations and possible issues. Do not use this document as the sole source of information. Additional server configuration information is available on the Microsoft website at technet.microsoft.com/library/ji134246.aspx. Table 1 lists key server hardware requirements.

We recommend configuring your server with either of the following processor families:

- Intel® Xeon® Processors with Intel 64 architecture
- Advanced Micro Devices, Inc. (AMD64) Opteron™ Series Processors

Table 1. Recommended system configuration as established by Microsoft

Component	Requirement
Processor	Minimum: 1.4 GHz Recommended: 2 GHz
RAM per processor (socket)*	Minimum: 512 MB Maximum: 4 TB Recommended: 4 GB
Monitor	SVGA resolution (800x600) or higher
Optical storage	DVD-ROM drive

Table 1. Recommended system configuration as established by Microsoft

Component	Requirement
Peripherals	Keyboard Microsoft mouse or compatible pointing device
Available disk space†‡	Minimum: 10 GB Recommended: 40 GB

*MB = 1024^2 bytes; GB = 1024^3, and TB=1024^4
†MB=1000^2; GB=1000^3; TB=1000^4
‡Available disk space is the free disk space on the partition that will contain the system files. Additional space is required to copy the Windows Server 2012 DVD contents to the disk during installation. Computers with more than 16 GB of RAM require more disk space for paging and dump files. In addition, if using a logical drive for booting, it must be less than 2 TB.

Recommended ProLiant servers

Table 2 lists the ProLiant servers and minimum ROM version that we tested with Windows Server 2012. We recommend that you use these listed, recommended ProLiant servers as platforms for Windows Server 2012.

You can download ROM updates from the HP Service Pack for ProLiant (HP SPP), which is available at hp.com/go/spp or the HP Support Center at hp.com/go/support.

Table 2. Recommended ProLiant servers

Server platform	ROM family	ROM date
ProLiant BL servers		
BL2x220c G7	I29	05/05/11 or later
BL420c Gen8*	I30	08/20/12 or later
BL460c G6	I24	12/02/11 or later
BL460c G7	I27	05/05/11 or later
BL460c Gen8*	I31	08/20/12 or later
BL465c G7	A19	05/08/12 or later
BL465c Gen8*	A26	08/14/12 or later
BL490c G7	I28	05/05/11 or later
BL620c G7	I25	08/04/12 or later
BL660c Gen8*	I32	08/20/12 or later
BL680c G7	I25	08/04/12 or later
BL685c G7	A20	08/15/12 or later
ProLiant DL servers		
DL120 G7	J01	08/10/12 or later
DL160 Gen8	J03	08/20/12 or later
DL165 G7	O37	05/25/10 or later

Table 2. Recommended ProLiant servers

Server platform	ROM family	ROM date
DL320e Gen8	J05	05/26/12 or later
DL360 G6	P64	05/05/11 or later
DL360 G7	P68	05/05/11 or later
DL360p Gen8*	P71	08/20/12 or later
DL360e Gen8*	P73	08/30/12 or later
DL380 G6	P62	07/06/11 or later
DL380 G7	P67	05/05/11 or later
DL380p Gen8*	P70	08/20/12 or later
DL380e Gen8*	P73	08/20/12 or later
DL385 G7	A18	05/08/12 or later
DL385p Gen8*	A28	08/14/12 or later
DL560 Gen8*	P77	08/20/12 or later
DL580 G7*	P65	08/04/12 or later
DL 585 G7*	A16	08/15/12 or later
DL980 G7*	P66	07/30/12 or later
ProLiant ML servers		
ML110 G7	J01	08/10/12 or later
ML310e Gen8	J04	09/22/12 or later
ML350 G6	D22	12/02/11 or later
ML350p Gen8*	P72	08/20/12 or later
ML350e Gen8*	J02	08/20/12 or later
ProLiant SL line servers		
SL165s G7	O37	11/27/12 or later
SL165z G7	O37	11/27/12 or later
SL230s Gen8*	P75	08/20/12 or later
SL250s Gen8*	P75	08/20/12 or later
SL270s Gen8*	P75	08/20/12 or later
SL335s G7	A24	01/10/13 or later
SL390s G7	P69	05/05/12 or later
SL4540 Gen8	P74	01/11/13 or later
ProLiant MicroServer		

Table 2. Recommended ProLiant servers

Server platform	ROM family	ROM date
ProLiant MicroServer	O41	08/29/11 or later

*SR-IOV-compliant ProLiant servers

Supported ProLiant server platform options

Before you install Windows Server 2012 on a ProLiant server, review the following sections for information on the ProLiant server platform options for which HP drivers are available and known to work.

Software and drivers

The HP storage option and NIC drivers are available on the HP SPP, which is available at hp.com/go/spp.

Storage options

We support the storage options listed in Table 3 for Windows Server 2012.

Table 3. Supported ProLiant storage controller options

Option	Driver	Location		
		Web download	Windows media	HP Intelligent Provisioning HP SPP
Management drivers				
SAS/SATA Notification Service	CISSESRV.EXE	✓		✓
Fibre Channel Storage Event Driver	CPQFCAC.SYS	✓		✓
Smart Array				
B110i	HPAHCISR.SYS	✓		✓
B120i B320i	HPSA2.SYS	✓		✓
P212 P220i P222	HPSAMD.SYS (basic)		✓	✓
P410 P410i P411 P420 P420i P421 P711m P712m P721m P812 P822	HPCISSS2.SYS (full featured)	✓		✓
1210m	HPCISSS2.SYS (full featured)	✓		✓

Table 3. Supported ProLiant storage controller options

Option	Driver	Location		
		Web download	Windows media	HP Intelligent Provisioning HP SPP
Host Bus Adapters				
H220 H221 H222 H210i H220i	LSI_SAS2.SYS		✓	✓
SC08e SC11Xe	LSI_SAS2.SYS LSI_SCSI.SYS		✓	✓
Fibre Channel Host Bus Adapters				
QLogic				
81Q PCIe 82Q PCIe FC1142SR FC1242SR	QL2300.SYS	✓	✓	✓
Emulex				
81E PCIe 82E PCIe LPe1205 FC2142SR FC2242SR	ELXSTOR.SYS	✓	✓	✓
Brocade				
81B PCIe 82B PCIe 41B PCIe 42B PCI2	BFAD.SYS	✓	✓	✓
StorageWorks				
DAT Autoloader 72*6 DAT Autoloader 72*10	HPDAT.SYS HPDATCHG.SYS			✓

Network adapters

We support the network adapters (NICs) listed in Table 4 for Windows Server 2012. When used with a supported ProLiant Gen8 server, the NICs with an asterisks (*) support Consistent Device Naming (CDN).

Table 4. Supported ProLiant NICs

NIC	Driver(s)	Location		
		Download	Windows Media	HP Intelligent Provisioning HP SPP
331i 331T 331FLR* 332T 330i NC107i NC326i/m	B57ND60A.SYS		✓	✓
NC382i/T/m	BXVBDA.SYS BXND60a.SYS		✓	✓
NC365T 361i 361FLB* 361T	E1R63X64.SYS		✓	✓
NC360T/m NC364T/m	E1E6332E.SYS		✓	✓
NC112i/T NC362i	E1Q63X64.SYS		✓	✓
NC532i NC532m 530FLR-SFP+* 530FLB* 530M 560FLB*	EVBDA.SYS BXND60A.SYS		✓	✓
NC542m	MLX4_BUS.SYS MLX4ETH63.SYS	✓	✓	
NC550m/SFP NC551m NC551i NC553m NC553i CN1000E CN1100E	OCND63.SYS	✓	✓	✓

Table 4. Supported ProLiant NICs

NIC	Driver(s)	Location		
		Download	Windows Media	HP Intelligent Provisioning HP SPP
NC522m	QLXGND64.SYS		✓	✓
NC522 SFP				
NC524FLR SFP+*				
NC375i				
NC375T				
NC523 SFP				
CN1000Q				

* CDN-compliant NIC

Pre-installation tasks

To prepare for installation, ensure that you complete the following tasks:

- Make sure that your server and components are recommended for Windows Server 2012:
 - Select a server from the recommended system platforms listed in the “Recommended ProLiant servers” section.
 - Make sure that the server has a DVD drive (either installed or attached to the server receiving the installation). Note that you need a license key to use iLO virtual media with HP ProLiant ML or DL servers.
 - Select additional storage options from the storage options listed in the “Storage options” section.
 - Select additional NICs from those listed in the “Network adapters” section.
- Make sure that your server is completely configured and up-to-date. If necessary, complete the following:
 - Update the ROM to the required version. You can apply ROM updates from the HP Service Pack for ProLiant (HP SPP), which is available at hp.com/go/spp or the HP Support Center at hp.com/go/support.
 - Use the HP ROM-Based Setup Utility (RBSU) to configure the server hardware, set the date and time appropriately, and configure the boot controller order if necessary. To access the RBSU, press **F9** from the main boot screen. For instructions on using the RBSU, see HP ROM-Based Setup Utility User Guide at hp.com/support/rbsu.
 - Update iLO firmware to the latest version. To download the latest iLO firmware, see the HP Support Center at hp.com/go/support.
 - Update the Intelligent Provisioning firmware to the latest version. Update the Intelligent Provisioning firmware by following the steps provided in the HP Intelligent Provisioning User Guide, located at hp.com/go/intelligentprovisioning.
 - Update your server using the latest version of the SPP. For instructions, see the “Installing components from the HP SPP” section.

Installing the Windows Server 2012 OS

These following sections provide instructions for installing Windows Server 2012 on ProLiant servers.

ProLiant Gen8 servers

Use HP Intelligent Provisioning 1.40 (or later) to install Windows Server 2012 onto a ProLiant Gen8 server. Although you can use the Windows Server 2012 media to install the OS onto any supported ProLiant server, we recommend using Intelligent Provisioning to install Windows Server 2012 onto ProLiant Gen8 servers. Using Intelligent Provisioning ensures that your server will have the latest HP firmware, drivers, and software.

Before beginning the OS installation, make sure that your server has the latest version of Intelligent Provisioning firmware. Update the Intelligent Provisioning firmware by following the steps provided in the HP Intelligent Provisioning User Guide, located at hp.com/go/intelligentprovisioning.

For additional information on Intelligent Provisioning, see the [Intelligent Provisioning Release Notes](#). To understand the OS support available for ProLiant servers, see the [Intelligent Provisioning Server Support Guide](#). Both of these documents are available on the [Intelligent Provisioning Information Library](#).

Note

HP Insight Control server deployment is the licensed solution for mass deployment and automated installs. Insight Control 7.1.2 adds the capability for Windows Server 2012 deployment.

To install the OS and the required software and firmware, use the following steps in conjunction with the [Intelligent Provisioning User Guide](#). The [Intelligent Provisioning User Guide](#) provides screen shots and specific steps and guidelines for the installation.

1. Boot the server, and press **F10** during POST. If you want to check the HP IP version, click **System Information** on the Intelligent Provisioning screen.
2. Select **Configure and Install**.
3. Configure hardware settings as necessary for your server.
4. Select the OS you want to install to be Windows Server 2012.
5. Choose the type of installation to be Custom, Manual, or Default installation.
6. Follow the on screen instructions to complete the installation.

ProLiant G7 servers

The assisted installation method for ProLiant G7 servers was HP SmartStart, which does not provide Windows Server 2012 as an option. To install Windows Server 2012 on a server using the Windows 2012 media, complete the following steps:

1. Insert the Windows Server 2012 media into the DVD drive and boot the server to the DVD.
2. Follow the steps on the installation screens to complete the OS installation.
3. If the installation does not find the drivers for the storage controller or NIC, download the driver as indicated in the “Where to get drivers” section.

Where to get drivers

To determine what media contains the drivers for your storage options or NICs, see the following sections of this paper:

- For storage option driver information, see the “Storage options” table under the “Supported ProLiant server platform options” section.
- For NIC driver information, see the “Network adapters” table under the “Supported ProLiant server platform options” section.

Install HP drivers from one of the following sources:

- **Intelligent Provisioning:** Intelligent Provisioning includes HP firmware, drivers, and software needed for all ProLiant Gen8 servers. If you are installing Windows Server 2012 onto a ProLiant Gen8 server, Intelligent Provisioning installs all of the latest drivers during the OS installation. For the latest version of Intelligent Provisioning firmware, see hp.com/go/intelligentprovisioning.
- **HP Service Pack for ProLiant (SPP):** The HP SPP includes HP drivers and software (components) for all ProLiant servers, with the following exceptions:
 - ProLiant MicroServer
 - Certain ProLiant 100 series servers that were released prior to ProLiant 100 series Gen8 servers

You can download the HP SPP from hp.com/go/spp/download. For instructions on installing the HP SPP, see the “Installing components from the SPP” section of this paper.
- **HP ProLiant 100 Series Easy Set-up CD:** The HP ProLiant 100 Series Easy Set-up CD contains drivers for all ProLiant 100 series servers except for ProLiant Gen8 100 series servers and the ProLiant ML110 G7 and DL120 G7 servers. The drivers for the ProLiant Gen8 100 series servers and the ProLiant ML110 G7 and DL120 G7 servers are included in the HP SPP.

You can download the HP ProLiant 100 Series Easy Set-up CD from from the HP HP Business Support Center website Support and Drivers page at hp.com/us/en/support-drivers.html.
- **HP Business Support Center:** You must obtain drivers for the ProLiant MicroServer from the HP Business Support Center website. The Service Pack for ProLiant does not include drivers for the ProLiant MicroServer.

You can download the ProLiant MicroServer drivers from the HP Support Center at hp.com/go/support. You can download the HP ProLiant 100 Series Easy Set-up CD from from the HP HP Business Support Center website Support and Drivers page at hp.com/us/en/support-drivers.html.

Installing components from the HP SPP

For instructions on how to download and install HP SPP 2012.10.0 (or later) follow the steps in the Release Notes, which are available at hp.com/go/spp/documentation.

When you get to the **Source Selection** screen, continue with the following steps to deploy the updates:

1. Verify that the directory path in the Directory field has the location of the smart components from the extracted Supplement, and then select **Start Inventory**.
HP Smart Update Manager (HP SUM) performs an inventory of the installed hardware and software, and then checks for available updates.
2. After the inventory and discovery finish, the **Select Installation Hosts** screen appears. Select either the local host or one (or more) remote hosts for Supplement deployment.
3. After selecting the host(s), the **Select bundle filter** screen shows the Supplement bundle information. Select the bundle and the appropriate filter options. For remote deployments, additional screens allow you to update information on a per-host basis.
4. After selecting the bundle for all hosts being updated, open the **Select Items to be Installed** screen to complete the following tasks:
 - A. Select the components for installation.
 - B. If necessary, configure the components. The **Configure Now** link is not available when running Windows Server 2012 with the Server Core option. To configure components:
 - i. Access the system as a remote host using HP SUM, where HP SUM is running on a system with a supported Windows OS.
 - ii. Configure the components and resolve any failed dependencies before deploying the OS.
 - C. Review the revision history of the components.
5. After selecting the components, click **Install**. When the installation finishes, the **Installation Results** screen displays. If the Supplement installs successfully, the process is complete. If one or more components did not install successfully, complete the following steps:
 - A. Exit HP SUM.
 - B. Make the required update to the environment.
 - C. Restart the Supplement installation.

Installing the HP SR-IOV enabled NIC driver (optional)

Install the HP SR-IOV enabled NIC driver by completing the following steps:

1. Copy the component package **cp017638** from the HP SPP to your server Windows desktop.
2. Double click the **cp017638** icon on your server Windows Desktop to launch the component package **cp017638** setup.
3. Choose **Install** from the component package **cp017638** setup.
4. Click **Install** again when the component package **cp017638** setup screen appears.

The message “The installation procedure was completed successfully” will display upon completion of the HP SR-IOV driver.

For details about implementing Windows Server 2012 SR-IOV on ProLiant servers, see the the integration note [Implementing Windows Server 2012 SR-IOV on HP ProLiant Servers](#) or the HP Windows Server 2012 Home Page at hp.com/go/ws2012.

Known issues and workarounds

This section outlines a few potential issues that you may encounter with the Windows Server 2012 OS and ProLiant servers. We are actively working to resolve all the issues. We will update this paper as additional information becomes available.

Table 5 lists known issues with ProLiant servers and Windows Server 2012.

Table 5. Known issues and workarounds

Issues	
After installing Windows Server 2012, the Event Viewer displays errors in the Windows Event Log showing that the license activation failed after providing the Product Key	
Description	<p>After installing Windows Server 2012, the Event Viewer displays the following errors in the Windows Event Log:</p> <ul style="list-style-type: none"> • The System information displays a message "Boot-start or system start drivers fail to load." • Application information displays a message "License Activation Failed." <p>This issue occurs because the services start in an order that differs from what the OS expects.</p>
Workaround/Solution	For details about this issue, see the Microsoft Support Blogs at support.microsoft.com/ph/1163 .
Event ID 46 occurs upon restarting the server	
Description	The default dump file is the pagefile. This issue may occur if the computer boots without a configured dump file. For example, after installing Windows Server 2012, the very first boot results in this issue because the pagefile has not been set up yet.
Workaround/Solution	To avoid this error, complete the paging file configuration. Note: You can ignore this event if it occurs after the OS installation or if you do not want to set up the dump file. For details on this issue, see the Microsoft Knowledge Base at support.microsoft.com/kb/2756313/EN-US .
The .NET Framework 3.5 does not automatically install	
Description	.NET Framework 3.5, which SQL Server requires, will not install automatically by selecting the appropriate box under Features in Server Manager.
Workaround/Solution	<p>To work around this issue, install .NET Framework 3.5 as follows:</p> <ol style="list-style-type: none"> 1. Insert the Windows Server 2012 RC installation DVD into an optical drive. In these steps, we are referring to the optical drive as D:\. 2. Create a temporary directory on the hard drive, C:\temp. 3. Copy all files from D:\sources\sxs to C:\temp. 4. From the powershell, type the command: <pre>dism /online /enable-feature /featurename:NetFX3 /all /source:C:\temp /limitaccess</pre> 5. The installation starts but then hangs and appears to stop at 99.9%. Press the Enter key at this point. 6. Reboot the server. <p>For details about this issue, see the Microsoft TechNet Blogs at blogs.technet.com/b/askcore/archive/2012/05/14/windows-8-and-net-framework-3-5.aspx.</p>
You cannot change the Windows Server 2012 screen resolution	
Description	After the installation of Windows Server 2012, you will not be able to change the screen resolution.
Workaround/Solution	<p>We are working with Microsoft to resolve this issue. To work around this issue, you can set the screen resolution by completing the following steps:</p> <p>Access the Advanced setting in the Display Control Panel.</p> <p>List All Modes in the Adapter tab.</p> <p>Uncheck the Hide modes that this monitor cannot display checkbox in the Monitor tab.</p>

Table 5. Known issues and workarounds

When exiting Suspend or Hibernation, a blue screen may display	
Description	A blue screen sometimes appears after you exit Suspend or Hibernation.
Workaround/Solution	To work around this issue, do not use Suspend or Hibernation. We are working with Microsoft to resolve this issue. We will also be providing additional information on this issue. Microsoft will make details available in Knowledge Base Article KB2749546. We will be publishing a Customer Advisory, which will be available at hp.com/portal/site/hpsc/public/kb .
HP SUM does not install the HP SR-IOV enabled NIC driver	
Description	HP SUM does not install the HP SR-IOV enabled NIC driver or update the Windows Server 2012 in-box SR-IOV enabled NIC driver.
Workaround/Solution	Install the HP SR-IOV enabled NIC driver by completing the following steps: Copy the component package cp017638 from the HP SPP to your server Windows desktop. Double click on the cp017638 icon on your server Windows desktop to launch the component package cp017638 setup. Choose Install from the component package cp017638 setup. Click Install again when the component package cp017638 setup screen appears. The message "The installation procedure was completed successfully" will display upon completion of the HP SR-IOV driver.
HP Smart Update Manager (HP SUM) may display the message "Qt : Untested Windows version 6.2 detected!"	
Description	When starting HP SUM in Windows Server 2012, the following warning may appear "Qt: Untested Windows version 6.2 detected!"
Workaround/Solution	This issue occurs because HP SUM detects the version of Windows incorrectly. You can disregard the warning and continue with the installation. We are working to resolve this issue. For details on this issue, see the Customer Advisory at hp.com/portal/site/hpsc/public/kb/docDisplay?docId=emr_na-c03517970 .
Emulex online firmware updates do not support the HP CN1000E Dual Port Converged Network Adapter and HP NC550SFP Dual Port 10GbE Server Adapter	
Description	Unless the following NICs have firmware version 4.0.360.15, the Emulex online firmware update components will not update the firmware: <ul style="list-style-type: none"> • HP CN1000E Dual Port Converged Network Adapter • HP NC550SFP Dual Port 10GbE Server Adapter
Workaround/Solution	To update these NICs, obtain the Firmware Image for Offline Update (OneConnect ISO). For details on this issue, see the Customer Advisory at hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&taskId=110&prodSeriesId=4194735&prodTypeId=3709945&prodSeriesId=4194735&objectID=c02790678 .
The SPP installs two versions of the HP ProLiant Integrated Lights-Out Management interface driver for Windows Server.	
Description	The SPP installs the HP ProLiant Integrated Management driver for Windows Server 2003/2008 and one for Windows Server 2012.
Workaround/Solution	Since the driver for Windows Server 2012 installs successfully, no action is necessary.

Resources, contacts, or additional links

Microsoft Windows Server 2012 information on the HP website
hp.com/go/ws2012

Microsoft Windows Server 2012 Home Page
microsoft.com/en-us/server-cloud/windows-server/default.aspx

Service Pack for ProLiant Home Page
hp.com/go/spp

Intelligent Provisioning information
hp.com/go/intelligentprovisioning

HP ProLiant Server Technology Papers
hp.com/servers/technology

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TC1302961, Created September 2012, Updated October 2012, March 2013

