

### Overview

HP and Microsoft are teaming up to make the Microsoft Private Cloud work for you. Windows Server 2012 paired with Microsoft System Center 2012 enables customers to accelerate delivery of private clouds through pooling and efficient use of infrastructure resource, through dynamic resource migration in response to resource availability, through simplified service design and self-service service delivery, and through efficient ongoing management from infrastructure through applications.

But a great cloud operating system and systems management are not enough.

- Our joint customers require infrastructure that delivers best-in-class performance and ensures that valuable, compute, storage, and networking resources are never wasted.
- Customers need to be able to implement private clouds faster and with less risk by relying on HP and Microsoft to conduct the up-front solution design work; remove the burden of time consuming racking, stacking, and cabling; and by ensuring that the private cloud environment is implemented correctly each time.
- And, most importantly, customers expect to work with HP to chart a path to the private cloud that allows them to realize the benefits of cloud computing incrementally, without disruption to existing IT services or massive cost over-runs.

HP has partnered with Microsoft to make the private cloud work for you by delivering:

- Converged infrastructure horsepower to get your organization "beyond virtualization" and running with unparalleled performance and scalability in the cloud.
- Solutions such as HP VirtualSystem that make it simple to deploy virtualization and private cloud infrastructure, from new two-node SMB and branch office solutions to enterprise data center solutions hosting thousands of VMs, without spending hours designing, racking, and deploying infrastructure.
- And expertise to help you chart a non-disruptive path from your current IT infrastructure to private cloud based on HP Converged Infrastructure, HP Insight Management, Microsoft Windows Server 2012, and Microsoft System Center.

Whether you are an enterprise, a small or medium-sized business, or a hosting provider, HP and Windows Server 2012 will help you cloud optimize your IT

HP ProLiant servers and option products are rigorously tested and certified for Windows Server 2012. For a complete list of supported HP ProLiant servers, visit the OS support matrix at: [www.hp.com/go/wincert](http://www.hp.com/go/wincert).

HP Windows Server 2012 OEM licenses are available for purchase from HP or your local authorized reseller.

- Available OEM licenses:
  - Foundation: per server licensing; limited to 1 processor only; up to 15 users. No virtualization rights.
  - Essentials: per server licensing; up to 2 processors; up to 25 users. No virtualization rights.
  - Standard: processor + CALs, up to 2 processors per license; no processor limit. Virtual use rights: 2 instances per license.
  - Datacenter: processor + CALs, up to 2 processor per license; no processor limit. Virtual use rights: unlimited instances.
  - Additional License: available for Standard and Datacenter editions.
  - Client Access Licenses: 1 or 5 pack, for User or Device.
  - Remote Desktop Services: 5 pack for User or Device.
- All Windows Server 2012 kits include:
  - x64 DVD media
  - Certificate of Authenticity (COA) - Sticker that contains your product key and is affixed to your server. The COA is your proof of license for the operating system.
- Licensing model for Standard and Datacenter editions: Per processor based + CALs. Each license grants rights to run on up to 2 processors. Windows Server 2012 will not include bundled CALs. Single Product Key per edition for activation.
- From HP: Available for purchase at the time of your HP ProLiant server purchase as pre-installed on selected HP ProLiant servers or Non-preinstalled (drop in the box) with the operating system DVDs included with the server. Client access licenses (CALs) are also available for purchase in addition to your server purchase or for a later purchase. Please be sure to review the minimum and

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maximum system requirements for Windows Server 2012 at the Microsoft website listed above.

- From your local authorized reseller: Available for purchase with your preferred HP ProLiant server as a Windows Reseller Option Kit or ROK.

**NOTE:** For more information on HP's offering of Windows Server 2012 products, go to: <http://www.hp.com/go/ws2012>

### Models

#### Microsoft Hardware Specifications for Foundation edition:

|   | WS Server 2012 | Foundation                              |
|---|----------------|---|
| <b>CPU</b>                                |                | Limited to 1 Proc; per server licensing |
| <b>Min. CPU Req.</b>                      |                | 1.4 GHz x64                             |
| <b>IA64 Sockets</b>                       |                | 0                                       |
| <b>X64 RAM STD/ Max</b>                   |                | 2GB/32GB                                |
| <b>ECC</b>                                |                | Yes                                     |
| <b>NIC</b>                                |                | multiple NICs supported                 |
| <b>Internal optical bay drive allowed</b> |                | Yes                                     |
| <b>Storage required</b>                   |                | 32 GB                                   |
| <b>SW RAID</b>                            |                | Yes                                     |
| <b>Video</b>                              |                | Yes                                     |
| <b>Keyboard, Mouse</b>                    |                | Yes                                     |

**NOTE:** Microsoft Windows Server Foundation edition will limit the number of permissible user accounts and/or require certain Active Directory and domain configurations. If not properly configured, the software will generate warnings to correct the configuration. The warnings will alert you as to the behavior of the software in the absence of corrective measures, which may include the periodic shutdown of the server. The warnings and shutdowns will cease once the configuration is corrected. For more information about these features as they apply to the product, please review the product-specific documentation located on [www.microsoft.com](http://www.microsoft.com).

#### Windows Server 2012 Foundation Edition 1P Pre-Installed on ProLiant Servers

**NOTE:** All Foundation Edition part numbers include x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Foundation FIO

701589-DN1

#### Windows Server 2012 Foundation Edition 1P OS Not Pre-Installed

**NOTE:** All Foundation Edition part numbers include x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Foundation FIO Not Pre-installed

701590-DN1

#### Windows Server 2012 Foundation Edition 1P Reseller Option Kit

**NOTE:** Available for purchase from your local HP authorized reseller. Foundation Edition includes: x64 DVD media and COA. Reseller must affix the COA to the server and may preinstall the OS before delivery of the server.

Windows Server 2012 Foundation Edition ROK

701591-DN1

### Models

#### Microsoft Hardware Specifications for Essentials edition:

|   | WS Server 2012 | Standard                           |
|---|----------------|------------------------------------|
| <b>CPU</b>                                |                | Up to 2 Proc; Per server licensing |
| <b>Min. CPU Req.</b>                      |                | 1.4 GHz x64                        |
| <b>IA64 Sockets</b>                       |                | 0                                  |
| <b>X64 RAM STD/ Max</b>                   |                | 2GB/64GB                           |
| <b>ECC</b>                                |                | Yes                                |
| <b>NIC</b>                                |                | multiple NICs supported            |
| <b>Internal optical bay drive allowed</b> |                | Yes                                |
| <b>Storage required</b>                   |                | 160 GB                             |
| <b>SW RAID</b>                            |                | Yes                                |
| <b>Video</b>                              |                | Optional                           |
| <b>Keyboard, Mouse</b>                    |                | Optional                           |

#### Windows Server 2012 Essentials Edition 1-2P Pre-Installed on ProLiant Servers

**NOTE:** All Essentials Edition part numbers include: x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server Essentials 2012 FIO

701585-DN1

#### Windows Server 2012 Essentials Edition 1-2P OS Not Pre-Installed

**NOTE:** All Standard Essentials part numbers include x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Essentials FIO Not Pre-installed

701586-DN1

#### Windows Server 2012 Essentials Edition 1-2P Reseller Option Kit

**NOTE:** Available for purchase from your local HP authorized reseller. Essentials Edition includes x64 DVD media and COA. Reseller must affix the COA to the server and may preinstall the OS before delivery of the server.

Windows Server 2012 Essentials Edition ROK

701587-DN1

### Models

#### Microsoft Hardware Specifications for Standard edition:

|   | WS Server 2012 | Standard                                      |
|---|----------------|---|
| <b>CPU</b>                                |                | Up to 2 Proc per licenses; no processor limit |
| <b>Min. CPU Req.</b>                      |                | 1.4 GHz x64                                   |
| <b>IA64 Sockets</b>                       |                | 0   |
| <b>X64 RAM STD/ Max</b>                   |                | 2GB/unlimited                                 |
| <b>ECC</b>                                |                | Yes   |
| <b>NIC</b>                                |                | multiple NICs supported                       |
| <b>Internal optical bay drive allowed</b> |                | Yes   |
| <b>Storage required</b>                   |                | 32 GB   |
| <b>SW RAID</b>                            |                | Yes   |
| <b>Video</b>                              |                | Yes   |
| <b>Keyboard, Mouse</b>                    |                | Yes   |

#### Windows Server 2012 Standard Edition 2P Pre-Installed on ProLiant Servers

**NOTE:** All Standard Edition part numbers include: x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Standard Edition F10

701593-DN1

#### Windows Server 2012 Standard Edition 2P OS Not Pre-Installed

**NOTE:** All Standard Edition part numbers include x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Standard Edition F10 Not Pre-installed

701594-DN1

#### Windows Server 2012 Standard Edition 2P Reseller Option Kit

**NOTE:** Available for purchase from your local HP authorized reseller. Standard Edition includes x64 DVD media and COA. Reseller must affix the COA to the server and may preinstall the OS before delivery of the server.

Windows Server 2012 Standard Edition ROK

701595-DN1

#### Windows Server 2012 Standard Edition 2P Additional License

**NOTE:** Standard Edition includes COA. Sold only as a configurable option with a ProLiant server purchase.

Windows Server 2012 Standard Edition 2P Additional License

Windows Server 2012 Standard Edition Add License F10

701596-DN1

### Models

#### Microsoft Hardware Specifications for Datacenter edition:

| WS Server 2012                            | Datacenter                                    |
|---|---|
| <b>CPU</b>                                | Up to 2 Proc per licenses; no processor limit |
| <b>Min. CPU Req.</b>                      | 1.4 GHz x64                                   |
| <b>IA64 Sockets</b>                       | 0   |
| <b>X64 RAM STD/ Max</b>                   | 2GB/unlimited                                 |
| <b>ECC</b>                                | Yes   |
| <b>NIC</b>                                | multiple NICs supported                       |
| <b>Internal optical bay drive allowed</b> | Yes   |
| <b>Storage required</b>                   | 32 GB   |
| <b>SW RAID</b>                            | Yes   |
| <b>Video</b>                              | Yes   |
| <b>Keyboard, Mouse</b>                    | Yes   |

#### Windows Server 2012 Datacenter Edition

##### OS Not Pre-Installed

**NOTE:** All Datacenter Edition part numbers include: x64 DVD media and COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Datacenter FIO Not Pre-installed

701599-DN1

#### Windows Server 2012 Datacenter Edition 2P

##### Reseller Option Kit

**NOTE:** Available for purchase from HP or your local HP authorized reseller. Datacenter Edition includes x64 DVD media and COA. Reseller must affix the COA to the server and may preinstall the OS before delivery of the server to the end-customer.

Microsoft Windows Server 2012 Datacenter ROK

701600-DN1

#### Windows Server 2012 Datacenter Edition 2P Additional License

**NOTE:** Standard Edition includes COA. Sold only as a configurable option with a ProLiant server purchase.

Microsoft Windows Server 2012 Datacenter Add License FIO

701601-DN1

#### Windows Server 2012 - Remote Desktop Services 5 Device CAL

**NOTE:** All part numbers include 5 Device Client Access License (CAL) Packs; Sold from HP with or without a ProLiant server.

Microsoft Windows Server 2012 Remote Desktop Services 5 Device CAL

701604-DN1

#### Windows Server 2012 - Remote Desktop Services 5 User CAL

**NOTE:** All part numbers include 5 User Client Access License (CAL) Packs; Sold from HP with or without a ProLiant server.

### Models

Microsoft Windows Server 2012 RDS 5 User CAL 701605-DN1

#### **Windows Server 2012 5 User CAL**

**NOTE:** All part numbers include 5 User Client Access License (CAL) Packs; Sold from HP with or without a ProLiant server.

Microsoft Windows Server 2012 5 User CAL 701606-DN1

#### **Windows Server 2012 5 Device CAL**

**NOTE:** All part numbers include 5 User Client Access License (CAL) Packs; Sold from HP with or without a ProLiant server.

Microsoft Windows Server 2012 5 Device CAL 701607-DN1

#### **Windows Server 2012 1 User CAL**

**NOTE:** All part numbers include 1 User Client Access License (CAL) Packs; Sold from HP with or without a ProLiant server.

Microsoft Windows Server 2012 1 User CAL 701608-DN1

#### **Windows Server 2012 1 Device CAL**

**NOTE:** All part numbers include 1 User Client Access License (CAL) Packs; Sold from HP with or without a ProLiant server.

Microsoft Windows Server 2012 1 Device CAL 701609-DN1

#### **Downgrade Windows Server 2008 R2 Standard Edition Not Pre-Installed**

**NOTE:** Only available when purchasing WS Server 2012 with an HP ProLiant server.

Microsoft Windows Server 2008 R2 Standard Downgrade Kit 717566-B21

#### **Downgrade Windows Server 2008 R2 Enterprise Edition Not Pre-Installed**

**NOTE:** Only available when purchasing WS Server 2012 with an HP ProLiant server.

717567-B21

#### **Downgrade Windows Server 2008 R2 Datacenter Edition Not Pre-Installed**

**NOTE:** Only available when purchasing WS Server 2012 with an HP ProLiant server.

Microsoft Windows Server 2008 R2 Datacenter Downgrade Kit 717568-B21

### Product Features

#### Windows Server 2012

Windows Server 2012 captures the experience Microsoft has gained from building and operating public clouds to deliver a highly dynamic, available, and cost-effective server platform for your datacenter and your private cloud.

It offers businesses and hosting providers a scalable, dynamic, and multitenant-aware cloud infrastructure that connects more securely across premises and allows IT to respond to business needs faster and more efficiently.

Windows Server 2012 is an open, scalable, and elastic web and application platform. For distributed and mobile workforces, Windows Server 2012 empowers IT to help ensure people's access to their personalized work environment from virtually anywhere.

- 1. It takes you beyond virtualization.** Windows Server 2012 offers a dynamic, multitenant infrastructure that goes beyond virtualization technology to provide a complete platform for building a private cloud. Going beyond virtualization lets you scale and secure workloads, cost-effectively build your cloud, and more securely connect to cloud services.
- 2. It delivers the power of many servers, with the simplicity of one.** Windows Server 2012 offers you excellent economics by providing an integrated, highly available, and easy-to-manage multiple-server platform.
- 3. It opens the door to every app on any cloud.** Windows Server 2012 is a broad, scalable, and elastic server platform that gives you the flexibility to build and deploy applications and websites on-premises, in the cloud, and in a hybrid environment, using a consistent set of tools and frameworks.
- 4. It enables the modern workstyle.** Windows Server 2012 empowers IT to provide users with access to data and applications from virtually anywhere, from any device, with a rich user experience-while simplifying management and helping maintain security, control, and compliance.

Please review the hardware system requirements on the Windows Server 2012 website.

**NOTE:** For more information on full features of Window Server 2012, visit:  
<http://www.microsoft.com/windowsserver2012>

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### Product Features

#### **Virtualization**

Server virtualization technology has helped organizations of all sizes achieve considerable cost savings and operational efficiencies. As the technology continually evolves, many see the potential for going beyond basic virtualization features and benefits—such as consolidating server hardware—to create comprehensive platforms for private clouds.

Hyper-V is a virtualization platform that can help transform your organization's data center and cloud computing. It is available as either a stand-alone server product or an integrated feature of Windows Server.

With Windows Server® 2012 Hyper-V®, you can more efficiently run multiple operating systems in parallel, on a single server. Plus, you can use virtualization for almost any workload. And with more features, better scalability, and more built-in mechanisms for reliability, you'll be able to create a platform that works for you—not just today, but well into the future. No matter what that future brings.

For more information about Hyper-V and your opportunities to increase your server performance visit: <http://www.microsoft.com/en-us/server-cloud/windows-server/2012-server-virtualization.aspx>

### Additional Features

#### HP Insight Control

HP Insight Control is essential server management that unleashes the management capabilities built into every HP ProLiant server. The result is superior management of physical and virtual servers, from any location. Insight Control integrates specific management functionality into HP Systems Insight Manager to manage server health, deploy and migrate servers quickly, optimize power consumption and performance, and control servers from anywhere.

HP Insight Control for Microsoft System Center provides seamless integration of the unique ProLiant and BladeSystem manageability features into Microsoft System Center. Licensed as part of HP Insight Control, these extensions deliver comprehensive system health and alerting, driver and firmware updates, OS deployment, detailed inventory, and proactive virtual machine management in a flexible, easy to install package. And HP Insight Control for Microsoft System Center is backed by HP Service and Support, ensuring timely service when you need it most.

HP Insight Control for Microsoft System Center extends the best-managed ProLiant experience for customers who have standardized on a Microsoft System Center management platform.

- Prevent problems from occurring with proactive monitoring and management
- Quickly and reliably deploy bare metal servers
- Ensure consistency and maximize uptime with simplified driver and firmware updates
- Reduce unplanned downtime with proactive virtual machine movement
- Fully integrated into System Center means one less tool to learn and manage

**NOTE:** For more information, visit: <http://www.hp.com/go/ice>.

#### HP Integrated Lights Out (iLO)

Included in every HP ProLiant Gen8 server, HP iLO simplifies server setup, engages health monitoring, power and thermal control, and promotes remote administration (coming soon) without sacrificing the fast performance you have gotten accustomed to. The next generation of the HP iLO - HP iLO 4 management processor is the core foundation and the intelligence driving features like HP Agentless Management, and HP Active Health System, under the HP iLO Management Engine portfolio.

- **HP Agentless Management:** the base hardware monitoring and alerting capability is built into the system (running on the HP iLO chip set) and starts working the moment that a power cord and an Ethernet cable is connected to the server.
- **HP iLO Mobile App:** HP iLO 4 brings additional efficiency and effective remote management at the touch of your fingertips. HP iLO Mobile App. Allows you to immediate secured access to your server from the touch of your Smartphone or Tablet devices. Today we support Apple's iOS (iTouch, iPhone4, iPad), and Adroid Smartphones and Tablets with Android 2.3.
- **HP iLO multi-language support:** Today we provide our customers with the ability to read the HP iLO GUI in the following languages: English and Japanese; with the introduction of HP iLO 4 we bring yet another language: simplified Chinese.
- **HP Sea of Sensors 3D:** Today we increase the functionality of the popular HP's Sea of Sensors. Introducing HP Sea of Sensors 3D; adding approximately 28 additional thermal sensors on HP branded networking and storage PCI cards, backplanes, and mezzanine cards for a 3D view of system cooling that automatically tracks thermal activity - heat - across the server. When temperatures get too high, sensors can kick on fans and make other adjustments to reduce energy usage.

**NOTE:** For more information, visit: <http://www.hp.com/go/ilo>.

### Additional Features

#### Software Technical Support

HP Software Technical Support provides remote software support services for Microsoft Server 2012. With HP Software Technical Support, your IT staff receives fast and reliable access to HP Global Support Centers. HP technical resources work with your IT team to provide advice on software features and use, problem diagnosis and resolution, software defect identification, and access to patches.

This service also provides electronic access to comprehensive support information, allowing any member of your IT staff to locate essential product and support information.

Software Technical Support for Windows Server 2012 is available from HP via multiple contact methods, including electronic media and telephone, for ninety (90) days from date of purchase. Software Technical Support includes assistance with:

- **24x7x365 access to technical resources** - Connect with HP Response Center engineers via telephone, electronic communication, or FAX for assistance in resolving software implementation or operations problems. Service is available around the clock every day, including all holidays.
- **Problem analysis and resolution** - HP Services provides corrective support to resolve identifiable and reproducible software product problems, and to help you identify problems that are difficult to reproduce. You can also receive assistance in trouble-shooting problems and setting configuration parameters.
- **Software features and operational support** - HP provides information on the latest product features and known problems and solutions, plus operational advice and assistance.
- **Escalation management** - Established escalation procedures enlist specialized expertise from HP to Microsoft Windows
- **Installation advisory** - Advisory support is available for help with installation and updating of standalone applications or products installed in a network environment.
- **Electronic software information** - Access HP's electronic support facility including symptom-solution database, product descriptions, specifications, technical literature, and more.

Software technical support does NOT include assistance with:

- Generating or diagnosing user generated programs or source codes
- Installation of non-HP products

**NOTE:** For more information, visit: <http://www.hp.com/services/software-support>.

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#### Microsoft Software Assurance

Boost productivity across your organization with new software versions, deployment planning services, 24x7 phone and web support, end-user training, unique desktop technologies and more, all in one cost-effective program.

With New Product Versions, every Microsoft product license that is covered by Software Assurance can be upgraded to the most recent version.

For example, if a new version of Microsoft Windows Server is made available during the term of your coverage, your licenses will automatically be upgraded to the new version. Customers that acquire perpetual licenses through Software Assurance can deploy the upgrades after their coverage has expired.

**NOTE:** For more information, please visit: <http://www.microsoft.com/licensing/programs/sa/default.aspx>

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### Additional Features

#### **HP Software Licensing and Management Solutions (SLMS)**

HP SLMS provides prime source licensing fulfillment and software license management solutions for various Microsoft operating systems and applications volume licenses to large multinational enterprise or domestic companies. HP provides a global sales channel for all Microsoft program and services and will work with you to select the program that best suits your needs. HP offers three comprehensive Microsoft licensing programs: Open, Select and Enterprise License.

**NOTE:** For more information on HP SLMS, visit:  
<http://h71028.www7.hp.com/enterprise/cache/8786-0-0-0-121.aspx>

#### **Windows Server Catalog Definition**

Microsoft's certification program allows HP ProLiant servers a compatibility certification with Windows Server operating systems. HP ProLiant Servers listed in the Windows Server Catalog have been rigorously tested and certified with Windows Server 2012.

**NOTE:** For information on ProLiant servers certified for Windows server, visit: [www.hp.com/go/wincert](http://www.hp.com/go/wincert).  
**NOTE:** For details on Microsoft's server catalog and also a list of HP ProLiant certified servers, visit: [www.windowsservercatalog.com](http://www.windowsservercatalog.com).

#### **Environment-friendly Products and Approach**

#### **End-of-life Management and Recycling**

Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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