

# Microsoft Windows Server 2012 R2 from HPE

Bringing together the world's leading server hardware and software

## Greater value

With Microsoft Windows Server 2012 R2, you receive significant value from seven key capabilities:



**Server virtualization**—New levels of performance and cross-platform support



**Storage**—High performance and resiliency at a fraction of the cost



**Networking**—Hybrid networking with breakthrough levels of flexibility and performance



**Server management and automation**—Increased management efficiency for your diverse data center



**Web and application platform**—Modern applications built and deployed to scale on-premise and in the cloud



**Access and information protection**—Consistent and flexible user access to corporate resources while protecting data behind the firewall



**Virtual desktop infrastructure**—Enjoy excellent performance, easy deployment, and cost-effectiveness

## HPE and Microsoft solutions

### Built on a tradition of excellence

As strategic partners and industry leaders for nearly 30 years, HPE and Microsoft® combine the intelligence of HPE ProLiant Gen9—the world's most self-sufficient servers—with the virtualization and scalability of Microsoft Windows Server® 2012 R2. Together, our integrated hardware and software solutions automate the IT lifecycle, accelerate workloads, optimize energy, and help assure availability to deliver the applications your business demands today and leverage the cloud-based models of the future.

### Getting better every time

As the latest release of the industry-leading server operating system, Windows Server 2012 R2 captures Microsoft's experience in delivering global-scale cloud services to provide an enterprise-class server and cloud platform.

With Windows Server 2012 R2, you can optimize the performance of your most important workloads, as well as protect against service outages by using robust recovery options. To reduce complexity and cost, you can take advantage of comprehensive automation capabilities, as well as storage and networking virtualization technologies built directly into Windows Server 2012 R2.

Running on industry-standard HPE hardware, Windows Server 2102 R2 enables you to build, run, and scale applications that can move between your data center and the cloud. And, to support your mobile workforce, Windows Server 2012 R2 provides flexible remote access from virtually anywhere and any device, while helping to safeguard corporate information behind your firewall.

### Taking you to the cloud and beyond

Working as a collaborative team, HPE and Microsoft go beyond delivering the Windows Server 2012 R2 operating system—taking you all the way to the Microsoft Private Cloud. Offering much more than a great cloud operating system and simplified systems management, HPE and Microsoft also provide:

- Robust infrastructure that delivers proven performance and helps assure the most efficient use of your valuable compute, storage, and networking resources.
- Support for faster private cloud deployments with less risk. Together, HPE and Microsoft complete upfront solution design work; remove the burden of time-consuming racking, stacking, and cabling; and see that your private cloud environment is implemented correctly.
- Strategic path to the private cloud, helping you realize the benefits of cloud computing incrementally, without disrupting existing IT services or creating massive cost overruns.

### HPE ProLiant Gen9 server portfolio

Depending on your needs, you can run Microsoft Windows Server 2012 R2 on most HPE ProLiant Gen9 servers—rack servers, blades, MicroServer, and scale-out clusters.

### Why choose Windows Server 2012 R2

There are many reasons to choose the latest version of Windows Server, but these top the list:



**Enterprise-class**—Offering industry-leading support for 64-node clusters and 8,000 virtual machines (VMs) per cluster



**Simple and cost-effective**—Flexible guest clustering options for file and block storage with shared virtual hard disk format (VHDX) files that preserve dynamic memory, live migration, and storage live migration for VMs



**Application-focused**—Complete VM portability between Windows Server and Windows Azure without the need for VM conversion



**User-centric**—Consistent in-box Windows experience for remote users from practically anywhere on any device

## HPE ProLiant server certification and support for Windows Server 2012 R2

### Get the information you need

To learn about HPE certifications for HPE ProLiant MicroServer, ML, DL, SL, and BL servers, please search the ProLiant Family webpage at: [hpe.com/info/servers](http://hpe.com/info/servers). You can also view the HPE ProLiant Operating System Support Matrix at: [hpe.com/servers/wincert](http://hpe.com/servers/wincert). You can find driver downloads by going to: [hpe.com/info/support](http://hpe.com/info/support) and entering your server name. This link provides a path for downloading drivers for HPE ProLiant servers by product family and server series. Once you locate the exact server, you will find the Windows Server 2012 R2 drivers available for download. You can also find drivers by clicking on the server name in the [HPE ProLiant Operating System Support Matrix](http://hpe.com/servers/wincert).

## Windows Server 2012 R2 OEM offerings from HPE

OEM licenses for Windows Server 2012 R2 from HPE are available worldwide in several languages. You can purchase these licenses directly from HPE or through your local HPE authorized reseller.

The HPE OEM license program is designed for small- to medium-sized businesses requiring the Windows Server 2012 R2 operating system with their preferred choice of HPE ProLiant server. For specific part numbers, please visit: [hpe.com/servers/ws2012r2](http://hpe.com/servers/ws2012r2) and click the QuickSpecs link. When you purchase directly from HPE or an HPE authorized reseller, you can select whether or not the operating system is preinstalled; OS media is included with the server.

When you purchase from your local HPE authorized reseller, the OEM license is also available in the form of the Windows Server 2012 R2 Reseller Option Kit (HPE ROK). With HPE ROK, the reseller affixes the certificate of authenticity (COA) label to your server and can provide installation and configuration services with your ProLiant system purchase. A primary benefit of the HPE OEM/HPE ROK licenses is your ability to place one call for end-to-end support. For more information about this purchase option visit: [hpe.com/info/rok](http://hpe.com/info/rok).

When the Windows Server 2012 R2 operating system is shipped preinstalled, the COA label is affixed to your server and the operating system is enhanced and integrated with the latest ProLiant system value-added software, drivers, tools, and utilities. The final installation process to customize your settings takes as little as 20 minutes; when that is complete, your system will be up and running. Preinstalled operating systems install quickly, and are easy to buy. Recovery media on DVD is included with the server. For HPE documentation relating to these products, visit: [hpe.com/info/windows/documentation](http://hpe.com/info/windows/documentation).

When the Windows Server 2012 R2 operating system is not preinstalled, the COA label is affixed to your server and the operating system media is included with the server. You can find supporting documentation at: [hpe.com/info/windows/documentation](http://hpe.com/info/windows/documentation).

When buying a HPE OEM or HPE ROK license for Windows Server 2012 R2, you can also purchase the software and product keys for eligible downgrade versions of Windows Server. These items are available from HPE for the cost of media and handling. This option is useful if you want to move legacy workloads to a virtual machine on a new HPE ProLiant Gen9 server. See "[Downgrading Windows Server 2012 R2 OEM licenses from HPE](http://hpe.com/info/windows/documentation)" for more details.

### HPE Support Services

HPE Software Technical Support provides remote software support services for Windows Server 2012 R2. With HPE Software Technical Support, your IT staff receives fast and reliable access to HPE Global Support Centers. HPE 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.

HPE Software Technical Support for Windows Server 2012 R2 is available from HPE via multiple contact methods, including electronic media and telephone. HPE Software Technical Support includes assistance with:



**24x7 access to technical resources**—Connect with Global Solution 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**—HPE Services provide 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 troubleshooting problems and setting configuration parameters.



**Software features and operational support**—HPE 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 HPE and Microsoft.



**Electronic software information**—Access HPE's electronic support facility including symptom-solution database, product descriptions, specifications, technical literature, and more.

For more information visit:

[hpe.com/services/foundationcare](http://hpe.com/services/foundationcare)

**Table 1:** Windows Server 2012 R2 minimum hardware requirements

Windows Server 2012 R2	Foundation	Essentials	Standard	Datacenter
CPU	Limited to one processor; per-server licensing	Up to two processors; per-server licensing	Up to two processors and two concurrent VMs per license; additional licenses can be added for more processors <sup>1</sup> or VMs <sup>6</sup>	Up to two processors per license with unlimited concurrent VMs on those processors; additional licenses can be added for more processors <sup>2</sup>
Min. CPU requirement	1.4 GHz 64-bit	1.4 GHz 64-bit	1.4 GHz 64-bit	1.4 GHz 64-bit
64-bit RAM standard and maximum	2 GB/32 GB	2 GB/64 GB (16 recommended)	2 GB/unlimited	2 GB/unlimited
Error-correcting code memory	Yes	Yes	Yes	Yes
Network interface card (NIC)	Multiple NICs supported	Multiple NICs supported	Multiple NICs supported; recommend Gigabit (10/100/1000 BASE-T) Ethernet adapter	Multiple NICs supported; recommend Gigabit (10/100/1000 BASE-T) Ethernet adapter
Internal optical bay drive allowed	Yes	Yes	Yes	Yes
Storage required	32 GB <sup>3</sup>	160 GB with a 60 GB system partition	32 GB <sup>4</sup>	32 GB <sup>5</sup>
SW RAID	Yes	Yes	Yes	Yes
Video	Yes	Optional	Yes; Super VGA (1024 x 768) or higher resolution monitor	Yes; Super VGA (1024 x 768) or higher resolution monitor
Keyboard, mouse	Yes	Optional	Yes	Yes

## Windows Server 2012 R2 volume license from HPE

Microsoft volume licensing offers customized programs designed to meet the needs of your business, tailored to the size and preference of your company. A volume license is available from HPE at [hpe.com/ww/slms](http://hpe.com/ww/slms) or Microsoft authorized resellers.

## Procuring Windows Server 2012 R2 OEM licenses from HPE

Windows Server 2012 R2 is available in four editions:

- **Datacenter Edition**—Designed for highly virtualized private cloud environments
- **Standard Edition**—Designed for low-density or non-virtualized environments
- **Essentials Edition**—Designed for small businesses with up to 25 users running on servers with up to two processors
- **Foundation Edition**—Designed for small businesses with up to 15 users running on single-processor servers

HPE authorized resellers can purchase customer offerings, as well as the Reseller Option Kit (HPE ROK) from HPE authorized distributors. Please visit: [hpe.com/info/rok](http://hpe.com/info/rok).

Windows Server 2012 R2 has some licensing changes from Windows Server 2012:

- Windows Server 2012 R2 Standard and Datacenter Editions
  - These editions are differentiated only by virtualization rights
    - Datacenter offers unlimited virtualization and two CPUs per license. Datacenter additional licenses can be added to license more processors, must be sold with a ProLiant Server

<sup>1, 2</sup> Up to the maximum number of physical processors supported by the ProLiant server model

<sup>3, 4, 5</sup> For systems with 16 GB+ RAM, more disk space will be required

<sup>6</sup> WS Standard Additional Licenses can be sold after point of sale (APOS). They also include the ability to reassign the license rights to another server with a WS2012 or WS2012 R2 Standard Base License

### Microsoft Software Assurance

We help you get the most from your software investment by combining the latest software with 24x7 phone support, partner services, training, and IT tools. When you purchase Software Assurance (SA) within 90 days of your OEM license purchase, your license is transitioned to a volume license with additional benefits. For more information please visit: [microsoft.com/licensing/software-assurance/check-your-benefits.aspx](http://microsoft.com/licensing/software-assurance/check-your-benefits.aspx). You can purchase SA directly from HPE Software Licensing Management Services ([HPE SLMS](#)) or your local Hewlett Packard Enterprise authorized reseller. SA is only available for the latest version of Microsoft products.

### Resources

To find answers to questions about running Windows Server 2012 R2 on HPE ProLiant Servers, contact your HPE representative or visit the following websites:

HPE's offerings of Windows Server 2012 R2 products

[hpe.com/servers/ws2012r2](http://hpe.com/servers/ws2012r2)

HPE ProLiant server support for Windows Server

[hpe.com/servers/wincert](http://hpe.com/servers/wincert)

HPE ProLiant servers

[hpe.com/info/servers](http://hpe.com/info/servers)

HPE Software Support Services

[hpe.com/services/foundationcare](http://hpe.com/services/foundationcare)

Learn more at  
[hpe.com/servers/ws2012r2](http://hpe.com/servers/ws2012r2)



Sign up for updates

  
**Hewlett Packard  
Enterprise**

- Standard offers two virtual instances and two CPUs per license. Standard additional licenses can be added to license more processors or VM's, Standard additional licenses include expanded licensing rights (1) available for purchase after point of sale (APOS) and (2) the ability to reassign the license rights to another server with a WS2012 or WS2012 R2 base license
- Both editions require the additional purchase of Windows Server 2012 Client Access Licenses (CALs) for every user or device that accesses or uses the server software
- Common licensing structure
  - Both editions have a processor and CAL licensing model
  - Each software license covers up to two physical processors on a single server
  - More than one license can be purchased for a server to support additional CPUs and/or more concurrent VMs
- Common features across both editions
  - High availability features such as failover clustering
- New Windows Server 2012 R2 Datacenter with reassignment licensing rights
  - These Part Numbers must be sold with a new ProLiant Server and are a great option as they allow customers to reassign the OS license to another server for any reason (hardware failure, maintenance, upgrade, etc.)

---

### Note

Memory and processor capabilities are the same across editions

---

## Downgrading Windows Server 2012 R2 OEM licenses from HPE

Windows Server 2012 R2 Standard and Datacenter Editions have the right to downgrade the software to use prior versions or lower editions. The ability to downgrade does not change the licensing or support terms for using the product; the purchased product rights apply. This means the license will continue to cover two physical processors and the virtualization rights do not change. In addition, the CAL corresponding to the purchased version will apply as an exception; if you are running a previous version of one of the eligible downgrades you can use the corresponding CAL version if one exists.

Please refer to the Downgrade Rights information [here](#) to learn about options that can be fulfilled by Hewlett Packard Enterprise.

---

### Note

HPE cannot provide downgrade media or keys for Windows Server 2012 R2 Datacenter with reassignment rights part numbers per Microsoft policy. Downgrade rights for these part numbers are limited to media and keys the customer already owns.

---

© Copyright 2012–2013, 2016 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft, Windows, and Windows Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

4AA4-3698ENW, June 2016, Rev. 3