










Microsoft Windows Server 2012 R2 from HP

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

HP and Microsoft solutions

Built on a tradition of excellence

As strategic partners and industry leaders for nearly 30 years, HP and Microsoft® combine the intelligence of HP ProLiant Gen8—the world's most self-sufficient servers—with the virtualization and scalability of the Microsoft Windows® Server 2012 Release 2 (R2) family. 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 the storage and networking virtualization technologies built into Windows Server 2012 R2.

Running on industry-standard HP 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, HP 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, HP 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, HP 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.





HP ProLiant server certification and support for Windows Server 2012 R2

HP ProLiant Gen8 server portfolio

Depending on your needs, you can run Microsoft Windows Server 2012 R2 on any HP ProLiant Gen8 server—rackmounts, blades, MicroServer, and scale-out clusters.

Why choose Windows Server 2012 R2

There are many reasons to choose the latest version of Windows Server 2012 R2, 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

Get the information you need

To learn about HP certifications for HP ProLiant MicroServer, ML, DL, SL, and BL servers, please search the ProLiant Family webpage at: hp.com/go/proliant. You can also view the HP ProLiant Operating System Support Matrix at: hp.com/go/wincert. You can find driver downloads by going to: hp.com/support/ and entering your server name. This link provides a path for downloading drivers for HP 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 [HP ProLiant Operating System Support Matrix](#).

Windows Server 2012 R2 OEM offerings from HP

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

The HP OEM license program is designed for small- to medium-sized businesses requiring the Windows Server 2012 R2 operating system with their preferred choice of HP ProLiant server. For specific part numbers, please visit: hp.com/go/ws2012R2 and click the QuickSpecs link. When you purchase directly from HP or an HP 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 HP authorized reseller, the OEM license is also available in the form of the Windows Server 2012 R2 Reseller Option Kit (ROK). With the 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 HP OEM/ROK licenses is your ability to place one call for end-to-end support. For more information about this purchase option visit: hp.com/go/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 HP documentation relating to these products, visit: hp.com/go/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: hp.com/go/windows/documentation.

When buying an HP OEM or 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 HP 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 HP ProLiant Gen8 server. See table 1 for complete details.

HP Support Services

HP Software Technical Support provides remote software support services for Windows Server 2012 R2. 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.

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

	<p>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.</p>
	<p>Problem analysis and resolution— HP 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.</p>
	<p>Software features and operational support—HP provides information on the latest product features and known problems and solutions, plus operational advice and assistance.</p>
	<p>Escalation management— Established escalation procedures enlist specialized expertise from HP and Microsoft.</p>
	<p>Electronic software information— Access HP's electronic support facility including symptom-solution database, product descriptions, specifications, technical literature, and more.</p>

For more information visit: hp.com/services/softwaresupport

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 ¹ or VMs	Up to two processors per license with unlimited concurrent VMs on those processors; additional licenses can be added for more processors ²
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 ³	160 GB with a 60 GB system partition	32 GB ⁴	32 GB ⁵
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 HP

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 HP at hp.com/go/slms or Microsoft authorized resellers.

Procuring Windows Server 2012 R2 OEM licenses from HP

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

HP authorized resellers can purchase customer offerings, as well as the Reseller Option Kit from HP authorized distributors. Please visit: hp.com/go/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
 - Standard offers two virtual instances and two CPUs per license
 - Both editions require the additional purchase of Windows Server 2012 Client Access Licenses (CALs)

^{1,2} Up to the maximum number of physical processors supported by the ProLiant server model.

^{3,4,5} For systems with 16 GB+ RAM, more disk space will be required.

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 Software Assurance. When you purchase Software Assurance 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. You can purchase Software Assurance directly from HP or your local HP authorized reseller.

Resources

To find answers to questions about running Windows Server 2012 R2 on HP Converged Infrastructure solutions, contact your HP representative or visit the following websites:

HP's offerings of Windows Server 2012 R2 products
hp.com/go/ws2012R2

Microsoft Windows Server 2012 R2
microsoft.com/windowsserver2012R2

HP ProLiant server support for Windows Server
hp.com/go/wincert

HP ProLiant servers
hp.com/go/proliant

HP Software Support Services
hp.com/services/software-support

- 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

Note: Memory and processor capabilities are the same across editions

Downgrading Windows Server 2012 R2 OEM licenses from HP


If you have Windows Server 2012 R2 Datacenter Edition, you have the right to downgrade software bits to any prior version or lower edition. If you have Windows Server 2012 R2 Standard Edition, you have the right to downgrade the software to use any prior version of Enterprise, Standard, or Essentials Editions. The ability to downgrade does not change the licensing or support terms for using the product; the purchased product (Windows Server 2012 R2) 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.

Product licensed (sold) to end user							
	WS 2012 R2 Datacenter	WS 2012 R2 Standard	WS 2012 Datacenter	WS 2012 Standard	WS 2008 R2 Datacenter	WS 2008 R2 Enterprise	WS 2008 R2 Standard
WS 2012	Datacenter Standard	Standard					
WS 2008 R2	Datacenter Enterprise Standard	Enterprise Standard	Datacenter Enterprise Standard	Enterprise Standard	Enterprise Standard	Standard	
WS 2008	Datacenter Enterprise Standard	Enterprise Standard	Datacenter Enterprise Standard	Enterprise Standard	Datacenter Enterprise Standard	Enterprise Standard	Standard

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hp.com/go/ws2012R2

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