

Overview

Microsoft® Windows Server® 2016

Microsoft Windows Server 2016 is a scalable and adaptive operating system (OS) designed to support the most demanding workloads, provide enterprise level security for your IT infrastructure, and enable cloud migration at your own pace. By combining new layers of security with advanced features to improve productivity and efficiency, it delivers powerful innovations that enable you to use your applications and infrastructure to transform your business.

Today, most business owners face daily challenges in running their businesses. One of the more difficult challenges can include managing an IT infrastructure. Windows Server 2016 is designed to help...

Safeguard your business:

Windows Server 2016 technologies have protections built-in to help you safeguard data across devices and apps, onsite or in the cloud, and help you recover from business disruptions

Improve IT efficiency and productivity:

To help deliver increased efficiency and maximize your IT investment, Windows Server 2016's technology gives you the business tools of a much larger company, at the right price

Ready for the cloud:

Whether you are moving to the cloud now or in the future, get the best of both worlds with Microsoft technologies that are designed for hybrid cloud IT environments

Leveraging a 30+ year partnership with Microsoft, HPE helps you maximize advanced features and functionality in Windows Server 2016 to achieve greater security control, modernize your infrastructure to help improve efficiency and productivity, and hybridize your datacenter. To simplify the support process, Hewlett Packard Enterprise delivers Microsoft Windows Server 2016 support for HPE Servers, see support details at [**http://www.hpe.com/servers/wincert**](http://www.hpe.com/servers/wincert).

Hewlett Packard Enterprise offers Windows Server OEM licensing for the following editions:

- Datacenter edition: ideal for companies of all sizes that have demanding IT workloads, require advanced storage, virtualization, and application deployment
- Standard edition: for businesses that need advanced features, support for distributed office locations, and require a flexible way to virtualize their environment
- Essentials edition: for small companies with basic IT needs purchasing a first server; likely small or no dedicated IT department. Essentials is also a good option for customers who have previously used Windows Server Foundation edition, which is not available for Windows Server 2016.

NOTE: For more information on Hewlett Packard Enterprise's offering of Microsoft Windows Server 2016 products, go to: [**http://www.hpe.com/servers/ws2016**](http://www.hpe.com/servers/ws2016).

What's New

- Introducing Windows Server 2016 Standard and Datacenter editions, as well as Windows Server 2016 Client Access Licenses (CALs).
- Windows Server 2016 Datacenter with Reassignment Rights now include downgrade rights to Windows Server 2012 R2 Datacenter edition.
- Windows Server 2016 Essentials edition now available. More details listed below.

Microsoft Hardware Specifications for Essentials Edition:

Windows Server 2016

CPU	Essentials
Min. CPU Req.	Up to 2 Processors; Per server licensing
X64 RAM STD/ Max	1.4 GHz x64
	Minimum: 2GB RAM (Recommend: 8GB) / Maximum: 64GB
ECC	Yes
NIC	multiple NICs supported

Internal optical bay drive allowed	Yes
Minimum OS Storage Footprint	160 GB with a 60-GB system partition
SW RAID	Yes
Video	Optional
Keyboard, Mouse	Optional

Windows Server 2016 Essentials Edition 1-2P Pre-Installed UEFI on HPE Servers

NOTE: Unified Extensible Firmware Interface (UEFI) is an industry standard set of interfaces between the system firmware and the operating system, and between various components of the system firmware. UEFI enables numerous new capabilities, for more information please read the whitepaper **UEFI: successor to legacy BIOS**.

NOTE: All Essentials edition part numbers include x64 DVD media and Certificate of Authenticity (COA). Sold only as a configurable option with an HPE Server purchase.

Microsoft Windows Server 2016 Essentials edition FIO UEFI 871136-B22

Windows Server 2016 Essentials Edition 1-2P OS Not Pre-Installed

NOTE: All Essentials edition part numbers include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.

Microsoft Windows Server 2016 Essentials edition FIO Not Pre-Installed 871140-B22

Windows Server 2016 Essentials Edition 1-2P Reseller Option Kit

NOTE: Available for purchase from your local HPE 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.

Microsoft Windows Server 2016 Essentials edition ROK 871141-B22

Microsoft Hardware Specifications for Standard and Datacenter Editions:

Unless otherwise specified, these minimum system requirements apply to both Standard and Datacenter editions.

Processor Processor performance depends not only on the clock frequency of the processor, but also on the number of processor cores and the size of the processor cache. The following are the processor requirements for this product:

Minimum:

- 1.4 GHz 64-bit processor
- Compatible with x64 instruction set
- Supports NX and DEP
- Supports CMPXCHG16b, LAHF/SAHF, and PrefetchW
- Supports Second Level Address Translation (EPT or NPT)

Coreinfo at <https://technet.microsoft.com/sysinternals/cc835722.aspx>, is a tool you can use to confirm which of these capabilities your CPU has.

RAM The following are the estimated RAM requirements for this product:

Minimum:

- 512 MB (2 GB for server with Desktop Experience installation option)
- ECC (Error Correcting Code) type or similar technology

Storage controller and disk space Computers that run Windows Server 2016 must include a storage adapter that is compliant with the PCI Express architecture specification. Persistent storage devices

requirements on servers classified as hard disk drives must not be PATA. Windows Server 2016 does not allow ATA/PATA/IDE/EIDE for boot, page, or data drives.

The following are the estimated minimum disk space requirements for the system partition.

Minimum: 32GB

Network adapter requirements

Minimum:

- An Ethernet adapter capable of at least gigabit throughput
- Compliant with the PCI Express architecture specification.
- Supports Pre-boot Execution Environment (PXE).

A network adapter that supports network debugging (KDNet) is useful, but not a minimum requirement.

Other requirements

Computers running this release also must have the following:

- DVD drive (if you intend to install the operating system from DVD media)

The following items are not strictly required, but are necessary for certain features:

- UEFI 2.3.1c-based system and firmware that supports secure boot
- Trusted Platform Module
- Graphics device and monitor capable of Super VGA (1024 x 768) or higher-resolution
- Keyboard and Microsoft® mouse (or other compatible pointing device)
- Internet access (fees may apply)

For more detail about Windows Server 2016 System Requirements visit:

<https://docs.microsoft.com/en-us/windows-server/get-started/System-Requirements>.

Microsoft Windows Server 2016 Standard Edition 16 Core Pre-Installed on HPE Servers

NOTE: Unified Extensible Firmware Interface (UEFI) is an industry standard set of interfaces between the system firmware and the operating system, and between various components of the system firmware. UEFI enables numerous new capabilities, for more information please read the whitepaper **UEFI: successor to legacy BIOS**.

NOTE: Include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.

NOTE: Standard edition provides rights for up to two OSEs or Hyper-V containers when all physical cores in the server are licensed. For every two additional VMs, all the cores in the server have to be licensed again. Additional licenses for Windows Server 2016 Standard are available in packs of two, four, and sixteen cores.

Microsoft Windows Server 2016 Standard Edition Pre-Installed (FIO) UEFI 16 Core

871143-B21

Microsoft Windows Server 2016 Standard Edition 16 Core OS Not Pre-Installed

NOTE: Include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.

NOTE: Standard edition provides rights for up to two OSEs or Hyper-V containers when all physical cores in the server are licensed. For every two additional VMs, all the cores in the server have to be licensed again. Additional licenses for Windows Server 2016 Standard are available in packs of two, four, and sixteen cores.

Microsoft Windows Server 2016 Standard edition Not Pre-installed (FIO Npi) 16 Core

871147-B21

Microsoft Windows Server 2016 Standard Edition 16 Core Reseller Option Kit (ROK)

NOTE: Available for purchase from your local Hewlett Packard Enterprise 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.

NOTE: Standard edition provides rights for up to two OSEs or Hyper-V containers when all physical cores in the server are licensed. For every two additional VMs, all the cores in the server have to be licensed again. Additional licenses for Windows Server 2016 Standard are available in packs of two, four, and sixteen cores.

Microsoft Windows Server 2016 Standard Edition ROK 16 Core

P00487-B21

Microsoft Windows Server 2016 Standard Edition Additional License

NOTE: Standard Additional Licenses include COA, will not include an activation key because will be activated with license key from the base OS license. Additional Licenses do not include media.

NOTE: Can be sold with or without an HPE Server - After Point of Sale (APOS).

NOTE: End Users can reassign Windows Server Standard Additional licenses to another server that has a Windows Server 2016 Standard base license.

Microsoft Windows Server 2016 Standard Edition Additional License 16 Core

871157-DN1

Microsoft Windows Server 2016 Standard Edition Additional License 4 Core

871158-DN1

Microsoft Windows Server 2016 Standard Edition Additional License 2 Core

871159-DN1

Microsoft Windows Server 2016 Datacenter Edition 16 Core - No Reassignment Rights OS Not Pre-Installed

NOTE: Include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.

NOTE: Datacenter edition permits unlimited OSEs and Hyper-V containers on a server when all physical cores in the server are licensed. Additional Licenses for Windows Server 2016 Datacenter are available in packs of two, four, and sixteen cores.

Microsoft Windows Server 2016 Datacenter Edition Not Pre-installed (FIO Npi) 16 Core - No Reassignment Rights

871150-B21

Microsoft Windows Server 2016 Datacenter Edition 16 Core - No Reassignment Rights Reseller Option Kit (ROK)

NOTE: Available for purchase from your local Hewlett Packard Enterprise 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.

NOTE: Datacenter edition permits unlimited OSEs and Hyper-V containers on a server when all physical cores in the server are licensed. Additional Licenses for Windows Server 2016 Datacenter are available in packs of two, four, and sixteen cores.

Microsoft Windows Server 2016 Datacenter Edition ROK 16 Core - No Reassignment Rights

P00488-B21

Microsoft Windows Server 2016 Datacenter Edition 16 Core - with Reassignment Rights Reseller Option Kit (ROK)

NOTE: Available for purchase from your local Hewlett Packard Enterprise Authorized reseller. Datacenter edition includes x64 DVD media and COA affixed to a license card. Reseller may preinstall the OS before delivery of the server to the end-customer.

NOTE: Datacenter edition permits unlimited OSEs and Hyper-V containers on a server when all physical cores in the server are licensed. Additional Licenses for Windows Server 2016 Datacenter are available in packs of two, four, and sixteen cores.

NOTE: The server OS license can be reassigned to another server for any reason (hardware failure, maintenance, upgrade, etc.). The COA is affixed to a license card which is the end user's proof of license for purposes of exercising the reassignment license rights. The server OS license may be reassigned by an end user to a different physical server no more than once every 90 days. Other rights and limitations are described on the license card.

Microsoft Windows Server 2016 Datacenter Edition with Reassignment Rights ROK 16 Core P00489-B21

Microsoft Windows Server 2016 Datacenter Edition Additional License

NOTE: Datacenter Additional Licenses include COA, will not include an activation key because will be activated with license key from the base OS license. Additional Licenses do not include media. Sold only as a configurable option with an HPE Server purchase.

Microsoft Windows Server 2016 Datacenter Edition Additional License 16 Core 871166-DN1

Microsoft Windows Server 2016 Datacenter Edition Additional License 4 Core 871167-DN1

Microsoft Windows Server 2016 Datacenter Edition Additional License 2 Core 871168-DN1

Microsoft Windows Server 2016 - Remote Desktop Services 5 Device CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

NOTE: Use of Remote Desktop Services requires a Windows Server CAL and an RDS CAL for each user or device.

Microsoft Windows Server 2016 Remote Desktop Services 5 Device CAL 871233-DN1

Microsoft Windows Server 2016 - Remote Desktop Services 5 User CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

NOTE: Use of Remote Desktop Services requires a Windows Server CAL and an RDS CAL for each user or device.

Microsoft Windows Server 2016 Remote Desktop Services 5 User CAL 871232-DN1

Microsoft Windows Server 2016 50 User CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 50 User CAL 871181-B21

Microsoft Windows Server 2016 50 Device CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 50 Device CAL 871182-B21

Microsoft Windows Server 2016 10 User CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 10 User CAL 871179-B21

Microsoft Windows Server 2016 10 Device CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 10 Device CAL

871180-B21

Microsoft Windows Server 2016 5 User CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 5 User CAL

871177-DN1

Microsoft Windows Server 2016 5 Device CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 5 Device CAL

871178-DN1

Microsoft Windows Server 2016 1 User CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 1 User CAL

871175-DN1

Microsoft Windows Server 2016 1 Device CAL

NOTE: Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.

Microsoft Windows Server 2016 1 Device CAL

871176-DN1

Windows Server 2012 R2 Downgrade options

IMPORTANT MESSAGE: Microsoft has recently announced new policies regarding Silicon support for Windows Server operating system products, including those that are offered through 'downgrade' rights. By placing a request for a Windows Server 2012 R2 Downgrade kit, you confirm that your HPE Server meets the Microsoft processor requirements, the details of which can be found at the following link:
<https://go.microsoft.com/fwlink/?linkid=847781>.

PLEASE NOTE, for the deployed OS to be supported by Microsoft, your HPE Server **must** meet all processor requirements that are specified and listed for **both** the licensed product **and** the downgrade/down-edition (DG/DE) software. For clarity, if you purchased a Windows Server 2016 and intend to downgrade to Windows Server 2012 R2, your server must meet both the processor requirements for Windows Server 2016 and 2012 R2.

This requirement applies **both** to customers who have purchased the Windows Server OEM license directly from HPE or from an HPE Reseller or Partner. The Microsoft processor requirements are in addition to other hardware requirements for the Windows Server operating system products that are specified in the document located at [https://msdn.microsoft.com/library/windows/hardware/dn915086\(v=vs.85\).aspx](https://msdn.microsoft.com/library/windows/hardware/dn915086(v=vs.85).aspx).

Microsoft may update the processor requirements and the minimum hardware requirements for Windows Server operating system products as requirements change.

Downgrade Windows Server 2012 R2 Standard Edition Not Pre-Installed

NOTE: Only available when purchasing Windows Server 2016 with a Hewlett Packard Enterprise server.

Microsoft Windows Server 2012 R2 Standard Downgrade Kit FIO Not Pre-installed

P00492-B21

Downgrade Windows Server 2012 R2 Datacenter Edition Not Pre-Installed

NOTE: Only available when purchasing Windows Server 2016 with a Hewlett Packard Enterprise server.

Microsoft Windows Server 2012 R2 Datacenter Downgrade Kit FIO Not Pre-installed

P00493-B21

HPE Integrated Lights Out (iLO)

HPE iLO Essentials is the preferred license for small and medium businesses that offer full remote server management capabilities for small and medium business via the Integrated Remote Console (IRC), virtual media, and e-mail based alerts. Learn more about HPE iLO Essentials at

<http://www.hpe.com/servers/iLO/essentials>.

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE Servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. Learn more about HPE iLO Advanced at **<http://www.hpe.com/servers/iloadvanced>**.

HPE Insight Control

HPE Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. HPE Insight Control also supports Location and Power Discovery Services to automate many configuration, asset tracking, and power management tasks to speed implementation and prevent downtime. For more information, see: <http://www.hpe.com/info/insightcontrol>.

HPE Insight Control includes one year of 24x7 HPE Software Technical Support and Update Service ensuring rapid access to Hewlett Packard Enterprise support staff and proactive delivery of software updates. For more information about this service, see: <http://www.hpe.com/services/foundationcare>.

Software Technical Support

HPE Foundation Care Services provide reliable and consistent support to keep your business up and running. Within Foundation Care HPE offers several ways for you to obtain support for your Microsoft solution. If your purchase includes the software licenses for Microsoft products, you receive 90 days of telephone support for setting up your Microsoft software. You can also purchase more extensive support to cover your requirements.

HPE Software Technical Support provides remote software support services for Microsoft Windows Server 2016. With HPE Software Technical Support, your IT staff receives fast and reliable access to HPE Global Support Centers. Hewlett Packard Enterprise 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 Microsoft Windows Server 2016 is available from Hewlett Packard Enterprise via multiple contact methods including electronic media and telephone. Software Technical Support includes:

- **24x7 access to technical resources** - Connect with HPE 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 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** - Hewlett Packard Enterprise 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 Hewlett Packard Enterprise to Microsoft Windows.
- **Electronic software information** - Access Hewlett Packard Enterprise'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-Hewlett Packard Enterprise products

NOTE: For more information, visit:

<http://www.hpe.com/services/foundationcare>.

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/sa>**

Windows Server Catalog Definition

Microsoft's certification program gives HPE Servers a compatibility certification with Windows Server operating systems. HPE Servers listed in the Windows Server Catalog have been rigorously tested and certified with Microsoft Windows Server 2016.

NOTE: For information on HPE Servers certified for Windows Server, visit:

<http://www.hpe.com/servers/wincert>.

NOTE: For details on Microsoft's server catalog and also a list of HPE certified servers, visit: **<http://www.windowsservercatalog.com/>**.

Summary of Changes

Date	Version History	Action	Description of Change
04-Dec-2017	From Version 4 to 5	Added	Added new part numbers for Swedish and Turkish languages.
		Changed	Overview section was revised.
04-Sep-2017	From Version 3 to 4	Changed	Overview section was revised.
08-May-2017	From Version 2 to 3	Added	Essentials Edition options were added to the QuickSpecs.

		Changed	Changes made throughout the QuickSpecs.
09-Dec-2016	From Version 1 to 2	Changed	Additional Features section was revised.
28-Nov-2016	Version 1	Added	New QuickSpecs.






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