

### Overview

## Microsoft Windows Server 2019

Microsoft Windows Server 2019 is the operating System bridging on-premises and cloud that will help you to grow your business locally and extend operations to the cloud from a position of strength. It maximizes your existing investments and builds on Windows Server security, app innovation, and Hyper-Converged Infrastructure capabilities to help you extend and enrich on-premises investments to include cloud services.

Today, most business owners face daily challenges in running their businesses. One of the most difficult challenges can include managing the highest level of security. Windows Server 2019 is designed to help.

- **Enhanced security capabilities:**

Windows Server 2019 helps to ensure that all apps and system components have just enough access privilege. Discover and address security breaches with assistance from the integrated Windows Defender Advanced Threat Protection<sup>1</sup>. Protect VM workloads from unauthorized access, with Shielded Virtual Machines for Windows Server<sup>2</sup>

- **Unique Hybrid Platform:**

Windows Server 2019 works with your existing on-premises investments to help you extend your on-premise infrastructure to leverage the cloud and add hybrid management capabilities.

- **Unprecedented hyper-converged infrastructure (HCI)**

HCI is one of the latest trends in the server industry today. Organizations are embracing the trend for cost and performance reasons. In hyper-converged deployments, compute, storage, and networking are on the same cluster, simplifying configuration helping to reduce cost and to maximize your hardware investments.

- **Faster innovation for applications**

Both developers and operations need a modern platform that enable them to deliver innovation at the rate of changing business demands.

Leveraging a 30+ year partnership with Microsoft, HPE helps you maximize advanced features and functionality in Windows Server 2019 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 2019 support for HPE Servers, see the support matrix at <http://www.hpe.com/servers/wincert>.

Hewlett Packard Enterprise offers Windows Server 2019 OEM license product for the following editions:

- **Datacenter:** Ideal for companies of all sizes that have demanding IT workloads, require advanced storage, virtualization, and application deployment
- **Standard:** For businesses that need advanced features, support for distributed office locations, and require a flexible way to virtualize their environment
- **Essentials:** 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 2019.

### Microsoft AMD Pilot Program

This program delivers some of the most economical and energy efficient single and dual socket HPE ProLiant platforms for Windows Server 2019 at greatly reduced OS licensing cost on high core count systems by capping the number of cores per CPU that need to be licensed to a maximum of 32 cores. Available for a limited time only with launch on August 3rd, 2020 and program end on June 30th, 2021.

Only on platforms with AMD EPYC™ 'Rome' processors with more than 32 cores per processor. Another great option for Virtualization / Hyper Converged Infrastructure (Microsoft Azure Stack HCI based on Windows Server 2019 Datacenter) and Multipurpose use (Windows Server 2019 Standard).

### Overview

#### Notes:

– For more information on Hewlett Packard Enterprise's offering of Microsoft Windows Server 2019 products, go to:

<http://www.hpe.com/servers/ws2019>.

–<sup>1</sup> Windows Defender Advanced Threat Protection (ATP) requires an Azure subscription

–<sup>2</sup> Shielded Virtual Machines feature requires Windows Server 2019 Datacenter

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### What's New

- Storage Replica (now limited support also included in Windows Server 2019 Standard)
  - Storage Migration Service for easy and automated, wizard-driven migration of legacy Windows file servers
  - 24TB RAM support
  - 1024 Logical Processor support
  - Windows Defender Advanced Threat Protection - ATP (Azure subscription required) unified endpoint protection
  - Security enhancements:
    - System Guard Runtime Monitor
    - Virtual Secure Mode (VSM) Enclaves
      - Shielded Linux VMs
      - Shielded VM Single Host Binding
  - Windows Admin Center (browser-based, out-of-band management tool: free download from Microsoft)
  - Azure integration (Azure subscription required):
    - Azure File Sync
    - Azure Backup
    - Azure Advanced Threat Analytics (ATA)
  - Hyper-V:
    - Virtual Persistent Memory (vPMEM)
    - Nested virtualization
    - Fallback Host Guardian Service (HGS)
    - Shielded VM Offline Mode
  - Updated WSSD Program for validated Storage Spaces Direct (S2D) solutions
  - System Insights local predictive analytics
  - Common PMEM architecture for all NV-DIMM devices
  - PMEM enhancements within Clustering, Virtualization, S2D and ReFS to enable DAX with certain Apps (SQL)
  - S2D Networking performance enhancements - Guest RDMA
  - Telemetry enhancements - include HW configuration, System ROM version, OS version, Server roles/Features/Apps, Geographic location, device/driver reliability
  - RDS Next Gen enhancements
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## Standard Features

Microsoft Hardware Specifications for Essentials Edition	
Windows Server 2019	Essentials
CPU	Up to 2 Processors; Per server licensing
Min. CPU Req.	1.4 GHz x64
X64 RAM STD/ Max	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 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 2016 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://docs.microsoft.com/en-us/windows-server/get-started/system-requirements>.

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 2019 and intend to downgrade to Windows Server 2016, your server must meet both the processor requirements for Windows Server 2019 and 2016.

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\(v=vs.85\)](https://msdn.microsoft.com/library/windows/hardware/dn915086(v=vs.85)).

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

## 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)

### Standard Features

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

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### 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
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### Storage controller and disk space requirements

Computers that run Windows Server 2019 must include a storage adapter that is compliant with the PCI Express architecture specification. Persistent storage devices on servers classified as hard disk drives must not be PATA. Windows Server 2019 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

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### 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.

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### 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 2019 System Requirements visit:

<https://docs.microsoft.com/en-us/windows-server/get-started-19/sys-reqs-19>

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### 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. 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>.

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## Standard Features

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### Service and Support

#### 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 2019. 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 2019 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

**Notes:** For more information, visit: <http://www.hpe.com/services/foundationcare>.

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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.

**Notes:** For more information, please visit:

<https://www.microsoft.com/en-us/licensing/licensing-programs/software-assurance-default>

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## Service and Support

### 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 2019.

#### Notes:

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

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

– For details on Microsoft's server catalog and also a list of HPE certified servers, visit:

<https://www.windowsservercatalog.com/>

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## Configuration Information

### Windows Server 2019 Essentials Edition 1-2P Pre-Installed UEFI on HPE Servers

**Notes:**

- 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](#).
- 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.

Language Code Key for P11071-xxx		
Microsoft Windows Server 2019 Essentials edition FIO UEFI		P11071-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ

### Windows Server 2019 Essentials Edition 1-2P OS Not Pre-Installed

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

Language Code Key for P11072-xxx		
Microsoft Windows Server 2019 Essentials edition FIO Not Pre-Installed		P11072-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = AD1	Korean	APJ
xxx = 051	French	AMS, EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS, EMEA

### Windows Server 2019 Essentials Edition 1-2P Reseller Option Kit

**Notes:** 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.

Language Code Key for P11070-xxx		
Microsoft Windows Server 2019 Essentials edition ROK		P11070-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = AD1	Korean	APJ
xxx = 051	French	AMS, EMEA Region
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS, EMEA
xxx = 331	Dutch	EMEA
xxx = 131	Portuguese	EMEA
xxx = 251	Russian	EMEA
xxx = 241	Polish	EMEA
xxx = 221	Czech	EMEA
xxx = 201	Brazilian Portuguese	AMS
xxx = B71	Swedish	EMEA



## Configuration Information

### Microsoft Windows Server 2019 Standard Edition 16 Core Pre-Installed on HPE Servers

**Notes:**

- 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](#).
- Include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.
- 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 2019 Standard are available in packs of two, four, and sixteen cores.

Language Code Key for P11059-xxx		
Microsoft Windows Server 2019 Standard Edition Pre-Installed (FIO) UEFI 16 Core		P11059-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS & EMEA

### Microsoft Windows Server 2019 Standard Edition 16 Core OS Not Pre-Installed

**Notes:**

- Include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.
- 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 2019 Standard are available in packs of two, four, and sixteen cores.

Language Code Key for P11060-xxx		
Microsoft Windows Server 2019 Standard edition Not Pre-installed (FIO Npi) 16 Core		P11060-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS & EMEA

## Configuration Information

### Microsoft Windows Server 2019 Standard Edition 16 Core Reseller Option Kit (ROK)

**Notes:**

- 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.
- 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 2019 Standard are available in packs of two, four, and sixteen cores.

Language Code Key for P11058-xxx		
Microsoft Windows Server 2019 Standard Edition ROK 16 Core		P11058-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = 201	Brazilian Portuguese	AMS
xxx = AA1	Chinese Simplified	APJ
xxx = AB1	Chinese Traditional	APJ
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS & EMEA
xxx = AD1	Korean	APJ
xxx = 331	Dutch	EMEA
xxx = 251	Russian	EMEA
xxx = 241	Polish	EMEA
xxx = 221	Czech	EMEA
xxx = 131	Portuguese	EMEA
xxx = B71	Swedish	EMEA

### Microsoft Windows Server 2019 Standard Edition Additional License

**Notes:**

- 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.
- Can be sold with or without an HPE Server - After Point of Sale (APOS).
- End Users can reassign Windows Server Standard Additional licenses to another server that has a Windows Server 2019 Standard base license.

Language Code Key for P11064-xxx		
Microsoft Windows Server 2019 Standard Edition Additional License 16 Core		P11064-xxx
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = 371	English, Korean, Japanese	APJ

## Configuration Information

Language Code Key for P11065-xxx		
Microsoft Windows Server 2019 Standard Edition Additional License 4 Core		P11065-xxx
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = 371	English, Korean, Japanese	APJ

Language Code Key for P11066-xxx		
Microsoft Windows Server 2019 Standard Edition Additional License 2 Core		P11066-xxx
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = 371	English, Korean, Japanese	APJ
xxx = AA1	Chinese Simplified	APJ
xxx = AB1	Chinese Traditional	APJ

## Microsoft Windows Server 2019 Datacenter Edition 16 Core - No Reassignment Rights OS Not Pre-Installed

### Notes:

- Include x64 DVD media and COA. Sold only as a configurable option with an HPE Server purchase.
- 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 2019 Datacenter are available in packs of two, four, and sixteen cores.

Language Code Key for P11063-xxx		
Microsoft Windows Server 2019 Datacenter Edition Not Pre-installed (FIO Npi) 16 Core - No Reassignment Rights		P11063-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS & EMEA

## Microsoft Windows Server 2019 Datacenter Edition 16 Core - No Reassignment Rights Reseller Option Kit (ROK)

### Notes:

- 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.
- 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 2019 Datacenter are available in packs of two, four, and sixteen cores.

## Configuration Information

Language Code Key for P11061-xxx		
Microsoft Windows Server 2019 Datacenter Edition ROK 16 Core - No Reassignment Rights		P11061-xxx
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = 201	Brazilian Portuguese	AMS
xxx = AA1	Chinese Simplified	APJ
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS & EMEA
xxx = AB1	Chinese Traditional	APJ
xxx = AD1	Korean	APJ
xxx = 331	Dutch	EMEA
xxx = 251	Russian	EMEA
xxx = 241	Polish	EMEA
xxx = 221	Czech	EMEA
xxx = 131	Portuguese	EMEA

## Microsoft Windows Server 2019 Datacenter Edition 16 Core - with Reassignment Rights Reseller Option Kit (ROK)

### Notes:

- 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.
- 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 2019 Datacenter are available in packs of two, four, and sixteen cores.
- 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.

Language Code Key for P11062-xxx		
Microsoft Windows Server 2019 Datacenter Edition with Reassignment Rights ROK 16 Core		P11062-xxx
xxx = B21	English	WW
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 291	Japanese	APJ

## Microsoft Windows Server 2019 Datacenter Edition Additional License

**Notes:** 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.

## Configuration Information

Language Code Key for P11067-xxx		
<b>Microsoft Windows Server 2019 Datacenter Edition Additional License 16 Core</b>		<b>P11067-xxx</b>
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish	EMEA
xxx = 371	English, Korean, Japanese	APJ

Language Code Key for P11068-xxx		
<b>Microsoft Windows Server 2019 Datacenter Edition Additional License 4 Core</b>		<b>P11068-xxx</b>
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian	EMEA
xxx = 371	English, Korean, Japanese	APJ

Language Code Key for P11069-xxx		
<b>Microsoft Windows Server 2019 Datacenter Edition Additional License 2 Core</b>		<b>P11069-xxx</b>
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian	EMEA
xxx = 371	English, Korean, Japanese	APJ

## Microsoft Windows Server 2019 - Remote Desktop Services 5 Device CAL

### Notes:

- Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.
- Use of Remote Desktop Services requires a Windows Server CAL and an RDS CAL for each user or device.

Language Code Key for P11074-xxx		
<b>Microsoft Windows Server 2019 Remote Desktop Services 5 Device CAL</b>		<b>P11074-xxx</b>
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ

## Microsoft Windows Server 2019 - Remote Desktop Services 5 User CAL

### Notes:

- Sold from Hewlett Packard Enterprise and authorized resellers with or without an HPE Server.
- Use of Remote Desktop Services requires a Windows Server CAL and an RDS CAL for each user or device.

## Configuration Information

Language Code Key for P11073-xxx		
<b>Microsoft Windows Server 2019 Remote Desktop Services 5 User CAL</b>		<b>P11073-xxx</b>
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ

### Microsoft Windows Server 2019 50 User CAL

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

Language Code Key for P11081-xxx		
<b>Microsoft Windows Server 2019 50 User CAL</b>		<b>P11081-xxx</b>
xxx = B21	English, French, Italian, German, Spanish, Japanese	WW

### Microsoft Windows Server 2019 50 Device CAL

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

Language Code Key for P11082-xxx		
<b>Microsoft Windows Server 2019 50 Device CAL</b>		<b>P11082-xxx</b>
xxx = B21	English, French, Italian, German, Spanish, Japanese	WW

### Microsoft Windows Server 2019 10 User CAL

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

Language Code Key for P11079-xxx		
<b>Microsoft Windows Server 2019 10 User CAL</b>		<b>P11079-xxx</b>
xxx = B21	English, French, Italian, German, Spanish, Japanese	WW

### Microsoft Windows Server 2019 10 Device CAL

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

Language Code Key for P11080-xxx		
<b>Microsoft Windows Server 2019 10 Device CAL</b>		<b>P11080-xxx</b>
xxx = B21	English, French, Italian, German, Spanish, Japanese	WW

### Microsoft Windows Server 2019 5 User CAL

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

### Configuration Information

Language Code Key for P11077-xxx		
Microsoft Windows Server 2019 5 User CAL		P11077-xxx
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ
xxx = AA1	Chinese Simplified	APJ
xxx = AB1	Chinese Traditional	APJ

### Microsoft Windows Server 2019 5 Device CAL

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

Language Code Key for P11078-xxx		
Microsoft Windows Server 2019 5 Device CAL		P11078-xxx
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ

### Microsoft Windows Server 2019 1 User CAL

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

Language Code Key for P11075-xxx		
Microsoft Windows Server 2019 1 User CAL		P11075-xxx
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ
xxx = AA1	Chinese Simplified	APJ

### Microsoft Windows Server 2019 1 Device CAL

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

Language Code Key for P11076-xxx		
Microsoft Windows Server 2019 1 Device CAL		P11076-xxx
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ

### Downgrade Windows Server 2016 Standard Edition Not Pre-Installed

**Notes:** Only available when purchasing Windows Server 2019 with a Hewlett Packard Enterprise server.

## Configuration Information

Language Code Key for P11083-xxx		
<b>Microsoft Windows Server 2016 Standard Downgrade Kit FIO Not Pre-installed</b>		<b>P11083-xxx</b>
xxx = B21	English	WW
xxx = 291	Japanese	APJ
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 041	German	EMEA
xxx = 071	Spanish	AMS & EMEA

### Downgrade Windows Server 2016 Standard Edition Reseller Option Kit

**Notes:** Available for purchase from your local Hewlett Packard Enterprise authorized reseller only when purchasing Windows Server 2019 with a Hewlett Packard Enterprise server.

Language Code Key for P11084-xxx		
<b>Microsoft Windows Server 2016 Standard Downgrade Kit ROK</b>		<b>P11084-xxx</b>
xxx = 291	Japanese	APJ

### Downgrade Windows Server 2016 Datacenter Edition Not Pre-Installed

**Notes:** Only available when purchasing Windows Server 2019 with a Hewlett Packard Enterprise server.

Language Code Key for P11086-xxx		
<b>Microsoft Windows Server 2016 Datacenter Downgrade Kit FIO Not Pre-installed</b>		<b>P11086-xxx</b>
xxx = B21	English	WW
xxx = 041	German	EMEA
xxx = 051	French	AMS & EMEA
xxx = 061	Italian	EMEA
xxx = 071	Spanish	AMS & EMEA
xxx = 291	Japanese	APJ

### Downgrade Windows Server 2016 Datacenter Edition Reseller Option Kit

**Notes:** Available for purchase from your local Hewlett Packard Enterprise authorized reseller only when purchasing Windows Server 2019 with a Hewlett Packard Enterprise server.

Language Code Key for P11085-xxx		
<b>Microsoft Windows Server 2016 Datacenter Downgrade Kit ROK</b>		<b>P11085-xxx</b>
xxx = 291	Japanese	APJ



## Configuration Information

### Microsoft Windows Server 2019 AMD Standard Edition Additional License

**Notes:**

- Standard Additional Licenses include a COA, but will not include an activation key (already included in the base OS license kit ROK / Npi). Additional Licenses do not include media.
- Cannot be sold without an HPE Server (known as - "After Point of Sale" / (APOS), only POS or at a Point of Sale of the ProLiant server purchase).
- End Users cannot reassign Windows Server Standard AMD Additional licenses to another server that has a Windows Server 2019 Standard base license.
- Only available on AMD EPYC 'Rome' systems with 48 and 64 core processors. Core licensing only required for the first 32 cores/CPU

Language Code Key for P35476-xxx		
Microsoft Windows Server 2019 AMD Standard Edition Additional License 16 Core		P35476-xxx
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = 371	English, Korean, Japanese	APJ

### Microsoft Windows Server 2019 AMD Datacenter Edition Additional License

**Notes:**

- Datacenter AMD Additional Licenses include COA, but will not include an activation key (already included in the base OS license kit ROK / Npi). Additional Licenses do not include media. Sold only as a configurable option with an HPE Server purchase.
- Only available on AMD EPYC 'Rome' systems with 48 and 64 core processors. Core licensing only required for the first 32 cores/CPU

Language Code Key for P35479-xxx		
Microsoft Windows Server 2019 AMD Datacenter Edition Additional License 16 Core		P35479-xxx
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS
xxx = A21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Turkish	EMEA
xxx = 371	English, Korean, Japanese	APJ

## Summary of Changes

<b>Date</b>	<b>Version History</b>	<b>Action</b>	<b>Description of Change</b>
03-Aug-2020	Version 3	Changed	Overview and Software Information sections were updated.
05-Aug-2019	Version 2	Changed	Software Information section was updated.
02-Apr-2019	Version 1	New	New QuickSpecs.

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