Overview

Windows Server 2022

Do your systems need a cloud-ready operating system to increase security and performance for modern applications? Microsoft Windows Server 2022 can modernize your data center or cloud platform by enabling hybrid capabilities to increase value from technology investments. You can now upgrade to multilayer security with Secured-core OS as a cornerstone, improve efficiency with featured options such as Storage Spaces Direct and Windows Admin Center for easier management of modern applications with virtualization and containerization. With powerful innovations to elevate your system's efficiency and productivity, Windows Server 2022 pairs with Hewlett Packard Enterprise servers, storage, and networking solutions to provide the technology to help achieve your business goals.

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 while keeping your infrastructure flexible and integrating cloud resources. Windows Server 2022 is designed to help.

- **Hybrid capabilities with Microsoft Azure™:**
  The cloud-ready operating system that boosts on-premises investments with hybrid capabilities[1].
- **Advanced multilayer security:**
  Help protect data and apps at virtually every level of your business, starting with the operating system.
- **Remote working with enhanced security features:**
  Empower workers through simplified deployment and management of remote apps and desktops.
- **Modernized server infrastructure:**
  Transform infrastructure and applications with flexible solutions like software-defined storage and networking and a modern app platform.

Leveraging a 30+ year partnership with Microsoft, HPE helps you maximize advanced features and functionality in Windows Server 2022 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 Windows Server 2022 support for HPE Servers, see the support matrix at **http://www.hpe.com/servers/wincert**.

Hewlett Packard Enterprise offers Windows Server 2022 OEM license products 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 has been phased out in the Windows Server 2016 generation.

Notes:

– For more information on Hewlett Packard Enterprise's offering of Windows Server 2022 products, go to:

  http://www.hpe.com/servers/ws2022

– [1]Azure cloud services may require an Azure subscription

Overview

What's New

Hybrid Cloud and Security

- Microsoft Windows Server 2022 features the Secured-core OS option, which uses Trusted Platform Module 2.0 and System Guard secure boot option to reduce risk from firmware vulnerabilities and to help provide multilayer security across hardware, firmware, and the operating system.
- Windows Server 2022 supports AES-256-GCM and AES-256-CCM cryptographic suites for SMB encryption as well as TLS 1.3 to help provide a communication channel between two endpoints with increased security features.
- To provide east-west storage encryption, Windows Server 2022 failover clusters support granular control of encrypting and signing intranode storage communications for cluster shared volumes (CSV) and the storage bus layer (SBL).
- Improved Discrete Device Assignment (DDA) brings better security, virtual machine isolation, and performance for graphics-intensive workloads.

Modernized Server Infrastructure

- Microsoft Windows Server 2022 features containers that allow for packaging apps with their dependencies and using operating system-level virtualization to provide fast, fully isolated environments on a single system.
- The Containers extension in Windows Admin Center enables the containerization of apps, as well as troubleshooting for containers running on a host, such as opening a console connection to a container, checking logs, or monitoring resource consumption.
- Microsoft drastically decreased the size of the Windows Server core container base image by reducing duplicate payloads and removing unused optional components.
- Performance and scalability increased with support for up to 48TB memory and 2048 logical processors

Storage Migration

- Microsoft Windows Server 2022 offers the Storage Migration Service, which provides a graphical tool that inventories data on Windows, Linux®, and NetApp CIFS servers and then transfers the data to newer servers or to Azure virtual machines, without reconfiguring applications or users.
- Capture and migrate legacy access permission settings along with the data for continued seamless functionality of your key business applications. As an option, transfer the identity of the legacy server to the destination server so apps and users can access the data without changing links or paths.

Standard Features

Microsoft Hardware Specifications for Essentials (10 Core) Edition	
Windows Server 2022	Essentials (10 Core)
CPU	Only 1 Processor with up to 10 cores
Min. CPU Req.	1.4 GHz x64
X64 RAM STD/ Max	Minimum: 2GB RAM / Recommended: 16GB
ECC	Yes
NIC	multiple NICs supported
Internal optical bay drive allowed	Yes
Minimum OS Storage Footprint	32GB
SW RAID	Yes
Video	Optional
Keyboard, Mouse	Optional

Windows Server 2019 Downgrade options
Important Message:
Microsoft has 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 2019 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 2022 and intend to downgrade to Windows Server 2019, your server must meet both the processor requirements for Windows Server 2022 and 2019.

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://docs.microsoft.com/en-us/windows-hardware/design/minimum/minimum-hardware-requirements-overview.

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.

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, for physical host deployments

Storage controller and disk space requirements
Computers that run Windows Server 2022 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, assuming Server Core installation.
Minimum: 32GB

Network adapter requirements
Minimum:
- An Ethernet adapter capable of at least gigabit throughput
- Compliant with the PCI Express architecture specification.

A network adapter that supports Pre-boot Execution Environment (PXE) is useful, but not a minimum requirement.

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 2022 System Requirements visit:
https://docs.microsoft.com/en-us/windows-server/get-started/get-started-with-windows-server

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

Standard Features

functionality. Learn more about HPE iLO Advanced at https://www.hpe.com/us/en/servers/integrated-lights-out-ilo.html.

Service and Support

Software Technical Support
Remote Tech Support via HPE Pointnext Tech Care provides reliable and consistent support to keep your business up and running. Tech Care goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. Within HPE Pointnext Tech 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 installing your Microsoft software. You can also purchase more extensive support to cover your requirements. Remote Tech Support provides software support for Microsoft Windows Server 2022 and includes support for other Microsoft supported applications. Visit **https://psnow.ext.hpe.com/doc/4AA4-9999ENW** to view the HPE supported Microsoft SW list. With Remote Tech Support, your IT staff receives fast and reliable access to HPE support. HPE Pointnext 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. Remote Tech Support for Microsoft Windows Server 2022 is available from HPE Pointnext via multiple contact methods including electronic media and telephone.
Remote Tech Support includes:

- 24x7 access to technical resources - Connect with Remote Tech Support via telephone, web portal, chat, or forums as locally available 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 Pointnext support 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 - HPE Pointnext 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 Pointnext to Microsoft support.
- Electronic software information - Access HPE Pointnext 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: **https://www.hpe.com/services/techcare**

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, you have access to and are licensed for 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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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 Windows Server 2022.

Service and Support

Notes:

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

Configuration Information

Windows Server 2022 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 virtualized Operating System instances (VMs) or Hyper-V containers when all physical processor 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 2022 Standard are available in packs of two, four, and sixteen cores.

Language Code Key for P46171xxx		
Windows Server 2022 Standard Edition ROK 16 Core		**P46171-xxx**
xxx = A21	English, French, Italian, German, Spanish, Dutch, Portuguese	EMEA
xxx = 371	English, Korean, Japanese	APJ
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS

Windows Server 2022 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 2022 Standard base license.

Language Code Key for P46199-xxx		
Windows Server 2022 Standard Edition Additional License 2 Core		**P46199-xxx**
xxx = B21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Korean, Japanese, Brazilian Portuguese	WW

Windows Server 2022 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 virtualized Operating System instances (VMs) and Hyper-V containers on a server when all physical cores in the server are licensed. Additional Licenses for Windows Server 2022 Datacenter are available in packs of two, four, and sixteen cores.

Language Code Key for P46123-xxx		
Windows Server 2022 Datacenter Edition ROK 16 Core - No Reassignment Rights		**P46123-xxx**
xxx = A21	English, French, Italian, German, Spanish, Dutch, Portuguese	EMEA
xxx = 371	English, Korean, Japanese	APJ
xxx = DN1	English, French, Spanish, Brazilian Portuguese	AMS

Configuration Information

Windows Server 2022 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.

Language Code Key for P46214-xxx		
Windows Server 2022 Datacenter Edition Additional License 2 Core		**P46214-xxx**
xxx = B21	English, Czech, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Swedish, Korean, Japanese, Brazilian Portuguese	WW

Summary of Changes

Date	Version History	Action	Description of Change
04-Oct-2021	Version 1	New	New QuickSpecs

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