WINDOWS SERVER 2019 ON HPE INTELLIGENT STORAGE

HPE brings innovation to Windows with the world's most intelligent storage

The HPE Intelligent Data Platform lets IT organizations transition from just deploying data storage to unlocking business value with intelligent data.

HPE InfoSight is the key feature—the IT industry's most established AI platform—in enabling autonomous, self-managing data storage. HPE InfoSight has analyzed application patterns across 1,250 trillion data points over the last decade to predict and prevent disruptions across storage, servers, and virtual machines, resulting in savings of more than 1.5 million hours from preventing lost productivity due to downtime.

HPE InfoSight provides the intelligent foundation for all HPE storage products, creating the industry's only end-to-end AI capability for self-managing storage.

Regardless of your business requirements, Microsoft® Windows Server® 2019 and HPE Intelligent Storage helps you realize the best of Microsoft Azure® cloud-connected functionality with the availability, control, and security of on-premises HPE infrastructure.

GET INTO A HIGH AVAILABILITY HYBRID CLOUD WITH THE WORLD'S MOST INTELLIGENT STORAGE

Windows Server 2019 enables hybrid cloud, bridging on-premises environments with Azure and added layers of security while helping modernize business applications and infrastructure. Windows Server 2019 extends your data center to the Microsoft public cloud service, Azure, improving the protection and reach of data center investments through hybrid capabilities.

A key enhancement of Windows Server 2019 is an updated Microsoft Hyper-V®, which is easy to manage (no mandatory licensed management tools) and affordable as a feature of Windows® or a separate free server, yet has capabilities and performance comparable to the market-leading hypervisor.[1] Hyper-V high-availability and disaster-recovery can be implemented in many ways. The stand-alone server is useful for license-free deployment of virtual desktops and Linux® virtual machines (VMs).

HPE technical best practices for a successful deployment of Windows Server 2019 on any HPE Storage platform are available through our technical libraries as well as on our Microsoft Storage Solutions webpage.

By observing these best practices, customers can implement and manage an architecture that maximizes Hyper-V system availability and off-site recovery with minimal effort.

WHAT'S NEW WITH WINDOWS SERVER 2019

Windows Server 2019 is now more cloud-ready than ever, with features to bridge on-premises and cloud environments.

- Unique hybrid capabilities—Extend your data center to the Azure cloud with effective and secure hybrid services, including a common identity platform with Active Directory®, a common data platform built on Microsoft SQL Server® technologies, and hybrid management capabilities with Windows Admin Center.

- Enhanced security—Security, privacy, and compliance concerns are key reasons to keep business-critical applications and data on-premises. Windows protects them with enhanced credential administration, integrated Windows Defender Advanced Threat Detection, Windows Defender Exploit Guard, and shielded VMs for Windows and Linux workloads.

- Faster application innovation—Container technologies in Windows Server 2019 lets DevOps deliver applications faster, with a smaller server core container image for faster download, enhanced support for Kubernetes clusters and Red Hat®

[1] Per published expert comparison by Andrea Mauro, VMware® User Group co-founder, Oct 31, 2018: vinfrastructure.it/2018/10/microsoft-hyper-v-2019-vs-vmware-vsphere-6-7

OpenShift and simplified Linux operations with the ability to use standard tools such as OpenSSH, Curl, and Tar.

- Breakthrough software-defined hyperconverged infrastructure (HCI)—Windows Server 2019 refines the HCI features introduced in Windows Server 2016 with Azure Stack HCI, supported by a full catalog of certified vendor solutions. They include the HPE Apollo 4200 with market-leading capacity especially suited for data-centric HCI workloads.

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HPE Primera delivers unmatched simplicity, resiliency, and performance for mission-critical applications and ships with a 100% availability guarantee.

HPE 3PAR storage is ideal for scale-up workloads such as mission-critical SQL Server.

HPE Nimble Storage can meet the performance needs of a mix of workloads efficiently and is often used for consolidating Microsoft business applications such as SQL Server, Exchange, and SharePoint®.

HPE MSA storage has flash-enabled performance for a range of budgets and meets the needs of business-class SQL Server and other Microsoft applications.

HPE Apollo storage servers are designed for data-centric workloads, hosting some of the world's largest Exchange deployments.

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HPE Storage Networking products such as HPE StoreFabric M-series switches provide high-bandwidth, low-latency, and NVMe-ready connectivity, supporting Azure and Azure Stack on hyperconverged, NAS, and object storage systems.

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HPE Storage solutions for Microsoft let organizations "push the envelope" with their Microsoft software and services—in terms of scale, transactions per second, or cross-cloud architectures. The largest organizations rely on HPE Storage solutions to ensure that data access to their Windows workloads is highly available, efficient, and intelligent. HPE all-flash storage makes SQL Server run faster, and the HPE Apollo platform lets enterprises realize cloud-scale economics on-premises. HPE Apollo is the company's newest platform for software-defined HCI with the validation of Azure Stack HCI on HPE Apollo.

The combination of HPE Cloud Volumes with applications such as SQL Server lets organizations leverage the flexibility of cloud while maintaining firm control of their data.

HIGHLY AVAILABLE WINDOWS ON HPE STORAGE

Hyper-V enhances Windows Server to improve system availability, usability, and economics. Best practices involving Hyper-V and related capabilities on HPE Storage can maximize system availability and off-site recoverability with minimal effort:

- Hyper-V live migration—Greatly reduces the effort required to migrate a virtual server during maintenance, load balancing, or hardware consolidation. The migration does not interrupt services or data processing.

- Hyper-V live storage migration—Can natively relocate virtual hard disk-based storage that is attached to a VM and all of the files needed to run that machine, such as the configuration file, from their existing location to a new location. Physical storage devices can be evacuated and populated with no interruption to services or interference with the server's ability to process data.

- Application awareness—Ensures that applications flush their HPE Nimble Storage write buffers to a quiescent state before operations such as snapshot backup and replication are triggered. HPE Recovery Manager Central ships with agents that integrate with Exchange and SQL Server for application-consistent data protection.

- High availability clustering—Windows Server Failover Clustering automatically restarts VMs on surviving hosts, reducing the manual intervention required for virtual server recovery.

- Off-site disaster recovery—HPE Storage arrays ship with WAN-efficient asynchronous replication to protect and recover production applications to an off-site disaster recovery location. HPE has also delivered Peer Persistence synchronous replication for metro region storage cluster protection for HPE 3PAR and HPE Nimble Storage platforms.

GET STARTED

There is an HPE intelligent storage solution to help you achieve your Windows Server 2019 objectives. Realize Azure cloud-connected functionality along with the availability, control, and security of on-premises infrastructure with HPE.

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