

Windows Server 2016

CLOUD-READY OPERATING SYSTEM

Secure. Evolve. Innovate

The cloud puts new demands on your organization to innovate faster in order to compete effectively. You make decisions every day about how to balance traditional IT responsibilities with cloud innovation. At the same time, your organization faces increased security threats from outside and within. For these reasons and more, organizations adopt cloud computing at different rates.

Windows Server 2016 is the cloud-ready operating system that supports your current workloads while introducing new technologies that make it easy to transition to cloud computing when you are ready. It delivers powerful new layers of security along with Azure-inspired innovation for the applications and infrastructure that power your business.

Add layers of security

Security is consistently rated as a top priority for IT organizations. Companies are in the news for security breaches and failing to protect their customer and employee information. The operating system lives and works at a strategic layer in your environment, making it an ideal location to introduce new capabilities for security and control. Windows Server 2016 gives you new capabilities to prevent attacks and detect suspicious activity with features to control privileged access, protect virtual machines and harden the platform against emerging threats.

- Prevent risks associated with compromised administrative credentials. Use new privileged identity management features to limit access to “just enough” and “just in time” administration. And use Credential Guard to prevent administrative credentials from being stolen by “pass-the-hash” attacks.
- Protect your virtual machines using the unique shielded virtual machine feature. A shielded VM is encrypted using BitLocker and can only run on approved hosts.
- Protect against unknown vulnerabilities by ensuring only permitted binaries are executed using additional security features such as Control Flow Guard and Code Integrity.
- Use Hyper-V Containers for a unique additional layer of isolation for containerized applications.

Evolve your infrastructure

Windows Server 2016 delivers capabilities to help you create a more flexible and cost-efficient datacenter using software-defined compute, storage and network virtualization features inspired by Azure.

RESILIENT COMPUTE

Run your datacenter with a highly automated, resilient, virtualized server operating system.

- Reduce your datacenter footprint, increase availability, and reduce resource usage with “just enough OS” using the Nano Server deployment option, with an image that is 25x smaller than Windows Server 2016 with the full desktop experience.
- Upgrade infrastructure clusters to Windows Server 2016 with zero downtime for your workload, and without requiring new hardware, using mixed-mode cluster upgrades.
- Increase application availability with improved cluster resiliency to transient failures in network and storage.
- Automate server management with PowerShell 5.0 and Desired State Configuration.
- Manage Windows servers from anywhere using the new web-based GUI – Server management tools – which are especially useful for managing headless deployment options such as Nano Server.
- Deploy applications on multiple operating systems with best-in-class support for Linux on Hyper-V.

REDUCED COST STORAGE

Windows Server 2016 includes expanded capabilities in software-defined storage with an emphasis on resilience, reduced cost, and increased control.

- Build highly available and scalable software-defined storage solutions at a fraction of the cost of SAN or NAS. Storage Spaces Direct uses standard servers with local storage to create converged or hyper-converged storage architectures.
- Create affordable business continuity and disaster recovery among datacenters with Storage Replica synchronous storage replication.
- Ensure application users have priority access to storage resources using quality-of-service features.

CLOUD-INSPIRED NETWORKING

Windows Server 2016 delivers key networking features used in the Azure datacenters to support agility and availability in your datacenter.

- Deploy and manage workloads across their entire lifecycle with hundreds of networking policies (isolation, QoS, security, load balancing, switching, routing, gateway, DNS, etc.) in a matter of seconds using a scalable network controller.
- Dynamically segment your network based on workload needs using a distributed firewall and network security groups to apply rich policies within and across segments. Layer enforcement by routing traffic to virtualized firewall appliances for even greater levels of security.
- Take control of your hybrid workloads, including running them in containers, and move them across servers, racks, and clouds using standards-based VXLAN and NVGRE overlay networks and multi-tenanted hybrid gateways.
- Optimize your cost/performance ratio when you converge RDMA and tenant traffic on the same teamed NICs, driving down cost while providing performance at 40G and beyond.

Support application innovation

Windows Server 2016 delivers new ways to deploy and run your applications – whether on-premises or in Microsoft Azure – using capabilities such as Windows containers and the lightweight Nano Server deployment option.

- Windows Server Containers bring the agility and density of containers to the Windows ecosystem, enabling agile application development and management.
- Use Hyper-V Containers for a unique additional level of isolation for containerized applications without any changes to the container image.
- Use the lightweight Nano Server deployment option for the agility and flexibility today's application developers need. It's the perfect option for running applications from containers or micro services.
- Run traditional first-party applications such as SQL Server 2016 with best-in-class performance, security and availability.

Windows Server 2016 editions

Windows Server 2016 Datacenter: for highly virtualized datacenter and cloud environments.

- Includes new datacenter functionality including shielded virtual machines, software-defined networking, storage spaces direct and storage replica.

Windows Server 2016 Standard: for physical or minimally virtualized environments.

Windows Server 2016 Essentials: for small businesses with up to 25 users and 50 devices.

Azure Hybrid Use Benefit

When you are ready to transition workloads to the public cloud, you can leverage your existing investment in Windows Server. The Azure Hybrid Use Benefit lets you bring your on-premises Windows Server license with Software Assurance to Azure. Rather than paying the full price for a new Windows Server virtual machine, you will only pay the base compute rate.

Find out more

For more information about Windows Server 2016, now in Technical Preview, visit

<http://www.microsoft.com/windowsserver2016>