Microsoft

Modernize your apps

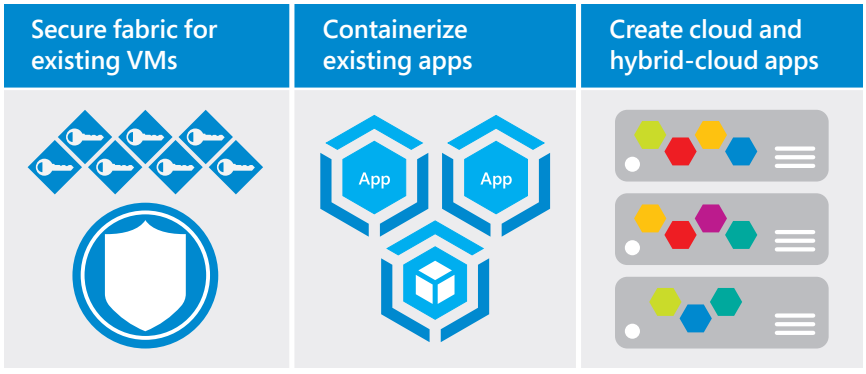
with Windows Server 2016

Accelerate business agility with apps built on Windows Server

The cloud enables businesses to innovate quickly and deliver faster time-to-value with cloud-native applications and microservices architecture. But most businesses are grappling with how to manage and update thousands of existing applications while planning how to move to this new world. What is needed is a solution that helps you invigorate existing applications and create new, cloud-native applications. Windows Server 2016 can do both.

Windows Server helps you secure and modernize existing existing enterprise .NET and line-of-business server apps with little or no code changes. Package existing apps in containers to realize the benefit of a more agile DevOps model, then deploy either on-premises, to any cloud, or in a hybrid model.

Developers can create cloud-ready, business-changing apps and services, whether on-premises or in any cloud, using technologies such as containers and the lightweight Nano Server installation option. Windows Server 2016 can help you modernize your apps and innovate faster with a cloud-ready application platform.



Secure fabric to help protect virtual machines

Enhance existing apps with Windows Server 2016, by taking advantage of enhanced security and management features in the fabric. Use Shielded Virtual Machines to help secure your critical applications to run only on trusted fabrics. Limit administrator access to specific tasks with Just Enough Administration and specific time limits with Just-in-Time Administration.

Cloud changes everything

- Enables agility, elasticity, and scalability.
- Enables developers to focus on features, not infrastructure.
- Agile processes get new capabilities into production and deliver value faster than ever before.

Windows Server 2016 features include agile cloud development technologies:

- Containers – OS virtualization
- Nano Server – just enough OS
- .NET Core – Core framework
- Just-in-Time and Just Enough Administration

Additional agile development technologies:

- Azure Service Fabric – microservices platform
- Azure Hybrid Use Benefit – special pricing for using Windows Server licenses in Azure
- Visual Studio Community – development tool
- Azure – public cloud deployment
- Third-party frameworks such as (Node.js)
- Azure ExpressRoute – connections for hybrid

Containerize existing apps

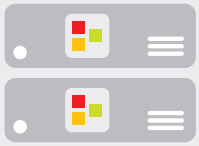
Move your traditional applications into a modern DevOps environment with little or no code changes. Gain benefits such as consistency across dev, test, and production using the same tooling, which enables rapid deployments, continuous integration and continuous delivery, all with better security. Use containers to gain control and consistency by enabling "write-once, run-anywhere" apps that can be deployed on-premises, to any cloud, or in a hybrid architecture across clouds.

For an additional layer of isolation, deploy your app in a Hyper-V container, which packages the same container image with its own dedicated kernel, ensuring tighter isolation in multi-tenant environments.

Build cloud-native and hybrid apps

Windows Server 2016 ships with agile technologies for building cloud-native applications with microservices architectures. Nano Server's "just enough OS" model enables you to build offline customized OS images highly optimized for your application, providing a fast booting, tiny OS that achieves higher density and a reduced attack surface. Create with familiar tools, including third-party frameworks, such as Node.js. Using proven Azure Service Fabric technology along with Windows Server 2016, build always-on, scalable, and distributed applications and run them in Azure, on-premises, or in a hybrid model.

Combine the benefits of containers with Nano Server, Service Fabric, and the proven Windows Server platform to achieve business agility with cloud apps.

Monolithic applications	Microservices architectures
Tiered approach. A monolith app contains domain specific functionality and is normally divided by functional layers such as web, business and data.  App 1	**Distributed approach.** A microservices architecture separates functionality into separate smaller services.  App 1 App 2
Cumbersome scale. Clone the app on multiple servers, VMs, containers. 	**Rapid scale.** Deploy each service independently creating instances of the services across servers, VMs, containers. 

Take the next step. Learn more at
www.microsoft.com/en-us/cloud-platform/application-platform

Consistency and control

When dev, test, and production systems all use the same container image pulled from a central repository—which can be enabled by Windows Server 2016 container technology—the improved process supports continuous integration across the application lifecycle. These images are built offline using human-readable, reproducible artifacts that enable infrastructure to behave like code—with change control, auditing, and consistency.

"By containerizing legacy applications using Windows Server containers, we gain better consistency and control between developers, testers, and deployment teams—a full DevOps environment—without changing the application."

– Matthew Roberts
Principle Software Engineer
Tyco International

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