Microsoft

Containers
A new way to build

Agile, lightweight building blocks to build, ship, and run any application, across any infrastructure

Docker + Microsoft: a bridge to DevOps

Take any app from development to production—with little or no code change—thanks to Docker integration across Microsoft developer tools, operating systems, and cloud

Windows Server 2016
Hyper-V
Visual Studio
Azure

Build | Ship | Run
any application, anywhere, from DevOps to datacenter to cloud

docker

One platform, one journey for all applications

Agility
Fast and agile

Supports microservices architecture
Visual Studio Code, Docker for Windows, Docker for Mac
Rapidly develop apps in Azure with templates from Docker Datacenter
65% reduction in developer onboarding time

"Evolution of the Modern Software Supply Chain," the Docker Survey, 2016

Portability
Modular and portable

Docker support for an open, portable bridge to Azure
Ship across public, private, and hybrid cloud environments
Lift and shift containers to new hosts at different sites without modifications to the service
41% move workloads across public/private clouds
Eliminates "works on my machine"

Control
Flexible and secure

Enterprise support options for Windows Server 2016 and Hyper-V containers
Docker for Azure provides native, easy-to-deploy environment for portable apps leveraging Azure IaaS Services
Higher resource utilization with Docker-supported container management

10x cost reduction in maintaining existing applications

Secure your container

Windows Server Containers

Native to Windows Server 2016
Docker Engine enables full ecosystem of tools including PowerShell, CLI, and Docker Datacenter
Active Directory identity for containers

Hyper-V Isolation

Hyper-V provides trusted isolation and security
Each one has its own instance of the kernel

Spin up fast

Compare the startup performance of NodeJS with...

	Nano Server		Windows Server Core	
Windows Server Container		Under 600 ms	1 second	
Hyper-V Isolation		1.75 seconds	3.3 seconds	
Virtual Machine		3 seconds	5-60+ seconds	

Make room for more apps

Compare the density of NodeJS with...

	Nano Server	Windows Server Core
Windows Server Container	● First container: 120 MB ○ Additional: 75 MB	● First container: 150 MB ○ Additional: 75 MB
Hyper-V Isolation	● First container: 340 MB ○ Additional: 150 MB	● First container: 555 MB ○ Additional: 280 MB
Virtual Machine	**10x** the size of containers	**10x** the size of containers

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Orchestrate and monitor from one location

Commercial solutions

Place, manage, and network containerized apps
Docker Datacenter
DC/OS

Open-source tools

Run Windows and Linux containers side by side
Elastic cluster scale for Linux and Windows containers
Built on familiar open-source tools (Docker Swarm, DC/OS, or Kubernetes)
Docker Swarm

Use your tools

Work with what you're used to across the board

Visual Studio
Docker for Windows
Use popular open-source tooling

Pick a project

Modernize .NET, C++, C, C#, and Java apps
Build cloud-native apps and microservices
Move from Dev & IT to DevOps

Let's build

microsoft.com/containers
aka.ms/modernizeyourapps

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