

Plan for Windows Server 2019 Installations and Upgrades



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What This Module Covers



Explore What's New in Windows Server 2019

Determine Appropriate Windows Server 2019 Editions per Workloads

Determine Windows Server 2019 Installation Requirements

Plan Upgrades and Migrations of Servers and Workloads

Determine the Appropriate Activation Model for Server Installation



Explore What's New in Windows Server 2019

First Desktop Experience since WS2016

Server Core App Compatibility FOD

System Insights predictive analysis

Windows Defender improvements

SDN and Shielded VM improvements

S2D and Storage Replica improvements

Failover Clustering improvements

Containers improvements

A few other “under the covers”
enhancements



Explore
What's New in
Windows
Server 2019

Windows Admin Center



Explore What's Out in Windows Server 2019

Distributable Scan Management, also known as Business Scanning

iSNS

Hyper-V Key Storage Drive

TPM Management Console

Host Guardian Service AD attestation mode

OneSync Service

RDC API Support

WFP Lightweight Filter switch extension



Determine Windows Server 2019 Editions



Determine Windows Server 2019 Editions

Datacenter Edition

Core functionality

Standard Edition

Core functionality



Determine Windows Server 2019 Editions

Datacenter Edition

Core functionality
Unlimited Containers

Standard Edition

Core functionality
Unlimited Containers



Determine Windows Server 2019 Editions

Datacenter Edition

Core functionality
Unlimited Containers
Unlimited Hyper-V Containers

Standard Edition

Core functionality
Unlimited Containers
Two Hyper-V Containers



Determine Windows Server 2019 Editions

Datacenter Edition

Core functionality
Unlimited Containers
Unlimited Hyper-V Containers
Storage Replica

Standard Edition

Core functionality
Unlimited Containers
Two Hyper-V Containers
Storage Replica (Constrained)



Determine Windows Server 2019 Editions

Datacenter Edition

Core functionality
Unlimited Containers
Unlimited Hyper-V Containers
Storage Replica
Host Guardian for Hyper-V
Software Defined Networking
Storage Spaces Direct
Shielded VMs

Standard Edition

Core functionality
Unlimited Containers
Two Hyper-V Containers
Storage Replica (Constrained)
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Determine Installation Requirements

1.4 GHz x64 processor with support for NX, DEP, CMPXCHG16b, LAHF/SAHF, and PrefetchW

SLAT support (EPT or NPT)

512 MB* or 2 GB ECC-type (or similar) RAM

32 GB* hard disk space

Gigabit Ethernet NIC that is PCI Express compliant and supports PXE



Determine Installation Options



Determine Installation Options

Server Core

Small-footprint OS which removes most elements of the desktop UI and runs limited set of services

Includes only limited graphical tools like Task Manager and Windows PowerShell

Tools and services can be extended using Features on Demand

Associated with Semi-Annual Channel

Eighteen months of support per release with new releases every six months



Determine Installation Options

Server with Desktop Experience

Traditional GUI experience with broadest support for applications

Support for Remote Desktop Services

Associated with Long Term Servicing Channel

Five-plus-five years of support per release with new releases every 2-3 years



Determine Installation Options

Nano Server

Extremely small footprint, headless OS
used as container host

Remote management exclusively via
PowerShell or remote consoles

Associated with Semi-Annual Channel

Eighteen months of support per release
with new releases every six months



Perform Upgrades and Migrations

Clean Install

Upgrade

Cluster OS Rolling Upgrade

License Conversion

Role Migration



License Conversions

Conversion not supported on Server Core

Simgmgr.vbs /dlv

Check for “EVAL” in the output

DISM /online /Get-CurrentEdition
Identify the installed Edition

DISM /online /Set-Edition:<edition ID>
/ProductKey:<product key> /AcceptEula

This command also used to convert
Standard Edition to Datacenter Edition



Perform Upgrades and Migrations

Clean Install

Upgrade

Cluster OS Rolling Upgrade

License Conversion

Role Migration



Determine an Appropriate Activation Model

**Retail and
Multiple Activation Keys**

Key Management Service

**Active Directory-based
Activation**

Automatic VM Activation



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