Windows Server 2025 Administrator

Duration: 5 Days Course Code: M-WS011WV2025

Overview:

This course examines the services and features of Microsoft Windows Server versions from 2019 to 2025, including lessons and lab exercises about key attributes you might need on the job.
It's a comprehensive guide to key areas of administrating contemporary Windows Server editions, and it's designed for IT professionals seeking one course in which they can learn all Windows Server knowledge and skills with respect to configuring, using, and maintaining it.
The course begins with an overview of administration techniques and continues with topics about identity services, networking, virtualization, high availability, and disaster recovery.
This is a comprehensive course that has extensive content and labs, and you'll find it helpful for exam preparation and as a guide for administering a Windows Server environment.
Updated January 2026

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

This course is intended for any IT professional who wants to administer Microsoft Windows servers and learn about the changes in version 2025.

Objectives:

- After this course participants should be able to:
- Describe Windows Server 2025, its versions, requirements, and deployment techniques.
- Describe the concepts and main tools for administering Windows Server.
- Deploy domain controllers (DCs) and use the Group Policy mechanism to manage the AD DS environment.
- Describe the core networking services in Windows Server, including DHCP, DNS, and IP Address Management (IPAM).
- Explain data deduplication, sharing, iSCSI, and Distributed File System (DFS) services.
- Describe Hyper-V, options to help secure a virtualization environment, containers, and Kubernetes.
- Explain the high availability in Windows Server and the Failover Clustering feature.
- Describe the technologies to implement disaster recovery in a Windows Server environment.
- Explain the security technologies that address various critical components in a Windows Server environment.
- Describe RDS in Windows Server and Virtual Desktop Infrastructure (VDI) implementations.
- Describe remote-access technologies for Windows Server and Internet Information Services (IIS) deployment and usage.
- List the monitoring tools and technologies available in Windows Server.
- List the available tools in Windows Server for upgrading and migrating servers, and describe AD DS migration and the upgrade process.

Prerequisites:

- Some exposure to, and experience with, Active Directory Domain Services (AD DS) concepts and technologies in Windows Server 2019 and newer.
- Experience working with, and configuring, Windows Server 2019 and newer.

Testing and Certification

- Experience with, and an understanding of, core networking technologies such as IP addressing, name resolution, and Dynamic Host Configuration Protocol (DHCP).
- Experience working with, and an understanding of, Microsoft Hyper-V and basic server-virtualization concepts.
- An awareness of basic security best practices.
- Experience working directly with Windows client operating systems such as Windows 10 and newer.
- Basic experience with Windows PowerShell.
- Basic experience with Microsoft Azure platform.

Follow-on-Courses:

No recommendation

Content:

Module 1: Module 1 Overview of Windows Server 2025

- Overview of Windows Server
- Windows Server deployment
- Overview of Windows Server Core

Lab: Deploy and configure Windows Server Core

- Exercise 1: Deploying and configuring Server Core
- Exercise 2: Provisioning an Azure trial subscription

Module 2: Windows Server administration

- Overview of Windows Server administration principles and tools
- Administer Windows Server with Azure Arc

Labs: Manage and configure Windows Server

- Exercise 1: Perform remote server administration by using Server Manager
- Exercise 2: Implement Windows Admin Center for remote server administration
- Exercise 3: Use Remote PowerShell for remote server administration
- Exercise 4: Configure Azure Arc to manage Windows Server

Module 3: Windows Server identity and management services

- Overview of AD DS
- Deploy Windows Server DCs
- Overview of Entra ID
- Implement Group Policy

Lab: Implement identity services and Group Policy

- Exercise 1: Deploy a new domain controller on Server Core
- Exercise 2: Configure Group Policy
- Exercise 3: Configure directory synchronization by using Microsoft Entra Connect

Module 4: Network infrastructure services in Windows Server

- Deploy and manage DHCP
- Deploy and manage DNS services
- Deploy and manage IPAM

Lab: Implement and configure network infrastructure services in Windows Server

- Exercise 1: Deploy and configure DHCP
- Exercise 2: Deploy and configure DNS
- Exercise 3: Implement IPAM

Module 5: File servers and storage management in Windows Server

- Volumes and file systems in Windows Server
- Implement sharing in Windows Server
- Implement Storage Spaces in Windows Server
- Implement Data Deduplication
- Implement iSCSI
- Implement DFS

Module 6: Hyper-V virtualization and containers in Windows Server

- Hyper-V in Windows Server
- Configure VMs
- Secure virtualization in Windows Server
- Containers in Windows Server

Module 7: High availability in Windows Server

- Plan for implementation of failover clustering
- Create and configure failover clusters
- Overview of stretched clusters
- High availability and disaster-recovery solutions with Hyper-V VMs

Lab: Implement failover clustering

- Exercise 1: Configure iSCSI storage
- Exercise 2: Configure a failover cluster
- Exercise 3: Deploy and configure a highly available file server
- Exercise 4: Validate deployment of the highly available file server

Module 8: Disaster recovery in Windows Server

- Hyper-V Replica
- Backup and restore an infrastructure in Windows Server

Lab A: Implement Hyper-V Replica and Windows Server Backup

- Exercise 1: Configure and implement Hyper-V Replica
- Exercise 2: Configure and implement backup with Windows Server Backup

Module 9: Windows Server security

- Credentials and privileged-access protection in Windows Server
- Harden Windows Server
- JEA in Windows Server
- Secure and analyze SMB traffic
- Windows Server update management

Lab: Configure security in Windows Server

Module 10: RDS in Windows Server

- Overview of RDS
- Configure a session-based desktop deployment
- Overview of pooled and personal virtual desktops

Lab: Implement RDS in Windows Server

- Exercise 1: Implement RDS
- Exercise 2: Configure RemoteApp collection settings

Module 11: Remote access and web services in Windows Server

- Deploy AD CS to secure network traffic
- Overview of remote access in Windows Server
- Implement VPNs
- Implement NPS
- Implement Always On VPN
- Implement Web Server in Windows Server

Lab: Deploy network workloads

- Exercise 1: Deploying AD CS
- Exercise 2: Implement Web Application Proxy
- Exercise 3: Implement VPN in Windows Server
- Exercise 4: Deploy and configure Web Server

Module 12: Server and performance monitoring in Windows Server

- Overview of Windows Server monitoring tools
- Use Performance Monitor
- Monitor event logs for troubleshooting

Lab: Monitor and troubleshoot Windows Server

- Exercise 1: Establish a performance baseline
- Exercise 2: Identify the source of a performance problem
- Exercise 3: Review and configure centralized event logs

Module 13: Upgrade and migration in Windows Server (optional)

- AD DS upgrade and migration
- Storage Migration Service
- Windows Server Migration Tools

Lab: Migrate server workloads

- Exercise 1: Select a process to migrate

- Exercise 4: Manage IP address spaces by using IPAM

- Exercise 1: Configure Windows Defender Credential Guard
- Exercise 2: Locate problematic accounts
- Exercise 3: Implement LAPS

server workloads
- Exercise 2: Plan how to migrate files by using Storage Migration Service

Additional Information:

Official course book provided to participants.

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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