



# WS-011T00: Windows Server 2019 Administration

Course ID #: 7000-380-ZZ-Z

Hours: 35

## Course Content

### Course Description:

This five-day instructor-led course is designed primarily for IT professionals who have some experience with Windows Server. It is designed for professionals who will be responsible for managing identity, networking, storage, and compute by using Windows Server 2019, and who need to understand the scenarios, requirements, and options that are available and applicable to Windows Server 2019. The course teaches IT professionals the fundamental administration skills required to deploy and support Windows Server 2019 in most organizations.

### At Course Completion:

After completing this course, student will be able to:

- Use administrative techniques and tools in Windows Server 2019.
- Implement identity Services.
- Manage network infrastructure services.
- Configure file servers and storage.
- Manage virtual machines using Hyper-V virtualization and containers
- Implement high availability and disaster recovery solutions.
- Apply security features to protect critical resources.
- Configure Remote Desktop Services.
- Configure a virtual machine-based desktop infrastructure deployment.
- Implement remote access and web services.
- Implement service monitoring and performance monitoring and apply troubleshooting.
- Perform upgrades and migration related to AD DS, and storage.

### Prerequisites:

- Some exposure to and experience with Active Directory Domain Services (AD DS) concepts and technologies in Windows Server 2012 or Windows Server 2016.
- Some exposure to and experience with Active Directory Domain Services (AD DS) concepts and technologies in Windows Server 2012 or Windows Server 2016.
- Experience 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 hands-on with Windows client operating systems such as Windows 8, Windows 8.1 or Windows 10.
- Basic experience with Windows PowerShell.



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## Target Student:

This course is intended for Information Technology (IT) Professionals who have some experiencing working with Windows Server and are looking for a single five-day course that covers core administration components and technologies in Windows Server 2019. This course also helps server administrators from previous Windows Server versions to update their knowledge and skills related to Windows Server 2019. Additionally, this course can help individuals looking for preparation materials to pass exams related to Windows Server. The course is also to individuals from a service desk role who wish to transition into server maintenance.

## Topics:

### Module 1: Windows Server Administration Overview

- Overview of Windows Server administration principles and tools
- Introducing Windows Server 2019
- Windows Server Core Overview

### Lab : Deploying and configuring Windows Server

- Deploying and configuring Server Core
- Implementing and using remote server administration

### Module 2: Identity Services in Windows Server

- Overview of AD DS
- Deploying Windows Server domain controllers
- Overview of Azure AD
- Implementing Group Policy
- Overview of Active Directory Certificate Services

### Lab : Implementing identity services and Group Policy

- Deploying a new domain controller on Server Core
- Configuring Group Policy
- Deploying and using certificate services

### Module 3: Network Infrastructure services in Windows Server

- Deploying and managing DHCP
- Deploying and managing DNS services
- Deploying and managing IPAM

### Lab : Implementing and configuring network infrastructure services in Windows Server

- Deploying and configuring DHCP
- Deploying and configuring DNS

### Module 4: File Servers and Storage management in Windows Server

- Volumes and file systems in Windows Server
- Implementing sharing in Windows Server
- Implementing Storage Spaces in Windows Server
- Implementing Data Deduplication
- Implementing iSCSI
- Deploying Distributed File System

### Lab : Implementing storage solutions in Windows Server

- Implementing Data Deduplication
- Configuring iSCSI storage
- Configuring redundant storage spaces
- Implementing Storage Spaces Direct



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## Module 5: Hyper-V virtualization and containers in Windows Server

- Hyper-V in Windows Server
- Configuring VMs
- Securing virtualization in Windows Server
- Containers in Windows Server
- Overview of Kubernetes

### Lab : Implementing and configuring virtualization in Windows Server

- Creating and configuring VMs
- Installing and configuring containers

## Module 6: High Availability in Windows Server

- Planning for failover clustering implementation
- Creating and configuring failover cluster
- Overview of stretch clusters
- High availability and disaster recovery solutions with Hyper-V VMs

### Lab : Implementing failover clustering

- Configuring iSCSI storage
- Configuring a failover cluster
- Deploying and configuring a highly available file server
- Validating the deployment of the highly available file server

## Module 7: Disaster recovery in Windows Server

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

### Lab : Implementing Hyper-V Replica and Windows Server Backup

- Implementing Hyper-V Replica
- Implementing backup and restore with Windows Server Backup

## Module 8: Windows Server security

- Credentials and privileged access protection in Windows Server
- Hardening Windows Server
- Just Enough Administration in Windows Server
- Securing and analyzing SMB traffic
- Windows Server update management

### Lab : Configuring security in Windows Server

- Configuring Windows Defender Credential Guard
- Locating problematic accounts
- Implementing LAPS

## Module 9: Remote Desktop Services in Windows Server

- Remote Desktop Services Overview
- Configuring a session-based desktop deployment
- Overview of personal and pooled virtual desktops

### Lab : Implementing RDS in Windows Server

- Implementing RDS
- Configuring RemoteApp collection settings
- Configuring a virtual desktop template

## Module 10: Remote access and web services in Windows Server

- Overview of RAS in Windows Server
- Implementing VPNs
- Implementing NPS
- Implementing Always On VPN
- Implementing Web Server in Windows Server

### Lab : Deploying network workloads

- Implementing Web Application Proxy
- Implementing VPN in Windows Server
- Deploying and Configuring Web Server



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## **Module 11: Monitoring, performance, and troubleshooting**

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

### **Lab : Monitoring and troubleshooting Windows Server**

- Establishing a performance baseline
- Identifying the source of a performance problem
- Viewing and configuring centralized event logs
- Identifying the source of a performance problem
- Describe monitoring tools in Windows Server.
- Describe performance monitoring and use it in Windows Server.
- Describe event logging and perform event logging monitoring for troubleshooting purposes.

## **Module 12: Upgrade and migration in Windows Server**

- AD DS migration
- Storage Migration Service
- Windows Server migration tools

### **Lab : Migrating Server workloads**

- Selecting a process to migrate server workloads
- Planning how to migrate files by using Storage Migration Service