

M55371A : Windows Server Administration

Course Outline

Module 1: Windows Server Administration Overview

This module describes how to distinguish different Windows Server editions and techniques for deployment, servicing, and activation. It introduces Windows Server Core and compares it with the Desktop Experience version. It also covers tools for administering Windows Server, such as Windows Admin Center, PowerShell, and delegation of privileges.

Lessons:

- Introducing Windows Server
- Windows Server Core Overview
- Windows Server Administration Principles and Tools Overview

Lab: Deploying and Configuring Windows Server

- Deploying and Configuring Server Core
- Implementing and Using Remote Server Administration

Outcomes:

- Understand Windows Server editions and deployment techniques.
- Describe Windows Server Core and its administration.

Module 2: Identity Services in Windows Server

This module introduces identity services, including Active Directory Domain Services (AD DS) in a Windows Server environment. It covers deploying domain controllers, integrating Azure AD with AD DS, Group Policy basics, and Active Directory Certificate Services.

Lessons:

- AD DS Overview
- Deploying Windows Server Domain Controllers
- Azure AD Overview
- Implementing Group Policy
- Active Directory Certificate Services Overview

Lab: Implementing Identity Services and Group Policy

- Deploying New Domain Controller on Server Core
- Configuring Group Policy
- Deploying and Using Certificate Services

Outcomes:

- Describe AD DS and deploy domain controllers.
- Integrate Azure AD with AD DS.
- Configure Group Policy and certificate services.

Module 3: Network Infrastructure Services in Windows Server

This module covers implementing core network infrastructure services, including DNS, DHCP, IPAM, and Remote Access Services.

Lessons:

- Deploying and Managing DHCP
- Deploying and Managing DNS Service

- Deploying and Managing IPAM
- Remote Access Services in Windows Server

Lab: Configuring Network Infrastructure Services

- Deploying and Configuring DHCP
- Deploying and Configuring DNS
- Implementing Web Application Proxy

Outcomes:

- Configure and manage DHCP, DNS, and IPAM.
- Use Remote Access Services.

Module 4: File Servers and Storage Management in Windows Server

This module discusses file sharing, Storage Spaces technology, data deduplication, iSCSI-based storage, and deploying DFS.

Lessons:

- 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

- Configuring iSCSI Storage
- Configuring Redundant Storage Spaces
- Implementing Data Deduplication

Outcomes:

- Implement sharing and Storage Spaces.
- Deploy iSCSI-based storage and DFS.

Module 5: Hyper-V Virtualization and Containers in Windows Server

This module explains how to implement and configure Hyper-V VMs and containers, including security technologies and Kubernetes integration.

Lessons:

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

Lab: Configuring Virtualization in Windows Server

- Creating and Configuring VMs
- Installing and Configuring Containers

Outcomes:

- Configure Hyper-V, VMs, and containers.
- Use Kubernetes with Windows Server.

Module 6: High Availability in Windows Server

This module covers failover clustering, stretch clusters, and high availability for Hyper-V VMs.

Lessons:

- Planning for Failover Clustering
- Creating and Configuring Failover Clusters
- Overview of Stretch Clusters
- High Availability with Hyper-V VMs

Lab: Implementing Failover Clustering

- Configuring Storage and Creating a Cluster
- Deploying a Highly Available File Server

Outcomes:

- Configure failover clusters and stretch clusters.
- Ensure high availability for Hyper-V VMs.

Module 7: Disaster Recovery in Windows Server

This module covers disaster recovery technologies, including Hyper-V Replica, Azure Site Recovery, and Windows Server Backup.

Lessons:

- Hyper-V Replica
- Backup and Restore Infrastructure

Lab: Implementing Disaster Recovery

- Configuring Hyper-V Replica
- Using Windows Server Backup

Outcomes:

- Implement Hyper-V Replica and backup solutions.
- Use Azure Site Recovery.

Module 8: Windows Server Security

This module explains security features, including credential protection, Just Enough Administration (JEA), and securing SMB traffic.

Lessons:

- Credential Protection
- Hardening Windows Server Security
- Just Enough Administration (JEA)
- Securing and Analyzing SMB Traffic
- Windows Update Management

Lab: Configuring Security

- Configuring Credential Guard
- Locating Problematic Accounts
- Implementing LAPS

Outcomes:

- Protect credentials and harden security.
- Configure JEA and secure SMB traffic.

Module 9: Remote Desktop Services in Windows Server

This module introduces Remote Desktop Protocol (RDP) and Virtual Desktop Infrastructure (VDI) features, session-based desktops, and virtual desktops.

Lessons:

- Overview of RDS

- Configuring Session-Based Desktop Deployment
- Personal and Pooled Virtual Desktops Overview

Lab: Configuring Remote Desktop Services

- Implementing RDS
- Configuring Session Collection
- Setting Up Virtual Desktop Templates

Outcomes:

- Deploy session-based desktops.
- Use personal and pooled virtual desktops.

Module 10: Remote Access and Web Services in Windows Server

This module discusses implementing VPNs, Network Policy Server (NPS), and Microsoft IIS.

Lessons:

- Implementing VPNs
- Always On VPN
- Implementing NPS
- Configuring IIS

Lab: Deploying Network Workloads

- Configuring VPNs
- Deploying IIS

Outcomes:

- Configure VPNs and NPS.
- Deploy and manage IIS.

Module 11: Server and Performance Monitoring

This module highlights monitoring tools, performance baselines, and troubleshooting using event logs.

Lessons:

- Monitoring Tools Overview
- Using Performance Monitor
- Event Log Troubleshooting

Lab: Monitoring Windows Server

- Establishing Performance Baselines
- Identifying Performance Issues

Outcomes:

- Use monitoring tools effectively.
- Analyze and resolve performance issues.

Module 12: Upgrade and Migration in Windows Server

This module focuses on AD DS, Storage Migration Service, and Windows Server migration tools.

Lessons:

- AD DS Migration
- Storage Migration Service
- Windows Server Migration Tools

Lab: Migrating Server Workloads

- Implementing Storage Migration Service

Outcomes:

- Perform AD DS and Storage migrations.
- Use Windows Server migration tools effectively.

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