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Learning Style: Virtual Classroom

Technology: Microsoft

Difficulty: Beginner

Course Duration: 5 Days

Administer Windows Server



About This Course:

This course prepares IT professionals to deploy, manage, secure, and troubleshoot Windows Server across on-premises, Azure, and hybrid environments. Learners gain hands-on skills in Active Directory Domain Services, Hyper-V and Azure virtual machines, DNS and DHCP, storage and file services, and hybrid management with Azure Arc, Azure Update Manager, and Azure Monitor. Administer Windows Server is the official Microsoft course that teaches IT professionals how to deploy, manage,

secure, and troubleshoot Windows Server workloads across on-premises, hybrid, and cloud environments. This new course combines the core skills from the earlier courses into a single program, updated to reflect current Windows Server and Azure technologies.

Course Objectives:

- Deploy and manage AD DS domain controllers on-premises and in Azure, including RODCs, FSMO roles, trusts, sites, replication, and Group Policy
- Manage Windows Server remotely and at scale using Windows Admin Center, PowerShell remoting, JEA, Azure Arc, Azure Update Manager, and Automation runbooks
- Configure and manage Hyper-V and Azure virtual machines, including GPU partitioning, Hyper-V Replica, JIT access, and Azure Bastion
- Implement on-premises and hybrid name resolution and IP addressing with DNS, DNSSEC, and highly available DHCP
- Configure storage and file services, including Azure Files, Azure File Sync, DFS, SMB over QUIC, Storage Spaces Direct, Storage Replica, and BitLocker
- Harden Windows Server and AD DS using OSConfig security baselines, Windows LAPS, Credential Guard, Defender for Servers, and Microsoft Entra Password Protection
- Monitor and troubleshoot Windows Server environments using Performance Monitor, Azure Monitor, and VM Insights, and recover AD objects, databases, and SYSVOL

Audience:

- Windows Server administrators responsible for on-premises, hybrid, or Azure-hosted server workloads
- System and infrastructure administrators extending their environments into Azure
- IT professionals who previously prepared for AZ-800 or AZ-801 and need to move to the new single-exam path
- Candidates pursuing the Microsoft Certified: Windows Server Administrator Associate certification

Prerequisites:

- There are no formal prerequisites

Course Outline:

Module 1: Deploying and Managing AD DS Domain Controllers

- Deploying domain controllers on-premises and in Azure
- Deploying Read-Only Domain Controllers (RODCs) and managing RODC account security
- Managing and troubleshooting FSMO roles
- Configuring domain and forest trusts
- Configuring AD DS sites and replication

Module 2: Managing AD DS Security Principals and Group Policy

- Creating and managing users and groups, including in multi-domain and multi-forest environments
- Selecting and managing service accounts, including group-managed service accounts (gMSAs)
- Implementing Group Policy and Group Policy Preferences
- Using Group Policy Modeling and Results for planning and troubleshooting

Module 3: Managing Windows Server in a Hybrid Environment

- Deploying Windows Admin Center on-premises and in the Azure portal
- Configuring PowerShell remoting, the double-hop scenario, and Just Enough Administration (JEA)
- Configuring remote SSH and Remote Desktop access
- Onboarding servers with Azure Arc and applying machine configuration
- Deploying VM extensions to non-Azure machines
- Managing updates with Azure Update Manager and automating tasks with Azure Automation runbooks

Module 4: Managing Hyper-V and Azure Virtual Machines

- Configuring Enhanced Session Mode, nested virtualization, memory, and integration services
- Managing VMs with PowerShell Direct and SSH Direct
- Configuring device assignment and GPU partitioning
- Managing checkpoints, virtual hard disks, virtual switches, network adapters, and NIC teaming
- Implementing high availability and Hyper-V Replica
- Managing Azure VM storage, sizing, scale sets, availability sets and zones
- Securing Azure VM access with just-in-time (JIT) access and Azure Bastion

Module 5: Implementing On-Premises and Hybrid Networking

- Integrating DNS with AD DS and managing zones and records
- Configuring forwarders, conditional forwarders, and hybrid name resolution

- Implementing DNS policies and DNSSEC
- Deploying and configuring DHCP, scopes, and reservations
- Implementing DHCP high availability and troubleshooting IP addressing in hybrid environments

Module 6: Configuring File Services and Azure Files

- Configuring access to Windows Server file shares and File Server Resource Manager (FSRM)
- Implementing DFS Namespaces and DFS Replication
- Configuring SMB settings, SMB Multichannel, and SMB over QUIC
- Creating and managing Azure file shares and share permissions
- Deploying and monitoring Azure File Sync, including cloud tiering
- Migrating DFS and on-premises file shares to Azure Files

Module 7: Configuring Windows Server Storage

- Configuring disks, volumes, and file systems (NTFS and ReFS)
- Implementing Storage Spaces and Storage Spaces Direct
- Configuring Storage Replica, Data Deduplication, and Storage QoS
- Configuring SMB Direct (RDMA) and iSCSI
- Managing BitLocker Drive Encryption and recovering encrypted volumes

Module 8: Securing Windows Server Infrastructure

- Configuring exploit protection, Application Control, Credential Guard, and SmartScreen
- Applying security settings with Group Policy and OSConfig security baselines
- Implementing Windows LAPS
- Configuring Microsoft Defender for Servers and Windows Firewall connection security rules
- Hardening AD DS: password policies, Microsoft Entra Password Protection, Protected Users, and domain controller hardening
- Managing administrative group security, AD delegation, and authentication protocols

Module 9: Monitoring Windows Server Environments

- Monitoring with Performance Monitor and data collector sets
- Managing event logs and using System Insights
- Monitoring and alerting with Windows Admin Center
- Configuring Azure Monitor data collection rules and alerts
- Monitoring Azure VM performance with VM Insights

Module 10: Troubleshooting Windows Server and Active Directory

- Troubleshooting connectivity, name resolution, time service, Windows Update, and performance issues
- Troubleshooting VM, Azure Arc extension, disk encryption, and storage

issues

- Using boot diagnostics and Serial Console for Azure VM issues
- Restoring objects from the AD Recycle Bin and recovering the AD database with Directory Services Restore Mode
- Recovering SYSVOL and troubleshooting AD replication
- Troubleshooting Kerberos, authentication, and secure channel trust issues