

Microsoft Certified: Windows Server Hybrid Administrator Associate



Training Course of, Microsoft Certified: Windows Server Hybrid Administrator Associate

Elevate your career by developing and validating your expertise in managing Windows Server environments with the Microsoft Certified: Windows Server Hybrid Administrator Associate certification. This credential is designed for professionals skilled in configuring and administering Windows Server across on-premises, hybrid, and Infrastructure as a Service (IaaS) platform.

As a certified Windows Server Hybrid Administrator Associate, you will seamlessly integrate Windows Server environments with Azure services, ensuring efficient management of on-premises and hybrid networks. Your responsibilities will include implementing and managing solutions for identity, security, computer, networking, storage, monitoring, high availability, and disaster recovery.

You will leverage a robust set of administrative tools and technologies, including:

- Windows Admin Center
- PowerShell
- Azure Arc
- Azure Policy
- Azure Monitor
- Azure Automation Update Management
- Microsoft Defender for Identity
- Microsoft Defender for Cloud
- IaaS Virtual Machine (VM) administration

This certification demonstrates your ability to manage complex, hybrid IT environments, positioning you as a key contributor to organizational success in a cloud-integrated world.

This course is designed for Windows Server Hybrid Administrators with experience managing Windows Operating environments who seek to enhance their on-premises infrastructure by integrating on-premises and hybrid technologies. Participants will learn to implement and manage hybrid solutions, including identity, management, computer, networking, and storage, within a Windows Server hybrid environment.

Course curriculum:

AZ-800: Administering Windows Server Hybrid Core Infrastructure

- **Class 1 – Introduction & AD DS Fundamentals**

Topics:

- Course overview and exam objectives
- Introduction to Active Directory Domain Services (AD DS)
- AD DS logical and physical structure (domains, trees, forests, sites)
- Understanding domain controllers and replication

Lab/Demo:

- Install and configure first domain controller on Windows Server 2025
- Explore ADUC, ADAC, and PowerShell for AD management

- **Class 2 – Managing Domain Controllers and FSMO Roles**

Topics:

- Managing domain controllers (promotion/demotion)
- Understanding FSMO roles and their placement
- Backup and restore of AD DS
- AD database maintenance

Lab/Demo:

- Transfer and seize FSMO roles
- Perform AD DS backup and authoritative/non-authoritative restore

- **Class 3 – Implementing and Managing Group Policy**

Topics:

- Group Policy Objects (GPOs) overview
- GPO inheritance, precedence, and enforcement
- Administrative templates and preferences
- Troubleshooting Group Policy

Lab/Demo:

- Create, link, and filter GPOs
- Configure folder redirection and logon scripts
- Use Group Policy Modeling and Resultant Set of Policy (RSOP)

- **Class 4 – Advanced AD DS and Hybrid Identity**

Topics:

- Implementing AD DS fine-grained password policies
- Using AD Recycle Bin and AD snapshots
- Implement hybrid identity with Windows Server (Azure AD Connect)
- Understand authentication methods (Password Hash Sync, Pass-through, Federation)

Lab/Demo:

- Enable AD Recycle Bin and perform object recovery
- Configure and synchronize Azure AD Connect

- **Class 5 – Windows Server Administration Tools & Secure Administration**

Topics:

- Windows Admin Center overview and configuration
- Remote management using RSAT, PowerShell, and WMI
- Secure administration: Just Enough Administration (JEA)
- Least privilege and Privileged Access Workstations (PAWs)

Lab/Demo:

- Install and configure Windows Admin Center
- Create and test JEA endpoint

- **Class 6 – Hybrid Management with Azure**

Topics:

- Manage hybrid workloads with **Azure Arc**
- Manage Windows Server IaaS Virtual Machines remotely
- Optimize operations using **Azure Automanage**
- Post-installation configuration of Windows Server

Lab/Demo:

- Connect on-prem server to Azure Arc
- Apply policies and monitoring via Azure Arc
- Enable Automanage on a Windows Server VM

- **Class 7 – Managing Virtualization with Hyper-V**

Topics:

- Hyper-V architecture and requirements
- Create and configure virtual switches
- Manage Hyper-V virtual machines and checkpoints
- Secure Hyper-V workloads

Lab/Demo:

- Install and configure Hyper-V role
- Create VM, configure vSwitch, and manage checkpoints

- **Class 8 – Windows Server IaaS VMs & Containers**

Topics:

- Plan and deploy Windows Server IaaS VMs
- Customize and automate VM configuration
- Run Windows containers
- Orchestrate containers using Kubernetes on Windows Server

Lab/Demo:

- Deploy and manage Windows Server IaaS VM in Azure
- Create and run a Windows container using Docker

- **Class 9 – Implementing DNS and DHCP**

Topics:

- Configure and manage DNS zones and records
- DNS for Windows Server IaaS VMs
- Deploy and manage DHCP servers and scopes
- IP Address Management (IPAM) overview

Lab/Demo:

- Configure forward/reverse lookup zones
- Deploy DHCP server and set up DHCP failover

- **Class 10 – Remote Access and Hybrid Networking**

Topics:

- Implement VPN and DirectAccess
- Configure Routing and Remote Access (RRAS)
- Implement hybrid network infrastructure (Azure VPN Gateway)
- Implement Windows Server IaaS VM IP addressing and routing

Lab/Demo:

- Configure site-to-site VPN between on-premises and Azure
- Implement RRAS for NAT/VPN access

- **Class 11 – Storage Management and File Services**

Topics:

- Manage file servers and share permissions
- Implement Storage Spaces and Storage Spaces Direct (S2D)
- Implement Windows Server Data Deduplication
- Implement Windows Server iSCSI

Lab/Demo:

- Configure file shares and quotas
- Implement S2D on a 2-node cluster
- Configure iSCSI target and initiator

- **Class 12 – Hybrid Storage, Backup, and Review**

Topics:

- Implement Windows Server Storage Replica
- Implement hybrid file server infrastructure (Azure File Sync)
- Backup and recovery strategy in hybrid environments
- Review and mock exam discussion

Lab/Demo:

- Configure Storage Replica between two servers
- Deploy and sync file shares using Azure File Sync

- **Class 13 – Soft Skills**

- **Class 14 – Soft Skills**

- **Class 15 – Final Assessment**

Course curriculum:

AZ-801: Configuring Windows Server Hybrid Advanced Services

- **Class 1 – Course Overview & Securing Windows Server in Hybrid Environments**

Topics:

- Course outline and objectives
- Windows Server hybrid security overview
- Implement Windows Server IaaS VM network security
- Secure network ports, NSGs, and Azure Firewall integration
- Audit the security posture of IaaS VMs

Lab/Demo:

- Configure NSG and Azure Firewall rules for a Windows Server IaaS VM
- Run Microsoft Defender for Cloud security assessment

- **Class 2 – Hardening Windows Server & Securing Identities**

Topics:

- Secure Windows Server DNS
- Secure Windows Server user accounts
- Hardening Windows Server (baseline policies, LAPS, account protection)
- Implement Windows Server update management

Lab/Demo:

- Configure DNSSEC and DNS logging
- Apply security baselines using Group Policy and Microsoft Security Compliance Toolkit

- **Class 3 – Advanced Security Configuration**

Topics:

- Manage Azure updates for Windows Servers
- Create and implement application allowlists (adaptive application control)
- Configure BitLocker disk encryption for Windows IaaS VMs
- Implement change tracking and file integrity monitoring

Lab/Demo:

- Enable Azure Update Management for IaaS VM
- Implement BitLocker and verify encryption
- Configure change tracking and file integrity monitoring in Azure Automation

- **Class 4 – Introduction to Windows Server High Availability**

Topics:

- High availability concepts and clustering overview
- Introduction to Cluster Shared Volumes (CSV)
- Implement Windows Server failover clustering

Lab/Demo:

- Install and configure failover clustering
- Add nodes and create a CSV for VM storage

- **Class 5 – High Availability for VMs and File Servers**

Topics:

- Implement high availability for Windows Server VMs
- Implement File Server high availability
- Implement scale-out and HA for Windows Server VMs

Lab/Demo:

- Create and test a highly available file server cluster

- Configure clustered virtual machines using Hyper-V

- **Class 6 – Implementing Disaster Recovery Fundamentals**

Topics:

- Introduction to disaster recovery principles
- Implement Hyper-V Replica
- Implement hybrid backup and recovery with Windows Server IaaS

Lab/Demo:

- Configure Hyper-V Replica between two servers
- Test failover and failback scenarios

- **Class 7 – Disaster Recovery with Azure Site Recovery**

Topics:

- Protect on-premises infrastructure using **Azure Site Recovery (ASR)**
- Protect Azure infrastructure using ASR
- Configure replication policies and failover plans

Lab/Demo:

- Set up ASR for an on-premises VM
- Test failover to Azure and validate recovery point

- **Class 8 – Backup and Recovery with Azure Backup**

Topics:

- Protect virtual machines with Azure Backup
- Recovery Services vault configuration
- On-premises backup integration
- Backup retention and restore operations

Lab/Demo:

- Configure Azure Backup for Windows Server VM
- Perform file-level restore from Recovery Services vault

- **Class 9 – Server and Workload Migration (Part 1)**

Topics:

- Migration strategies and tools overview
- Migrate on-premises Windows Server instances to Azure IaaS
- Upgrade and migrate existing IaaS VMs

Lab/Demo:

- Use Azure Migrate to discover and migrate on-prem servers to Azure
- Upgrade Windows Server 2016 VM to 2025

- **Class 10 – Server and Workload Migration (Part 2)**

Topics:

- Active Directory Domain Services (AD DS) migration
- File Server migration using Storage Migration Service (SMS)
- Migrate other Windows Server roles

Lab/Demo:

- Perform AD DS domain/forest migration to new hardware
- Use Storage Migration Service to migrate shares and permissions

- **Class 11 – Monitoring and Troubleshooting Windows Server**

Topics:

- Monitor Windows Server IaaS VMs and hybrid instances
- Monitor Azure virtual machines using Azure Monitor and Log Analytics
- Configure performance monitoring and alerts

Lab/Demo:

- Connect Windows Server to Log Analytics workspace
- Configure performance counters and view metrics in Azure Monitor

- **Class 12 – Advanced Troubleshooting and Course Review**

Topics:

- Manage and monitor event logs
- Implement auditing and diagnostics
- Troubleshoot hybrid networking issues
- Troubleshoot VMs in Azure
- Troubleshoot Active Directory
- Course wrap-up and review

Lab/Demo:

- Perform AD and networking troubleshooting scenarios
- Review common Azure hybrid connectivity issues
- Practice with AZ-801 sample exam questions

- **Class 13 – Soft Skills**

- **Class 14 – Soft Skills**

- **Class 15 – Final Assessment**

Other Six Classes are reserved for Practice, Quiz, Final Assessment and Soft-Skills.