

Configuring Windows Server Hybrid Advanced Services (AZ-801) Training

Microsoft Authorized Training · Applied Technology Academy

This course teaches IT Professionals to configure advanced Windows Server services using on-premises, hybrid, and cloud technologies. The course teaches IT Professionals how to leverage the hybrid capabilities of Azure, how to migrate virtual and physical server workloads to Azure IaaS, and how to secure Azure VMs running Windows Server. The course also teaches IT Professionals how to perform tasks related to high availability, troubleshooting, and disaster recovery. The course highlights administrative tools and technologies including Windows Admin Center, PowerShell, Azure Arc, Azure Automation Update Management, Microsoft Defender for Identity, Azure Security Center, Azure Migrate, and Azure Monitor.

LEVEL	DURATION	AVERAGE SALARY	LABS	EXPERIENCE
Intermediate	4 Days	\$86,971	Yes	2 years: Windows Server

Course Overview

In this course, you will learn how to:

- Harden the security configuration of the Windows Server operating system environment.
- Enhance hybrid security using Azure Security Center, Azure Sentinel, and Windows Update Management.
- Apply security features to protect critical resources.
- Implement high availability and disaster recovery solutions.
- Implement recovery services in hybrid scenarios.
- Plan and implement hybrid and cloud-only migration, backup, and recovery scenarios.
- Perform upgrades and migration related to AD DS, and storage.
- Manage and monitor hybrid scenarios using WAC, Azure Arc, Azure Automation, and Azure Monitor.
- Implement service monitoring and performance monitoring and apply troubleshooting.
- Continue learning and face new challenges with after-course one-on-one instructor coaching.

Course Outline

- 1 - Secure Windows Server user accounts
- Configure user account rights
- Protect user accounts with the Protected Users group
- Describe Windows Defender Credential Guard
- Block NTLM authentication

- Locate problematic accounts
- 2 - Windows Server update management
- Explore Windows Update
- Outline Windows Server Update Services server deployment options
- Define Windows Server Update Services update management process
- Describe the process of Update Management
- 3 - Secure Windows Server DNS
- Implement split-horizon DNS
- Create DNS policies
- Implement DNS policies
- Secure Windows Server DNS
- Implement DNSSEC
- 4 - Implement Windows Server IaaS VM network security
- Implement network security groups and Windows IaaS VMs
- Implement adaptive network hardening
- Implement Azure Firewall and Windows IaaS VMs
- Implement Windows firewall with Windows Server IaaS VMs
- Choose the appropriate filtering solution
- Deploy and configure Azure firewall using the Azure portal
- Capture network traffic with network watcher
- Log network traffic to and from a VM using the Azure portal
- 5 - Audit the security of Windows Server IaaS Virtual Machines
- Describe Azure Security Center
- Enable Azure Security Center in hybrid environments
- Implement and assess security policies
- Protect your resources with Azure Security Center
- Implement Azure Sentinel
- 6 - Manage Azure updates
- Describe update management
- Enable update management
- Deploy updates
- View update assessments
- Manage updates for your Azure Virtual Machines
- 7 - Create and implement application allowlists with adaptive application control
- Describe adaptive application control
- Implement adaptive application control policies

- 8 - Configure BitLocker disk encryption for Windows IaaS Virtual Machines
- Describe Azure Disk Encryption and server-side encryption
- Configure Key Vault for Azure Disk Encryption
- Encrypt Azure IaaS Virtual Machine hard disks
- Back up and recover data from encrypted disks
- Create and encrypt a Windows Virtual Machine
- 9 - Implement change tracking and file integrity monitoring for Windows IaaS VMs
- Implement Change Tracking and Inventory
- Manage Change Tracking and Inventory
- Manage tracked files
- Implement File Integrity Monitoring
- Select and monitor entities
- Use File Integrity Monitoring
- 10 - Introduction to Cluster Shared Volumes
- Determine the functionality of Cluster Shared Volumes
- Explore the architecture and components of Cluster Shared Volumes
- Implement Cluster Shared Volumes
- 11 - Implement Windows Server failover clustering
- Define Windows Server failover clustering
- Plan Windows Server failover clustering
- Implement Windows Server failover clustering
- Manage Windows Server failover clustering
- Implement stretch clusters
- Define cluster sets
- 12 - Implement high availability of Windows Server VMs
- Select high-availability options for Hyper-V
- Consider network load balancing for Hyper-V VMs
- Implement Hyper-V VM live migration
- Implement Hyper-V VMs storage migration
- 13 - Implement Windows Server File Server high availability
- Explore the Windows Server File Server high-availability options
- Define Cluster Shared Volumes
- Implement Scale-Out File Server
- Implement Storage Replica
- 14 - Implement scale and high availability with Windows Server VM
- Describe virtual machine scale sets

- Implement scaling
- Implement load-balancing VMs
- Create a virtual machine scale set in the Azure portal
- Describe Azure Site Recovery
- Implement Azure Site Recovery
- 15 - Implement Hyper-V Replica
- Define Hyper-V Replica
- Plan for Hyper-V Replica
- Configure and implement Hyper-V Replica
- Define extended replication
- Define Azure Site Recovery
- Implement Site Recovery from on-premises site to Azure
- Implement Site Recovery from on-premises site to on-premises site
- 16 - Protect your on-premises infrastructure from disasters with Azure Site Recovery
- Azure Site Recovery overview
- Workloads supported for protection with Azure Site Recovery
- Run a disaster recovery drill
- Failover and failback
- 17 - Implement hybrid backup and recovery with Windows Server IaaS
- Describe Azure Backup
- Implement recovery vaults
- Implement Azure Backup policies
- Recover Windows IaaS Virtual Machines
- Perform file and folder recovery
- Perform backup and restore of on-premises workloads
- Manage Azure Virtual Machine backups with Azure Backup service
- 18 - Protect your Azure infrastructure with Azure Site Recovery
- What is Azure Site Recovery
- Prepare for disaster recovery with Azure Site Recovery
- Run a disaster recovery drill
- Failover and failback using Azure Site Recovery
- 19 - Protect your virtual machines by using Azure Backup
- Azure Backup features and scenarios
- Back up an Azure virtual machine by using Azure Backup
- Restore virtual machine data
- 20 - Active Directory Domain Services migration

- Examine upgrade vs. migration
- Upgrade a previous version of Active Directory Domain Services to Windows Server 2022
- Migrate to Active Directory Domain Services in Windows Server 2022 from a previous version
- Explore the Active Directory Migration Tool
- 21 - Migrate file server workloads using Storage Migration Service
- Storage Migration Service overview and usage scenarios
- Storage migration requirements
- Migrate a server with Storage migration
- Evaluate storage migration considerations
- 22 - Migrate Windows Server roles
- Describe the Windows Server Migration Tools
- Install the Migration Tools
- Migrate roles using the Migration Tools
- 23 - Migrate on-premises Windows Server instances to Azure IaaS virtual machines
- Plan your migration
- Describe Azure Migrate
- Perform server assessment
- Assess physical servers with Azure Migrate
- Migrate Windows Server workloads by using Azure Migrate
- 24 - Upgrade and migrate Windows Server IaaS virtual machines
- Describe Azure Migrate
- Migrate Windows Server workloads by using Azure Migrate
- Describe storage migration
- Migrate file servers by using Storage Migration Service
- 25 - Containerize and migrate ASP.NET applications to Azure App Service
- Azure Migrate App Containerization overview
- 26 - Monitor Windows Server performance
- Use Performance Monitor to identify performance problems
- Use Resource Monitor to review current resource usage
- Review reliability with Reliability Monitor
- Implement a performance monitoring methodology
- Use Data Collector Sets to analyze server performance
- Monitor network infrastructure services
- Monitor virtual machines running Windows Server
- Monitor performance with Windows Admin Center
- Use System Insights to help predict future capacity issues

- Optimize the performance of Windows Server
- 27 - Manage and monitor Windows Server event logs
- Describe Windows Server event logs
- Use Windows Admin Center to review logs
- Use Server Manager to review logs
- Use custom views
- Implement event log subscriptions
- 28 - Implement Windows Server auditing and diagnostics
- Describe basic auditing categories
- Describe advanced categories
- Log user access
- Enable setup and boot event collection
- 29 - Troubleshoot Active Directory
- Recover objects from the AD recycle bin
- Recover the AD DS database
- Recover SYSVOL
- Troubleshoot AD DS replication
- Troubleshoot hybrid authentication issues
- 30 - Monitor Windows Server IaaS Virtual Machines and hybrid instances
- Enable Azure Monitor for Virtual Machines
- Monitor an Azure Virtual Machine with Azure Monitor
- Enable Azure Monitor in hybrid scenarios
- Collect data from a Windows computer in a hybrid environment
- Integrate Azure Monitor with Microsoft Operations Manager
- 31 - Monitor the health of your Azure virtual machine by using Azure Metrics Explorer and metric alerts
- Monitor the health of the virtual machine
- View VM metrics
- Configure the Azure Diagnostics extension
- Diagnostic data case studies
- 32 - Monitor performance of virtual machines by using Azure Monitor VM Insights
- What are Azure Monitor Logs and Azure Monitor VM Insights?
- Build log queries by using the Kusto Query Language
- 33 - Troubleshoot on-premises and hybrid networking
- Diagnose DHCP problems
- Diagnose DNS problems

- Diagnose IP configuration issues
- Diagnose routing problems
- Use Packet Monitor to help diagnose network problems
- Use Azure Network Watcher to help diagnose network problems
- 34 - Troubleshoot Windows Server Virtual Machines in Azure
- Troubleshoot VM deployment
- Troubleshoot VM startup
- Troubleshoot VM extensions
- Troubleshoot VM connectivity
- Troubleshoot VM performance
- Troubleshoot VM storage

Intended Audience

This four-day course is intended for Windows Server Hybrid Administrators who have experience working with Windows Server and want to extend the capabilities of their on-premises environments by combining on-premises and hybrid technologies. Windows Server Hybrid Administrators who already implement and manage on-premises core technologies want to secure and protect their environments, migrate virtual and physical workloads to Azure IaaS, enable a highly available, fully redundant environment, and perform monitoring and troubleshooting.

Prerequisites

An understanding of the following concepts as related to Windows Server technologies:

- High availability and disaster recovery
- Automation
- Monitoring
- Troubleshooting

Follow-On Courses

- Data Engineering on Microsoft Azure (DP203)
- Microsoft Azure Security Technologies (AZ-500)
- Microsoft Azure Data Fundamentals (DP-900)
- Developing Solutions for Microsoft Azure (AZ-204)
- Designing Microsoft Azure Infrastructure Solutions (AZ-305)

Ready to enroll? Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.