Enterprise Computing Solutions - Education Services

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AZ-802T00: Administer Windows Server

CODE:	LENGTH:	PRICE:
MCS_AZ-802T00	40 Hours (5 dage)	kr 28,500.00

Description

This course teaches IT professionals how to deploy, manage, secure, and troubleshoot Windows Server workloads across on-premises, hybrid, and cloud environments. The course covers Active Directory Domain Services, Hyper-V and Azure virtual machines, on-premises and hybrid networking, storage and file services, Windows Server security hardening, and monitoring and troubleshooting. It highlights administrative tools and technologies including Windows Admin Center, PowerShell, Azure Arc, Azure Monitor, Azure Update Manager, and Microsoft Defender for Cloud.

Audience

This course is intended for Windows Server administrators who deploy, implement, manage, and troubleshoot Windows Server as a workload in on-premises, cloud, or hybrid environments. Candidates administer identity, security, compute, networking, storage, and monitoring for Windows Server, and they typically collaborate with architects, administrators, and engineers. Candidates should have experience administering Windows Server using technologies such as Windows Admin Center, Hyper-V, PowerShell, Azure Arc, Azure Monitor, Azure Update Manager, and Microsoft Defender for Cloud, and should be familiar with Active Directory Domain Services (AD DS).

Prerequisites

- Experience administering Windows Server operating systems
- Familiarity with Azure Arc and Azure portal basics
- Basic knowledge of PowerShell
- Familiarity with Active Directory Domain Services (AD DS) concepts and technologies
- Familiarity with Hyper-V and Azure virtual machines
- Familiarity with core networking technologies including DNS and DHCP
- Familiarity with storage concepts and file server management

Programme

Deploy and manage Active Directory Domain Services domain controllers

- Introduction
- Define Active Directory Domain Services
- Define Active Directory Domain Services forests and domains
- Deploy Active Directory Domain Services domain controllers
- Migrate a domain controller to a new site
- Manage Active Directory Domain Services operations masters
- Module assessment
- Summary

Deploy and manage Azure IaaS Active Directory domain controllers in Azure

- Introduction
- Select an option to implement directory and identity services using Active Directory Domain Services in Azure
- Deploy and configure Active Directory Domain Services domain controllers in Azure VMs
- Install a replica Active Directory domain controller in an Azure VM
- Install a new Active Directory forest on an Azure VNet
- Module assessment
- Summary

Manage AD DS domain controllers and FSMO roles

- Introduction
- Deploy AD DS domain controllers
- Maintain AD DS domain controllers
- Manage the AD DS Global Catalog role
- Manage AD DS operations masters
- Manage AD DS schema
- Module assessment
- Summary

Create and manage Active Directory objects

- Introduction
- Define users, groups, and computers
- Define organizational units
- Manage objects and their properties in Active Directory
- Create objects in Active Directory
- Configure objects in Active Directory
- Perform bulk management tasks for user accounts
- Maintain Active Directory Domain Services domain controllers
- Module assessment
- Summary

Implement hybrid identity with Windows Server

- Introduction
- Select a Microsoft Entra integration model
- Plan for Microsoft Entra integration
- Prepare on-premises Active Directory for directory synchronization
- Install and configure directory synchronization with Microsoft Entra Connect
- Implement Seamless Single Sign-On
- Enable Microsoft Entra login in for Windows VM in Azure
- Knowledge check 1
- Describe Microsoft Entra Domain Services
- Implement and configure Microsoft Entra Domain Services
- Manage Windows Server in a Microsoft Entra Domain Services environment
- Create and configure a Microsoft Entra Domain Services instance
- Join a Windows Server VM to a managed domain
- Module assessment
- Summary

Create and configure Group Policy Objects in Active Directory

- Introduction
- Define Group Policy Objects
- Implement Group Policy Object scope and inheritance
- Define domain-based Group Policy Objects
- Create and configure a domain-based Group Policy Object
- Configure a domain password policy
- Configure and apply a fine-grained password policy
- Module assessment
- Summary

Implement Group Policy Objects

- Introduction
- Define GPOs
- Implement GPO scope and inheritance
- Define domain-based GPOs
- Create and configure a domain-based GPO
- Define GPO storage
- Define administrative templates
- Module assessment
- Summary

Manage advanced features of AD DS

- Introduction
- Create trust relationships

- Implement ESAE forests
- Monitor and troubleshoot AD DS
- Create custom AD DS partitions
- Module assessment
- Summary

Administer and manage Windows Server IaaS Virtual Machine remotely

- Introduction
- Select the appropriate remote administration tool
- Manage Windows Virtual Machines with Azure Bastion
- Create an Azure Bastion host
- Configure just-in-time administration
- Module assessment
- Summary

Describe Windows Server administration tools

- Introduction
- Explore Windows Admin Center
- Use Server Manager
- List Remote Server Administration Tools
- Use Windows PowerShell
- Use Windows PowerShell to remotely administer a server
- Module assessment
- Summary

Just Enough Administration in Windows Server

- Introduction
- Explain the concept of Just Enough Administration (JEA)
- Define role capabilities for a JEA endpoint
- Create a session configuration file to register a JEA endpoint
- Describe how JEA endpoints work to limit access to a PowerShell session
- Create and connect to a JEA endpoint
- Demonstration: Connect to a JEA endpoint
- Module assessment
- Summary resources

Perform Windows Server secure administration

- Introduction
- Define least privilege administration
- Implement delegated privileges
- Use privileged access workstations
- Use jump servers
- Module assessment
- Summary

Use advanced Windows PowerShell remoting techniques

- Introduction
- Review common remoting techniques of Windows PowerShell
- Send parameters to remote computers in Windows PowerShell
- Set access protection to variables, aliases, and functions by using the scope modifier
- Enable multi-hop remoting in Windows PowerShell
- Module assessment
- Summary

Manage single and multiple computers by using Windows PowerShell remoting

- Introduction
- Review the remoting feature of Windows PowerShell
- Compare remoting with remote connectivity
- Review the remoting security feature of Windows PowerShell
- Enable remoting by using Windows PowerShell
- Use one-to-one remoting by using Windows PowerShell
- Use one-to-many remoting by using Windows PowerShell
- Compare remoting output with local output
- Module assessment

- Summary

Manage hybrid workloads with Azure Arc

- Introduction
- Describe Azure Arc
- Onboard Windows Server instances
- Connect hybrid machines to Azure from the Azure portal
- Use Azure Arc to manage Windows Server instances
- Restrict access with RBAC
- Module assessment
- Summary

Manage Azure updates

- Introduction
- Describe Azure Update Manager
- Prepare machines for Azure Update Manager
- Deploy updates
- Assess updates
- Manage updates at scale
- Module assessment
- Summary

Automate the configuration of Windows Server IaaS Virtual Machines

- Introduction
- Describe Azure Automation
- Implement Azure Automation with DSC
- Remediate noncompliant servers
- Describe Custom Script Extensions
- Configure a Virtual Machine by using DSC
- Module assessment
- Summary

Enforce VM security configuration with Azure Machine Configuration

- Introduction
- Explore Azure Machine Configuration extension capabilities and modes
- Apply built-in security baseline policies
- Author and assign custom machine configurations
- Knowledge check
- Summary

Explore Azure Automation with DevOps

- Introduction
- Create automation accounts
- What is a runbook?
- Understand automation shared resources
- Explore runbook gallery
- Examine webhooks
- Explore source control integration
- Explore PowerShell workflows
- Create a workflow
- Explore hybrid management
- Examine checkpoint and parallel processing
- Module assessment
- Summary

Configure and manage Hyper-V virtual machines

- Introduction
- List the virtual machine configuration versions
- List the virtual machine generation versions
- List available VHD formats and types
- Create and configure VMs
- Determine storage options for VMs
- Define shared VHDs and VHD Sets
- Implement guest clusters using shared VHDX

- Module assessment
- Summary

Configure and manage Hyper-V

- Introduction
- Define Hyper-V
- Define Hyper-V Manager
- Configure Hyper-V hosts using best practices
- Configure Hyper-V networking
- Assess advanced Hyper-V networking features
- Define nested virtualization
- Module assessment
- Summary

Secure Hyper-V workloads

- Introduction
- Define guarded fabric
- Define the Host Guardian Service
- Explore TPM-trusted attestation
- Define KPS
- Determine key features of shielded VMs
- Compare encryption-supported and shielded VMs in a guarded fabric
- Implement a shielded VM
- Module assessment
- Summary

Implement high availability of Windows Server VMs

- Introduction
- 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
- Module assessment
- Summary

Run containers on Windows Server

- Introduction
- Define containers
- List the differences between containers and VMs
- Define Windows Server and Hyper-V containers and isolation modes
- Explore Docker
- Prepare a Windows Server 2019 host for container deployment
- Security, Storage, and Networking with Windows containers
- Module assessment
- Summary

Plan and deploy Windows Server IaaS Virtual Machines

- Introduction
- Describe Azure compute
- Describe Virtual Machine storage
- Deploy Azure Virtual Machines
- Create a windows Virtual Machine using the portal
- Create a windows Virtual Machine using Azure CLI
- Deploy Azure Virtual Machines using templates
- Describe additional management optimization options
- Module assessment
- Summary

Implement scale and high availability with Windows Server VM

- Introduction
- 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
- Module assessment
- Summary

Implement Windows Server IaaS VM IP addressing and routing

- Introduction
- Implement a virtual network
- Implement IaaS VM IP addressing
- Assign and manage IP addresses
- Configure a private IP address for a virtual machine using the Azure portal
- Create a virtual machine with a static public IP address using the Azure portal
- Implement IaaS virtual machine IP routing
- Implement IPv6 for Windows Server IaaS virtual machines
- Module assessment
- Summary

Implement Windows Server IaaS VM network security

- Introduction
- Implement network security groups and Windows IaaS VMs
- 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
- Module assessment
- Summary

Administer and manage Windows Server IaaS Virtual Machine remotely

- Introduction
- Select the appropriate remote administration tool
- Manage Windows Virtual Machines with Azure Bastion
- Create an Azure Bastion host
- Configure just-in-time administration
- Module assessment
- Summary

Implement Windows Server DNS

- Introduction
- Explore the DNS architecture
- Work with DNS zones and records
- Install and configure the DNS role
- Implement DNS forwarding
- Module assessment
- Summary

Implement DNS for Windows Server IaaS VMs

- Introduction
- Understand Azure DNS
- Implement Azure DNS
- Create an Azure DNS zone and record using the Azure portal
- Implement DNS with Azure IaaS virtual machines
- Implement split-horizon DNS in Azure
- Troubleshoot DNS
- Module assessment
- Summary

Secure Windows Server DNS

- Introduction
- Implement split-horizon DNS
- Create DNS policies
- Implement DNS policies
- Secure Windows Server DNS

- Implement DNSSEC
- Module assessment
- Summary

Deploy and manage DHCP

- Introduction
- Use DHCP to simplify IP configuration
- Install and configure the DHCP role
- Configure DHCP options
- Configure DHCP scopes
- Select DHCP high availability options
- Implement DHCP Failover
- Module assessment
- Summary

Implement IP Address Management

- Introduction
- Define IP Address Management
- Deploy IP Address Management
- Administer IP Address Management
- Configure IP Address Management options
- Manage DNS zones with IP Address Management
- Manage DHCP servers with IP Address Management
- Use IP Address Management to manage IP addressing
- Module assessment
- Summary

Implement Windows Server IaaS VM IP addressing and routing

- Introduction
- Implement a virtual network
- Implement IaaS VM IP addressing
- Assign and manage IP addresses
- Configure a private IP address for a virtual machine using the Azure portal
- Create a virtual machine with a static public IP address using the Azure portal
- Implement IaaS virtual machine IP routing
- Implement IPv6 for Windows Server IaaS virtual machines
- Module assessment
- Summary

Implement a hybrid file server infrastructure

- Introduction
- Describe Azure File services
- Configure Azure Files
- Configure connectivity to Azure Files
- Describe Azure File Sync
- Implement Azure File Sync
- Deploy Azure File Sync
- Deploy Azure File Sync 2
- Manage cloud tiering
- Migrate from DFSR to Azure File Sync
- Module assessment
- Summary

Manage Windows Server file servers

- Introduction
- Define the Windows Server file system
- List the benefits and uses of File Server Resource Manager
- Define SMB and its security considerations
- Configure SMB protocol
- Define Volume Shadow Copy Service
- Module assessment
- Summary

Implement Storage Spaces and Storage Spaces Direct

- Introduction
- Define the Storage Spaces architecture and its components
- List the functionalities, benefits, and use cases of Storage Spaces
- Implement Storage Spaces
- List the functionalities, components, benefits, and use cases of Storage Spaces Direct
- Implement Storage Spaces Direct
- Module assessment
- Summary

Implement Windows Server Data Deduplication

- Introduction
- Define the architecture, components, and functionality of Data Deduplication
- Define the use cases and interoperability of Data Deduplication
- Implement Data Deduplication
- Manage and maintain Data Deduplication
- Module assessment
- Summary

Implement Windows Server iSCSI

- Introduction
- List the functionalities, components, and use cases of iSCSI
- List the considerations for implementing iSCSI
- Implement iSCSI
- Configure high availability for iSCSI
- Module assessment
- Summary

Implement Windows Server Storage Replica

- Introduction
- List the functionalities and components of Storage Replica
- Examine the prerequisites for implementing Storage Replica
- Implement Storage Replica by using Windows Admin Center
- Implement Storage Replica by using Windows PowerShell
- Module assessment
- Summary

Session Dates

På anmodning. Kontakt os venligst

Yderligere Information

Denne træning er også tilgængelig som træning på stedet. Kontakt os for at finde ud af mere.