## AZ-800: Administering Windows Server Hybrid Core Infrastructure

**Deploy and manage Active Directory Domain Services (AD DS) in on premises and cloud environments**

### Deploy and manage AD DS domain controllers
- deploy and manage domain controllers on-premises
- deploy and manage domain controllers in Azure
- deploy Read-Only Domain Controllers (RODCs)
- troubleshoot flexible single master operations (FSMO) roles

### Configure and manage multi-site, multi-domain, and multi-forest environments
- configure and manage forest and domain trusts
- configure and manage AD DS sites
- configure and manage AD DS replication

### Create and manage AD DS security principals
- create and manage AD DS users and groups
- manage users and groups in multi-domain and multi-forest scenarios
- implement group managed service accounts (gMSAs)
- join Windows Servers to AD DS, Azure AD DS, and Azure AD

### Implement and manage hybrid identities
- implement Azure AD Connect
- manage Azure AD Connect Synchronization
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- implement Azure AD Connect cloud sync
- integrate Azure AD, AD DS, and Azure AD DS
- manage Azure AD DS
- manage Azure AD Connect Health
- manage authentication in on-premises and hybrid environments
- configure and manage AD DS passwords

### Manage Windows Server by using domain-based Group Policies
- implement Group Policy in AD DS
- implement Group Policy Preferences in AD DS
- implement Group Policy in Azure AD DS

**Manage Windows Servers and workloads in a hybrid environment**

### Manage Windows Servers in a hybrid environment
- deploy a Windows Admin Center gateway server

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- configure a target machine for Windows Admin Center
- configure PowerShell Remoting
- configure CredSSP or Kerberos delegation for second hop remoting
- configure JEA for PowerShell Remoting

**Manage Windows Servers and workloads by using Azure services**

- manage Windows Servers by using Azure Arc
- assign Azure Policy Guest Configuration
- deploy Azure services using Azure Virtual Machine extensions on non-Azure machines
- manage updates for Windows machines
- integrate Windows Servers with Log Analytics
- integrate Windows Servers with Azure Security Center
- manage IaaS virtual machines (VMs) in Azure that run Windows Server
- implement Azure Automation for hybrid workloads
- create runbooks to automate tasks on target VMs
- implement DSC to prevent configuration drift in IaaS machines

**Manage virtual machines and containers**

**Manage Hyper-V and guest virtual machines**

- enable VM enhanced session mode
- manage VM using PowerShell Remoting, PowerShell Direct, and HVC.exe
- configure nested virtualization
- configure VM memory
- configure Integration Services
- configure Discrete Device Assignment
- configure VM Resource Groups
- configure VM CPU Groups
- configure hypervisor scheduling types
- manage VM Checkpoints
- implement high availability for virtual machines
- manage VHD and VHDX files
- configure Hyper-V network adapter
- configure NIC teaming
- configure Hyper-V switch

**Create and manage containers**

- create Windows Server container images
- manage Windows Server container images
- configure Container networking
- manage container instances

**Manage Azure Virtual Machines that run Windows Server**

- manage data disks
- resize Azure Virtual Machines
- configure continuous delivery for Azure Virtual Machines
- configure connections to VMs
- manage Azure Virtual Machines network configuration

**Implement and manage an on-premises and hybrid networking Infrastructure**

**Implement on-premises and hybrid name resolution**

- integrate DNS with AD DS
- create and manage zones and records
- configure DNS forwarding/conditional forwarding
- integrate Windows Server DNS with Azure DNS private zones
- implement DNSSEC

**Manage IP addressing in on-premises and hybrid scenarios**

- implement and manage IPAM
- implement and configure the DHCP server role (on-premises only)
- resolve IP address issues in hybrid environments
- create and manage scopes
- create and manage IP reservations
- implement DHCP high availability

**Implement on-premises and hybrid network connectivity**

- implement and manage the Remote Access role
- implement and manage Azure Network Adapter
- implement and manage Azure Extended Network
- implement and manage Network Policy Server role
- implement Web Application Proxy
- implement Azure Relay
- implement site-to-site virtual private network (VPN)
- implement Azure Virtual WAN
- implement Azure AD Application Proxy

**Manage storage and file services**

**Configure and manage Azure File Sync**

- create Azure File Sync service
- create sync groups

- create cloud endpoints
- register servers
- create server endpoints
- configure cloud tiering
- monitor File Sync
- migrate DFS to Azure File Sync

**Configure and manage Windows Server file shares**

- configure Windows Server file share access
- configure file screens
- configure File Server Resource Manager (FSRM) quotas
- configure BranchCache
- implement and configure Distributed File System (DFS)

**Configure Windows Server storage**

- configure disks and volumes
- configure and manage Storage Spaces
- configure and manage Storage Replica
- configure Data Deduplication
- configure SMB direct
- configure Storage Quality of Service (QoS)
- configure file systems