PURPLE GRIFFON
The IT Service Management Training & Consultancy Specialists

Course Title: Administering Windows Server Hybrid Core Infrastructure	**Course Duration**: 4.0 Days
Exam: Not Included	**Exam Type**: No Exam
Qualification: Administering Windows Server Hybrid Core Infrastructure Certificate	

Course Syllabus

Our Administering Windows Server Hybrid Core Infrastructure training course covers the following Modules:

Module 1: Identity services in Windows Server

- Describe AD DS in a Windows Server environment.
- Describe Azure AD and the benefits of integrating Azure AD with AD DS.
- Deploy domain controllers in AD DS.
- Explain Group Policy basics and configure GPOs in a domain environment.
- Manage AD DS domain controllers and FSMO roles
- Implement Group Policy Objects
- Manage advanced features of AD DS

Lab: Implementing identity services and Group Policy

- Deploying a new domain controller on Server Core
- Configuring Group Policy

Module 2: Implementing identity in hybrid scenarios

- Implement hybrid identity with Windows Server
- Integrate on-premises Active Directory Domain Services (AD DS) environment into Azure.
- Install and configure directory synchronization using Azure AD Connect.
- Implement and configure Azure AD DS.
- Implement Seamless Single Sign-on (SSO).
- Implement and configure Azure AD DS.
- Install a new AD DS forest on an Azure VNet.
- Deploy and manage Azure IaaS Active Directory domain controllers in Azure

Lab: Implementing integration between AD DS and Azure AD

- Preparing Azure AD for AD DS integration
- Preparing on-premises AD DS for Azure AD integration
- Downloading, installing, and configuring Azure AD Connect
- Verifying integration between AD DS and Azure AD
- Implementing Azure AD integration features in AD DS

Module 3: Windows Server administration

- Explain least privilege administrative models.
- Decide when to use privileged access workstations.
- Select the most appropriate Windows Server administration tool for a given situation.
- Apply different methods to perform post-installation configuration of Windows Server.
- Constrain privileged administrative operations by using Just Enough Administration (JEA).

Lab: Managing Windows Server

- Implementing and using remote server administration

Module 4: Facilitating hybrid management

- Select appropriate tools and techniques to manage Windows IaaS VMs remotely.
- Explain how to onboard on-premises Windows Server instances in Azure Arc.
- Connect hybrid machines to Azure from the Azure portal.
- Use Azure Arc to manage devices.
- Restrict access using RBAC.

Lab: Using Windows Admin Center in hybrid scenarios

- Provisioning Azure VMs running Windows Server
- Implementing hybrid connectivity by using the Azure Network Adapter
- Deploying Windows Admin Center gateway in Azure
- Verifying functionality of the Windows Admin Center gateway in Azure

Module 5: Hyper-V virtualization in Windows Server

- Install and configure Hyper-V on Windows Server.
- Configure and manage Hyper-V virtual machines.
- Use Host Guardian Service to protect virtual machines.
- Create and deploy shielded virtual machines.
- Configure and manage container workloads.
- Orchestrate container workloads using a Kubernetes cluster.

Lab: Implementing and configuring virtualization in Windows Server

- Creating and configuring VMs
- Installing and configuring containers

Module 6: Deploying and configuring Azure VMs

- Create a VM from the Azure portal and from Azure Cloud Shell.
- Deploy Azure VMs by using templates.
- Automate the configuration of Windows Server IaaS VMs.
- Detect and remediate non-compliant servers.
- Create new VMs from generalized images.
- Use Azure Image Builder templates to create and manage images in Azure.

Lab: Deploying and configuring Windows Server on Azure VMs

- Authoring Azure Resource Manager (ARM) templates for Azure VM deployment
- Modifying ARM templates to include VM extension-based configuration
- Deploying Azure VMs running Windows Server by using ARM templates
- Configuring administrative access to Azure VMs running Windows Server

- Configuring Windows Server security in Azure VMs

Module 7: Network infrastructure services in Windows Server

- Implement automatic IP configuration with DHCP in Windows Server.
- Deploy and configure name resolution with Windows Server DNS.
- Implement IPAM to manage an organisation's DHCP and DNS servers, and IP address space.
- Select, use, and manage remote access components.
- Implement Web Application Proxy (WAP) as a reverse proxy for internal web applications.

Lab: Implementing and configuring network infrastructure services in Windows Server

- Deploying and configuring DHCP
- Deploying and configuring DNS

Module 8: Implementing hybrid networking infrastructure

- Implement an Azure virtual private network (VPN).
- Configure DNS for Windows Server IaaS VMs.
- Run a DNS server in a Windows Server Azure IaaS VM.
- Create a route-based VPN gateway using the Azure portal.
- Implement Azure ExpressRoute.
- Implement an Azure wide area network (WAN).
- Manage Microsoft Azure virtual networks (VNets).
- Manage IP address configuration for Windows Server IaaS virtual machines (VMs).

Lab: Implementing Windows Server IaaS VM networking

- Implementing virtual network routing in Azure
- Implementing DNS name resolution in Azure

Module 9: File servers and storage management in Windows Server

- Configure and manage the Windows Server File Server role.
- Protect data from drive failures using Storage Spaces.
- Increase scalability and performance of storage management using Storage Spaces Direct.
- Optimise disk utilisation using Data Deduplication.
- Configure high availability for iSCSI.
- Enable replication of volumes between clusters using Storage Replica.
- Use Storage Replica to provide resiliency for data hosted on Windows Servers volumes.

Lab: Implementing storage solutions in Windows Server

- Implementing Data Deduplication
- Configuring iSCSI storage
- Configuring redundant Storage Spaces
- Implementing Storage Spaces Direct

Module 10: Implementing a hybrid file server infrastructure

- Configure Azure file services.
- Configure connectivity to Azure file services.
- Implement Azure File Sync.
- Deploy Azure File Sync

- Manage cloud tiering.
- Migrate from DFSR to Azure File Sync.

Lab: Implementing Azure File Sync

- Implementing DFS Replication in your on-premises environment
- Creating and configuring a sync group
- Replacing DFS Replication with File Sync–based replication
- Verifying replication and enabling cloud tiering
- Troubleshooting replication issues

Course Overview

Our four-day Administering Windows Server Hybrid Core Infrastructure training course will teaches IT Professionals how to manage core Windows Server workloads and services using on-premises, hybrid, and cloud technologies. The course teaches IT Professionals how to implement and manage on-premises and hybrid solutions such as identity, management, compute, networking, and storage in a Windows Server hybrid environment.

Course Learning Outcomes

Our Administering Windows Server Hybrid Core Infrastructure training course will teach you to become proficient in the following:

- Use administrative techniques and tools in Windows Server.
- Identify tools used to implement hybrid solutions, including Windows Admin Center and PowerShell.
- Implement identity services in Windows Server.
- Implement identity in hybrid scenarios, including Azure AD DS on Azure IaaS and managed AD DS.
- Integrate Azure AD DS with Azure AD.
- Manage network infrastructure services.
- Deploy Azure VMs running Windows Server and configure networking and storage.
- Administer and manage Windows Server IaaS Virtual Machine remotely.
- Manage and maintain Azure VMs running Windows Server.
- Configure file servers and storage.
- Implement File Services in hybrid scenarios, using Azure Files and Azure File Sync.

Audience

Our Administering Windows Server Hybrid Core Infrastructure training course will benefit several individuals and organisations including but not limited to:

- System Administrators
- Network Administrators
- Cloud Administrators
- Infrastructure Architects
- IT Managers and Directors
- Security Professionals
- Disaster Recovery and Business Continuity Specialists
- IT Consultants
- Small and Medium-Sized Business Owners
- IT Training and Education Professionals

Entry-Level Requirements

Our Administering Windows Server Hybrid Core Infrastructure training course requires you to have:

- Experience with managing Windows Server operating system and Windows Server workloads in on-premises scenarios, including AD DS, DNS, DFS, Hyper-V, and File and Storage Services
- Experience with common Windows Server management tools (implied in the first prerequisite)
- Basic knowledge of core Microsoft compute, storage, networking, and virtualization technologies (implied in the first prerequisite)
- Experience and an understanding of core networking technologies such as IP addressing, name resolution, and Dynamic Host Configuration Protocol (DHCP)
- Experience working with and an understanding of Microsoft Hyper-V and basic server virtualization concepts
- Basic experience with implementing and managing IaaS services in Microsoft Azure
- Basic knowledge of Azure Active Directory
- Experience working hands-on with Windows client operating systems such as Windows 10 or Windows 11
  Basic experience with Windows PowerShell

Recommended Reading

There is no recommended reading for our Administering Windows Server Hybrid Core Infrastructure training course.

What's Included

Our Administering Windows Server Hybrid Core Infrastructure training course includes the following:

- Hands-On Labs Included
- Microsoft Official Courseware
- After-Course Coaching Available
- Pre-reading
- Course Manual
- Quizzes
- Exercises

Exam Information

Our Administering Windows Server Hybrid Core Infrastructure training course will prepare attendees for the Microsoft Certification AZ-800: Administering Windows Server Hybrid Core Infrastructure Exam.

Please Note: The exam voucher is not included in the cost of this training course, however, it can be purchased separately.

What's Next

Our two-day BCS DevOps Foundation training course is a great starting point for an individual or organisation wishing to embark upon the DevOps journey.

A core understanding of fundamental DevOps values, practices and techniques is essential learning, as you move towards improved workflows and faster deployments.

Our BCS DevOps Foundation training course promotes framework-agnostic learning, and core DevOps values will be at the heart of all discussions, citing specific textbook examples to support these values.

Additional Information

Our Administering Windows Server Hybrid Core Infrastructure training course offers several benefits to individuals and organisations including but not limited to:

- **Flexibility and Scalability**: Hybrid infrastructures allow you to scale resources up or down based on demand.
- **Cost Optimisation**: By leveraging cloud resources when needed, you can avoid overprovisioning on-premises hardware.
- **Disaster Recovery and Business Continuity**: Hybrid setups provide enhanced disaster recovery options.
- **Improved Performance**: Hybrid infrastructures allow you to offload some workloads to the cloud, reducing the load on on-premises resources and potentially improving performance for critical applications.
- **Innovation and Agility**: By integrating cloud services, you can take advantage of the latest technologies and innovations without overhauling your entire infrastructure.
- **Global Reach**: Cloud services enable global availability. Learning to administer hybrid infrastructure lets you extend your organisation's reach by deploying resources closer to your users around the world.
- **Career Opportunities**: Proficiency in administering hybrid infrastructure is a sought-after skill in the IT job market.
- **Integration of Legacy Systems**: For organisations with existing on-premises systems, hybrid setups allow gradual migration to the cloud. Learning to manage these environments helps integrate legacy systems with modern cloud services.