AZ-801

Configuring Windows Server Hybrid Advanced Services

Description:

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.

Students will be able 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

Course requirements:

- 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
- An awareness of basic security best practices
- Basic understanding of security-related technologies (firewalls, encryption, multi-factor authentication, SIEM/SOAR).
- Basic knowledge of on-premises resiliency Windows Server-based compute and storage technologies (Failover Clustering, Storage Spaces).
- 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
- An understanding of the following concepts as related to Windows Server technologies: High availability and disaster recovery, Automation, Monitoring, Troubleshooting

This course is intended for:

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.

Literature:

All participants will get original Microsoft student materials.

Hardware:

Classrooms are equipped with high-performance computers with Internet access and the possibility of wireless connection.

Syllabus:

Module 1: Windows Server security

- Secure Windows Sever user accounts
- Hardening Windows Server
- Windows Server Update Management
- Secure Windows Server DNS

Module 2: Implementing security solutions in hybrid scenarios

- Implement Windows Server IaaS VM network security
- Audit the security of Windows Server IaaS Virtual Machines
- Manage Azure updates
- Create and implement application allowlists with adaptive application control
- Configure BitLocker disk encryption for Windows IaaS Virtual Machines
- Implement change tracking and file integrity monitoring for Windows Server IaaS VMs

Module 3: Implementing high availability

- Introduction to Cluster Shared Volumes
- Implement Windows Server failover clustering
- Implement high availability of Windows Server VMs
- Implement Windows Server File Server high availability
- Implement scale and high availability with Windows Server VMs

Module 4: Disaster recovery in Windows Server

- Implement Hyper-V Replica
- Protect your on-premises infrastructure from disasters with Azure Site Recovery

Module 5: Implementing recovery services in hybrid scenarios

- Implement hybrid backup and recovery with Windows Server IaaS
- Protect your Azure infrastructure with Azure Site Recovery
- Protect your virtual machines by using Azure Backup

Module 6: Upgrade and migrate in Windows Server

- Active Directory Domain Services migration
- Migrate file server workloads using Storage Migration Service
- Migrate Windows Server roles

Module 7: Implementing migration in hybrid scenarios

- Migrate on-premises Windows Server instances to Azure IaaS virtual machines
- Upgrade and migrate Windows Server IaaS virtual machines
- Containerize and migrate ASP.NET applications to Azure App Service

Module 8: Server and performance monitoring in Windows Server

- Monitor Windows Server performance
- Manage and monitor Windows Server event logs
- Implement Windows Server auditing and diagnostics
- Troubleshoot Active Directory

Module 9: Implementing operational monitoring in hybrid scenarios

- Monitor Windows Server IaaS Virtual Machines and hybrid instances
- Monitor the health of your Azure virtual machines by using Azure Metrics Explorer and metric alerts
- Monitor performance of virtual machines by using Azure Monitor VM Insights
- Troubleshoot on-premises and hybrid networking
- Troubleshoot Windows Server Virtual Machines in Azure

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