Microsoft Azure

AZ-104

MICROSOFT AZURE ADMINISTRATOR

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OVERVIEW

Candidates for the Azure Administrator Associate will have subject matter expertise in implementing, managing, and monitoring an organization's Microsoft Azure environment.

Responsibilities for this role include implementing, managing, and monitoring identity, governance, storage, compute, and virtual networks in a cloud environment, plus provision, size, monitor, and adjust resources, when needed.

An Azure administrator often serves as part of a larger team dedicated to implementing an organization's cloud infrastructure.

Where we are
TODAY

- **Introduction to Cloud Computing**
  - **Why Cloud Computing?**
    - On-premise data center costs
    - On-premise data center common issues
    - Cloud Computing basics
  - **Azure cloud terminologies**
    - Azure regions
    - Azure availability zones
    - Azure region pairing
    - Azure special regions
    - Understanding IaaS
    - Understanding PaaS
    - Understanding SaaS
    - Creating an Azure Account
    - Azure Subscriptions
    - Azure Resource Groups

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- **Deploy and manage Azure compute resources**
  - **Configuring VMs**
    - Understanding VMs
    - Creating Linux VMs
    - Creating Windows VMs
    - Configuring VM network security groups
    - Accessing Linux VMs using SSH
    - Accessing Windows VMs using RDP
    - Accessing VMs using Bastion
    - VM public and private IPs
    - VM dynamic and static IPs
    - Understanding VM Extensions
    - Add data disks
    - Transferring data disks between VMs
    - Configuring server-side encryption
    - Configuring Azure Disk Encryption
    - Configuring high availability
    - Deploy and configure VMSS
    - Redeploy failed VMs
    - Creating VMs using Azure CLI
  - **Create and configure containers**
    - Configuring Azure Container Instances
    - Preparing sample application for Azure Kubernetes Service
    - Creating Azure Container Registry
    - Creating Kubernetes Cluster
    - Running the application on AKS
    - Scaling AKS
    - Upgrading AKS Cluster

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- **Deploy and manage Azure compute resources**
  - **Create and configure Azure App Service**
    - Creating an App Service Plan
    - Create an App Service
    - Secure an App Service - theory
    - Configuring scaling in App service
    - Configuring Custom Domain name in App Service
    - Configuring Networking
    - Configuring deployment settings
- **Implement and manage storage**
  - **Storage Accounts**
    - Understanding storage accounts architecture
    - Creating storage accounts
    - Configuring storage accounts
    - Generating SAS tokens
    - Managing storage account access keys
    - Configuring access to Azure files
  - **Manage Storage**
    - Install Azure Storage Explorer
    - Copy data using AZCopy
    - Implementing Azure Storage replication
    - Configure blob object replication
    - Azure data import
    - Azure data export

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- **Configure Azure files and Azure Blob Storage**
  - Create an Azure file share
  - Create and configure the Azure File Sync service
  - Configure storage tiers
  - Configure blob lifecycle management
- **Configure and manage virtual networking**
  - **Implement and manage virtual networking**
    - Create and configure virtual networks
    - Configure private and public IP addresses
    - Configure user-defined network routes
    - Implement subnetting
    - Configure endpoints on subnets
    - Configure private endpoints
    - Configure Azure DNS - Private
    - Configure local peering
    - Configure global peering
  - **Secure access to virtual networks**
    - Create security rules
    - Implement Azure Firewall
  - **Configure load balancing**
    - Configure a load balancer
    - Configure Azure Application Gateway
    - Troubleshooting common load balancing issues

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- **Monitor and troubleshoot virtual networking**
  - Use Azure Network Watcher
  - Configure Azure Monitor for Networks
  - Troubleshoot virtual network connectivity
- **Integrate an on-premise network with an Azure virtual network**
  - Create and configure Azure VPN Gateway
  - Create and configure Azure ExpressRoute
  - Configure Azure Virtual WAN
  - Troubleshoot external networking
- **Monitor and back up Azure resources**
  - **Monitor resources by using Azure Monitor**
    - Create and interpret metrics
    - Configure Azure Monitor logs
    - Query and analyze logs
    - Set up alerts and actions
    - Understanding Application Insights
  - **Implement backup and recovery**
    - Create a Recovery Services Vault
    - Performing Azure VM backup
    - Performing on-premise VM backup
    - Configuring backup policy
    - Restoring from backups
    - Performing site-to-site recovery using Azure Site Recovery
    - Viewing backup reports

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- **Manage Azure identities and governance**
  - **Manage Azure Active Directory objects**
    - Create users and groups
    - Manage user and group properties
    - Performing bulk user changes
    - Managing guest users
    - Configuring Azure AD Join
    - Manage device settings
    - Configure Self-Service Password Reset
    - Understanding Administrative Units
  - **Manage role-based access control (RBAC)**
    - Understanding role scope levels
    - Providing access at different scopes
    - Create custom roles
  - **Manage subscriptions and governance**
    - Configure Azure policies
    - Configure resource locks
    - Applying and managing tags
    - Managing resource groups
    - Managing subscriptions
    - Cost Alerts
    - Configure Man
  - **Implement backup and recovery**
    - Create a Recovery Services Vault
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- **Automating deployments using ARM templates**
  - **Azure ARM Introduction**
    - Creating Azure Resource Manager templates
    - Configure a storage account template
    - Using template variables
    - Using template parameters
    - Deploying from a template
    - Save deployments as templates

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