

# **Microsoft Azure Administrator (AZ-104)**

Duration: 2 Months (40 hrs.)

## **1. Manage Azure identities and governance**

Manage Azure Active Directory (Azure AD) objects

- Create users and groups
- Create administrative units
- Manage user and group properties
- Manage device settings
- Perform bulk user updates
- Manage guest accounts
- Configure Azure AD join
- Configure self-service password reset

Manage role-based access control (RBAC)

- Create a custom role
- Provide access to Azure resources by assigning roles at different scopes
- Interpret access assignments

Manage subscriptions and governance

- Configure Azure policies
- Configure resource locks
- Apply and manage tags on resources
- Manage resource groups
- Manage subscriptions
- Manage costs
- Configure management groups

## 2. Implement and Manage Storage

### Secure storage

- Configure network access to storage accounts
- Create and configure storage accounts
- Generate shared access signature (SAS) tokens
- Manage access keys
- Configure Azure AD authentication for a storage account
- Configure access to Azure Files

### Manage storage

- Export from Azure job
- Import into Azure job
- Install and use Azure Storage Explorer
- Copy data by using AZCopy
- Implement Azure Storage replication
- Configure blob object replication

### Configure Azure files and Azure Blob Storage

- Create an Azure file share
- Create and configure Azure File Sync service
- Configure Azure Blob Storage
- Configure storage tiers
- Configure blob lifecycle management

## 3. Deploy and Manage Azure Compute Resources

Automate deployment of virtual machines (VMs) by using Azure Resource Manager templates

- Modify an Azure Resource Manager template
- Configure a virtual hard disk (VHD) template
- Deploy from a template
- Save a deployment as an Azure Resource Manager template
- Deploy virtual machine extensions

### Configure VMs

- Configure Azure Disk Encryption
- Move VMs from one resource group to another
- Manage VM sizes
- Add data disks
- Configure networking
- Redeploy VMs
- Configure high availability
- deploy and configure scale sets

### Create and configure containers

- Configure sizing and scaling for Azure Container Instances
- Configure container groups for Azure Container Instances
- Configure storage for Azure Kubernetes Service (AKS)
- Configure scaling for AKS
- Configure network connections for AKS
- Upgrade an AKS cluster

### Create and configure Azure App Service

- Create an App Service plan
- Configure scaling settings in an App Service plan
- Create an App Service
- Secure an App Service
- Configure custom domain names
- Configure backup for an App Service
- Configure networking settings
- Configure deployment settings

#### 4. Configure and Manage Virtual Networking

Implement and manage virtual networking

- Create and configure virtual networks, including peering
- Configure private and public IP addresses
- Configure user-defined network routes
- Implement subnets
- Configure endpoints on subnets
- Configure private endpoints
- Configure Azure DNS, including custom DNS settings and private or public DNS zones

Secure access to virtual networks

- Create security rules
- Associate a network security group (NSG) to a subnet or network interface
- Evaluate effective security rules
- Implement Azure Firewall
- Implement Azure Bastion

Configure load balancing

- Configure Azure Application Gateway
- Configure an internal or public load balancer
- Troubleshoot load balancing

Monitor and troubleshoot virtual networking

- Monitor on-premises connectivity
- Configure and use Azure Monitor for Networks
- Use Azure Network Watcher
- Troubleshoot external networking
- Troubleshoot virtual network connectivity

Integrate an on-premises network with an Azure virtual network

- Create and configure Azure VPN Gateway
- Create and configure Azure ExpressRoute
- Configure Azure Virtual WAN

## 5. Monitor and Backup Azure Resources

Monitor resources by using Azure Monitor

- Configure and interpret metrics
- Configure Azure Monitor logs
- Query and analyze logs
- Set up alerts and actions
- Configure Application Insights

Implement backup and recovery

- Create a Recovery Services vault
- Create and configure backup policy
- Perform backup and restore operations by using Azure Backup
- Perform site-to-site recovery by using Azure Site Recovery
- Configure and review backup reports

## **Course Projects:**

- **Project 1: Website Development on Linux Server**

Create and host a website on a Linux Server with a Reserved IP

- **Project 2: Custom Virtual Network Creation**

Create a Virtual Network (VNet) with public and private subnets

- **Project 3: Database Server Management**

Create and manage a Linux RDS Server

- **Project 4: Auto scaling Configuration**

Launch two servers and configure a load balancer and auto-scaling

## Contact Us

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