Microsoft Azure AZ-305 Training

COURSEBROCHURE& SYLLABUS

Microsoft Azure Cloud Training course objectives:

- Plan and develop Azure Virtual Machines.
- Configure, manage, and monitor Azure VM (Virtual Machines) to optimize availability and reliability.
- Implement Azure App Service.
- Plan and implement storage and backup, and recovery services.
- Implement container-based workloads in Azure.
- Deploy, configure, monitor, and diagnose cloud services.
- Implement Azure AD.
- Manage an AD(Active Directory) infrastructure in a hybrid environment.
- Azure network and cross site connectivity

CourseDuration:40Hours

Module 1 - Deploy and configure infrastructure

1: Analyzeresourceutilizationandconsumption

- configure diagnostic settings on resources
- create and test alerts
- analyze alerts across subscription
- analyze metrics across subscription
- create action groups
- monitor for unused resources
- monitor spend
- report on spend
- view alerts in Azure Monitor logs
- visualize diagnostics data using Azure Monitor Workbooks
- LAB
- configure diagnostic settings on resources
- analyze alerts across subscription
- create action groups
- monitor for unused resources
- monitor spend
- report on spend
- o view alerts in Azure Monitor logs

2: Create and configure storage accounts

- configure network access to the storage account
- create and configure storage account
- generate shared access signature
- implement Azure AD authentication for storage
- install and use Azure Storage Explorer
- manage access keys
- monitor activity log by using Azure Monitor logs
- implement Azure storage replication
- implement Azure storage account failover
- LAB
- configure network access to the storage account
- create and configure storage account
- generate shared access signature
- install and use Azure Storage Explorer
- manage access keys
- monitor activity log by using Azure Monitor logs

3: Create and configure a Virtual Machine (VM) for Windows and Linux configure high availability

- configure monitoring, networking, storage, and virtual machine size
- implement dedicated hosts
- deploy and configure scale sets
- LAB
- configure high availability
- configure monitoring, networking, storage, and virtual machine size
- deploy and configure scale sets

4: Automate deployment of Virtual Machines (VMs)

- **Modify Azure Resource Manager template**
- **configure location of new VMs**
- **deploy from template**
- **save a deployment as an Azure Resource Manager template**
- **deploy Windows and Linux VMs**
- **LAB**
- **Modify Azure Resource Manager template**
- **configure location of new VMs**
- **deploy from template**
- **save a deployment as an Azure Resource Manager template**
- **deploy Windows VMs**

5: Create connectivity between virtual networks

- **create and configure VNET peering**
- **create and configure VNET to VNET connections**
- **verify virtual network connectivity**
- **create virtual network gateway**
- **LAB**
- **create and configure VNET peering**
- **create and configure VNET to VNET connections**
- **verify virtual network connectivity**
- **create virtual network gateway**

6: Implement and manage virtual networking

- **configure private and public IP addresses, network routes, network interface, subnets, and virtual network**
- **create and configure Network Security Groups and Application Security Groups**
- **LAB**
- **configure private and public IP addresses, network routes, network interface, subnets, and virtual network**

7: Manage Azure Active Directory (AD)add custom domains

- **configure Azure AD Identity Protection, Azure AD Join, and Enterprise State Roaming**
- **configure self-service password reset**

- implement conditional access policies
- manage multiple directories
- perform an access review
- LAB
- add custom domains
- configure self-service password reset
- implement conditional access policies

8: Implement and manage hybrid identities

- install and configure Azure AD Connect
- configure federation and single sign-on
- manage and troubleshoot Azure AD Connect
- troubleshoot password sync and writeback
- LAB
- install and configure Azure AD Connect
- configure single sign-on
- Configure password sync and writeback

9: Implement solutions that use virtual machines (VM)

- provision VMs
- create Azure Resource Manager templates
- configure Azure Disk Encryption for VMs
- implement Azure Backup for VMs
- LAB
- provision VMs
- create Azure Resource Manager templates
- implement Azure Backup for VMs

Module 2- Implement workloads and security

10: migrate servers using Azure Migrate

- configure storage
- create a recovery services vault
- prepare source
- backup and restore data
- deploy Azure Site Recovery agent
- prepare virtual network

- LAB
- migrate servers using Azure Migrate
- create a recovery services vault
- prepare source
- backup and restore data
- deploy Azure Site Recovery agent
- prepare virtual network
- 11: Configure serverless computing
- create and manage objects
- manage a Logic App resource
- manage Azure Function app settings
- manage Event Grid
- manage Service Bus
- LAB
- create and manage objects
- manage Azure Function app settings

12: Implement application load balancing

- configure application gateway
- configure application gateway load balancing rules
- implement application gateway front end IP configurations
- troubleshoot application gateway load balancing
- configure Azure Front Door service
- configure Azure Traffic Manager
- LAB
- configure application gateway
- configure application gateway load balancing rules
- implement application gateway front end IP configurations
- configure Azure Traffic Manage

13: Integrate on-premises network with Azure virtual network

- create and configure Azure VPN Gateway
- create and configure site to site VPN
- configure Express Route
- configure Virtual WAN
- verify on-premises connectivity
- manage on-premises connectivity with Azure

- **LAB**
- **create and configure Azure VPN Gateway**
- **create and configure site to site VPN**
- **verify on-premises connectivity**
- **manage on-premises connectivity with Azure**

14: Implement Multi-Factor Authentication (MFA)

- **configure user accounts for MFA**
- **configure fraud alerts**
- **configure bypass options**
- **configure trusted IPs**
- **configure verification methods**
- **LAB**
- **configure user accounts for MFA**
- **configure fraud alerts**
- **configure trusted IPs**

15: Manage role-based access control (RBAC)

- **create a custom role**
- **configure access to Azure resources by assigning roles**
- **configure management access to Azure**
- **troubleshoot RBAC**
- **implement Azure policies**
- **assign RBAC roles**
- **LAB**
- **configure access to Azure resources by assigning roles**
- **configure management access to Azure**
- **troubleshoot RBAC**
- **implement Azure policies**
- **assign RBAC roles**

16: Create web apps by using PaaS

- **create an Azure App Service Web App**
- **create an App Service Web App for containers**
- **LAB**
- **create an Azure App Service Web App**

- create an App Service Web App for containers

17 : Design and develop apps that run in containers

- configure diagnostic settings on resources
- create a container image by using a Docker file
- create an Azure Kubernetes Service
- publish an image to the Azure Container Registry
- implement an application that runs on an Azure Container Instance
- manage container settings by using code
- LAB
- create a container image by using a Docker file
- create an Azure Kubernetes Service
- publish an image to the Azure Container Registry

Module 3 - Implement authentication and secure data

18 : Implement authentication

- Implement authentication by using certificates, forms-based authentication, tokens, or Windows-integrated
- authentication
- implement multi-factor authentication by using Azure AD
- implement OAuth2 authentication
- implement Managed identities for Azure resources Service Principal authentication
- LAB
- implement multi-factor authentication by using Azure AD
- implement Managed identities for Azure resources Service Principal authentication

19 : Implement secure data solutions

- encrypt and decrypt data at rest and in transit
- encrypt data with Always Encrypted
- implement Azure Confidential Compute and SSL/TLS communications
- create, read, update, and delete keys, secrets, and certificates by using the KeyVault API
- LAB
- implement Azure Confidential Compute and SSL/TLS communications
- create, read, update, and delete keys, secrets, and certificates by using the KeyVault API

Module 4 - Develop for the cloud and for Azure storage

20 :Develop solutions that use Cosmos DB storage

- **create, read, update, and delete data by using appropriate APIs - Lesson**
- **implement partitioning schemes - Lesson**
- **set the appropriate consistency level for operations**
- **LAB**
- **create, read, update, and delete data by using SAS Key**
- **set the appropriate consistency level for operations**

21 : Develop solutions that use a relational database

- **provision and configure relational databases**
- **configure elastic pools for Azure SQL Database**
- **implement Azure SQL Database managed instances**
- **create, read, update, and delete data tables by using code**
- **implement Azure Cosmos Database**
- **LAB**
- **provision and configure relational databases**
- **configure elastic pools for Azure SQL Database**
- **implement Azure SQL Database managed instances**
- **implement Azure Cosmos Database**

22 : Configure a message-based integration architecture/Develop for autoscaling

- **configure an app or service to send emails, Event Grid, and the Azure Relay service**
- **create and configure Notification Hub, Event Hub, and Service Bus**
- **configure queries across multiple products**
- **implement autoscaling rules and patterns (schedule, operational/system metrics, code that addresses singleton application instances)**
- **implement code that addresses transient state**
- **LAB**
- **implement autoscaling rules and patterns (schedule, operational/system metrics.**