

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

Course Duration: 40 Hours

Module 1 - Deploy and configure infrastructure

1: Analyze resource utilization and consumption

- 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 4 - Implement authentication and secure data

18 : Implement authentication

- Implement authentication by using certificates, forms-based authentication, tokens, or Windows-integrated authentication
- 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 5 - 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

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