



Quality Training For Better Career Since 2001

Azure Cloud Administration - Course Details

Duration: 70 Hours

Module 1: Azure Cloud Computing Basics

Learning Objective: In this Module you will learn about Azure Cloud Architecture, Subscription, Support Plan, Resource Group, and Tags

- Overview of Azure Cloud
- Azure Free Tier Account Creation
- Azure Cloud Architecture
- Azure Subscription
- Need of Azure Support Plan and Type of Support Plan
- Importance of Azure Resource Group
- Creating, Managing and Deleting Azure Resource Group
- Adding Azure Tags to Azure Resources

Module 2: Identity and Access Management (IAM), Role Based Access Control (RBAC) and Entra ID (Previously Azure AD)

Learning Objective: In this Module you will learn about Identity and Access Management (IAM), Azure Role Based Access Control (RBAC), Difference between RBAC Role and Entra ID Role, how to add custom domain to Entra ID, how to give access of your azure account to other users and how to setup MFA

- What is Microsoft Entra ID
- User Creation in Microsoft Entra ID
- Giving Microsoft Entra ID Roles to user
- Adding Custom Domain in Microsoft Entra ID
- How to buy Custom Domain from Domain Registrar
- Identity and Access Management (IAM) Overview
- Need of Azure Role Based Access Control (RBAC)
- Understanding Roles in RBAC
- Assigning RBAC Roles to user
- How to recover deleted user from Microsoft Entra ID
- Difference between Microsoft Entra ID Role and RBAC Role
- Type of Scope where you can Assign RBAC Roles
- Enable Multi Factor Authentication (MFA) for user

Module 3: Azure Virtual Machine (VM), Azure Networking, Availability Zone and Availability Set

Learning Objective: In this Module you will learn about creating a Highly Available Design using concept of Availability Set and Availability Zone and Deploy Virtual Machine in Availability Zone and Availability Set



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Module 3: Azure Virtual Machine (VM), Azure Networking, Availability Zone and Availability Set (Contd.)

Understand Azure Region, Location and Geography
Need of Availability Set in Azure
Create Availability Set in Azure and Deploy Virtual Machine in Availability Set
Understand Fault Domain and Update Domain concept in Availability Set
Need of Azure Proximity Placement
Create Proximity Placement and attach to Availability Set
Importance of Availability Zone in Azure
Deploy Virtual Machine in Availability Zone
Difference Between Availability Zone and Availability Set
Understand Virtual Network (VNET) and Subnet
Create Virtual Network (VNET) and Subnet
Deploy Virtual Machine in VNET and Subnet
Change Azure Virtual Machine Size and Family Type
Understand Concept of STOPPED versus DEALLOCATE in Azure Virtual Machine
Configure Boot Diagnostic in Azure Virtual Machine
Configuring Auto-shutdown to save cost of Azure Virtual Machine
Reset User Password of Azure Virtual Machine

Module 4: Azure NSG (Firewall), NIC (LAN Card) and Public IP

Learning Objective: In this Module you will be introduced to Azure Virtual Machine Components like NSG (Firewall), NIC (LAN Card), and Public IP Address

Azure Virtual Machine Network Interface (NIC)
Moving Azure Virtual Machine to Different Subnet
Changing Azure Virtual Machine Private IP
Setting Custom DNS in Azure Virtual Machine
Azure Virtual Machine Public IP
Dissociating Azure Virtual Machine Public IP
Understanding Network Security Group (NSG)
Attaching NSG to Azure Virtual Machine
Attaching NSG to Subnet
Understanding NSG Default Rule
Creating Custom Rule in NSG
Understanding Concept of NSG Inbound and Outbound Rule
Create Rule using Priority Number
Create Allow and Deny NSG Rule



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Module 5: Azure VM Routing, VNET Peering and NAT Gateway

Learning Objective: In this Module you will learn how Routing happen in Azure and Create Peering between different Virtual Network (VNET) and Implement NAT Gateway

How one Virtual Machine Communicate with other Virtual Machine in Azure

What is Route Table in Azure

Default Route Table and Custom Route Table

Create Route Table and attach to Subnet

Need of VNET Peering

Performing VNET Peering

Local Peering and Global Peering

Need of NAT Gateway

Implement NAT Gateway

Attach NAT Gateway to Subnet

Module 6: Azure Managed Disk, Image, Snapshot and Locks

Learning Objective: In this Module you will learn about Azure Disk and Disk Type and how to create snapshot, create Image and protect your resources using locks

What is Azure Managed Disk

Disk Type Premium/Standard SSD & Standard HDD

Concept of IOPS and Throughput in Disk

Understand Type of Disk – Operating System Disk (OS), Temporary Disk & Data Disk

Increase Size of OS and Data Disk

Create and Attach Data Disk to Azure Virtual Machine

What is Azure Snapshot

Azure Snapshot Type

Create Azure Snapshot from Disk

What is Azure Image

Generalize the Virtual Machine and Create Azure Image

Difference between Azure Image and Snapshot

Need of Azure Locks and there Types

Apply different Type of Lock to Resource Group

Module 7: Azure Cost Calculation and Cost Saving Techniques

Learning Objective: : In this Module you will learn about Azure Virtual Machine, Disk, and Public IP Cost Calculation using Azure Pricing Calculator



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Module 7: Azure Cost Calculation and Cost Saving Techniques (Contd.)

How to Use Azure Cloud in a cost saving way
How Virtual Machine Pricing is calculated
How to save cost in Prod and Non-Prod Virtual Machine
Reservation of Virtual Machine in Azure
Concept of Azure Hybrid Benefits in saving cost
Using Spot Virtual Machine for Non Prod Virtual Machine
Understanding Pricing of Disk and Public IP
Configure Azure Budget
Understand Azure Cost Management
Use Azure Pricing Calculator for cost calculation

Module 8: Azure Virtual Machine Backup & Restore and Azure Site Recovery (Disaster Recovery)

Learning Objective: In this Module you will learn how to create Backup of Azure Virtual Machine and Restore using Azure Backup and how to setup a DR (Disaster Recovery) Plan using Azure Site Recovery

Create Recovery Service Vault for Virtual Machine Backup
How Azure Backup Works
Understanding Backup Redundancy options like LRS and GRS
Take Backup of Azure Virtual Machine
Understand Concept of Azure Backup Instant Restore
Restore Virtual Machine from Backup
Restore File from Backup
Soft Delete in Azure Backup
How Azure Site Recovery Works
Create a Disaster Recovery Plan
Select the Primary & Secondary Region
Initiate Replication from Primary to Secondary Region
Perform Failover in Azure Site Recovery

Module 9: Azure Load Balancer, Traffic Manager and DNS

Azure Load Balancer, Traffic Manager and DNS - How Load Balancer Works, Public and Private Load Balancer, Installing IIS Role in Virtual Machine, Create Backend Pool, Health Probe and Load Balancing Rule in Load Balancer, Create NAT Rule in Load Balancer
Understand Working of Azure Traffic Manager
Use Traffic Manager for DR Scenario
Perform Traffic Management on Internet using Traffic Manager



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Module 10: Azure Virtual Machine Scale Set and Automate Deployment using JSON Template

Learning Objective: In this Module you will learn how to keep your design highly available using Azure Virtual Machine Scale Set and how to use scale set to increase or decrease number of Virtual Machine and you will be introduced to Infrastructure as a Code using JSON Template which is useful for repeated deployment

- How Azure Virtual Machine Scale Set Works
- Create Virtual Machine Scale Set
- Create a Scale in and Scale out policy
- See in action VM scale in and Scale out operation
- Automate Deployment using JSON Template
- Create Virtual Machine and Storage using JSON Template

Module 11: Azure Storage Account, Azure CDN, Azure File Share and AZCOPY Tool

Learning Objective: In this Module you will learn how to create Azure Storage Account, How to access Storage Account, how to put data in Azure storage Account, how to copy data between storage account using AZCOPY tool, how to use CDN (Content Delivery Network), further we will have a look on File share

- What is Azure Storage Account
- Premium and Standard Storage Options
- Hot/Cool and Archive Tier in Storage Account
- Type of Replication in Storage Account
- LRS/GRS/RA-GRS/ZRS/GZRS/RA-GZRS
- Azure Storage Endpoints
- Access keys and Shared Access Signature of Azure Storage Account
- Access Azure Storage Account using Storage Explore
- Azure CDN(Content Delivery Network)
- Create Azure File Share
- Azure Storage Account Life Cycle
- Copy Data between storage accounts using AZCOPY Tool

Module 12: Azure VPN/Express Route, Entra ID Connect (Previously Azure AD Connect)

Learning Objective: In this Module you will learn how to connect your office with Azure Cloud using Azure VPN Gateway and then you will learn about connecting on-premises Domain Controller with Microsoft Entra ID using Entra ID Connect, so that the user have single sign on experience



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Module 12: Azure VPN/Express Route, Entra ID Connect (Previously Azure AD Connect) (Contd.)

How to connect On-Premises Office with Azure Cloud using VPN

Create Azure VPN Gateway

Create Fortigate Firewall

Create Site to Site VPN Tunnel

Understand Azure Express Route

Difference between VPN and Express Route

Understand Entra ID Connect

Implement Single-Sign-On using Entra ID Connect

Use Entra ID Connect Password Hash Authentication

Perform Synchronization between On-Premises Domain Controller and Entra ID

Module 13: Azure Bastion, Azure Monitor, Azure Policy and Powershell

Learning Objective: In this Module you will learn how to secure your VM by not exposing RDP ports to the outside world, you will learn about Azure Monitor service which is used to send Alert , you will create Virtual Machine using PowerShell and you will learn about Azure Policy for compliance

Secure Virtual Machine Access using Azure Bastion

Create Azure Bastion

Need of Azure Monitor

Create an Alert for Virtual Machine Restart

Perform Monitoring of Azure Virtual Machine

Create Azure Policy for maintaining compliance

Create Virtual Machine and Storage using PowerShell

Transfer Snapshot from one Region to another Region using PowerShell

Module 14: Migration to Azure Clouds

Learning Objective: In this Module you will get overview of Azure Cloud Migration

Overview of Migration process to Azure Cloud

Create Azure Migrate Service

Concept of Discovery and Replication Server in Migration

Understanding Discovery, Assess, Replication and Migration