

Implementing Solutions on Microsoft Azure Cloud Platform

(AZ-900/AZ-104/AZ-303)

Duration of course: 60 Hours(2 Months)

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Training Available in Telugu and English.

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Azure Course Curriculum

1. **Introduction to Azure**
   * Cloud technology overview
   * Overview of Azure
   * Managing Azure with the Azure portal
   * Managing Azure with Windows PowerShell
   * Overview of Azure Resource Manager
   * Azure management services
2. **Implementing and managing Azure networking**
   * Overview of Azure networking
   * Implementing and managing Azure virtual networks
   * Configuring Azure virtual networks
   * Configuring Azure virtual network connectivity
   * Configuring the Subnets
   * Configuring Virtual Network Region Peering
   * Configuring Virtual Network Global Peering
   * Understanding Azure to On-Prem Connectivity
   * Deploying Azure Virtual Network Gateway.
   * Understanding User Defined Routes(UDR).
   * Configuring Azure Virtual Network Gateway with AWS over IPSec VPN.
   * Implementing Azure Service End Points.
3. **Understanding and Configuring Network Security Groups(NSG)**
   * Understanding Azure Network Security Groups(NSG)
   * Creating and Updating Inbound & Outbound Security Rules.
   * Understanding NSG Rule Hierarchy.
   * Testing Network Security Groups and learning rule priority.
   * Creating NSG Rules with Service tags.
   * Understanding Application Security Groups (ASG).
   * Creating NSG with Application Security Groups.
4. **Understanding and Configuring Azure Firewall**
   * Overview of Azure Firewall as a Service.
   * Creating UDR and AzureFirewallSubnet.
   * Deploy Azure Firewall.
   * Configure routing on UDR and assigning to subnets.
   * Create Network Rule Collection and check the traffic.
   * Create Application Rule Collection and block traffic to websites.
   * Understand SNAT and DNAT in Azure Firewall.
   * Creating DNAT for Azure machine using Azure Firewall.
5. **Implementing & Configuring Azure Virtual Machines**
   * Overview Azure virtual machines
   * Deploy virtual machines in Azure portal
   * Deploy virtual machines using Azure CLI
   * Managing Azure Virtual machine storage
   * Understanding Availability sets, Fault Domain & Update Domain.
   * Creating & placing virtual machines in Availability Sets.
6. **Designing & Implementing Azure Load Balancing** 
   * Overview on Load Balancing
   * Type of Load Balancers in Azure
   * Basic Vs Standard Load Balancer
   * Deploying Basic Load Balancer with Availability Sets.
   * Creating Backend Pools, Health probes and Load Balance rules.
   * Checking the Load Balancing scenarios.
   * Configuring NAT using Basic Load Balancer.
7. **Implement and configure Azure DNS & Azure Standard Load Balancer**
   * Understanding Azure DNS.
   * Buying a domain name for Godaddy.com
   * Creating Azure DNS Zone and configuring it with Godaddy.
   * Creating 3 Availability Sets and placing a single virtual machine in each AV-Set.
   * Create Azure Standard Load Balancer and create a backend pool and assign all the 3 AVSets.
   * Check the Load Balancing between the servers in different AV-Sets.
   * Create Host Records for Server and check the name resolution.
   * Create the CNAME record for the Load Balancer and check the website resolution.
8. **Configuring Azure Application gateway** 
   * Understanding Azure Application Gateway architecture.
   * Understanding Path Based Routing in AGW.
   * Creating multiple VMs and configuring application gateway.
   * Configuring the SSL Off-loading on Application gateway.
   * Check pathing based routing using AGW.
9. **Configuring Auto Scaling with Virtual Machine Scale Sets(VMSS)**
   * Understanding Azure VMSS
   * Creating a Azure VM Image for VMSS
   * Deploy VMSS with the custom image.
   * Performing stress testing on the VMSS.
   * Check AutoScaling of VMs under stress testing
10. **Planning and implementing Azure Storage**
    * Azure Storage account overview
    * Understand Blob Storage
    * Understand File Shares
    * Configuring Azure FileSync
    * Data migration using Azure storage explorer
    * Manage Azure Storage permissions
    * Azure Static Website deployment
    * Custom domains
11. **Configure and Manage Azure Backup and Disaster Recovery Services**
    * Backup and disaster recovery overview
    * Backup VMware Servers to Azure
    * Backup Azure VM & Azure SQL instances
    * Azure replication and failover groups
    * Azure disaster recovery vault configuration
    * How to implement full BCDR strategy
12. **Planning and implementing Azure SQL Database**
    * Azure SQL database(PaaS) vs SQL database (IaaS)
    * Structured vs Unstructured data
    * DTUs - Azure SQL
    * RUs – Azure Cosmos DB
    * Azure SQL Global Replication and Failover Groups
    * Azure MySQL Deployment
13. **Implementing Azure App services**
    * Azure Web Apps overview ( PaaS)
    * Deploying and Managing Web Apps
    * Azure App Service plan
    * Azure Deployment slots
    * App Service Security
    * Serverless computing concepts
    * Azure Web Apps for scale and resilience
14. **Implementing Azure Active Directory**
    * Azure Domain services.
    * Azure Active Directory overview.
    * Deploy and configure Active directory.
    * Create and manage users and groups.
    * Extending On-premise Active directory to Azure.
    * Configure Azure AD connect.
    * Role based access control (RBAC) overview.
    * Configure domain users and groups to access Azure portal.
15. **Implementing Azure-based management and automation**
    * Implementing Azure Automation.
    * Implementing Automation runbooks.
    * Managing Azure Automation.
    * Creating and Managing Azure DSC.
16. **Designing and developing apps for Containers**
    * Virtual Machine vs Containers.
    * Install and configure Docker Engine.
    * Deploy and manage Containers.
    * Deploying container images using Azure Container Instances(ACI).
    * Introduction to Azure Kubernetes Services(AKS).
    * Creating Azure AKS Cluster.
    * Deploying application on AKS.
17. **Configure Diagnostics, Monitoring, and Analytics**
    * Azure Monitoring and alerts configuration.
    * Log analytics.
    * Insights virtual machines and network.
    * Insights applications and containers.
18. **Azure Migrate projects and customer billing optimization**
    * Azure Migration projects.
    * Recovery services vaults.
    * Azure Database migration services.
    * Azure cost calculator.
    * Azure price optimization.
19. **Azure NAT Gateway CDN WAF**
    * Deploy Azure NAT Gateway for Private Subnets.
    * Deploying CDN for Web Applications.
    * Deploy Web Application Firewall for Securing Web Applications.
20. **Introduction to Infrastructure as a Code(IaaC)**
    * Understanding JSON files.
    * Introduction Azure Resource Manager Templates(ARM).
    * Deploying ARM Templates from Azure Powershell & Azure Portal.
    * Using ARM Functions and Dry Run with Powershell 7.0
    * Working with ARM Template Modes.
    * Deploy basic Azure Infrastructure with Terraform
    * Azure Image management with Packer.
21. **Understanding Azure DevOps**
    * Learning Azure DevOps application/tool.
    * Creating KANBAN boards.
    * Creating Repos and branches
    * Installing 3rd Party Plugins
    * Building software packers with Azure DevOps Build Pipelines.
    * Deploying infrastructure using Release Pipelines.
    * Azure integration with Service Pipelines.
    * Integrating with 3rd Party Clouds and Applications using Plugins.
    * Developing YAML Pipelines with Stages.
    * Working with Secrets & Securefiles
    * Complete CI/CD Pipeline with Azure DevOps.
22. **Azure Functions & Logic Apps**
    * Understanding Azure functions.
    * Creating and executing Azure Functions.
    * Creating Logic Apps and executing.
    * Introduction to Azure API Management.
23. **Azure Management & Governance**
    * Understanding Azure Policies for Compliance & Governance.
    * Understanding Azure Management Groups.
    * Azure Landing Zone & Cloud Adoption Framework.
    * Extending Azure Governance using Azure Arc.
24. **Azure Certification & Azure Project.**