



COURSE CONTENT

COURSE NAME

Microsoft Azure

DURATION

18 Days

COURSE OUTLINE

Module 01 – Azure Administration

- Resource Manager
- Azure Portal and Cloud Shell
- Azure PowerShell and CLI
- ARM Templates

Module 02 – Azure Virtual Machines

- Virtual Machine Planning
- Creating Virtual Machines
- Virtual Machine Availability
- Virtual Machine Extensions

Module 03 – Azure Storage

- Storage Accounts
- Blob Storage
- Storage Security
- Azure Files and File Sync
- Managing Storage

Module 04 – Virtual Networking

- Virtual Networks
- IP Addressing
- Network Security groups
- Azure Firewall
- Azure DNS

Module 05 – Intersite Connectivity

- Vnet Peering
- VPN Gateway Connections
- ExpressRoute and Virtual WAN

Module 06 – Network Traffic Management

- Network Routing and Endpoints
- Azure Load Balancer
- Azure Application Gateway
- Traffic Manager

Module 07 – Data Protection

- File and Folder Backups
- Virtual Machine Backups

Module 08 – Monitoring

- Azure Monitor
- Azure Alerts
- Log Analytics
- Network Watcher

Module 09 – Identity

- Azure Active Directory
- Users and Groups

Module 10 – Governance and Compliance

- Subscriptions and Accounts
- Azure Policy
- Role-based Access Control (RBAC)

Module 11 - Serverless Computing

- Azure App Service Plans
- Azure App Service
- Azure Container Instances
- Azure Kubernetes Service

Module 13: Implement IaaS solutions

- Provisioning VMs in Azure
- Create and deploy ARM templates
- Create container images for solutions
- Publish a container image to Azure Container Registry
- Create and run container images in Azure Container Instances

Module 14: Develop solutions that use blob storage

- Azure Blob storage core concepts
- Managing the Azure Blob storage lifecycle
- Working with Azure Blob storage

Module 15: Develop solutions that use SQL DB storage

- Azure SQL overview
- Azure SQL Offerings

Module 16: Develop solutions that use Cosmos DB storage

- Azure Cosmos DB overview
- Azure Cosmos DB data structure
- Working with Azure Cosmos DB resources and data

Module 17: Creating Azure App Service Web Apps

- Azure App Service core concepts
- Creating an Azure App Service Web App
- Configuring and Monitoring App Service apps
- Scaling App Service apps
- Azure App Service staging environments

Module 18: Implement Azure functions

- Azure Functions overview
- Developing Azure Functions
- Implement Durable Functions

Module 19: Develop App Service Logic Apps

- Azure Logic Apps overview
- Creating custom connectors for Logic Apps

Module 20: Develop message-based solutions

- Implement solutions that use Azure Service Bus
- Implement solutions that use Azure Queue Storage queues

Module 21: Develop event-based solutions

- Implement solutions that use Azure Event Grid
- Implement solutions that use Azure Event Hubs

- Implement solutions that use Azure Notification Hubs

Module 22: Implement API Management

- API Management overview
- Defining policies for APIs
- Securing your APIs

Module 23: Implement user authentication and authorization

- Microsoft Identity Platform v2.0
- Authentication using the Microsoft Authentication Library
- Using Microsoft Graph
- Authorizing data operations in Azure Storage

Module 24: Implement secure cloud solutions

- Manage keys, secrets, and certificates by using the KeyVault API
- Implement Managed Identities for Azure resources
- Secure app configuration data by using Azure App Configuration

Module 25: Monitor and optimize Azure solutions

- Overview of monitoring in Azure
- Instrument an app for monitoring
- Analyzing and troubleshooting apps
- Implement code that handles transient faults

Module 26: Integrate caching and content delivery within solutions

- Develop for Azure Cache for Redis
- Develop for storage on CDNs

Module 27: Implement Storage Accounts and CDN

- Storage Accounts
- Blob Storage
- Storage Security
- Managing Storage
- Accessing Blobs and Queues using AAD
- Configure Azure Storage Firewalls and Virtual Networks
- Configure CDN

Module 28: Implement VMs for Windows and Linux

- Select Virtual Machine Size

- Configure High Availability
- Implement Azure Dedicated Hosts
- Deploy and Configure Scale Sets
- Configure Azure Disk Encryption

Module 29: Implement Virtual Networking and DNS

- Virtual Network Peering
- Implement VNet Peering
- Configure Azure DNS

Module 30: Implement Azure Active Directory

- Overview of Azure Active Directory
- Users and Groups
- Domains and Custom Domains
- Azure AD Identity Protection
- Implement Conditional Access
- Configure Fraud Alerts for MFA
- Implement Bypass Options
- Configure Trusted IPs
- Configure Guest Users in Azure AD
- Manage Multiple Directory

Module 31: Implement and Manage Azure Governance

- Create Management Groups, Subscriptions, and Resource Groups
- Overview of Role-Based Access Control (RBAC)
- Role-Based Access Control (RBAC) Roles
- Azure AD Access Reviews
- Implement and Configure an Azure Policy
- Azure Blueprints

Module 32: Implement and Manage Hybrid Identities

- Install and Configure Azure AD Connect
- Configure Password Sync and Password Writeback
- Configure Azure AD Connect Health

Module 33: Implement Azure SQL Databases

- Configure Azure SQL Database Settings
- Implement Azure SQL Database Managed Instances
- High-Availability and Azure SQL Database

Module 34: Implement Cloud Infrastructure Monitoring

- Azure Infrastructure Security Monitoring
- Azure Monitor
- Azure Workbooks
- Azure Alerts
- Log Analytics
- Azure Service Health
- Monitor Azure Costs
- Azure Application Insights
- Unified Monitoring in Azure

Module 35: Implement NoSQL Databases

- Configure Storage Account Tables
- Configure CosmosDB

Module 36: Implement an Application Infrastructure

- Create and Configure Azure App Service
- Create an App Service Web App for Containers
- Create and Configure an App Service Plan
- Configure Networking for an App Service
- Create and Manage Deployment Slots
- Implement Logic Apps
- Implement Azure Functions

Module 37: Manage Workloads in Azure

- Migrate Workloads using Azure Migrate
- VMware - Agentless Migration
- VMware - Agent-Based Migration
- Implement Azure Backup
- Azure to Azure Site Recovery
- Implement Azure Update Management

Module 38: Manage Security for Applications

- Azure Key Vault
- Azure Managed Identity

Module 39: Implement Load Balancing and Network Security

- Implement Azure Load Balancer
- Implement an Application Gateway
- Understand Web Application Firewall

- Implement Azure Firewall
- Implement Azure Front Door
- Implementing Azure Traffic Manager
- Implement Network Security Groups and Application Security Group
- Implement Azure Bastion

Module 40: Implement Container-Based Applications

- Azure Container Instances
- Configure Azure Kubernetes Service

Module 41: Automate Deployment and Configuration of Resources

- Azure Resource Manager Templates
- Save a Template for a VM
- Evaluate Location of New Resources
- Configure a Virtual Hard Disk Template
- Deploy from a Template
- Create and Execute an Automation Runbook