

# Course: Exam AZ- 303: Microsoft Azure Solution Architect Certification Training



## Course Summary

This course is designed for candidates that are already Azure Solution Architects or aspiring to become Azure Solution Architect who advise stakeholders and translate business requirements into secure, scalable, and reliable solutions. Learners should have advanced experience and knowledge across various aspects of IT operations, including networking, virtualization, identity, security, business continuity, disaster recovery, data management, budgeting, and governance. This role requires managing how decisions in each area affect an overall solution. Learners must be proficient in Azure administration, Azure development, and DevOps, and have expert-level skills in at least one of those domains.

## Course Description

This course will help learners gain expertise on below skills in Azure:

- Deploy and configure infrastructure (25-30%)
- Implement workloads and security (20-25%)
- Create and deploy apps (5-10%)
- Implement authentication and secure data (5-10%)
- Develop for the cloud and for Azure storage (20-25%)

## Course Duration

- This course is of total 33(Thirty Three) hours and is an Instructor Led Live Training class.
- Each Module (chapter) is of 3(Three) hours that will be conducted as per the timeline given on LnR site during weekends

## Requirements

- Learners should have good understanding of the services involved in the IT lifecycle.
- Learners should have good knowledge of development, architecture patterns, networking, Virtual Machine, Virtualization, Local Area Network(LAN), Wide Area Network (WAN), Firewall, Router, Virtual Private Network (VPN), I.P Address, Subnet/Masking, LDAP, Domain Controller, website & various database etc.

## **What are the system requirements for this course?**

### **Hardware Requirements:**

- Memory – Minimum 8 GB RAM

- Processor – Intel Core i3 CPU @2.00 GHz or above
- Storage – 250 GB HDD/SDD or above

**Software Requirements:**

- Operating System – Windows 7 or above, Ubuntu 14 or above
- Visual Studio 2017 community edition (Include Azure packages)
- Windows PowerShell 4.0 or above (Install Azure Module)
- Microsoft Azure SDK for .NET v2.9 (prefer latest)

**What am I going to get from this course?**

This is a fully exam oriented course and will prepare to help you in Azure Az-303 examination. This course will also help to give kick start to your cloud Solutioning career and empower you in handling various real world scenarios. This course will cover various products of Azure such as Architecture Patterns, Hybrid Networking, Azure AD Migration, Backup & Recovery, Disaster Recovery, High Availability, App Service, Compute, Networking, No-SQL Database like Cosmos DB, SQL Database, Deployment, Containers, Subscriptions, ARM Template, Traffic Manager, Batch Service, API, Traffic Manager, Application Gateway , S2S VPN ,PowerShell, Azure CLI, Service Bus, Logic Apps,Functions,CDN, Event Hub, KeyVault, Multifactor Authentication, Monitoring, Alerts & Serverless programming in cloud. Learners will be able to recommend or design various architecture/solutions in IaaS or PaaS services as per customer and business requirements and further work on implementation with the team.

**Curriculum**

The entire course curriculum is being broken down into 12 modules. Below are the modules.

Each module will have 3(three) hours of training.

**Modules:**

**Module1: Introduction to Azure - IaaS & PaaS Services**

- Manage Azure subscription and Azure overview
- Manage resource groups
- Analyze resource utilization and consumption
- Azure SDK's
- Overview of Azure Networking & Virtual Machines
- Create and configure a VM for Windows and Linux
- PowerShell examples to showcase app services creation.  
Demo & Quiz

**Module2: Implement and manage virtual networking and Hybrid Set up**

- Create and manage virtual networks
- Create connectivity between virtual networks
- Create and configure a Network Security Group (NSG)
- Configure domain name resolution
- Implement Azure load balancer with Fault Domain and Update Domain.
- Monitor and troubleshoot virtual networking
- ARM Template
- Integrate on premises network with Azure virtual network
- Implement and Configure P2S and S2S Virtual Private Network(VPN)
- PowerShell demo to showcase various networking set up and VM Creation

## Demo & Quiz

### Module3: Design and Implement Azure Web App

- Implement and Configure azure web app
- Configure azure mobile app & Api app
- Deploy and publish .NET code to azure web app using VS2017
- Configure primary and secondary slots
- Configure auto scale
- Configure application insights with azure web app.
- App Service Security and Authentication.
- Implement SSL and Certificates
- Implement Azure WebJobs

Demo & Quiz

### Module4: Implement and manage azure storage service

- Create and configure storage accounts
- Configure Azure files, blob, table & Queue
- Import and export data to Azure
- Attach a storage account using SAS
- Azure Storage Explorer
- Design and Implement Azure Redis Cache
- Design and Implement Azure Content Delivery Network(CDN)
- PowerShell demo to showcase storage services

Demo & Quiz

### Module5: Implement and manage Containers

- Overview of Containers
- Overview of Orchestration services
- Overview of Docker Container and push/pull images into Docker container
- Configure and Manage Azure Kubernetes Service(AKS)
- Configure and Manage Azure Container Registry(ACR)
- Configure and Manage Azure Container Instance(ACI)
- Implement Diagnostics and Log Search

Demo & Quiz

### Module6: Manage Azure Active Directory (AD)

- Implement and manage hybrid identities
- Manage Azure AD objects (users, groups, and devices)
- Implement Multi-factor authentication (MFA)
- Migrate on premises Active Directory to Azure Active Directory
- Configure custom domain and registration in AD
- Implement Role based access control (RBAC)
- Overview of Claim based authorization like OAuth
- Create and Configure Custom Domains in AD
- Configure App Registrations and Service Principal

Demo & Quiz

#### Module7: Azure database and application architecture patterns

- Overview of Azure Architecture Patterns
  - Cloud Design Patterns
  - Azure SQL DB and Geo Replication
  - Disaster Recovery for Database
  - High Availability set up for Azure Web App
  - Implement Azure Front Door
  - Implement Azure Data Lake
  - Implement Azure Elastic Pool
  - Implement Azure Cosmos DB
  - Implement Azure Data Factory
  - Implement Azure Redis Cache
- Demo & Quiz

#### Module8: Implement Azure Serverless Services

- Implement and Configure Logic Apps
  - Design and Configure Azure Functions using .NET/Visual Studio code
  - Implement and Configure Azure Logic Apps using Visual Studio
  - Implement Azure Durable Functions
  - Implement Function trigger using data operations, timers & Webhook
- Demo & Quiz

#### Module9: Implement and Design API

- Overview of Azure API app
  - Design and Configure Azure API using .NET code
  - Enable Swagger for API documentation
  - Deploy and Manage API's in Azure API app
  - Create and Manage Azure Mobile app
  - Deploy and Manage Virtual Machine Scale Set (VMSS)
- Demo & Quiz

#### Module10: Integrate Azure Search solutions

- Overview of Azure Search
  - Design and Configure Azure Search
  - Query using Azure Search
  - Implement Cognitive Search
  - Create and Manage Azure Mobile app
  - Create and Manage Azure Notification Hub
- Demo & Quiz

#### Module11: Develop event-based and message-based solutions for Integration

- Implement solutions that use Azure Event Grid
- Implement solutions that use Azure Notification Hubs
- Implement Solutions that uses Azure Service Bus (Queue, Topics, Relays)
- Implement solutions that use Azure Event Hub

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- Implement solutions that use Azure Service Bus
- Implement solutions that use Azure Queue Storage queues
- Transient Fault Handling  
Demo & Quiz

#### Module12: Monitor, troubleshoot, and optimize solutions

- Implement and Configure various types of Monitoring Solutions
- Virtual Machine Back up and Site Recovery Solution
- Configure Azure Application Insights
- Configure Azure Monitor
- Configure Metrics, rules and alerts
- Azure Activity Log
- Azure Analytics
- Service Health
- Implement Log Analytics OMS solution  
Demo & Quiz

#### **Certification Project:**

Learner will have to submit certification project and will be rewarded with certificate once this project is completed.

#### **Multiple Choice Questions & Answers:**

Learners will be asked with multiple choices Q&A during the training sessions and points will be provided.

#### **Scenario based Questions & Answers:**

Learners will have to submit scenario based Q&A and points will be provided.

#### **Sample Project:**

A Sample Project will be discussed and shown to the learners that will help learners to start working in a project and apply for job interviews.

#### **About Instructor:**

##### **Professional Summary**

**Name: Ayush Sharma**

**Freelance Trainer with 14+ years of experience in IT and 6 years in Microsoft Azure products and services. My interest predominantly lies in Cloud Architecture; may it be Microsoft Azure or Amazon Web Services.**

**Reach out to LearnNRise Team on below email or phone number for joining this course or to clarify your doubts with Trainer, Happy to help you.**

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