# Microsoft Azure Solutions Architect Certification Training for AZ-303 & 304

In Collaboration with **Microsoft**

IntelliPaat

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## About the Program

Microsoft Azure Certified Expert Certification for Solutions Architect training (AZ-303 & 304) is designed to help you prepare for the architect technologies exam. Candidates applying for this exam are Azure Solutions Architects who advise and translate business requirements into reliable, secure, and scalable solutions. You will master advanced configuration for networking, security, reliability, virtualization, identity, security, business continuity, disaster recovery, data management, budgeting, and governance in this program.

Microsoft

## Collaborating with Microsoft

Microsoft is one of the largest organizations in terms of inventing creative tools for various purposes. Experts from Microsoft and other top MNCs will offer you their understanding and knowledge in the field through this online certification. Moreover, you will also get deep insights into the concepts and gain hands-on experience by working on industry-specified assignments.

**Benefits for students from Microsoft:**

- Industry-recognized Microsoft certification

- Real-time projects and exercises

## About Intellipaat

Intellipaat is one of the leading e-learning training providers with more than 600,000 learners across 55+ countries. We are on a mission to democratize education as we believe that everyone has the right to quality education.

Our courses are delivered by subject matter experts from top MNCs, and our world-class pedagogy enables learners to quickly learn difficult topics in no time. Our 24/7 technical support and career services will help them jump-start their careers in their dream companies.

# Key Features

### 36 HRS INSTRUCTOR-LED TRAINING

### 40 HRS SELF-PACED TRAINING

### 56 HRS REAL-TIME PROJECT WORK

### LIFETIME ACCESS

### 24/7 TECHNICAL SUPPORT

### INDUSTRY-RECOGNIZED CERTIFICATION

### JOB ASSISTANCE THROUGH 80+ CORPORATE TIE-UPS

### FLEXIBLE SCHEDULING

# Career Support

### SESSIONS WITH INDUSTRY MENTORS
Attend sessions from top industry experts and get guidance on how to boost your career growth

### MOCK INTERVIEWS
Mock interviews to make you prepare for cracking interviews by top employers

### GUARANTEED INTERVIEWS & JOB SUPPORT
Get interviewed by our 400+ hiring partners

### RESUME PREPARATION
Get assistance in creating a world-class resume from our career services team

# Why take up this course?

Microsoft Azure is growing at an unprecedented rate, and also, the cloud deployment in today's digital-first organizations is rising at a very fast rate. Intellipaat is offering a comprehensive training course in architecting Microsoft Azure solutions. It is completely in line with the Azure certification exams. You will work on real-world projects and gain hands-on experience, and you will also be in a position to apply for the best jobs in the industry.

# Who should take up this course?

- Solutions Architects and programmers looking to build SaaS, PaaS, and IaaS applications
- Network and Systems Admins and Application, DevOps, and QA Engineers
- Storage and Security Admins and Virtualization and Network Engineers

# Program Curriculum

## Microsoft Azure Solutions Architect Training Course Content

### 1. INTRODUCTION TO MICROSOFT AZURE

- Introduction to Cloud Computing

- What is Microsoft Azure?

- Microsoft Azure Services

- Azure Portal

- Azure CLI

- Azure PowerShell

**Hands-on Exercise**: *Creating a Microsoft Azure account, configuring Azure PowerShell, and configuring Azure CLI*

### 2. INTRODUCTION TO ARM & AZURE STORAGE

- Azure resources and subscriptions

- Azure Resource Manager

- Managing Azure resources

- Azure tags

- Azure Storage account and its types

- Azure Blob Storage

- Azure Content Delivery Network (CDN)

- Azure Files Storage

- Azure File Sync

**Hands-on Exercise:** *Managing resource groups in Azure, moving resources from one resource group to another, applying tags, creating a storage account, accessing the*

storage account, creating a blob storage, uploading into the blob storage, creating a file share, and creating and using CDN endpoint

## 3. INTRODUCTION TO AZURE STORAGE

- Azure Table Storage

- Azure Queue Storage

- Azure Storage Explorer

- Azure Shared Access Signature (SAS)

- Azure Databox

- Azure Storage Replication

- Data replication options

- Azure Import/Export Service

*Hands-on Exercise: Attaching and detaching an external storage account, storage explorer: Blob, file, queues and table storage, backup-archive, backup: snapshots, backup: AZCopy, Azure Shared Access Signature (SAS), and using Azure Data Factory Copy Data tool to transfer data to Azure*

## 4. AZURE VIRTUAL MACHINES

- Azure virtual machines

- Data disks in Azure

- Azure VMs and interfaces

- ARM templates

- VHD templates

- Custom images of Azure VM

- Virtual machine scale sets

- Virtual machine availability sets

*Hands-on Exercise: Creating and configuring an Azure VM, deploying a custom image of the Azure VM, and using virtual machine scale sets*

## 5. AZURE APP & CONTAINER SERVICES

- App Service Web App for containers

- App Service plan

- Networking for an App Service

- Deployment slots

- Container image

- Azure Kubernetes Service

- Azure Container Registry

*Hands-on Exercise:* *Creating an App Service Web App for containers, creating a container image, configuring Azure Kubernetes Service, and publishing and automating image deployment to Azure Container Registry*

## 6. AZURE NETWORKING

- Azure virtual networks

- Azure VNet Components

- IP address: Public and private IPs

- Azure VNet subnets

- Azure Network Interface Cards (NIC)

- Network Security Groups (NSGs)

- Route tables

- Service tags

- Azure DNS

- Private DNS

*Hands-on Exercise:* *VNet creation, creating and configuring VNet-VNet peering, verifying virtual network connectivity, assigning a static IP to a VM, creating route tables, adding routes, creating NIC, attaching NIC to VM, creating DNS, adding*

*RecordSet, creating NSG, adding a security rule to NSG, attaching NSG to a subnet, and verifying if NSG is applied*

## 7. AZURE NETWORKING - II

- Application Gateway

- Azure Front-door Service

- Azure Traffic Manager

- Application Security Groups

- Azure Load Balancers

- Azure Firewall

- Azure Bastion

- Network Watcher

- Azure ExpressRoute

- ExpressRoute Circuits

- ExpressRoute Peering

*Hands-on Exercise: Creating an internal load balancer, creating a public load balancer and Application Gateway, implementing Azure Front-door Service, implementing Azure Traffic Manager, and deploying and configuring Azure Bastion Service*

## 8. AUTHENTICATION & AUTHORIZATION IN AZURE USING RBAC

- Identity and Access Management in Azure

- Role-based Access Control (RBAC)

- Role definitions

- Role assignment in Azure resources

- Azure users and groups

- RBAC policies

*Hands-on Exercise: Creating a custom role for Azure resources and assigning the role to configure access to Azure resources*

## 9. MICROSOFT AZURE ACTIVE DIRECTORY

- Azure Active Directory (Azure AD)

- Windows AD vs Azure AD

- Azure AD Users

- Azure AD Groups

- Azure AD Domains

- Azure AD Tenants

- Authentication options

- Azure AD Connect

- Self-service Password Reset (SSPR)

- Multi-factor Authentication (MFA)

- Resource Locks

*Hands-on Exercise: Adding or deleting users using Azure Active Directory, add or deleting tenants using Azure Active Directory, creating a basic group and adding members, and applying Resource Locks*

## 10. AZURE MONITORING

- Azure Monitor

- Azure Metrics

- Log Analytics

- Alerts and actions

- Application Insights

- Backup reports

- Recovery Services Vault

- Backing up Azure virtual machines

- VM backup policies

- Restoring Azure virtual machines

*Hands-on Exercise: Configuring and interpreting Azure metrics, configuring Log Analytics, querying and analyzing logs, setting up alerts and actions, creating a Recovery Services Vault, and backing up and restoring a virtual machine*

## 11. MULTI-FACTOR AUTHENTICATION (MFA)

- MFA fraud alerts

- MFA bypass options

- MFA trusted IPs

- MFA verification methods

- Azure Key Vault

- Azure AD Managed Identities

- Azure AD Application Management

*Hands-on Exercise: Configuring and deploying Azure Key Vault, configuring and deploying Azure AD MFA fraud alerts, and configuring and deploying Azure AD MFA one-time bypass*

## 12. MIGRATION IN AZURE

- Understanding VM migration

- Azure Migrate

- Azure Site Recovery

- Server assessment

- Server migration

*Hands-on Exercise: Migrating physical servers using Azure Migrate and assessing physical servers using Azure Migrate*

## 13. AZURE DATA PLATFORM - I

- NoSQL and NoSQL databases

- Cosmos DB

- Multiple APIs and data models

- Request units

- Request unit calculator

- Achieving elastic scale

- Partition key

- Cross-partition queries

- Replication

- Turnkey global

- Distribution

- Turnkey global distribution

- Replication and consistency

- Consistency levels

- Document database

- Cosmos DB Resource Model

- Resource properties, self-links, and URLs

*Hands-on Exercise: Creating a Cosmos DB account, creating global distribution, importing data from SQL Server using the Data Migration tool, and executing SQL queries on an existing database*

## 14. AZURE DATA PLATFORM - II

- Data Migration tool

- Rich query with SQL

- SQL operators and functions

- Client development

- Indexing policies

- Users, permissions, and resource tokens

- Server-side programming model

- Triggers

- User-defined functions (UDFs)

- Table API

- Cosmos DB graph database

- Vertices and edges

- Populating a graph

- Bi-directional relationships

- Writing Gremlin queries

- Azure Table Storage

*Hands-on Exercise: Creating an Azure table API database and performing query execution, working with custom indexing, working with user-defined functions and triggers, creating an Azure Table API database, creating a graph database using Cosmos DB, and importing data from Table Storage*

# Project Work

## Azure Solutions Architect Projects Covered

**Handling Data Migration Based on Provided Architectural Requirements**

Using Azure Migrate Service, you will create and migrate Azure virtual machines and create storage accounts and application gateways for aiding Azure Migrate. You will also learn how to create an architecture using the aforementioned services to migrate servers.

**Implementing a New Architecture to the Company's Website**

You will design an architecture according to the requirement provided for Application Gateway, Storage Accounts, and Traffic Manager. Using VNet, you will establish a

connection between two networks across regions, and use all the services provided to create an architecture that is highly available and resilient.

## Building a Dashboard to Monitor Your Website

Using Azure Monitor and Azure Metrics, you will create a dashboard to monitor the company's website, which is hosted on a Web App. Using Log Analytics, Alerts and Actions, and Application Insights, you will build a dynamic dashboard, which can be used for investigating traffic spikes, correlating data, and performing actions when an alert is raised.

## Case Study 1 - Introduction to Cloud Computing

Here, you need to solve the issue of not wanting the corporation's confidential data on the cloud while migrating to Microsoft Azure. All the resources are governed, and track costing and billing are performed separately. Furthermore, resource groups are accessed and managed.

## Case Study 2 - Microsoft Azure Storage

The project involves solving latency issues and difficulty in accessing common files and tools and perhaps eases the upload of static content to Azure storage. Here, you will create and configure a CDN endpoint to serve the static files that are uploaded. You will create an Azure file share and upload the content within it, thereby connecting a Linux or Windows server to the file share.

## Case Study 3 - Azure Virtual Machines

You will be managing and automating the scaling requirements using custom images to create a virtual machine. Multiple and identical virtual machines should also be deployed using a custom VM image.

## Case Study 4 - Microsoft Azure Networking

You need to create a VNet with multiple subnets and deploy virtual machines within it, and then, you have to establish a connection between these subnets, enabling the resources within them to communicate privately.

## Case Study 5 - Load Balancing and Network Watcher

In this project, you will be setting up and deploying a load balancer for the backend resources so that a single front IP is exposed, and all the web servers can be accessed from it. Additionally, a Network Performance Manager and a Network Watcher must be set up in the Azure portal to generate alerts.

## Case Study 6 - Access Management in Azure

Here, you will be adding users to the organization's custom Active Directory domain and providing access to some of the services managed by them. The password authentication method and MFA must be set up with a verification option.

# Certification

After the completion of the course, you will get certificates from Intellipaat and Microsoft.

# Success Stories

**Kevin K Wada**

Thank you very much for your top-class service. A special mention should be made for your patience in listening to my queries and giving me a solution, which was exactly what I was looking for. I am giving you a 10 on 10!

**Sampson Basoah**

The Intellipaat team helped me in selecting the perfect course that suits my profile. The whole course was practically oriented, and the trainers were always ready to answer any question. I found this course to be impactful. Thank you.

**Lubin Jayalakshmi**

Amazing course with excellent trainers! The online classes were scheduled as per the given plan, and the instructors made the classes entertaining and interactive. Further, the topics were explained clearly, and the assignments, hands-on sessions, and quizzes were extremely helpful for self-validation.

**Hareram Singh**

The support team helped me in the course selection. I have never come across such a cooperative team. They scheduled my Azure classes as per my requirement. The entire course package was great. I enjoyed every bit of it.

**Vishal Pentakota**

The best part of this course was the series of hands-on demonstrations that the trainer performed. Not only did he explain each concept theoretically, but he also implemented all those concepts practically. Great job! A must go for beginners.

# CONTACT US

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