

# **Azure Certification Training Course Content**

Course Duration - 45-50 Hrs., 7-8 Weeks

#### Course Information

### **Batch Options**

Weekday Batch Mon - Fri - 1.5 Hr./Day

### **About the Trainer**

Industry Expert Trainer with 15+ Years Real Time Work Experience at Top US Based Product and Consulting Firms

#### **Contact Us**

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## **Introduction To Azure Training**

Microsoft Azure, commonly referred to as Azure, is a cloud computing service created by Microsoft for building, testing, deploying, and managing applications and services through global data centers. Many companies are becoming more efficient with Microsoft Azure's open and flexible cloud computing platform as they Invent with purpose and realize cost savings

## What you'll learn

- > Understand cloud-computing platforms, and how Azure fits into them
- Learn Azure Core Skills Networking, Computing, Storage, databases, & Security
- > Use Azure Web Apps, Kubernetes, Active Directory and more
- Master Azure Messaging, Monitoring and Insights Services
- Manage security and design Identity solutions in Azure
- Architect Data Storage Solutions in Azure
- ➤ How to design resilient solutions in Azure
- ➤ How to monitor and optimize costs in Azure
- > To prepare students for Azure Certified Solutions Architect Exam
- > To teach Azure concepts comprehensively and turn students into Cloud Gurus



# **Course Content**

### Module 1: Introduction to Azure and It's Services

- > Introduction to Cloud Computing
- Cloud Computing Service Models
- Cloud Computing Deployment Models
- Service Comparison: AWS, Azure, and GCP
- > Azure and its Benefits
- Azure Global Infrastructure and Regions
- Availability Zones and High Availability
- Different Azure Services

### Module 2: Azure Account Creation and Setup

- Creating an Azure Free Tier Account
- Azure Account Activation Troubleshooting
- Different Azure Web Services
- Managing Azure Subscriptions
- Managing Azure with the Azure portal
- Overview of Azure Resource Manager
- Azure management services
- Azure Architecture



### Module 3: Virtual Machines in Microsoft Azure

- Create and Configure Virtual Machines
- Workloads on Azure Virtual Machines
- > Azure Resource Manager Virtual Machine
- Virtual Machines in ARM Template
- Overview of Azure Virtual Machine
- Different types VM images
- Custom images
- Azure Managed Disks
- Azure Blob Storage
- Configuring Virtual Machines
- Configuring Availability and Extensibility
- Backup and Restore data
- Managing and Monitoring Virtual Machines

### Module 4: Virtual Machine Scale Sets and Availability Zones

- Azure Availability sets & Zones
- Azure Scale Sets
- Azure Availability Zones
- Deploying Virtual Machine Images
- Create a Virtual Machine Scale Set
- Configure VMSS and add custom usage alerts
- Configure VM for Redundancy
- Create Application Gateway



## Module 5: Web Apps for Azure Infrastructure

- Introduction to Azure Web Apps
- Understanding Web App Tiers and Pricing
- Understanding App Service Plans
- Understanding Different Ways to deploy Web Apps
- Deployment pipeline
- Scaling Web Apps
- Supported Languages
- Security and Monitoring
- Understanding Web jobs
- Azure Logic Apps
- Azure API Apps

### Module 6: Storage Services in Microsoft Azure

- Introduction Azure Storage
- Understanding Different Azure Storage replication techniques
- LRS (Locally Redundant Storage), ZRS (Zone Redundant Storage)
- > GRS (Geo Redundant Storage), RA-GRS (Read Only Geo Redundant Storage)
- Different types of Azure Storage options
- > Azure File, Blob, Queue, Table Storage
- Advanced Concepts on Azure Storage
- Storage Access Keys & Signatures
- Use cases for Azure File, Table, Queue and Blob storage
- Different types of Blobs
- Understanding Azure Managed Storage



## Module 7: Networking in Microsoft Azure

- > Introduction to Azure Virtual Networks
- Creating and Managing Azure virtual networks
- Understanding Network ACLs and Network Security groups
- Understand Point-to-Site Networks
- Securing Virtual Network Resources
- Demo: Create Azure virtual networks
- Understanding Azure DIP, VIP and PIP

### **Module 8: Azure Active Directory**

- Access Control
- Role Based Access Control
- > Authentication in applications (certificates, Azure AD, Azure AD Connect, token-based)
- Multi-Factor Authentication (MFA)
- > Claims-based authorization
- > Role-based access control (RBAC) authorization
- > End-to-end encryption
- Azure confidential computing
- SSL and TLS communications
- > Azure Key Vault
- Configure Fraud alerts
- Bypass option, trusted IPs
- Managed Service Identity
- Service Principal authentication



## Module 9: Azure SQL Database

- > Introduction
- > SQL Azure concepts
- Create Database in SQL Azure
- > Demonstration: Working with SQL Azure
- Configure active geo-replication for Azure SQL
- Database
- Migration methods
- Limitations

## Module 10: Azure Messaging Services

- Overview of Cloud Services
- Cloud Service Web Roles
- Customizing Cloud Service Configurations
- Updating and Managing Cloud Service
- > Deployments
- Cloud Service Worker Role
- Cloud Service Worker Role Processing
- Analyzing Application Cloud Service Role
- Demo: Web Roles and Worker Roles
- Instances



### Module 11: Azure Kubernetes Service

- > Application Environment Components
- Docker
- Docker File
- Docker Image
- > Azure Container Registry
- Azure Container Instance
- Orchestration
- Azure Kubernetes Service
- Diagnostics Logs

## Module 12: Azure Monitoring and Insights Service

- Overview of Cloud Services
- Cloud Service Web Roles
- Customizing Cloud Service Configurations
- Updating and Managing Cloud Service
- > Deployments
- Cloud Service Worker Role
- Cloud Service Worker Role Processing
- Analyzing Application Cloud Service Role
- Instances
- Demo: Web Roles and Worker Roles



### Module 13: Azure Service Bus

- > Introduction Windows Azure Service Bus
- MSMQ vs Azure Service Bus
- Windows Azure Service Bus Relays, Queues & Topics
- ➤ Demo: Windows Azure Service Bus Relays | Topics | Queues

## Module 14: Manage and Understanding PowerShell

- Basics Using Azure Portal
- Installing PowerShell
- Getting started using PowerShell and scripting the Infra services
- Provisioning resources using PowerShell script
- Using Azure Cloud Shell from Azure Portal

### Module 15: RBAC Roles

- Managing user access Roles using RBAC control
- Manage access using RBAC and the Azure portal
- Overview of Classic subscription administrator roles



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## Module 16: Real Time Project Example 1, 2

- ➤ Introduction to Realtime Project Examples 1, 2
- Build Project Examples 1, 2 for Realtime scenarios
- > Test the Project Examples and debug the if required

### Module 17: Real Time Project Example 3, 4

- > Introduction to Realtime Project Examples 3, 4
- Build Project Examples 3, 4 for Realtime scenarios
- Test the Project Examples and debug the if required

### Module 18: Real Time Project Example 5, 6

- > Introduction to Realtime Project Examples 5, 6
- ➤ Build Project Examples 5, 6 for Realtime scenarios
- > Test the Project Examples and debug the if required

### Module 19: Real Time Project Example 7, 8

- > Introduction to Realtime Project Examples 7, 8
- > Build Project Examples 7, 8 for Realtime scenarios
- > Test the Project Examples and debug the if required

### Module 20: Real Time Project Example 9, 10

- > Introduction to Realtime Project Examples 9, 10
- Build Project Examples 9, 10 for Realtime scenarios
- Test the Project Examples and debug the if required



### Module 21: Real Time Project Example 11, 12

- ➤ Introduction to Realtime Project Examples 11, 12
- ➤ Build Project Examples 11, 12 for Realtime scenarios
- ➤ Test the Project Examples and debug the if required

## Module 22: Real Time Project Example 13, 14

- ➤ Introduction to Realtime Project Examples 13, 14
- ➤ Build Project Examples 13, 14 for Realtime scenarios
- Test the Project Examples and debug the if required

### Module 23: Real Time Project Example 15 + Course Revision

- Introduction to Realtime Project Example 15
- Build Report 15 for Realtime scenario
- Course Revision

### Module 24: Azure Solution Architect Certification Guidance

- Explain various Azure Certification Options
- ➤ Discuss 60+ Important Azure Solution Architect Certification
- Practice Azure Solution Architect Certification

### Module 25: Resume Preparation, Interview and Job Assistance

- Prepare Crisp Resume as Azure Developer/Architect
- > Discuss common interview questions in Azure
- Explain students what jobs they should target and how