Azure Developer Certification: Developing Solutions for Microsoft Azure (AZ-203)

Modality: On Demand

Duration: 80 Hours

About this Course:

In this “Azure Developer Certification: Developing Solutions for Microsoft Azure” course, students will learn about Azure IaaS services and different features in development solutions. This course teach about Batch services for deployment and maintenance of resources and creation of container solutions with the help of Azure Kubernetes Service.

As we move deeper into the course, students will get fundamental knowledge and skills required for the deployment of Azure platform as a service as well as to implement services development solutions. Management of Azure App Service resources will be taught to students in this course. This course includes a helpful guide to create and test Azure features.

The course also provides key knowledge about Azure storage services and various features of Azure, Azure Table storage, Azure Blob, and Azure Relational Database. The student enrolled in this course will also learn about integration of Azure authentication and authorization services in their development solution. Students will also learn about access management and implementation of secure data solutions. During this course, students will also learn about integration of Azure CLI and program code.

This course “Azure Developer Certification: Developing Solutions for Microsoft Azure” also teaches students about working on Azure Monitor and tools like Log Analytics and Application Insights to obtain a better understanding of the application. Students will get insight about Azure Cache and CDN options to enhance the user experience.

Course Objectives:

The aim of this project is to make students proficient about:

- Use of Azure Portal and PowerShell for the deployment of virtual machines
- Azure Kubernetes Service (AKS) core concepts
- Deployment of AKS clusters
- Azure Batch Service API
- Registering push notification Apps
- Core concepts of App Service
- Create Swagger objects with the help of Swashbuckle
- Azure Container Registry

Audiences:

- The course is aimed for anyone who have keen interest in Azure Development
- Anyone who wishes to take Azure Developer Associate certification exam

Prerequisites:

- The course required the student to have 1-2 year of development experience.
- Students should have some knowledge and working experience of PowerShell or Azure CLI
- Working Experience in Azure Portal and Azure-supported programming language will be a plus.
- The course contains examples in C\# . NET

Course Outline:

The course outline is as follows:

Module 1

Module 1.1: Implement solutions that use virtual machines

- Provision VMs
- Create ARM templates
- Azure Disk Encryption for VMs
- Review questions

Module 1.2: Implement batch jobs by using Azure Batch Services

- Azure Batch overview
- Run a batch job by using Azure CLI and Azure portal
- Running Batch jobs by using code
- Manage batch jobs by using Batch Service API

Module 1.3: Create containerized solutions

- Azure Kubernetes Service (AKS) core concepts
- Deploy an AKS cluster
- Publish a container image to Azure Container Registry
- Create and run container images in Azure Container Instances

Module 1 Completion

Final Assessment

Module 2

Module 2.1: Create Azure App Service Web Apps

- Azure App Service core concepts

- Creating an Azure App Service Web App
- Creating background tasks by using WebJobs in Azure App Service

Module 2.2: Create Azure App Service mobile apps

- Getting Started with mobile apps in App Service
- Enabling push notifications for your app
- Enabling offline sync for your app

Module 2.3: Create Azure App Service API apps

- Creating APIs
- Using Swagger to document an API

Module 2.4: Implement Azure functions

- Azure Functions overview
- Develop Azure Functions using Visual Studio
- Implement Durable Functions

Module 2 Completion

Final Assessment

Module 3

Module 3.1: Develop solutions that use Azure Table storage

- Azure Table storage overview
- Authorization in Azure Storage
- Table service REST API

Module 3.2: Develop solutions that use Azure Cosmos DB storage

- Azure Cosmos DB overview
- Managing containers and items
- Create and update documents by using code

Module 3.3: Develop solutions that use a relational database

- Azure SQL overview
- Create, read, update, and database tables by using code

Module 3.4: Develop solutions that use Microsoft Azure Blob storage

- Azure Blob storage overview
- Working with Azure Blob storage

Module 3 Completion

Final Assessment

Module 4

Module 4.1: Implement authentication

- Microsoft identity platform
- Implement OAuth2 authentication
- Implement managed identities for Azure resources
- Implement authentication by using certificates, forms-based authentication, or tokens
- Implement multi-factor authentication

Module 4.2: Implement access control

- Claims-based authorization
- Role-based access control (RBAC) authorization

Module 4.3: Implement secure data solutions

- Encryption options
- End-to-end encryption
- Implement Azure confidential computing
- Manage cryptographic keys in Azure Key Vault

Module 4 Completion

Final Assessment

Module 5

Module 5.1: Introduction to Azure Monitor

- Overview of Azure Monitor

Module 5.2: Develop code to support scalability of apps and services

- Implement autoscale
- Implement code that addresses singleton application instances
- Implement code that handles transient faults

Module 5.3: Instrument solutions to support monitoring and logging

- Instrumentation in an app or service by using Application Insights
- Analyze and troubleshoot solutions by using Azure Monitor

Module 5.4: Integrate caching and content delivery within solutions

- Azure Cache for Redis
- Develop for storage on CDNs

Module 5 Completion

Final Assessment

Module 6

Module 6.1: Develop an App Service Logic App

- Azure Logic Apps overview
- Create Logic Apps by using Visual Studio
- Create custom connectors for Logic Apps
- Create custom templates for Logic Apps

Module 6.2: Integrate Azure Search within solutions

- Create and query an Azure Search index
- Full text search in Azure Search

Module 6.3: API Management

- Introduction to the API Management service
- Securing your APIs
- Defining API policies

Module 6.4: 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 6.5: Develop message-based solutions

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

Module 6 Completion

Final Assessment