

# AZ-204T00: Developing Solutions for Microsoft Azure

**Duration: 40 Hours (5 Days)**

## Overview

The AZ-204T00: Developing Solutions for Microsoft Azure course is designed for developers who want to learn how to build cloud solutions on Azure. It covers a wide range of topics, including Creating and deploying web apps, Implementing Azure functions, Developing solutions with Blob storage, Cosmos DB, and Implementing IaaS solutions such as Provisioning VMs and Using container services. Learners will gain practical experience with Azure services that can help them develop scalable, reliable, and secure cloud applications. The course also delves into key aspects of cloud development such as User authentication and authorization, Implementing secure cloud solutions, API management, developing event-based and message-based solutions, and Monitoring and optimizing Azure services. By integrating labs and exercises, the course ensures that participants can apply the concepts in real-world scenarios. The course prepares developers for the Microsoft Azure Developer Associate certification and equips them with the knowledge and skills necessary to build and maintain Azure cloud solutions effectively.

## Audience Profile

The AZ-204T00 course focuses on developing solutions for Microsoft Azure, tailored for experienced developers who are familiar with Azure services and SDKs.

- Target Audience for AZ-204T00: Developing Solutions for Microsoft Azure:
- Software Developers
- Cloud Solution Architects
- Azure Developers
- DevOps Engineers
- Technical Team Leads
- Application Engineers
- IT Professionals aiming to build, manage, and deploy Azure applications
- Professionals seeking Azure Developer Associate certification
- Experienced programmers transitioning to Azure cloud development

## Course Syllabus

### 01: Implement Azure App Service web apps

- Module 1: Explore Azure App Service
- Module 2: Configure web app settings
- Module 3: Scale apps in Azure App Service
- Module 4: Explore Azure App Service deployment slots
- Lab 01: Build a web application on Azure platform as a service offerings

### 02: Implement Azure Functions

- Module 1: Explore Azure Functions
- Module 2: Develop Azure Functions
- Lab 02: Implement task processing logic by using Azure Functions

### 03: Develop solutions that use Blob storage

- Module 1: Explore Azure Blob storage
- Module 2: Manage the Azure Blob storage lifecycle
- Module 3: Work with Azure Blob storage
- Lab 03: Retrieve Azure Storage resources and metadata by using the Azure Storage SDK for .NET

## **04: Develop solutions that use Azure Cosmos DB**

- Module 1: Explore Azure Cosmos DB
- Module 2: Work with Azure Cosmos DB
- Lab 04: Construct a polyglot data solution

## **05: Implement containerized solutions**

- Module 1: Manage container images in Azure Container Registry
- Module 2: Run container images in Azure Container Instances
- Module 3: Implement Azure Container Apps

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- Module 1: Manage container images in Azure Container Registry
- Module 2: Run container images in Azure Container Instances
- Module 3: Implement Azure Container Apps
- Lab 05: Deploy compute workloads by using images and containers

## **06: Implement user authentication and authorization**

- Module 1: Explore the Microsoft identity platform
- Module 2: Implement authentication by using the Microsoft Authentication Library
- Module 3: Implement shared access signatures
- Module 4: Explore Microsoft Graph
- Lab 06: Authenticate by using OpenID Connect, MSAL, and .NET SDKs

## **07: Implement secure cloud solutions**

- Module 1: Implement Azure Key Vault
- Module 2: Implement managed identities
- Module 3: Implement Azure App Configuration
- Lab 07: Access resource secrets more securely across services

## **08: Implement API Management**

- Module 1: Explore API Management
- Lab 09: Exercise: Route custom events to web endpoint by using Azure CLI
- 09: Develop eventbased solutions
- Module 1: Explore Azure Event Grid
- Module 2: Explore Azure Event Hubs
- Lab 09: Publish and subscribe to Event Grid events

## **10: Develop messagebased solutions**

- Module 1: Discover Azure message queues
- Lab 10: Asynchronously process messages by using Azure Service Bus Queues

## **11: Troubleshoot solutions by using Application Insights**

- Module 1: Monitor app performance
- Lab 11: Monitor services that are deployed to Azure

## **12: Implement caching for solutions**

- Module 1: Develop for Azure Cache for Redis
- Module 2: Develop for storage on CDNs
- Lab 12: Enhance a web application by using the Azure Content Delivery Network