

## SAIL SMOOTH IN TECH OCEAN

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# **AZ-204 Developing Solutions for Microsoft Azure**

This course teaches IT Professionals how to manage their Azure subscriptions, secure identities, administer the infrastructure, configure virtual networking, connect Azure and on-premises sites, manage network traffic, implement storage solutions, create, and scale virtual machines, implement web apps and containers, back up and share data, and monitor your solution.

#### **Audience**

- This course is for Azure Developers.
- Design and build cloud solutions such as applications and services.
- Participate in all phases of development including solution design, development and deployment, and testing and maintenance.
- Partner with cloud solution architects, cloud DBAs, cloud administrators, and clients to implement the solution.

### Learning objectives

After completing this course, students will be able to:

- Deploy and update apps in Azure App Service, implement App Service authentication and authorization, configuring app settings, scale apps, and how to use deployment slots.
- Create and deploy Azure Functions and utilize bindings and triggers to interact with other Azure services.
- Create Azure Blob storage resources, manage data through the blob storage lifecycle, and work with containers and items by using the Azure Blob storage client library V12 for .NET.
- Develop solutions integrating Azure Cosmos DB resources with the appropriate consistency levels, and perform data operations by using the .NET SDK V3 for Azure Cosmos DB.
- Implement authentication and authorization to resources by using the Microsoft identity platform, Microsoft Authentication Library, shared access signatures, and use Microsoft Graph.
- Securely deploy apps in Azure by using Azure Key Vault, managed identities, and Azure App Configuration.
- Implement the Azure API Management service to transform and secure APIs, and how to create a backend API.

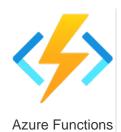
- Build applications with event-based architectures by integrating Azure Event Grid and Azure Event Hubs into their solutions.
- Build applications with message-based architectures by integrating Azure Service Bus and Azure Queue Storage into their solutions.
- Explain how Azure Monitor operates, how Application Insights collects events and metrics, and how to instrument apps to monitor and troubleshoot issues.
- Improve the performance and scalability of applications by integrating Azure Cache for Redis and Azure Content Delivery Network into solutions.

## **Tech Stack To Be Covered**





Azure Active Directory









Module

Lab

• Introductions

Slides only

## Course Introduction

Prerequisites

Certifications

Exam

## Course Outline

**01:** Implement Azure Module 1: Explore Azure App Lab 01: Build a web application App Service web apps Service Module 2: Configure web on Azure platform as a service

app settings Module 3: Scale apps offerings

in Azure App Service Module 4:

Explore Azure App Service

deployment slots

O2: Implement Module 1: Explore Azure Functions Lab 02: Implement task processinAzure Functions Module 2: Develop Azure Functions logic by using Azure Functions

03:DevelopModule 1: Explore Azure BlobLab 03: Retrieve Azure Storagesolutions that usestorage Module 2: Manage the resources and metadata by usingBlob storageAzure Blob storage lifecyclethe Azure Storage SDK for .NET

Module 3: Work with Azure Blob storage

O4: Develop Module 1: Explore Azure Cosmos DB Lab 04: Construct a polyglot da solutions that use Module 2: Work with Azure Cosmos solution

Azure Cosmos DB

**05:** Module 1:

Implementimagesin AzureContainerby using images and containerscontainerizedRegistry

Manage container

Lab 05: Deploy compute workloa

.NET SDKs

solutions Module 2: Run container images

in Azure Container Instances

Module 3: Implement Azure

Container Apps

Module 1: Explore the Microsoft Lab 06: Authenticate by using identity platform OpenID Connect, MSAL, and

userModule authentication2: Implement authentication by using the Microsoft Authentication Library

and Module 3: Implement shared access

authorization signatures

Module 4: Explore Microsoft Graph

07: Implement secure cloud solutions	Module 1: Implement Azure Key Vault Module 2: Implement managed identities Module 3: Implement Azure App	Lab 07: Access resource secrets more securely across services
	Configuration	
08: Implement API Management	Module 1: Explore API Management	08 -Exercise: Route custom events to web endpoint by using Azure CLI
09: Develop	Module 1: Explore Azure Event Grid	Lab 09: Publish and subscribe to
event- based solutions	Module 2: Explore Azure Event Hubs	Event Grid events
10: Develop message- based 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	Module 1: Develop for Azure	Lab 12: Enhance a web applicatio
caching for solutions	Cache for Redis  Module 2: Develop for storage on  CDNs	by using the Azure Content Deliver Network