

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.

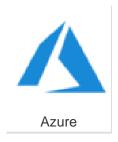
Learning objectives

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









Course

Introduction

Module

Lab

Introductions

Slides only

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

02: **Implement** Module 1: Explore Azure Functions Lab 02: Implement task processin **Azure Functions** Module 2: Develop Azure Functions logic by using Azure Functions

03: Lab 03: Retrieve Azure Storage Develop Module 1: Explore Azure Blob solutions that use storage Module 2: Manage the resources and metadata by using the Azure Storage SDK for .NET **Blob storage** Azure Blob storage lifecycle

> Module 3: Work with Azure Blob storage

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

DB **Azure Cosmos DB**

05: Module 1: Manage container Lab 05: Deploy compute workloa **Implement** by using images and containers images in Azure Container

containerized Registry

solutions Module 2: Run container images

in Azure Container Instances

Module 3: Implement Azure

Container Apps

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

.NET SDKs

Module Implement user the authentication using by

authentication Microsoft Authentication Library

Module 3: Implement shared and

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