Developing Solutions for Microsoft Azure (AZ-204)

Description

Enhance your cloud development skills

Are you a developer aiming to master the creation of efficient cloud solutions? This training, focused on Microsoft Azure, guides you step by step to design, deploy, and manage modern applications. Designed for professionals preparing for the AZ-204 certification, it covers all key aspects of application development within the Azure ecosystem.

Throughout the modules, you'll learn how to implement computing solutions, create serverless functions with Azure Functions, leverage storage services, and integrate third-party services. You'll also discover how to secure your applications using managed identities and Key Vault, along with best practices for monitoring and troubleshooting.

A hands-on AZ-204 training course, built for developers

What sets this course apart is its practical, hands-on approach. You'll work directly with Azure services through guided exercises. You'll deploy functions, manage data storage, and get a solid introduction to containerization using Azure Container Registry and Container Instances.

Course Content
Module 1: Explore Azure App Service

- Examine Azure App Service
- Examine Azure App Service plans
- Deploy to App Service
- Explore authentication and authorization in App Service
- Discover App Service networking features

Module 2: Configure web app settings

- Configure app settings
- Configure general settings
- Configure path mappings
- Enable diagnostic logging
- Configure security certificates

Module 3: Scale applications in Azure App Service

- Review scaling options
- Identify auto-scaling factors
- Enable auto-scaling in App Service
- Explore best practices for auto-scaling

Module 4: Explore Azure App Service deployment slots

- Discover staging environments

- Review slot swapping
- Swap deployment slots
- Route traffic in App Service

Module 5: Explore Azure Functions

- Discover Azure Functions
- Compare Azure Functions hosting options
- Scale Azure Functions

Module 6: Develop Azure Functions

- Discover Azure Functions development
- Create triggers and bindings
- Connect functions to Azure services

Module 7: Explore Azure Blob Storage

- Explore Azure Blob Storage
- Discover types of Azure Blob Storage resources
- Explore Azure Storage security features

Module 8: Manage the Azure Blob Storage lifecycle

- Explore the Azure Blob Storage lifecycle
- Discover Blob Storage lifecycle policies
- Implement Blob Storage lifecycle policies
- Rehydrate blob data from the Archive tier

Module 9: Use Azure Blob Storage

- Explore the Azure Blob Storage client library
- Create a client object
- Manage container metadata and properties using .NET
- Set and retrieve blob resource properties and metadata using REST

Module 10: Explore Azure Cosmos DB

- Identify key benefits of Azure Cosmos DB
- Explore the resource hierarchy
- Explore consistency levels
- Select the right consistency level
- Explore supported APIs
- Discover request units

Module 11: Use Azure Cosmos DB

- Explore the Microsoft .NET SDK v3 for Azure Cosmos DB
- Create stored procedures
- Create triggers and user-defined functions
- Explore the change feed in Azure Cosmos DB

Module 12: Manage container images in Azure Container Registry

- Discover Azure Container Registry
- Explore storage features
- Create and manage containers with tasks
- Explore Dockerfile elements

Module 13: Run container images in Azure Container Instances

- Explore Azure Container Instances
- Run containerized tasks with restart policies
- Set environment variables in container instances
- Mount an Azure file share in Azure Container Instances

Module 14: Implement Azure Container Apps

- Explore Azure Container Apps
- Explore containers in Azure Container Apps
- Implement authentication and authorization in Azure Container Apps
- Manage revisions and secrets in Azure Container Apps
- Explore Dapr integration with Azure Container Apps

Module 15: Explore the Microsoft identity platform

- Explore the Microsoft identity platform
- Explore service principals
- Discover permissions and consent
- Discover conditional access

Module 16: Implement authentication using Microsoft Authentication Library

- Explore Microsoft Authentication Library
- Initialize client applications

Module 17: Implement shared access signatures

- Discover shared access signatures
- Choose when to use shared access signatures
- Explore stored access policies

Module 18: Explore Microsoft Graph

- Discover Microsoft Graph
- Query Microsoft Graph using REST
- Query Microsoft Graph using SDK
- Apply best practices to Microsoft Graph

Module 19: Implement Azure Key Vault

- Explore Azure Key Vault
- Discover Azure Key Vault best practices
- Authenticate to Azure Key Vault

Module 20: Implement managed identities

- Explore managed identities
- Discover the managed identities authentication flow
- Configure managed identities
- Obtain an access token

Module 21: Implement Azure App Configuration

- Explore the Azure App Configuration service
- Create key-value pairs
- Manage application features
- Secure application configuration data

Module 22: Explore API Management

- Discover the API Management service
- Explore API gateways
- Explore API Management policies
- Create advanced policies
- Secure APIs using subscriptions
- Secure APIs using certificates

Module 23: Explore Azure Event Grid

- Explore Azure Event Grid
- Discover event schemas
- Explore event delivery durability
- Control access to events
- Receive events using webhooks
- Filter events

Module 24: Explore Azure Event Hubs

- Discover Azure Event Hubs
- Explore Event Hubs Capture
- Scale the processing application
- Control access to events
- Common operations with the Event Hubs client library

Module 25: Discover Azure message queues

- Choose a message queuing solution
- Explore Azure Service Bus
- Discover Service Bus queues, topics, and subscriptions
- Explore Service Bus message payloads and serialization
- Explore Azure Queue Storage
- Create and manage Azure Queue Storage and messages using .NET

Module 26: Monitor application performance

- Explore Application Insights
- Discover log-based metrics
- Instrument an app for monitoring

- Select a availability test
- Troubleshoot application performance issues using the Application Map

Module 27: Develop for Azure Cache for Redis

- Explore Azure Cache for Redis
- Configure Azure Cache for Redis
- Interact with Azure Cache for Redis using .NET

Module 28: Develop for CDN storage

- Explore Azure Content Delivery Network
- Control cache behavior on Azure Content Delivery Network
- Interact with Azure Content Delivery Network using .NET

Lab / Exercises

- This course provides you with exclusive access to the official Microsoft lab, enabling you to practice your skills in a professional environment.

Documentation

- Access to Microsoft Learn, Microsoft's online learning platform, offering interactive resources and educational content to deepen your knowledge and develop your technical skills.

Exam

- This course prepares you to the **AZ-204: Developing Solutions for Microsoft Azure** exam

Participant profiles

- Web Developer
- Back-end Developer
- Software Engineer
- Cloud Architect
- Technical Consultant

Prerequisites

- Have a basic understanding of development with .NET or a similar language
- Understand how web services and REST APIs work
- Have initial experience with Azure or another cloud platform

Objectives

- Implement web applications using Azure App Service
- Configure application settings and security for web apps
- Set up automatic scaling for applications
- Deploy serverless functions with Azure Functions
- Manage storage and lifecycle with Azure Blob Storage
- Develop and integrate databases using Azure Cosmos DB
- Create, store, and run containers with Azure
- Deploy microservices using Azure Container Apps

Description
Developing Solutions for Microsoft Azure (AZ-204)
Niveau

Intermédiaire
Classroom Registration Price (CHF)
3900
Virtual Classroom Registration Price (CHF)
3650
Duration (in Days)
5
Reference
AZ-204T00