

## AZ-204: Developing Solutions for Microsoft Azure

- **Formato do curso:** Presencial e Live Training
- **Localidade:** Porto
- **Data:** 25 Mai. 2020 a 05 Jun. 2020
- **Preço:** 1810€
- **Horário:** Pós-laboral - das 18h30 às 22h00
- **Duração:** 35 horas

This course teaches developers how to create end-to-end solutions in Microsoft Azure.

Students will learn how to implement Azure compute solutions, create Azure Functions, implement and manage web apps, develop solutions utilizing Azure storage, implement authentication and authorization, and secure their solutions by using KeyVault and Managed Identities. Students will also learn how to connect to and consume Azure services and third-party services, and include event- and message-based models in their solutions.

The course also covers monitoring, troubleshooting, and optimizing Azure solutions.

In this course students will gain the knowledge and skills needed to:

- Build a web application on the Azure App Service platform. They will learn how the platform functions and how to create, configure, scale, secure, and deploy to the App Service platform
- Create Functions apps, and how to integrate triggers and inputs/outputs in to the app
- How Azure Blob storage works, how to manage data through the hot/cold/archive blob storage lifecycle, and how to use the Azure Blob storage client library to manage data and metadata
- How Cosmos DB is structured and how data consistency is managed. Students will also learn how to create Cosmos DB accounts and create databases, containers, and items by using a mix of the Azure Portal and the .NET SDK
- Use create VMs and container images to use in their solutions. It covers creating VMs, using ARM templates to automate resource deployment, create and manage Docker images, publishing an image to the Azure Container Registry, and running a container in Azure Container Instances
- Leverage the Microsoft Identity Platform v2.0 to manage authentication and access to resources. Students will also learn how to use the Microsoft Authentication Library and Microsoft Graph to authenticate a user and retrieve information stored in Azure, and how and when to use Shared Access Signatures
- Secure the information (keys, secrets, certificates) an application uses to access resources. It also covers securing application configuration information
- Publish APIs, create policies to manage information shared through the API, and to manage access to their APIs by using the Azure API Management service
- Use Azure Logic Apps to schedule, automate, and orchestrate tasks, business processes, workflows, and

services across enterprises or organizations

- Build applications with event-based architectures
  - Build applications with message-based architectures
  - Instrument their code for telemetry and how to analyze and troubleshoot their apps
  - Use different caching services to improve the performance of their apps
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## Destinatários

Students in this course are interested in Azure development or in passing the Microsoft Azure Developer Associate certification exam.

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## Pré-requisitos

Students should have 1-2 years professional development experience and experience with Microsoft Azure.

They must be able to program in an Azure Supported Language.

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## Programa

### **Creating Azure App Service Web Apps**

- Azure App Service core concepts
- Creating an Azure App Service Web App
- Configuring and Monitoring App Service apps
- Scaling App Service apps
- Azure App Service staging environments

### **Implement Azure functions**

- Azure Functions overview
- Developing Azure Functions
- Implement Durable Functions

### **Develop solutions that use blob storage**

- Azure Blob storage core concepts
- Managing the Azure Blob storage lifecycle
- Working with Azure Blob storage

### **Develop solutions that use Cosmos DB storage**

- Azure Cosmos DB overview
- Azure Cosmos DB data structure
- Working with Azure Cosmos DB resources and data

## **Implement IaaS solutions**

- Provisioning VMs in Azure
- Create and deploy ARM templates
- Create container images for solutions
- Publish a container image to Azure Container Registry
- Create and run container images in Azure Container Instances

## **Implement user authentication and authorization**

- Microsoft Identity Platform v2.0
- Authentication using the Microsoft Authentication Library
- Using Microsoft Graph
- Authorizing data operations in Azure Storage

## **Implement secure cloud solutions**

- Manage keys, secrets, and certificates by using the KeyVault API
- Implement Managed Identities for Azure resources
- Secure app configuration data by using Azure App Configuration

## **Implement API Management**

- API Management overview
- Defining policies for APIs
- Securing your APIs

## **Develop App Service Logic Apps**

- Azure Logic Apps overview
- Creating custom connectors for Logic Apps

## **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

## **Develop message-based solutions**

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

## **Monitor and optimize Azure solutions**

- Overview of monitoring in Azure
- Instrument an app for monitoring
- Analyzing and troubleshooting apps
- Implement code that handles transient faults

## **Integrate caching and content delivery within solutions**

- Develop for Azure Cache for Redis
- Develop for storage on CDNs