AZ-200: Azure Developer, Core Solutions Course Outline

(4 days)

Overview

This course prepares you for Microsoft's Azure Developer certification exam AZ-200: Develop Core Microsoft Azure Cloud Solutions. This course is designed for developers who already know how to code in at least one of the Azure-supported languages.

The coursework covers Azure architecture, design and connectivity patterns, choosing the right storage solution for your development needs, developing solutions leveraging Azure Storage options including: Cosmos DB, Azure Storage tables, file storage, Blob, relations databases and caching and content delivery networks, creating App Service Web Apps; notification and offline sync for mobile apps; Service Fabric; serverless Azure Functions; managing bulk operations through the Batch Service API; Azure Kubernetes Service; and Azure Media Services, authentication work in Azure, and how to implement secure data solutions with: encryption; Azure Key Vault; and SSL and TLS communications.

Related Certifications

Microsoft Certified: Azure Developer Associate

Who Should Attend

These courses are for experienced programmers who want to develop and host solutions in Azure. Learners should have some experience with Azure and must be able to program in at least one Azure-supported language. These course focus on C#, Node.js, Azure CLI, Azure PowerShell, and JavaScript.

At Course Completion

After completing this course, students will be able to:
Learn common Azure application design and connectivity patterns

Measuring and planning throughput, and data access structure

Learn about Azure networking topologies

Connect to storage in Azure

Design and implement policies to Tables

Create, read, update, and delete tables by using code

Develop for Azure Redis cache and content delivery networks

Develop solutions that use blob storage

Create an Azure app service web app by using Azure CLI, Powershell, and other tools

Create documentation for the API by using open source and other tools

Add push notifications and enable offline sync for mobile apps

Develop stateful and stateless apps on Service Fabric

Create Azure functions including bindings and triggers

Define and run scheduled bulk operations

Create an Azure Container Service (ACS/AKS) cluster using Azure CLI and Azure Portal

Develop media solutions that use AI services

Learn about the different authentication options, including multi-factor, available in Azure and how they operate

Learn about implementing access control in your solution including claims- and role-based authorization

Implement secure data solutions by using encryption, Azure confidential computing, and SSL/TLS communications

Manage cryptographic keys in Azure Key Vault

Course Outline

AZ-200T01: Select the Appropriate Azure Technology Development Solution

Module 1: Select an appropriate compute solution
Lessons
Take advantage of appropriate design and connectivity patterns

Module 2: Design for hybrid technologies

Lessons

Virtual networking

Hybrid networking

Module 3: Select an appropriate storage solution

Lessons

Address durability of data

Caching

AZ-200T02: Develop for Azure Storage

Module 1: Develop solutions that use Azure Storage tables

Lessons

Connect to Azure Storage

Design and Implement Storage tables

Query a table by using code

Module 2: Develop solutions that use Azure Cosmos DB storage Azure Cosmos

Lessons

Choose the appropriate API for Cosmos DB storage

Manage containers and items in Cosmos DB storage

Create, read, update, and delete documents in Azure Cosmos DB by using code

Module 3: Develop solutions that use file storage

Lessons

Implement file shares for an Azure storage account

Migrating content to and between file shares

Module 4: Develop solutions that use a relational database

Lessons

Create, read, update, and delete database tables by using code

Implement SQL Dynamic Data Masking

Module 5: Develop solutions that use Microsoft Azure Blob storage

Lessons

Create a Shared Access Signature for a blob

Asynchronously move items in Blob storage between containers

Set Blob storage container properties in metadata

Module 6: Develop for caching and content delivery solutions

Lessons

Azure Redis Cache

Develop for storage on CDNs

AZ-200T03: Develop Azure Platform as a Server Solutions

Module 1: Creating App Service Web Apps

Lessons

Introduction to Web Apps

Using shell commands to create App Service Web Apps

Creating background tasks using WebJobs in Azure App Service

Using Swagger to document an API

Module 2: Creating mobile apps

Lessons

Getting started with mobile apps in App Service

Enabling push notifications for your app

Enabling offline sync for your app

Module 3: Creating an app service Logic App

Lessons

Overview of Azure Logic Apps

Creating a Logic App

Creating custom connectors for Logic Apps

Creating a custom template for a Logic App

Module 4: Creating an app or service that runs on Service Fabric

Lessons

Understanding Azure Service Fabric

Creating a Reliable Service

Creating a Reliable Actors app

Working with Reliable Collections

Module 5: Creating Azure Functions

Lessons

Azure Functions overview

Develop Azure Functions using Visual Studio

Triggers and bindings

Module 6: Scheduling bulk operations

Lessons

Azure Batch overview

Running Batch jobs

Using the .NET Batch Management client library

Module 7: Create solutions that use Azure Kubernetes Service

Lessons

Creating an Azure Kubernetes Service cluster

Azure Container Registry

Azure Contaner Instances

Module 8: Developing apps for Azure Media Services

Lessons

Introduction to Azure Media Services

Azure Media Services v3 concepts

Upload, encode, and stream with .NET

Analyze your video with .NET

AZ-200T04: Implement Security in Azure Development Solutions

Module 1: Implementing authentication

Lessons

Implement authentication in applications

Implement multi-factor authentication

Module 2: Implementing access control

Lessons

Claims-based authorization

Role-based access control (RBAC) authorization

Module 3: Implementing secure data solutions

Lessons

Encryption options

End-to-end encryption

Implement Azure confidential computing

Manage cryptographic keys in Azure Key Vault