

Azure Developer Certification: Developing Solutions for Microsoft Azure (AZ-203)

Modality: Self-Paced Learning

Duration: 80 Hours

SATV Value:

CLC:

NATU:

SUBSCRIPTION: Learn, Master

This course prepares you for the AZ-203 Exam leading to AZ-203 Certification. This course does not include the Official Exam Voucher, however, you can request to purchase the **Official Exam Voucher** separately.

About this Course:

In this course students will gain the knowledge and skills needed to implement Azure IaaS services and features in their development solutions. The course covers provisioning virtual machines, using Batch Service to deploy/maintain resources, and how to create containerized solutions by using Azure Kubernetes Service

In this course will gain the knowledge and skills needed to implement Azure Platform as a Service feature and services in their development solutions. Students will learn how to create and manage Azure App Service resources, integrate push and offline sync in their mobile apps, and how to document an API. Students will also learn how to create and test Azure Functions.

Students will learn Azure storage services and features in their development solutions. It covers Azure Table storage, Azure Cosmos DB, Azure Blob, and developing against relational databases in Azure

In this course students will gain the knowledge and skills needed to include Azure authentication and authorization services in their development solutions. Students will learn how identity is managed and utilized in Azure solutions by using the Microsoft identity platform. Students will also learn about access control (claims-based authorization and role-based access control) and how to implement secure data solutions. Throughout the course students learn how to create and integrate these resources by using the Azure CLI, REST, and application code.

Students will learn how Azure Monitor operates and how to use tools like Log Analytics and Application Insights to better understand what is happening in their application. Students will also learn how to implement autoscale, instrument their solutions to support monitoring and logging, and use Azure Cache and CDN options to enhance the end-user experience.

Course Objectives:

- Learn how to create and deploy virtual machines by using the Azure Portal, PowerShell, and through code
- Learn how to use the Azure Batch Service API to manage jobs
- Learn core concepts for Azure Kubernetes Service (AKS)
- Learn how to deploy AKS clusters
- Publish an image to the Azure Container Registry
- Learn about Azure Container Instances and how to deploy to them
- Understand App Service core concepts and capabilities
- Know how to create App Service web apps by using Azure CLI, Azure Portal, and PowerShell.
- Be able to create continuous and triggered WebJobs
- Push their app on to the Mobile App service
- How to register apps for push notifications
- Know how to create an APIM instance and create a new API
- Know how to use Swashbuckle to create Swagger objects in ASP.NET Core

Audiences:

- Students in this course are interested in Azure development or in passing the Microsoft Azure Developer Associate certification exam.
- Students should have 1-2 years experience as a developer. This course assumes students know how to code and have a fundamental knowledge of Azure.

Prerequisites:

- Students should have 1-2 years experience as a developer. This course assumes students know how to code and have a fundamental knowledge of Azure.
- It is recommended that students have some experience with PowerShell or Azure CLI, working in the Azure portal, and with at least one Azure-supported programming language. Most of the examples in this course are presented in C# .NET.

Course Outline:

The course outline is as follows:

Module 1

Module 1.1: Implement solutions that use virtual machines

- Provision VMs
- Create ARM templates
- Azure Disk Encryption for VMs
- Review questions

Module 1.2: Implement batch jobs by using Azure Batch Services

- Azure Batch overview

- Run a batch job by using Azure CLI and Azure portal
- Running Batch jobs by using code
- Manage batch jobs by using Batch Service API

Module 1.3: Create containerized solutions

- Azure Kubernetes Service (AKS) core concepts
- Deploy an AKS cluster
- Publish a container image to Azure Container Registry
- Create and run container images in Azure Container Instances

Module 1 Completion

Final Assessment

Module 2

Module 2.1: Create Azure App Service Web Apps

- Azure App Service core concepts
- Creating an Azure App Service Web App
- Creating background tasks by using WebJobs in Azure App Service

Module 2.2: Create Azure App Service mobile apps

- Getting Started with mobile apps in App Service
- Enabling push notifications for your app
- Enabling offline sync for your app

Module 2.3: Create Azure App Service API apps

- Creating APIs
- Using Swagger to document an API

Module 2.4: Implement Azure functions

- Azure Functions overview
- Develop Azure Functions using Visual Studio
- Implement Durable Functions

Module 2 Completion

Final Assessment

Module 3

Module 3.1: Develop solutions that use Azure Table storage

- Azure Table storage overview
- Authorization in Azure Storage
- Table service REST API

Module 3.2: Develop solutions that use Azure Cosmos DB storage

- Azure Cosmos DB overview
- Managing containers and items
- Create and update documents by using code

Module 3.3: Develop solutions that use a relational database

- Azure SQL overview
- Create, read, update, and database tables by using code

Module 3.4: Develop solutions that use Microsoft Azure Blob storage

- Azure Blob storage overview
- Working with Azure Blob storage

Module 3 Completion

Final Assessment

Module 4

Module 4.1: Implement authentication

- Microsoft identity platform
- Implement OAuth2 authentication
- Implement managed identities for Azure resources
- Implement authentication by using certificates, forms-based authentication, or tokens
- Implement multi-factor authentication

Module 4.2: Implement access control

- Claims-based authorization
- Role-based access control (RBAC) authorization

Module 4.3: Implement secure data solutions

- Encryption options
- End-to-end encryption
- Implement Azure confidential computing
- Manage cryptographic keys in Azure Key Vault

Module 4 Completion

Final Assessment

Module 5

Module 5.1: Introduction to Azure Monitor

- Overview of Azure Monitor

Module 5.2: Develop code to support scalability of apps and services

- Implement autoscale
- Implement code that addresses singleton application instances
- Implement code that handles transient faults

Module 5.3: Instrument solutions to support monitoring and logging

- Instrumentation in an app or service by using Application Insights
- Analyze and troubleshoot solutions by using Azure Monitor

Module 5.4: Integrate caching and content delivery within solutions

- Azure Cache for Redis
- Develop for storage on CDNs

Module 5 Completion

Final Assessment

Module 6

Module 6.1: Develop an App Service Logic App

- Azure Logic Apps overview
- Create Logic Apps by using Visual Studio
- Create custom connectors for Logic Apps
- Create custom templates for Logic Apps

Module 6.2: Integrate Azure Search within solutions

- Create and query an Azure Search index
- Full text search in Azure Search

Module 6.3: API Management

- Introduction to the API Management service
- Securing your APIs
- Defining API policies

Module 6.4: 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

Module 6.5: Develop message-based solutions

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

Module 6 Completion

Final Assessment