

AZ-204

Developing Solutions for Microsoft Azure

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.

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- Module 13: Integrate caching and content delivery within solutions

E-Book The original Microsoft courseware is made available to you online.

Target Group

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

Prerequisites

To be successful in this course, learners should have the following:

- Hands-on experience with Azure IaaS and PaaS solutions, and the Azure Portal.
- Experience writing in an Azure supported language at the intermediate level. (C#, JavaScript, Python, or Java)
- Ability to write code to connect and perform operations on, a SQL or NoSQL database product. (SQL Server, Oracle, MongoDB, Cassandra or similar)
- Experience writing code to handle authentication, authorization, and other security principles at the intermediate level.
- A general understanding of HTML, the HTTP protocol and REST API interfaces.

This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

www.experteach-training.com/go/MZ24

Reservation

On our Website, you can reserve a course seat for 7 days free of charge and in a non-committal manner. This can also be done by phone under +49 6074/4868-0.

Guaranteed Course Dates

To ensure reliable planning, we are continuously offering a wide range of guaranteed course dates.

Your Tailor-Made Course!

We can precisely customize this course to your project and the corresponding requirements.

Training		Prices, excl. of V.A.T.	
Classes in Germany	5 Days	€ 2,995	
Online Training	5 Days	€ 2,995	
Date/course venue	Course language German		
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Implement solutions that use virtual machines

Students will learn how to properly plan for VM deployment. It covers VM creation by using the Azure Portal, PowerShell, and through code. It also covers creating and using ARM templates for repeatable deployments and how to use Azure Disk Encryption to secure information on the VM.

Lessons
Provision VMs
Create ARM templates
Configure Azure Disk Encryption for VMs

Implement batch jobs by using Azure Batch Services

Azure Batch creates and manages a pool of compute nodes (virtual machines), installs the applications you want to run, and schedules jobs to run on the nodes.

Lessons
Azure Batch overview
Run a batch job by using the Azure CLI and Azure Portal
Run batch jobs by using code
Manage batch jobs by using the Batch Service API

Create containerized solutions

You can build and run modern, portable, microservices-based applications that benefit from Kubernetes orchestrating and managing the availability of those application components. Kubernetes supports both stateless and stateful applications as teams progress through the adoption of microservices-based applications.

Lessons
Create an Azure Managed Kubernetes Service (AKS) cluster
Create container images for solutions
Publish an image to the Azure Container Registry
Run containers by using Azure Container Instance or AKS

Create App Service web apps

Azure App Service Web Apps (or just Web Apps) is a service for hosting web applications, REST APIs, and mobile back ends. Web Apps not only adds the power of Microsoft Azure to your application, such as security, load balancing, autoscaling, and automated management.

Lessons
Azure App Service core concepts
Creating an Azure App Service web app
Creating background tasks by using WebJobs in Azure App Service

Creating Azure App Service mobile apps

The Mobile Apps feature of Azure App Service gives enterprise developers and system integrators a mobile-application development platform that's highly scalable and globally available.

Lessons
Getting started with mobile apps in App Service
Enable push notifications for your app
Enable offline sync for your app

Create Azure App Service API apps

This module covers how to create and document an Azure App Service API.

Lessons
Creating APIs
Using Swagger to document an API

Implement Azure Functions

Azure Functions is a solution for easily running small pieces of code, or "functions," in the cloud. You can write just the code you need for the problem at hand, without worrying about a whole application or the infrastructure to run it.

Lessons
Azure Functions overview
Develop Azure Functions using Visual Studio
Implement durable functions

Develop solutions that use Azure Table storage

Azure Table storage is a service that stores structured NoSQL data in the cloud, providing a key/attribute store with a schemaless design. Because Table storage is schemaless, it's easy to adapt your data as the needs of your application evolve.

Lessons
Azure Table storage overview
Authorization in Table storage
Table service REST API

Develop solutions that use Azure Cosmos DB storage

This module covers Azure Cosmos DB storage. It instructs students on how it works, how to manage containers and items, and create and update documents by using code.

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

Develop solutions that use a relational database

SQL Database is a general-purpose relational database managed service in Microsoft Azure that supports structures such as relational data, JSON, spatial, and XML.

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

Develop solutions that use Microsoft Azure Blob storage

Azure Blob storage is Microsoft's object storage solution for the cloud. Blob storage is optimized for storing massive amounts of unstructured data. Unstructured data is data that does not adhere to a particular data model or definition, such as text or binary data.

Lessons
Azure Blob storage overview
Working with Azure Blob storage

Implement authentication

Microsoft identity platform is an evolution of the Azure Active Directory (Azure AD) identity service and developer platform. It allows developers to build applications that sign in all Microsoft identities, get tokens to call Microsoft Graph, other Microsoft APIs, or APIs that developers have built.

Lessons
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

Implement access control

This module covers claims-based and role-based access control.

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

Implement secure data solutions

This module covers securing data at rest and during transmission.

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

Introduction to Azure Monitor

Azure Monitor is the central service that includes all of tools you need to monitor and optimize your solution.

Lessons
Overview of Azure Monitor

Develop code to support scalability of apps and services

This module covers how applications scale and how to handle some troubleshooting.

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

Instrument solutions to support monitoring and logging

This module covers adding code to your app to send the data to Azure Monitor.

Lessons
Configure instrumentation in an app or server by using Application Insights
Analyze and troubleshoot solutions by using Azure Monitor

Integrate caching and content delivery within solutions

This module shows students how to leverage Azure Cache for Redis and Azure CDNs to deliver assets to users more quickly.

Lessons
Azure Cache for Redis
Develop for storage on CDNs

Develop an App Service Logic App

Logic Apps helps you build solutions that integrate apps, data, systems, and services across enterprises or organizations by automating tasks and business processes as workflows. This module covers what they are and how to create them.

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

Integrate Azure Search within solutions

Azure Search is a search-as-a-service cloud solution that gives developers APIs and tools for adding a rich search experience over private, heterogeneous content in web, mobile, and enterprise applications. In this module students will learn how to integrate Azure Search in to their solutions.

Lessons
Create and query an Azure Search Index
Full text search in Azure Search

API Management

API Management (APIM) helps organizations publish APIs to external, partner, and internal developers to unlock the potential of their data and services.

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

Develop event-based solutions

This module covers developing event-based solutions in Azure by integrating Azure Event Grid, Event Hubs, and Notification Hubs in your applications.

Lessons
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

Microsoft Azure Service Bus is a fully managed enterprise integration message broker. Service Bus is most commonly used to decouple applications and services from each other, and is a reliable and secure platform for asynchronous data and state transfer. Azure Queue storage is a service for storing large numbers of messages that can be accessed from anywhere in the world via authenticated calls using HTTP or HTTPS.

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

