

# AZ-204

## Developing Solutions for Microsoft Azure

Dieses Training hat das Ziel Entwicklern näherzubringen, wie sie End-to-End-Lösungen in Microsoft Azure erstellen können. Die Teilnehmenden lernen, wie sie Azure-Computerlösungen implementieren, Azure-Funktionen erstellen, Web-Apps implementieren und verwalten, Lösungen unter Verwendung von Azure-Speichern entwickeln, Authentifizierung und Autorisierung implementieren und ihre Lösungen mit Hilfe von KeyVault und Managed Identities sichern. Die Teilnehmenden lernen auch, wie sie sich mit Azure-Services und Services von Drittanbietern verbinden und diese nutzen können und wie sie ereignis- und nachrichtenbasierte Modelle in ihre Lösungen integrieren können. Der Kurs behandelt auch die Überwachung, Fehlerbehebung und Optimierung von Azure-Lösungen. Empfohlenes Training für die Zertifizierung zum: Microsoft Certified: Azure Developer Associate

### Kursinhalt

- Erstellen von Azure App Service
- WebAppsAzure-Funktionen implementieren
- Lösungen entwickeln, die Blob-Speicher verwenden
- Lösungen entwickeln, die Cosmos-DB-Speicher verwenden
- IaaS-Lösungen implementieren
- Benutzerauthentifizierung und -autorisierung implementieren
- Sichere Cloud-Lösungen implementieren
- API-Verwaltung implementieren
- App-Service-Logic-Apps entwickeln
- Entwicklung ereignisbasierter Lösungen
- Nachrichtenbasierte Lösungen entwickeln
- Azure-Lösungen überwachen und optimieren
- Caching und Inhaltsbereitstellung in Lösungen integrieren

**E-Book** Die originalen Microsoft-Kursunterlagen werden Ihnen online zur Verfügung gestellt.

### Zielgruppe

Die Teilnehmer dieses Kurses sind an der Entwicklung von Azure oder an der Zertifizierungsprüfung Microsoft Azure Developer Associate interessiert.

### Voraussetzungen

Die Teilnehmer sollten 1-2 Jahre Erfahrung als Entwickler haben. Dieser Kurs setzt voraus, dass die Teilnehmer mit der Programmierung vertraut sind und übergrundlegende Kenntnisse von Azure verfügen. Es wird empfohlen, dass die Schüler über einige Erfahrungen mit PowerShell oder Azure CLI, der Arbeit im Azure-Portal und mit mindestens einer von Azure unterstützten Programmiersprache verfügen. Die meisten Beispiele in diesem Kurs werden in C\#. NET vorgestellt.

### Dieser Kurs im Web



Alle tagesaktuellen Informationen und Möglichkeiten zur Bestellung finden Sie unter dem folgenden Link: [www.experteach.ch/go/MZ24](http://www.experteach.ch/go/MZ24)

### Vormerkung

Sie können auf unserer Website einen Platz kostenlos und unverbindlich für 7 Tage reservieren. Dies geht auch telefonisch unter 06074 4868-0.

### Garantierte Kurstermine

Für Ihre Planungssicherheit bieten wir stets eine große Auswahl garantierter Kurstermine an.

### Ihr Kurs maßgeschneidert

Diesen Kurs können wir für Ihr Projekt exakt an Ihre Anforderungen anpassen.

Training		Preise zzgl. MwSt.	
<b>Termine in der Schweiz</b>	<b>5 Tage</b>	<b>Online Training</b>	<b>5 Tage CHF 3.295,-</b>
<b>Termin/Kursort</b>	<b>Kurssprache Deutsch</b>		
23.06.-27.06.25  Online	08.09.-12.09.25  Online		
28.07.-01.08.25  Online	27.10.-31.10.25  Online		

Stand 13.05.2025

# Inhaltsverzeichnis

## AZ-204 – Developing Solutions for Microsoft Azure

### 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



ExperTech AG

Kronenstrasse 11 · 8735 St. Gallenkappel · Telefon: +41 55 420 2591 · Fax: +41 55 420 2592 · info@experteach.ch · www.experteach.ch