

Developing Solutions for Microsoft Azure

Authorized training Microsoft Developing Solutions for Microsoft Azure **AZ-204 on-line** course. This course is for **developers**.



Purpose of the training

The **training** is intended for:

- developer
- people interested in taking Microsoft Azure **Developer Associate** certification exam.

At the training developers are acquainted with mechanisms of architecting complex Solutions for Microsoft Azure. The participants will find out how to:

- implement **calculation solutions** for Azure
- create **Azure functions**
- network application implementations and their management
- architect solutions using Azure storage
- implementing authentication and authorization, as well as securing your solutions using Azure **KeyVault**
- identity **management** .

The participants will also find out:

- how to connect with Azure services and third party services, as well as how to make use of them.
- how to architect event-based or message-based solutions.

The training also consists of solutions related to **monitoring** and solving problems, as well as with optimizing Solutions for Azure.



Benefits of completing the training

Successful learners **AZ-204** will have prior knowledge and understanding of:

- Gaining knowledge
- practical skills from applications development at Azure platform.

Including acquaintance with:

- **Azure App Service**, how it works, implementing, configuring, scaling, securing

- **Azure Functions**, how to develop and integrate triggers and connections
- Blob object storage and how to store objects at different layers of access, as well as how to make use of data with Client's library of Blob object storage
- Database service **NoSQL** Azure Cosmos DB, how to develop and manage databases, how to control data cohesion, as well as how to use data with the combination of Azure portal and **.NET SDK** set
- Designing virtual machines and containers, including architecting solutions with the use of ARM templates to automate resource implementation, as well as managing containers and publishing images in Azure Container Registry and activating them in Azure Container Instance
- Using Microsoft Identity Platform v2.0 to manage authentication and access resources, including the use of Microsoft Authentication Library and Microsoft Graph to authenticate the user and download the information stored at Azure platform.
- Securing information using Azure KeyVault (keys, secrets and certificates), the applications of which use them to access resources and secure the information about application's configuration
- Publishing API services in API Management service, creating the rules of managing information shared via API interface
- Azure Logic Apps to automate and coordinate tasks, business processes, workflows, and service flows in companies or organizations
- Developing applications with event-based architecture
- Developing applications with message-based architecture
- Code instrumentation for telemetry and the way of analyzing and solving problems with applications
- Using various buffering services in order to improve the performance of your applications



Examination method

On-line exam. Record at: <https://home.pearsonvue.com/Clients/Microsoft.aspx>



Exam description

After the **AZ-204** course, you can take **Microsoft** certification **exams**:an Authorized Test Center,online being monitored by an offsite proctor. Details on the website:<https://docs.microsoft.com/en-us/learn/certifications/exams/az-204>



Expected Listener Preparation

Each student should have 1-2 years of experience as a developer, it is recommended to have knowledge of working with **Microsoft Azure**.

It is also necessary to know one of the programming languages supported by Microsoft Azure.

An ability to use English materials

Pre-training: **AA_10961, AZ-104**

To increase the comfort of work and training's effectiveness we suggest using an additional monitor. The lack of additional monitor does not exclude participation in the training, however, it significantly influences the comfort of work during classes.



Training Language

- **Training:** English
- **Materials:** English

Training Includes

- manual in electronic form available on the platform: <https://learn.microsoft.com/pl-pl/training/>
- access to Altkom Akademia's student portal

Duration

5 days / 35 hours

Training agenda

1. Developing **web** applications in Azure App Service:
 - Basic terms of usługi Azure **App Service**
 - Developing Web applications in Azure App Service

- Configuring and monitoring App Service application
 - Scaling App Service application
 - Stage environments of Azure App Service
2. Implementing Azure **Function**:
- Discussing Azure platform functions
 - **Programming** functions
 - Implementing stable functions
3. Designing Solutions using **Blob** object storage:
- Basic terms of Azure Blob Storage
 - Blob object life-cycle management
 - Working with Blob object storage
4. Designing solutions using **Cosmos DB** storage:
- Discussing Azure Cosmos DB service
 - Data structures in Azure Cosmos DB service
 - Working with **Azure Cosmos** DB resources and data
5. Implementing **IaaS** solutions:
- Delivering virtual machines in Azure
 - Creating and implementing **ARM** templates
 - Creating container images with solutions
 - Publishing images of a container in Azure **Container Registry**
 - Creating and activating container images in Azure Container Instance
6. Implementing user's authentication and authorization:
- Microsoft **Identity Platform** v2.0
 - Authentication with the use of Microsoft Authentication Library
 - Using Microsoft **Graph**
 - Authorizing data operations in Azure Storage service
7. Implementing secure solutions in **cloud**:
- Managing licenses, secret entries with the use of Azure KeyVault API
 - Implementing identities manager for Azure platform resources
 - Securing configuration data of applications using Azure App Service configuration
8. Architecting solutions using API Management service:
- Discussing **API Management**
 - Defining the rules for API interfaces
 - Securing API interfaces
9. Designing solutions using Azure Logic Apps:
- Discussing Azure **Logic** Apps
 - Developing one's own connectors for Azure Logic Apps
10. Architecting event-based solutions:

- Implementing solutions using Azure Event Grid service
- Implementing solutions using Azure Event Hub service
- Implementing solutions using Notification Hub service

11. Architecting message-based solutions:

- Implementing solutions using Azure Service Bus service
- Implementing solutions using Azure Queue Storage service's queues

12. Monitoring and optimizing solutions implemented in Azure:

- Discussing supervision in Azure
- Matching applications to supervision
- Analyzing and solving problems with applications
- Implementing the code servicing momentary errors

13. Integration of buffering and delivering content as part of solutions:

- Architecting solutions using Azure **Cache** for Redis
- Architecting solutions using data storage on **CDN**