

# Learning path for Azure Developer

Microsoft Azure is the cloud for modern business. Expand your Azure development skills to meet future business needs with these resources.



[aka.ms/AzureDeveloperLearning](https://aka.ms/AzureDeveloperLearning)

Classroom

Develop Azure Infrastructure as a Service compute solutions  
AZ-203T01

Develop Azure Platform as a Service compute solutions  
AZ-203T02

Develop for Azure storage  
AZ-203T03

Implement Azure security  
AZ-203T04

Monitor, troubleshoot, and optimize Azure solutions  
AZ-203T05

Connect to and consume Azure services and third-party services  
AZ-203T06



**Exam AZ-203: Developing Solutions for Microsoft Azure Exam**

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## Azure fundamentals

- 9H 35M - 12 Modules**
1. Principles of cloud computing
  2. Introduction to Azure
  3. Azure architecture and service guarantees
  4. Create an Azure account
  5. Manage services with Azure portal
  6. Azure compute options
  7. Azure data storage options
  8. Azure networking options
  9. Security, responsibility and trust in Azure
  10. Apply and monitor infrastructure standards with Azure Policy
  11. Control and organize Azure resources with Azure Resource Manager
  12. Predict costs and optimize spending for Azure



## Create serverless applications

- 6H 15M - 7 Modules**
1. Choose the appropriate Azure service to integrate and automate business processes
  2. Create serverless logic with Azure Functions
  3. Execute an Azure Function with triggers
  4. Chain Azure functions together using input and output bindings
  5. Create a long-running serverless workflow with Durable Functions
  6. Develop, test, and deploy an Azure Function with Visual Studio
  7. Monitor GitHub events with an Azure Function triggered by a webhook



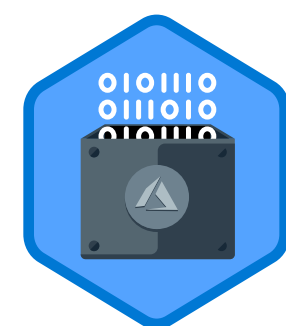
## Connect your services together

- 3H 31M - 4 Modules**
1. Choose a messaging model in Azure to loosely connect your services
  2. Implement message-based communication workflows with Azure Service Bus
  3. Communicate between applications with Azure Queue storage
  4. Enable reliable messaging for Big Data applications using Azure Event Hubs



## Work with relational data in Azure

- 3H 20M - 4 Modules**
1. Provision an Azure SQL database to store application data
  2. Create an Azure Database for PostgreSQL server
  3. Scale multiple Azure SQL Databases with SQL elastic pools
  4. Secure your Azure SQL Database



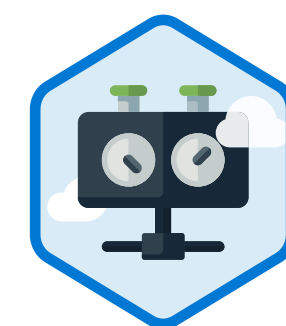
## Store data in Azure

- 3H 50M - 5 Modules**
1. Choose a data storage approach in Azure
  2. Create an Azure Storage account
  3. Connect an app to Azure Storage
  4. Secure your Azure Storage account
  5. Store application data with Azure Blob storage



## Deploy a website with Azure virtual machines

- 4H 18M - 4 Modules**
1. Introduction to Azure virtual machines
  2. Create a Linux virtual machine in Azure
  3. Create a Windows virtual machine in Azure
  4. Build and run a web application with the MEAN stack on an Azure Linux virtual machine



## Manage resources in Azure

- 4H 15M - 5 Modules**
1. Align requirements with cloud types and service models in Azure
  2. Control Azure services with the CLI
  3. Automate Azure tasks using scripts with PowerShell
  4. Predict costs and optimize spending for Azure
  5. Control and organize Azure resources with Azure Resource Manager



## Deploy a website to Azure with Azure App Service

- 4H 30M - 5 Modules**
1. Prepare your development environment for Azure development
  2. Host a web application with Azure App service
  3. Publish a web app to Azure with Visual Studio
  4. Stage a web app deployment for testing and rollback by using App Service deployment slots
  5. Deploy and run a containerized web app with Azure App Service



## Extract knowledge and insights from your data with Azure Databricks

- 4H 21M - 6 Modules**
1. Introduction to Azure Databricks
  2. Read and write data by using Azure Databricks
  3. Perform exploratory data analysis with Azure Databricks
  4. Train, evaluate, and select machine-learning models with Azure Databricks
  5. Deep learning with Azure Databricks
  6. Perform text analytics with Azure Databricks



## Secure your cloud data

**6H 45M - 8 Modules**

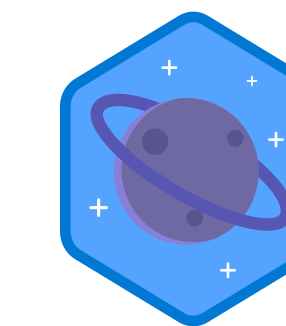
1. Design for security in Azure
2. Top 5 security items to consider before pushing to production
3. Secure your Azure Storage account
4. Manage secrets in your server apps with Azure Key Vault
5. Authenticate browser-based apps with Azure App Services
6. Secure your Azure resources with conditional access
7. Secure your Azure resources with role-based access control (RBAC)
8. Secure your Azure SQL Database



## Perform data engineering with Azure Databricks

**7H 49M - 9 Modules**

1. Introduction to Azure Databricks
2. Access SQL Data warehouse instances with Azure Databricks
3. Data ingestion with Azure data factory
4. Read and write data using Azure Databricks
5. Perform basic data transformations in Azure Databricks
6. Perform advanced data transformation in Azure Databricks
7. Create data pipelines using Databricks Delta
8. Work with streaming data in Azure Databricks
9. Create data visualizations using Azure Databricks and Power BI



## Work with NoSQL data in Azure Cosmos DB

**5H 55M - 8 Modules**

1. Create an Azure Cosmos DB database built to scale
2. Choose the appropriate API for Azure Cosmos DB storage
3. Insert and query data in your Azure Cosmos DB database
4. Store and access graph data in Azure Cosmos DB with the Graph API
5. Store and Access NoSQL Data with Azure Cosmos DB and the Table API
6. Build a .NET Core app for Azure Cosmos DB in Visual Studio Code
7. Optimize the performance of Azure Cosmos DB by using partitioning and indexing strategies
8. Distribute your data globally with Azure Cosmos DB



## Introduction to machine learning with Python and Azure Notebooks

**2H 11M - 3 Modules**

1. Analyze climate data with Azure Notebooks
2. Predict flight delays by creating a machine learning model in Python
3. Analyze the sentiment of reviews with Keras

## Become a Microsoft Certified Professional

Certification helps establish your credentials with current and future employers.

Pass certification exam AZ-203: Developing Solutions for Microsoft Azure to become a Microsoft Certified: Azure Developer Associate.

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