

Microsoft Certified: Azure Developer Associate (AZ-204)

This Microsoft Certified: Azure Developer Associate (AZ-204) training covers how to design, build, and implement applications using the Microsoft Azure cloud platform. Microsoft Azure is much more than just a cloud network. It's an entire ecosystem, full of services and tools to make application development and cloud development easier. This course covers a very wide range of skills and knowledge, including building web apps, APIs, and serverless functions.

[CBT Nuggets course material](#) →

WEEK 1

Understand Azure Regions and Resource Groups 151 min.

Understand the Point of the Azure Cloud	16
Explore and Customize Your Azure Portal	9
Understand Azure Regions, Availability Zones, and Data Centers	9
Understand Azure Resource Groups	9
Explore Azure AD and Cost Management	9

Deploy and Configure API Management

Manage Your APIs with Azure API Management	2
Understand What API Management Does	12
Deploy API Management (Portal and Powershell)	15
Design and Publish an API	13
Begin to Explore Policies	5
Apply Inbound Policies such as Backend Authentication	4
Explore Your Policy Reference and Sample Policies	5

Understand, Develop, and Ship Azure Function Apps

Understanding the Core Serverless Resource in Azure - Function Apps	2
What is a Function App?	13
Prep and Scaffold a Function App	8
Explore the Main Function	9
Explore the Other Root Files	6
Ship and Test Your Function App	5

WEEK 2

160 min.

Plus Ultra: Now Secure the Function App Behind Azure API Management 7

Understand and Store Data with Cosmos DB for NoSQL

Understand Cosmos DB for NoSQL 2

What Cosmos DB Brings to the Table 18

Deploying a Cosmos DB Account 6

Setup Custom Permissions and Create a Container 9

Write Items to the Container 11

Item Retrieval Basics 4

Query for Items and Delete Items 5

CHALLENGE: Build an End-to-End PaaS App

Let's See How Much We've Learned... 1

Consider the Architecture and Any Challenges 9

Scaffold a Cosmos DB Account 7

Scaffold a Function App (locally) 2

Extensions and Bindings 8

Explore the Function App Code 7

Ship the App and Integrate it with API-M 5

Test the Solution 4

Host Web Apps and APIs with Azure App Services

Getting to know the all-in-one web hosting solution 1

MORE PaaS?!? What Makes App Services so Special 7

Understand the App Service Plan 9

Scaffold a Basic Web App (React + Node) 4

Deploy an App Service Plan 5

Deploy an App service 6

Ship Your Code and Test the App 4

Deployment Slots, Custom Domains, SSL, and More 19

WEEK 3

157 min.

Configure Auto-Scaling 3

CHALLENGE: Make a change to the web code, deploy it to a deployment slot, and then swap the slot to production. 2

Containerize an Application

Introducing Containers and Docker and Why They Matter 1

Why Containers are so Awesome 17

Work with Docker 13

Scaffold a Basic React App to Containerize 4

Containerize the App with a Dockerfile 10

Build and Test the Container 11

CHALLENGE: 2

Ship and Run Containers in Azure

Introducing Container Compute Options 1

The Architecture and Options of Azure Container Compute 15

Deploy ACR 6

Push an Image to ACR 6

Run Your Container with ACI 8

Explore Configuration and Monitoring in ACI 6

Deploy Your Frontend Container to App Services 7

Deploy Your Service to Azure Container Apps 18

Understand Microservices and Asynchronous Design

What it Means to be Web-Scale	2
First Let's Understand Microservices	13
The Asynchronous, Loosely-Couple Architecture	12

WEEK 4

160 min.

Queueing Options in Azure	12
Deploy a Storage Account	12
Post a Message to the Queue	7

CHALLENGE: Create a Full Microservice Solution

Put All the Pieces Together	1
The Challenge	8
The Producer	12
The Consumer	13
Prep a Managed Identity	6
Deploy the Producer Container App	3
Assign the Managed Identity to the Container App	7
Deploy the Consumer App	2
Assign the Managed Identity and Cosmos DB Role	11

Use Service Bus for Messaging Operations

☒Introducing Advanced Queueing with Service Bus	1
Why Service Bus is Preferred	11
Deploy a Service Bus Namespace and a Queue	10
Develop for the Queue	11
Upgrade to a Standard SKU and Work with Topics	6
Develop for Topics and Subscriptions	4
Methods for Settling Messages	7

Develop for Object Storage

The BLOB!... Storage	2
What are BLOBS and how are they used?	14

WEEK 5

153 min.

Deploy a Storage Account	7
Upload a BLOB with Code	12
Download a File with Code	4
Get and Set Object Properties	7
Get and Set Metadata	4
Understand Access Tiers	4
Understand Versioning	6
Use Lifecycle Policies to Manage Access Tiers	4
CHALLENGE: Try to update the metadata on a BLOB to include a User's ID on your own, and once you're done, review the video below to check your work.	1

Develop for Event-Driven Architectures

Introducing Azure Event Grid	1
Events vs. Messages	11
Event Grid Key Terms	13
Set Up Permissions for Event Grid	8
Create a Subscription the Easy Way	8
Create a Subscription in Event Grid	13

Develop Event-Driven Apps with Logic Apps

Introducing Azure Logic Apps	1
Understand Azure Logic Apps	7
Deploy and Prep Logic Apps	12
Create a Basic Workflow	14

Add Complex Logic to Your Workflow 16

WEEK 6

155 min.

Administer Logic Apps 8

Ingest Streaming Data with Event Hub

Introducing Event Hub 3

The Point of Event Hub 8

Deploy a Namespace and Event Hub 11

The Producer App 10

Understand Consumer Mechanics 6

Consumer App Code 7

Test the Apps Simultaneously 2

CHALLENGE: Try to create a Logic App that writes data to an Event Hub on a schedule, then consume the messages with code. 1

Then, check the video below to compare your results to mine. 4

Implement Azure AD Authentication in a React App

Introducing Authn/Authz in Azure 2

Understanding Authentication Components 11

Understand the OAuth 2.0 Authorization Code Flow 11

Register the Application in Azure AD 7

Scaffold and Prep a React App 3

The authConfig file 7

The index.js File 3

The Four Components 10

The App.jsx File 9

Test the App 3

CHALLENGE: Create an implement your own protected component. 2

Use Azure Key Vault to Secure Sensitive Info

Introducing Azure Key Vault 1

Understand the Point of Key Vault 15

Deploy and Prep a Key Vault 11

WEEK 7

126 min.

Code for Key Vault 9

App Configs and Environment Variables 6

SAS Tokens 8

CHALLENGE 2

Troubleshoot Solutions Using Application Insights

Introducing Azure Application Insights 3

Understand Telemetry and App Insights 11

Deploy App Insights and Send Some Data 10

Configure Your App Insights SDK 6

Send Your Own Custom Metrics 9

Trace Requests, Dependencies, and Exceptions in FastAPI 7

CHALLENGE 2

Implement Caching for Azure Solutions

Optimize Applications with Azure Caching Solutions 2

Explore Redis Caching Strategies 9

Deploy Azure Cache for Redis 4

Set and Query the Cache	7
Perform a Lazy Load	7
Understand Eviction Policies	9
Set a TTL on a Key	5
Use Azure Front Door as your CDN	9
CHALLENGE	1