

# Exam AZ-204: Developing Solutions for Microsoft Azure – Skills Measured

## Audience Profile

Candidates for this exam are cloud developers who participate in all phases of development from requirements definition and design, to development and deployment, and maintenance. They partner with cloud DBAs, cloud administrators, and clients to implement solutions.

Candidates should be proficient in Azure SDKs, data storage options, data connections, APIs, app authentication and authorization, compute and container deployment, debugging, performance tuning, and monitoring.

Candidates must have 1-2 years professional development experience and experience with Microsoft Azure. They must be able to program in an Azure Supported Language.

## Skills Measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

## Develop Azure compute solutions (25-30%)

### Implement IaaS solutions

- provision VMs
- create ARM templates
- create container images for solutions
- publish an image to the Azure Container Registry
- run containers by using Azure Container Instance

### Create Azure App Service Web Apps

- create an Azure App Service Web App
- enable diagnostics logging
- deploy code to a web app
- configure web app settings

- implement autoscaling rules (schedule, operational/system metrics)

### **Implement Azure functions**

- implement input and output bindings for a function
- implement function triggers by using data operations, timers, and webhooks
- implement Azure Durable Functions

## **Develop for Azure storage (10-15%)**

### **Develop solutions that use Cosmos DB storage**

- select the appropriate API for your solution
- implement partitioning schemes
- interact with data using the appropriate SDK
- set the appropriate consistency level for operations
- create Cosmos DB containers

### **Develop solutions that use blob storage**

- move items in Blob storage between storage accounts or containers
- set and retrieve properties and metadata
- interact with data using the appropriate SDK
- implement data archiving and retention

## **Implement Azure security (15-20%)**

### **Implement user authentication and authorization**

- implement OAuth2 authentication
- create and implement shared access signatures
- register apps and use Azure Active Directory to authenticate users

### **Implement secure cloud solutions**

- secure app configuration data by using the App Configuration and KeyVault API
- manage keys, secrets, and certificates by using the KeyVault API
- implement Managed Identities for Azure resources

## **Monitor, troubleshoot, and optimize Azure solutions (10-15%)**

### **Integrate caching and content delivery within solutions**

- develop code to implement CDN's in solutions

- configure cache and expiration policies
- store and retrieve data in Azure Redis cache

### **Instrument solutions to support monitoring and logging**

- configure instrumentation in an app or service by using Application Insights
- analyze and troubleshoot solutions by using Azure Monitor
- implement Application Insights Web Test and Alerts
- implement code that handles transient faults

## **Connect to and consume Azure services and third-party services (25-30%)**

### **Develop an App Service Logic App**

- create a Logic App
- create a custom connector for Logic Apps
- create a custom template for Logic Apps

### **Implement API management**

- create an APIM instance
- configure authentication for APIs
- define policies for APIs

### **Develop event-based solutions**

Note: Creating event models is in scope

- implement solutions that use Azure Event Grid
- implement solutions that use Azure Notification Hubs
- implement solutions that use Azure Event Hub

### **Develop message-based solutions**

- implement solutions that use Azure Service Bus
- implement solutions that use Azure Queue Storage queues