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

The English language version of this exam will be updated on April 19, 2022.

Following the current exam guide, we have included a version of the exam guide with Track Changes set to “On,” showing the changes that will be made to the exam on that date.

NOTE: Passing score: 700. Learn more about exam scores.

Audience Profile

Candidates for the Azure Developer Associate certification should have subject matter expertise designing, building, testing, and maintaining cloud applications and services on Microsoft Azure.

Responsibilities for this role include participating in all phases of cloud development from requirements, definition, and design, to development, deployment, and maintenance, performance tuning, and monitoring.

Azure Developers partner with cloud solution architects, cloud DBAs, cloud administrators, and clients to implement solutions.

A candidate for this certification should have 1-2 years professional development experience and experience with Microsoft Azure. In addition, the role should have ability programming in a language supported by Azure and proficiency in Azure SDKs, Azure PowerShell, Azure CLI, data storage options, data connections, APIs, app authentication and authorization, compute and container deployment, debugging, performance tuning, and monitoring.

Skills Measured

NOTE: The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

NOTE: Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Develop Azure compute solutions (25-30%)

Implement IaaS solutions

- provision virtual machines (VMs)
- configure, validate, and deploy ARM templates
- configure 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 including SSL, API settings, and connection strings
- implement autoscaling rules including scheduled autoscaling and autoscaling by operational or system metrics

Implement Azure functions
- create and deploy Azure Functions apps
- implement input and output bindings for a function
- implement function triggers by using data operations, timers, and webhooks
- implement Azure Durable Functions
- implement custom handlers

Develop for Azure storage (15-20%) 
Develop solutions that use Cosmos DB storage
- select the appropriate API and SDK for a solution
- implement partitioning schemes and partition keys
- perform operations on data and Cosmos DB containers
- set the appropriate consistency level for operations
- manage change feed notifications

Develop solutions that use blob storage
- move items in Blob storage between storage accounts or containers
- set and retrieve properties and metadata
- perform operations on data by using the appropriate SDK
- implement storage policies, and data archiving and retention

Implement Azure security (20-25%)
Implement user authentication and authorization
- authenticate and authorize users by using the Microsoft Identity platform
- authenticate and authorize users and apps by using Azure Active Directory
- create and implement shared access signatures
Implement secure cloud solutions

- secure app configuration data by using App Configuration Azure Key Vault
- develop code that uses keys, secrets, and certificates stored in Azure Key Vault
- implement Managed Identities for Azure resources
- implement solutions that interact with Microsoft Graph

**Monitor, troubleshoot, and optimize Azure solutions (15-20%)**

Integrate caching and content delivery within solutions

- configure cache and expiration policies for Azure Redis Cache
- implement secure and optimized application cache patterns including data sizing, connections, encryption, and expiration

**Instrument solutions to support monitoring and logging**

- configure an app or service to use Application Insights
- analyze and troubleshoot solutions by using Azure Monitor
- implement Application Insights web tests and alerts

**Connect to and consume Azure services and third-party services (15-20%)**

Implement API Management

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

**Develop event-based solutions**

- implement solutions that use Azure Event Grid
- 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

*The following exam guide shows the changes that will be implemented on April 19, 2022 to the English language version of this exam. Note that the audience profile has been updated.*
Audience Profile

Candidates for this exam are cloud developers who participate in all phases of development from requirements definition and design to development, 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 should have 1-2 years professional development experience and experience with Microsoft Azure. They should be able to program in an Azure-supported language, and should be proficient using Azure CLI, Azure PowerShell, and other tools.

Skills measured

NOTE: The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

NOTE: Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Develop Azure compute solutions (25-30%)

Implement IaaS solutions

- provision virtual machines (VMs)
- configure, validate, and deploy ARM templates
- configure 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 including SSL, API settings, and connection strings
- implement autoscaling rules including scheduled autoscaling and autoscaling by operational or system metrics

Implement Azure functions
• create and deploy Azure Functions apps
• implement input and output bindings for a function
• implement function triggers by using data operations, timers, and webhooks
• implement Azure Durable Functions
• Implement custom handlers

Develop for Azure storage (15-20%)

Develop solutions that use Cosmos DB storage
• select the appropriate API and SDK for a solution
• implement partitioning schemes and partition keys
• perform operations on data and Cosmos DB containers
• set the appropriate consistency level for operations
• manage change feed notifications

Develop solutions that use blob storage
• move items in Blob storage between storage accounts or containers
• set and retrieve properties and metadata
• perform operations on data by using the appropriate SDK
• implement storage policies, and data archiving and retention

Implement Azure security (20-25%)

Implement user authentication and authorization
• authenticate and authorize users by using the Microsoft Identity platform
• authenticate and authorize users and apps by using Azure Active Directory
• create and implement shared access signatures
• Implement solutions that interact with Microsoft Graph

Implement secure cloud solutions
• secure app configuration data by using App Configuration Azure Key Vault
• develop code that uses keys, secrets, and certificates stored in Azure Key Vault
• implement Managed Identities for Azure resources
• Implement solutions that interact with Microsoft Graph

Monitor, troubleshoot, and optimize Azure solutions (15-20%)

Implement caching and content delivery within services
• configure cache and expiration policies for Azure Redis Cache for Redis
• implement secure and optimized application cache patterns including data sizing, connections, encryption, and expiration
Troubleshoot solutions to support monitoring by using metrics and logging data

- configure an app or service to use Application Insights
- Review and analyze solutions by using Azure Monitor metrics and log data
- implement Application Insights web tests and alerts

Connect to and consume Azure services and third-party services (15-20%)

Implement API Management

- create an APIM instance
- Create and document APIs
- configure authentication for APIs
- define policies for APIs

Develop event-based solutions

- implement solutions that use Azure Event Grid
- 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