Microsoft

Enterprise Skills Initiative

Study guide for Exam AZ-204: Developing Solutions for Microsoft Azure

QUICK NAVIGATION

Document purpose

As an attendee of the Exam Prep session for **Exam AZ-204: Developing Solutions for Microsoft Azure**, you can use this guide as a summary of the topics covered and to explore important links and additional resources. The information and materials found here can help you focus your studies as you prepare for the exam.

About Exam AZ-204: Developing Solutions for Microsoft Azure

Exam AZ-204 is required to earn the **Azure Developer Associate certification**.

This exam measures your ability to design, build, test, and maintain cloud applications and services on Microsoft Azure.

A candidate for this exam, you should have one to two years of professional development experience and experience with Azure. In addition, you need the ability to program 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

For the full list of the skills that the exam measures, along with the level of experience and expertise that you'll need as an exam candidate, check out the Exam AZ-204 skills outline.

Certification journey

For an overview of the journey to Microsoft Certification, including prerequisites (if any) and follow-up resources, explore The journey to Microsoft Certified: Azure Developer Associate.

Exam overview

For information on the exam, including the types of questions you may encounter, read About Microsoft Certification exams.

Objective domains

This section itemizes the topics covered in the Exam Prep session and links to Microsoft documentation so you can review the topics in detail.

- Develop Azure compute solutions (25–30%)
- Develop for Azure Storage (10–15%)
- Implement Azure security (15–20%)
- Monitor, troubleshoot, and optimize Azure solutions (10–15%)
- Connect to and consume Azure services and third-party services (25–30%)

Develop Azure compute solutions (25–30%)

Implement IaaS solutions

- Infrastructure as a Service (IaaS)
- Create a Windows virtual machine (VM) in the Azure portal
- Create a Linux virtual machine that uses SSH authentication with the REST API
- VM pricing models
- Azure Resource Manager and Azure Resource Manager templates (ARM templates)
- ARM template elements
- Differences between VMs and containers
- Containers
- Docker
- Azure Container Registry and Azure Container Instances
- Make a docker image available in Azure Container Registry
- Run a container using Azure Container Instances
- Container Instances pricing
- Container Registry SKUs

Create Azure App Service web apps

- Azure App Service
- Azure App Service plan
- App Service pricing
- Creating a web app with Azure PowerShell
- Create a web app and deploy code from GitHub
- Azure monitoring services
- Azure App Configuration

Implement Azure Functions

- Azure Functions
- Triggers and trigger types
- An introduction to Azure Functions
- Bindings in Azure
- Durable Functions
- Orchestrator functions
- Consumption plan versus Azure App Service plan

Develop for Azure Storage (10–15%)

Develop solutions that use Azure Cosmos DB storage

- Azure Cosmos DB
- APIs
- Steps to use Azure Cosmos DB
- Create an Azure Cosmos DB instance
- Create a database and container in Azure Cosmos DB
- Partitioning implementation
- Insert or retrieve a document using the SQL API
- Azure Cosmos DB pricing model

Develop solutions that use Blob storage

- Blob storage
- Manage blobs with Python
- Azure storage access tiers
- Managing Azure Blob storage lifecycle
- Replication strategies

Implement Azure security (15–20%)

Implement user authentication and authorization

- Authentication (authN) and authorization (authZ)
- Service principals
- Role-based access control (RBAC)
- Register apps with Azure Active Directory (Azure AD)
- Create an Azure AD app and configure it to access
- Media Services API
- Shared access signature (SAS)
- Secure Sockets Layer (SSL) certificates
- Encryption

Implement secure cloud solutions

- Key Vault
- Using Azure Key Vault
- Key Vault operations
- Managed identity
- Tracking and logging using a managed identity
- Types of managed identities | differences

Monitor, troubleshoot, and optimize Azure solutions (10–15%)

Integrate caching and content delivery within solutions

- Azure Content Delivery Network (CDN)
- Caching fundamentals
- Azure Front Door
- Adding Azure CDN to an Azure App Service web app
- Creating a Front Door for a highly available global web application
- Difference between Azure CDN and Azure Front Door
- Azure Cache for Redis
- Create and use an Azure Cache for Redis

Instrument solutions to support monitoring and logging

- Azure Monitor
- Implement and configure Application Insights
- Alerts and alert rules
- Creating alerts and alert rules data classification
- Log Analytics queries

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

Implement API Management

- Introduction to API Management
- Create a new API Management instance using the Azure portal
- Configuring authentication for APIs
- API Management policies

Develop event-based solutions

- Events vs. messaging services
- Event-driven architecture
- Azure Event Grid
- Subscribe to events for an Azure subscription with Azure CLI
- Azure Event Hubs

Develop message-based solutions

- Azure Service Bus
- Azure Queue storage
- Storage queues and Service Bus queues compared and contrasted
- Cloud messaging options

Additional study resources

In addition to the documentation listed in the previous sections, we offer several resources to help you prepare for the exam and to stay up to speed and engaged with the Azure community. These resources range from formal training to blogs and even interviews with Microsoft team members.

Course AZ-204T00-A: Developing solutions for Microsoft Azure	Take a five-day instructor-led course that covers how to create end-to-end solutions in Microsoft Azure and combines lectures with practical, hands-on exercises.
Course AZ-020T00-A: Microsoft Azure solutions for AWS developers	Take a three-day instructor-led course that covers how to prepare end-to-end solutions in Microsoft Azure and combines lectures with practical, hands-on exercises.
AZ-204 online learning paths	Don't miss these free, self-paced online resources to help you gain the skills needed to earn your certification.
AZ-204: Developing Solutions for Microsoft Azure – Microsoft Official Practice Test	Microsoft Official Practice Tests are self-study tools that prepare candidates for the Microsoft required exams. These practice tests are written by subject matter experts and are designed to ensure that all crucial exam objectives are covered in-depth.
Azure documentation	Stay informed on the latest products, tools, and features, and get information on pricing, partners, support, solutions, and more.
Azure Community Support	Ask questions, get answers, and connect with Microsoft engineers and Azure community experts.
Microsoft Learn Community Blog	Get the latest information about certification tests and exam study groups.
Channel 9	Explore this community site for customers. It includes video channels, discussions, podcasts, screencasts, and interviews.

Azure Tuesdays with Corey	Corey Sanders answers your questions about Microsoft Azure.
Azure Fridays	Scott Hanselman, Partner Program Manager, speaks with Azure engineers as they demo capabilities and share insights.
Microsoft Azure Blog	Keep current on what's happening in Azure, including what's in preview and what's generally available, along with Azure news, updates, and much more.