



Microsoft Azure Developer Associate
(AZ-204)



Microsoft Azure Developer Associate (AZ-204)

Introduction

The Microsoft Azure Developer Associate AZ-204 course provides a structured, in-depth understanding of developing cloud-based solutions with Microsoft Azure. The program focuses on core development concepts for designing, building, testing, and maintaining scalable Azure applications. It covers essential services, including compute, storage, security, and integration technologies used in modern cloud environments. Participants explore how application components interact within Azure architecture. It emphasizes efficient development workflows and application lifecycle management. Learners gain a strong theoretical foundation aligned with professional Azure development practices.

Targeted Groups

This Microsoft Azure Developer Associate AZ-204 training targets professionals seeking knowledge and skills:

- Software developers working with cloud-based applications.
- Application developers transitioning to Microsoft Azure environments.
- Backend developers supporting scalable cloud solutions.
- Web developers building Azure-hosted applications.
- IT professionals involved in application deployment processes.
- Technical engineers supporting cloud development teams.
- Programmers seeking Azure development certification readiness.
- Professionals aiming to strengthen cloud application design knowledge.

Course Objectives

Participants will achieve the following objectives by completing the Microsoft Azure Developer Associate AZ-204 course:

- Understand Azure development concepts and terminology.
- Analyze the architecture and service selection for an Azure application.
- Explain the compute services used in cloud development.
- Identify appropriate Azure storage solutions.
- Understand secure application authentication methods.
- Interpret identity management concepts in Azure.
- Describe API and integration services functionality.
- Apply principles of application monitoring and diagnostics.
- Understand deployment strategies for Azure applications.
- Evaluate performance optimization approaches.
- Recognize event-driven development models.
- Understand messaging-based application workflows.
- Analyze configuration management practices.
- Explain container-based application concepts.
- Understand DevOps alignment in Azure development.
- Interpret application lifecycle management stages.
- Recognize best practices for scalable cloud solutions.

Targeted Competencies

Participants will gain the following competencies during the Microsoft Azure Developer Associate AZ-204 program:

- Understanding Azure development architecture principles.
- Ability to interpret cloud-native application models.
- Knowledge of Azure compute and hosting options.
- Understanding secure access control mechanisms.
- Familiarity with Azure storage structures.
- Ability to analyze application integration flows.
- Understanding event-based application design.
- Knowledge of monitoring and logging concepts.
- Awareness of performance tuning techniques.
- Ability to assess deployment strategies theoretically.
- Understanding configuration and environment management.
- Knowledge of scalable and resilient design concepts.

Studying Scenarios

In this Microsoft Azure Developer Associate AZ-204 training, participants develop skills through the following scenarios:

- Analyzing application requirements to select Azure services.
- Reviewing cloud architecture diagrams for development alignment.
- Studying identity flow between applications and users.
- Examining storage choices for structured and unstructured data.
- Evaluating messaging patterns in distributed systems.
- Assessing application monitoring data for performance insight.
- Reviewing deployment models for cloud applications.
- Interpreting error handling and diagnostics scenarios.

Course Content

Unit 1: Azure Development Fundamentals

- Overview of Microsoft Azure platform architecture.
- Understanding cloud computing models and service layers.
- Azure resource management concepts for developers.
- Subscription, resource group, and service organization structure.
- Azure development tools and supported languages.
- Application lifecycle concepts in cloud environments.
- Understanding regional deployment and availability design.
- Development responsibilities within Azure environments.

Unit 2: Developing Azure Compute Solutions

- Understanding Azure App Service architecture.
- Web application hosting concepts in Azure.
- Azure Functions and serverless development principles.
- Event-driven compute execution models.
- Background processing and task automation concepts.

- Container-based compute fundamentals in Azure.
- Virtual machine usage for development workloads.
- Selecting compute services based on application design.

Unit 3: Implementing Azure Storage and Data Solutions

- Overview of Azure storage services structure.
- Blob storage concepts for unstructured data.
- Table storage and NoSQL design fundamentals.
- File storage use cases for applications.
- Queue storage concepts for messaging workflows.
- Data redundancy and replication principles.
- Secure access to storage resources.
- Storage performance and scalability considerations.

Unit 4: Securing, Integrating, and Monitoring Applications

- Azure identity management fundamentals.
- Authentication and authorization principles.
- Managed identities and secure access concepts.
- API Management architecture overview.
- Integration patterns using Azure services.
- Messaging services for distributed applications.
- Application monitoring concepts using Azure tools.
- Logging, diagnostics, and telemetry interpretation.

Unit 5: Application Deployment, Optimization, and Maintenance

- Azure deployment models and release strategies.
- Configuration management for cloud applications.
- Environment separation and version control concepts.
- Continuous integration and deployment principles.
- Application performance optimization strategies.
- Scaling methods and load handling concepts.
- Fault tolerance and resiliency design.
- Application update and maintenance lifecycle.

Final Insights & Key Takeaways

This Microsoft Azure Developer Associate AZ-204 course provides a structured theoretical foundation for understanding modern cloud application development. Participants finish with clear insight into Azure development architecture, service integration, and scalable application design principles.