

AZ-204: Microsoft Azure Developer Associate

Level: Associate

Duration: 40–50 Hours

Course Overview

The **AZ-204: Microsoft Azure Developer Associate** course is designed for developers who want to build cloud-based applications and services on Microsoft Azure. This course covers topics such as implementing Azure services, security, storage, and monitoring, and is aligned with the **Microsoft Azure Developer Associate certification exam**.

Course Objectives

- Develop Azure compute solutions
 - Implement Azure storage solutions
 - Design and implement Azure security solutions
 - Monitor, troubleshoot, and optimize Azure solutions
 - Prepare for the **AZ-204 Developer Associate** certification exam
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Course Outline

Module 1: Develop Azure Compute Solutions

- Implement Azure App Services
 - Develop Azure Functions
 - Implement Azure Container Instances and Azure Kubernetes Service (AKS)
 - Configure application settings and connection strings
 - Implement deployment slots and continuous integration/continuous deployment (CI/CD)
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Module 2: Implement Azure Storage Solutions

- Develop solutions for using Azure Blob Storage
- Manage data in Azure Cosmos DB and SQL Database
- Integrate Azure Storage with applications
- Implement data storage strategies using Azure Queue and Table Storage

- Implement Azure File Storage and Share
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Module 3: Implement Azure Security Solutions

- Implement authentication and authorization for Azure applications
 - Use Managed Identity and Azure Active Directory (Azure AD)
 - Secure communication between Azure resources with Azure Key Vault
 - Implement OAuth2, OpenID Connect, and role-based access control (RBAC)
 - Implement encryption at rest and in transit
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Module 4: Monitor, Troubleshoot, and Optimize Azure Solutions

- Implement logging and monitoring with Azure Monitor and Application Insights
 - Configure diagnostic settings and troubleshooting tools
 - Monitor performance and optimize applications for Azure
 - Integrate third-party tools for monitoring
 - Implement autoscaling and performance tuning
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Module 5: Connect to and Consume Azure Services and Third-Party Services

- Implement Azure Service Bus, Event Grid, and Event Hubs for messaging
 - Integrate Azure Logic Apps, Azure Functions, and WebJobs for automation
 - Integrate third-party services with Azure APIs and RESTful services
 - Implement API management with Azure API Management
 - Use Azure Cognitive Services and integrate AI with applications
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Module 6: Design and Implement Azure Solutions for APIs and Web Apps

- Create and deploy Azure APIs with API Management
 - Configure and deploy web apps using Azure App Service
 - Implement custom authentication and authorization for web apps
 - Integrate with Azure Active Directory for authentication in web apps
 - Implement session state and cookies in Azure web apps
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Module 7: Implement Azure DevOps for Development and Deployment

- Implement CI/CD pipelines using Azure DevOps
 - Set up and configure version control for Azure repositories
 - Implement automated testing and deployment strategies
 - Create release pipelines with Azure DevOps
 - Use Azure DevTest Labs for provisioning environments
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Module 8: Exam Preparation and Practice

- Review key topics and best practices
 - Practice questions to familiarize with exam format
 - Scenario-based assessments and real-world applications
 - Final mock exam and exam tips
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Target Audience

- Developers who want to build cloud-based applications and services on Microsoft Azure
 - IT professionals looking to enhance their Azure development skills
 - Candidates preparing for the **AZ-204** certification exam
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Prerequisites

- Proficiency in programming with C#, Java, Python, or other languages
- Experience with web development, cloud-based services, and application lifecycle management
- Basic understanding of Microsoft Azure is helpful but not required