APPLIED TECHNOLOGY ACADEMY

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Developing Solutions for Microsoft Azure (AZ-204) Training

Microsoft Authorized Training · Applied Technology Academy

This AZ-204 course teaches developers how to create end-to-end solutions in Microsoft Azure. Students will learn how to implement Azure compute solutions, create Azure Functions, implement and manage web apps, develop solutions utilizing Azure storage, implement authentication and authorization, and secure their solutions by using KeyVault and Managed Identities.

LEVEL	DURATION	EXPERIENCE	AVERAGE SALARY	LABS
Intermediate	**5 Days**	**2 years: Azure IaaS & PaaS & AZ-900**	**$133,519**	**No**

Course Overview

In this AZ-204 Training Course, you will learn:

- Azure Fundamentals
- Azure Virtual Machines
- Azure App Service
- Azure Functions
- Azure Storage
- Azure Cosmos DB
- Azure Logic
- Azure Event Grid and Azure Event Hubs
- Azure Service Bus
- Azure Key Vault
- Authentication and Authorization
- Monitoring and Diagnostics

Course Outline

- 1. Develop Azure compute solutions (25-30%)
- 1.1 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

- 1.2 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 aut scaling by operational or system metric
- 1.3 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
- 2. Develop for Azure storage (15-20%)
- 2.1 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
- 2.2 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
- 3. Implement Azure security (20-25%)
- 3.1 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
- 3.2 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 solutions that interact with Microsoft Graph
- 4. Monitor, troubleshoot, and optimize Azure solutions (15-20%)
- 4.1 Integrate caching and content delivery within solutions

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- Configure cache and expiration policies
- Configure cache and expiration policies for Azure Redis Cache
- Implement secure and optimized application cache patterns including data sizing, connections, encryption, and expiration
- 4.2 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
- 5. Connect to and consume Azure services and third-party services (15- 20%)
- 5.1 Implement API Management
- Create an APIM instance
- Configure authentication for APIs
- Define policies for APIs
- 5.2 Develop event-based solutions
- Implement solutions that use Azure Event Grid
- Implement solutions that use Azure Notification Hubs
- Implement solutions that use Azure Event Hub
- Import OpenAPI definitions
- 5.3 Develop message-based solutions
- Implement solutions that use Azure Service Bus
- Implement solutions that use Azure Queue Storage queues

Intended Audience

Students in this course are interested in Azure development or in passing the Microsoft Azure Developer Associate certification exam.

Prerequisites

To be successful in this course, learners should have the following:

- Hands-on experience with Azure IaaS and PaaS solutions, and the Azure Portal
- Experience writing in an Azure supported language at the intermediate level. (C#, JavaScript, Python, or Java)

Ability to write code to connect and perform operations on, a SQL or NoSQL database product. (SQL Server, Oracle, MongoDB, Cassandra, or similar)

- Experience writing code to handle authentication, authorization, and other security principles at the intermediate level
- A general understanding of HTML, the HTTP protocol and REST API interfaces

- If you are new to Azure and cloud computing consider course AZ-900.

Follow-On Courses

- Azure Security Technologies (AZ-500)
- Administering Windows Sever Hybrid Core Infrastructure (AZ-800)

Ready to enroll? Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.