Microsoft Certified Azure Developer Associate (AZ-203 = AZ-200 + AZ-201) Course Agenda

Module 1: Develop Azure Infrastructure as a Service Compute Solutions

- Implement solutions that use virtual machines (VM)
 - Provision VMs
 - Create ARM templates
 - Configure Azure Disk Encryption for VMs
- Implement batch jobs by using Azure Batch Services
 - Manage batch jobs by using Batch Service API
 - o Run a batch job by using Azure CLI, Azure portal, and other tools
 - o Write code to run an Azure Batch Services batch job
- Create containerized solutions
 - Create an Azure Managed Kubernetes Service (AKS) cluster
 - Create container images for solutions
 - Publish an image to the Azure Container Registry
 - Run containers by using Azure Container Instance or AKS

Module 2: Develop the Azure Platform as a Service Compute Solutions

- Create Azure App Service Web Apps
 - Create an Azure App Service Web App
 - Create an Azure App Service background task by using WebJobs
 - Enable diagnostics logging
- Create Azure App Service mobile apps
 - Add push notifications for mobile apps
 - Enable offline sync for mobile app
 - Implement a remote instrumentation strategy for mobile devices
- Create Azure App Service API apps
 - Create an Azure App Service API app

- Create documentation for the API by using open source and other tools
- Implement Azure functions
 - o Implement input and output bindings for a function
 - o Implement function triggers by using data operations, timers, and webhooks
 - o Implement Azure Durable Functions
 - Create Azure Function apps by using Visual Studio

Module 3: Develop for Azure storage

- Develop solutions that use storage tables
 - Design and implement policies for tables
 - Query table storage by using code
 - Implement partitioning schemes
- Develop solutions that use Cosmos DB storage
 - o Create, read, update, and delete data by using appropriate APIs
 - o Implement partitioning schemes
 - Set the appropriate consistency level for operations
- Develop solutions that use a relational database
 - Provision and configure relational databases
 - o Configure elastic pools for Azure SQL Database
 - o Create, read, update, and delete data tables by using code
- Develop solutions that use blob storage
 - o Move items in blob storage between storage accounts or containers
 - Set and retrieve properties and metadata
 - o Implement blob leasing
 - o Implement data archiving and retention

Module 4: Implement Azure security

- Implement authentication
 - o Implement authentication by using certificates, forms-based authentication, or tokens
 - o Implement multi-factor or Windows authentication by using Azure AD
 - Implement OAuth2 authentication
 - o Implement Managed Service Identity (MSI)/Service Principal authentication
- Implement access control
 - o Implement CBAC (Claims-Based Access Control) authorization
 - o Implement RBAC (Role-Based Access Control) authorization
 - o Create shared access signatures
- Implement secure data solutions
 - Encrypt and decrypt data at rest and in transit
 - o Create, read, update, and delete keys, secrets, and certificates by using the KeyVault API

Module 5: Monitor, troubleshoot, and optimize Azure solutions

- Develop code to support scalability of apps and services
 - o Implement autoscaling rules and patterns
 - o Implement code that handles transient faults
- Integrate caching and content delivery within solutions
 - o Store and retrieve data in Azure Redis cache
 - o Develop code to implement CDNs in solutions
 - Invalidate cache content (CDN or Redis)
- Instrument solutions to support monitoring and logging
 - o Configure instrumentation in an app or service by using Application Insights
 - Analyze and troubleshoot solutions by using Azure Monitor
 - Implement Application Insights Web Test and Alerts

Module 6: Connect to and Consume Azure Services and Third-party Services

- Develop an App Service Logic App
 - Create a Logic App
 - Create a custom connector for Logic Apps
 - Create a custom template for Logic Apps
- Integrate Azure Search within solutions
 - Create an Azure Search index
 - Import searchable data
 - Query the Azure Search index
- Establish API Gateways
 - o Create an APIM instance
 - Configure authentication for APIs
 - Define policies for APIs
- Develop event-based solutions
 - o Implement solutions that use Azure Event Grid
 - o Implement solutions that use Azure Notification Hubs
 - o Implement solutions that use Azure Event Hub
- Develop message-based solutions
 - o Implement solutions that use Azure Service Bus
 - Implement solutions that use Azure Queue Storage queues

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