Microsoft Azure Developer Associate (AZ-204) Crash Course

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Resources

Exam az-204: Developing Solutions for Microsoft
Azure
https://docs.microsoft.com/en-us/learn/certifications/exams/az-204
https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B

Browse code samples
https://learn.microsoft.com/en-us/samples/browse/

Provision virtual machines (VMs)
https://docs.microsoft.com/en-us/azure/virtual-machines/
https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/create-sql-vm-portal
https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/create-sql-vm-powershell

Configure, validate, and deploy ARM templates
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-first-template
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/quickstart-create-templates-use-the-portal
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/overview
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/bicep-overview
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-specs?tabs=azure-powershell
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/deployment-tutorial-local-template?tabs=azure-powershell
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/deployment-tutorial-linked-template?tabs=azure-powershell
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/deployment-tutorial-pipeline

Configure container images for solutions
https://docs.microsoft.com/en-us/learn/modules/build-and-store-container-images/

https://docs.microsoft.com/en-us/learn/modules/deploy-run-container-app-service/

Azure Container Apps
https://learn.microsoft.com/en-us/azure/container-apps/overview

Publish an image to the Azure Container Registry
https://docs.microsoft.com/en-us/azure/container-registry/
https://docs.microsoft.com/en-us/azure/container-registry/container-registry-intro
https://docs.microsoft.com/en-us/azure/container-registry/container-registry-concepts
https://docs.microsoft.com/en-us/azure/container-registry/container-registry-get-started-docker-cli
https://docs.microsoft.com/en-us/azure/container-registry/container-registry-webhook
https://learn.microsoft.com/en-us/azure/container-instances/container-instances-using-azure-container-registry
https://learn.microsoft.com/en-us/azure/container-registry/container-registry-authentication-managed-identity?tabs=azure-cli

Run containers by using Azure Container Instance
https://docs.microsoft.com/en-us/learn/modules/run-docker-with-azure-container-instances/
https://docs.microsoft.com/en-us/azure/container-instances/container-instances-overview
https://docs.microsoft.com/en-us/azure/container-instances/container-instances-quickstart-portal

Create an Azure App Service Web App
https://docs.microsoft.com/en-us/azure/app-service/
https://docs.microsoft.com/en-us/azure/app-service/overview
https://docs.microsoft.com/en-us/azure/app-service/quickstart-dotnetcore?tabs=netcore31&pivots=development-environment-vs

Enable diagnostics logging
https://docs.microsoft.com/en-us/azure/app-service/troubleshoot-diagnostic-logs

Deploy code to a web app
https://docs.microsoft.com/en-us/azure/app-service/deploy-run-package
https://docs.microsoft.com/en-us/azure/app-service/deploy-zip
https://docs.microsoft.com/en-us/azure/app-service/deploy-local-git?tabs=cli
https://docs.microsoft.com/en-us/azure/app-service/deploy-complex-application-predictably

Configure web app settings including SSL, API settings, and connection strings
https://docs.microsoft.com/en-us/azure/app-service/configure-common
https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-bindings

Implement auto scaling rules including scheduled autoscaling and auto scaling by operational or system metrics
https://docs.microsoft.com/en-us/azure/app-service/manage-scale-up

Create and deploy Azure Functions apps
https://docs.microsoft.com/en-us/azure/azure-functions/functions-overview
https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-your-first-function-visual-studio
https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-first-function-resource-manager?tabs=visual-studio-code%2Cazure-cli
https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale?WT.mc_id=Portal-WebsitesExtension

Implement input and output bindings for a function
Implement function triggers by using data operations, timers, and webhooks
https://docs.microsoft.com/en-us/azure/azure-functions/functions-triggers-bindings?tabs=csharp
https://docs.microsoft.com/en-us/azure/azure-functions/add-bindings-existing-function?tabs=csharp
https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-return-value?tabs=csharp
https://docs.microsoft.com/en-us/learn/modules/execute-azure-function-with-triggers/

Implement Azure Durable Functions
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-overview?tabs=csharp
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-create-first-csharp?pivots=code-editor-vscode
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-sequence?tabs=csharp
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-cloud-backup?tabs=csharp
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-monitor?tabs=csharp
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-http-api#get-all-instances-status
https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-external-events?tabs=csharp

Implement custom handlers
https://docs.microsoft.com/en-us/azure/azure-functions/functions-custom-handlers

Select the appropriate API and SDK for a solution
https://docs.microsoft.com/en-us/learn/modules/choose-api-for-cosmos-db/
https://docs.microsoft.com/en-us/azure/cosmos-db/introduction
https://docs.microsoft.com/en-us/azure/cosmos-db/relational-nosql

https://docs.microsoft.com/en-us/azure/cosmos-db/create-sql-api-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/create-mongodb-nodejs
https://docs.microsoft.com/en-us/azure/cosmos-db/create-cassandra-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/create-graph-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/create-table-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/sql-api-sdk-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/change-feed

Implement partitioning schemes and partition keys
https://docs.microsoft.com/en-us/azure/cosmos-db/partitioning-overview
https://docs.microsoft.com/en-us/azure/cosmos-db/partitioning-overview#choose-partitionkey

Perform operations on data and Cosmos DB containers
https://docs.microsoft.com/en-us/azure/cosmos-db/account-databases-containers-items
https://docs.microsoft.com/en-us/azure/cosmos-db/sql-api-get-started

Set the appropriate consistency level for operations
https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels

Manage change feed notifications
https://docs.microsoft.com/en-us/azure/cosmos-db/change-feed
https://learn.microsoft.com/en-us/azure/cosmos-db/nosql/change-feed-functions

Move items in Blob storage between storage accounts or containers
https://docs.microsoft.com/en-us/learn/modules/copy-blobs-from-command-line-and-code/

Set and retrieve properties and metadata
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-properties-metadata?tabs=dotnet

Perform operations on data by using the appropriate SDK
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-quickstart-blobs-dotnet
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-quickstart-blobs-dotnet-legacy

Implement storage policies, and data archiving and retention
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-lifecycle-management-concepts?tabs=azure-portal
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-immutability-policies-manage?tabs=azure-portal

Authenticate and authorize users by using the Microsoft Identity platform
https://docs.microsoft.com/en-us/azure/active-directory/develop/
https://docs.microsoft.com/en-us/advertising/guides/authentication-oauth-identity-platform?view=bingads-13

https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-auth-code-flow
https://docs.microsoft.com/en-us/azure/active-directory/develop/authentication-vs-authorization
https://www.youtube.com/watch?v=y_fgJAatVhk
https://www.youtube.com/results?search_query=microsoft+identity+platform
https://docs.microsoft.com/en-us/azure/active-directory/develop/msal-overview
https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-overview

Authenticate and authorize users and apps by using Azure Active Directory
https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-provider-aad
https://devblogs.microsoft.com/premier-developer/adding-authentication-to-your-app-easily-with-azure-ad/

Create and implement shared access signatures
https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview
https://docs.microsoft.com/en-us/samples/azure-samples/storage-dotnet-sas-getting-started/storage-dotnet-sas-getting-started/

Secure app configuration data by using App Configuration Azure Key Vault
https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references

Develop code that uses keys, secrets, and certificates stored in Azure Key Vault
https://docs.microsoft.com/en-us/dotnet/api/overview/azure/security.keyvault.keys-readme
https://docs.microsoft.com/en-us/dotnet/api/overview/azure/security.keyvault.secrets-readme
https://docs.microsoft.com/en-us/dotnet/api/overview/azure/security.keyvault.certificates-readme

Implement solutions that interact with Microsoft Graph
https://docs.microsoft.com/en-us/graph/overview
https://docs.microsoft.com/en-us/learn/paths/m365-msgraph-associate/
https://docs.microsoft.com/en-us/graph/sdks/sdks-overview
https://docs.microsoft.com/en-us/graph/sdks/sdk-installation
https://docs.microsoft.com/en-us/graph/api/resources/azure-ad-overview?view=graph-rest-1.0
https://docs.microsoft.com/en-us/graph/overview
https://developer.microsoft.com/en-us/graph/graph-explorer

Configure cache and expiration policies
https://docs.microsoft.com/en-us/azure/cdn/
https://docs.microsoft.com/en-us/azure/cdn/cdn-overview
https://docs.microsoft.com/en-us/azure/cdn/cdn-caching-rules
https://docs.microsoft.com/en-us/azure/cdn/cdn-manage-expiration-of-blob-content
https://docs.microsoft.com/en-us/azure/cdn/cdn-manage-expiration-of-cloud-service-content
https://docs.microsoft.com/en-us/azure/cdn/cdn-query-string-premium
https://docs.microsoft.com/en-us/azure/cdn/cdn-query-string
https://docs.microsoft.com/en-us/azure/cdn/cdn-caching-rules
https://docs.microsoft.com/en-us/azure/cdn/cdn-sas-storage-support

Configure cache and expiration policies for Azure Redis Cache
https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-configure
https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-configure#memory-policies

Implement secure and optimized application cache patterns including data sizing, Connections, encryption, and expiration
https://docs.microsoft.com/en-us/azure/architecture/best-practices/caching

Configure an app or service to use Application Insights
https://docs.microsoft.com/en-us/azure/azure-monitor/app/cloudservices
https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-functions
https://docs.microsoft.com/en-us/azure/azure-functions/functions-monitoring
https://docs.microsoft.com/en-us/azure/azure-monitor/app/ilogger
https://docs.microsoft.com/en-us/azure/azure-monitor/app/worker-service

Analyze and troubleshoot solutions by using Azure Monitor
https://docs.microsoft.com/en-us/azure/azure-monitor/insights/solutions?tabs=portal

Implement Application Insights web tests and alerts
https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability
https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-alerts
https://docs.microsoft.com/en-us/azure/azure-monitor/app/tutorial-alert

Create an APIM instance
https://docs.microsoft.com/en-us/azure/api-management/get-started-create-service-instance
https://learn.microsoft.com/en-us/azure/api-management/api-management-policies
https://docs.microsoft.com/en-us/azure/api-management/import-and-publish
https://conferenceapi.azurewebsites.net/?format=json

Configure authentication for APIs
https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies

Define policies for APIs
https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-policies

Implement solutions that use Azure Event Grid
https://docs.microsoft.com/en-us/azure/event-grid/overview
https://docs.microsoft.com/en-us/azure/architecture/solution-ideas/articles/application-integration-using-event-grid

Implement solutions that use Azure Notification Hubs

https://docs.microsoft.com/en-us/azure/notification-hubs/notification-hubs-push-notification-overview
https://docs.microsoft.com/en-us/azure/notification-hubs/create-notification-hub-portal
https://docs.microsoft.com/en-us/azure/notification-hubs/configure-notification-hub-portal-pns-settings?tabs=azure-portal
https://docs.microsoft.com/en-us/azure/notification-hubs/configure-notification-hub-portal-pns-settings?tabs=azure-portal
https://docs.microsoft.com/en-us/azure/notification-hubs/ios-sdk-get-started

Implement solutions that use Azure Event Hub
https://docs.microsoft.com/en-us/azure/event-hubs/
https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-about
https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-create
https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-samples
https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features

Import OpenAPI definitions
https://docs.microsoft.com/en-us/connectors/custom-connectors/define-openapi-definition

Implement solutions that use Azure Service Bus
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-queues-topics-subscriptions
https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-portal
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-topics-subscriptions-portal
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-samples

Implement solutions that use Azure Queue Storage queues
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted
https://docs.microsoft.com/en-us/azure/storage/queues/storage-dotnet-how-to-use-queues?tabs=dotnet
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted

Course Repository

https://github.com/zaalion/oreilly-az-204

Thank you!
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