



AZ-2003: Deploy Cloud-Native Apps Using Azure Container Apps

Course ID #: 7000-908-ZZ-Z

Hours: 7

Course Content

Course Description:

Develop the skills necessary to configure a secure deployment solution for cloud-native apps. Learn how to build, deploy, scale, and manage containerized cloud-native apps using Azure Container Apps, Azure Container Registry, and Azure Pipelines.

Prerequisites:

- Basic understanding of cloud computing concepts: Familiarity with cloud computing fundamentals, such as virtualization, scalability, and on-demand resource provisioning.
- Knowledge of containers: Understanding the concept of containers, their benefits, and how they differ from traditional apps and virtual machines.
- Familiarity with container orchestration: Basic understanding of container orchestration platforms like Kubernetes and their role in managing containerized applications.
- Experience with Azure: Some familiarity with Microsoft Azure and its core container services, such as Azure Container Registry, Azure Kubernetes Service, and Azure Container Apps.
- Experience with deployments: Some familiarity with Azure DevOps or similar CI/CD tools for application deployment.
- Experience with networks: Some familiarity with networking concepts and Azure Virtual Networks.

Topics:

Lesson 1: Get started with cloud native apps and containerized deployments

- Introduction
- Examine cloud-native apps
- Examine deployment options for cloud-native apps
- Review an Azure Container Apps solution architecture and resources
- Knowledge check
- Summary

Lesson 2: Configure Azure Container Registry for container app deployments

- Introduction
- Review the Azure Container Registry service
- Create a container registry instance in the Azure portal
- Examine registry operations for image management
- Examine authentication with managed identity
- Examine Azure Container Registry roles and permissions
- Examine secure communications using virtual network
- Knowledge check
- Summary



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Lesson 3: Configure a container app in Azure Container Apps

- Introduction
- Review the Azure Container Apps service
- Examine Azure Container Apps containers and containers registries
- Create a container app and container app environment
- Examine managed identities in Azure Container Apps
- Examine ingress in Azure Container Apps
- Examine the management of secrets in Azure Container Apps
- Examine the storage mounts in Azure Container Apps
- Examine cloud service connections in Azure Container Apps
- Knowledge check
- Summary

Lesson 4: Configure continuous deployment for container apps

- Introduction
- Review continuous deployment options for container apps
- Examine Azure DevOps and Azure Pipelines
- Examine Azure Pipeline configuration and deployment tasks
- Examine agents and agent pools for pipelines
- Examine environment and secret variables for pipelines
- Knowledge check
- Summary

Lesson 5: Scale and manage deployed container apps

- Introduction
- Examine revisions in Azure Container Apps
- Examine application lifecycle management in Azure Container Apps
- Examine scaling options in Azure Container Apps
- Examine ingress settings for traffic-splitting and blue-green deployments
- Knowledge check
- Summary

Lesson 6: Guided project - Deploy and manage a container app using Azure Container Apps

- Introduction
- Prepare your app deployment tools and resources
- Exercise - Configure Azure Container Registry for a secure connection with Azure Container Apps
- Exercise - Create and configure a container app in Azure Container Apps
- Exercise - Configure continuous integration by using Azure Pipelines
- Exercise - Manage revisions in Azure Container Apps
- Knowledge check
- Summary

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