



# **Oracle Cloud Infrastructure DevOps**

### 1: DevOps Introduction

- Course Introduction
- DevOps Overview
- DevOps Tools and Advantages
- OCI-DevOps Services

## 2: Configuration Management and Infrastructure as Code

- Automation Overview
- Configuration Management Overview
- Ansible with OCI
- Intro to Terraform
- Terraform Configurations
- OCI Resource Manager Basics
- Syncing Resource Manager and Infrastructure
- Extending the Console

#### 3: Microservices and Container Orchestration

- Introduction: Microservices and Container Orchestration
- Microservices Architecture: Overview
- Design Methodology of Microservices
- Introduction to Containerization
- Docker Component
- Demo: Docker Basic Commands
- Working with Docker Images
- Demo: Working with Docker Images and Repository
- Introduction to Oracle Cloud Infrastructure Registry OCIR
- Managing OCIR

- Demo: Managing OCIR
- Introduction to Kubernetes
- Overview of Kubernetes Architecture and it's main components
- Components of Kubernetes Architecture and its features
- Introduction to OKE
- Prerequisite to create an OKE Cluster
- Creating OKE Cluster on OCI
- Demo: Creating an OKE Cluster
- Setting Up Cluster Access
- Demo: Setting Up Cluster Access
- Deploying an Application to OKE
- Demo: Deploying an Application to OKE
- Observing an OKE Cluster
- Accessing the OKE Dashboard
- Demo: Accessing the OKE Dashboard
- Scaling and Deleting the OKE Cluster
- Demo: Scaling and Deleting the OKE Cluster

# 4: Continuous Integration and Continuous Delivery (CI/CD)

- Introduction to CI/CD
- DevOps IAM Policies
- Demo: Configuring OCI Security for DevOps
- DevOps Projects and Code Repositories
- Demo: Create a DevOps Project
- Demo: Configuring a SSH authentication token
- Demo: Code Repositories
- Demo: Mirror Code Repository
- Artifacts and Registries
- Demo: Artifacts and Registries
- Environments

- Build Pipelines
- Demo: Examining the build\_spec.yaml file
- Demo: Build Pipeline
- Demo: Getting artifacts from your build pipeline
- Deployment Pipeline
- Demo: Deployment Pipeline
- Demo: Combining build and deploy pipelines, and automated triggering
- Continuous Testing and OCI Support for External Tools

## 5: DevSecOps

- DevSecOps Introduction
- OCI Vault: Overview
- OCI Vault: Integration with OCI Services
- OCI Vault: Secrets Overview
- Security for OKE: Overview
- Security for OKE: IAM Policies and RBAC
- Security for OKE: Kubernetes Secrets
- Security for OKE: Cluster Security
- Security for OKE: Node Pool Security
- Security for OKE: Network Security
- Security for OKE: Multi-Tenant Considerations
- Security for OKE: Image Security
- Security for Oracle Functions: Overview
- Controlling Invoke and Management Access with IAM Policies
- Defining Network Sources for Restricting Access to Functions
- Leveraging Oracle Functions Support for Private Network Access

# 6 : Observability Services

- Introduction to Observability
- Monitoring
- Demo: Monitoring Service
- Demo: Notifications Service
- Demo: Setting up Oracle Linux for CLI
- Demo: Notifications Service with CLI
- Demo: Monitoring Service with CLI
- Logging Service
- Demo: Custom and Service Logs
- Demo: Logging with CLI
- Events Service
- Demo: Events Service