

# Container Adoption Boot Camp for Developers

**Course Duration: 40 Hours**

**Course Code: DO720**

## 1. Course Overview

The **Container Adoption Boot Camp for Developers (DO720)** is an accelerated, hands-on training program that helps developers quickly adopt and master container technology using **Docker, Kubernetes, and Red Hat OpenShift**. This course is designed to guide developers through the process of containerizing applications, building microservices, and deploying them on **enterprise-grade container platforms**.

With practical labs and real-world use cases, participants gain the skills to design, develop, and run **container-native applications**, enabling faster innovation, simplified DevOps workflows, and scalable cloud-native deployments.

## 2. What You'll Learn?

By the end of this boot camp, participants will be able to:

- Understand **containers, images, and registries**.
- Build and manage **containerized applications**.
- Develop and deploy **microservices-based applications**.
- Use **Kubernetes and OpenShift** for orchestration and scaling.
- Implement **CI/CD pipelines** for faster software delivery.
- Apply **best practices in container security and automation**.

### 3. Target Audience

This boot camp is designed for:

- **Developers** who want to containerize and modernize applications.
- **DevOps engineers** responsible for continuous integration and delivery.
- **Architects and software engineers** adopting microservices.

### 4. Pre-Requisites

- Basic knowledge of Linux commands.
- Familiarity with application development (Java, Python, Node.js, etc.).
- Understanding of Git and version control is helpful.

### 5. Course Content

#### **Module 1: Introduction to Containers and Microservices**

- Why containers? Benefits for developers
- Introduction to Docker, Kubernetes, and OpenShift

#### **Module 2: Building and Running Containers**

- Container images and registries
- Hands-on: Building containerized applications

#### **Module 3: Developing Microservices-Based Applications**

- Breaking monoliths into microservices
- Designing container-native apps

#### **Module 4: Orchestration with Kubernetes and OpenShift**

- Deploying applications on Kubernetes
- Scaling and managing workloads with OpenShift

## **Module 5: CI/CD and DevOps Integration**

- Automating builds and deployments
- GitOps workflows with OpenShift Pipelines

## **Module 6: Managing Data and Storage in Containers**

- Persistent volumes and storage strategies
- State management in containerized applications

## **Module 7: Security and Best Practices**

- Container security basics
- Secrets management and policy enforcement

## **Module 8: Advanced Container Development**

- Service mesh and API management basics
- Debugging and troubleshooting containerized applications