

Red Hat OpenShift Development I: Introduction to Containers with Podman

Course Duration: 32 Hours

Course code DO188

1. Course Overview

The Red Hat OpenShift Development I: Introduction to Containers with Podman (DO188) course provides developers and IT professionals with the essential skills to build, run, and manage containers using Podman. Participants will learn container fundamentals, create containerized applications, and explore best practices for developing and deploying in Red Hat OpenShift. The training covers container images, multi-container applications, and secure container management. By the end of the course, learners will be equipped to transition smoothly into OpenShift development and containerized workflows.

2. What you'll learn?

This course aims to build a solid foundation in container technology using Podman, an open-source, daemonless container engine. Learners will discover how to design, build, manage, and deploy containerized applications efficiently and securely. By exploring the essentials of container architecture and container lifecycle management, participants will be ready to leverage containerized development for faster, more consistent, and scalable application delivery on OpenShift and similar platforms.

3. Target Audience

- Application developers exploring container-based workflows
- DevOps professionals and site reliability engineers
- Cloud-native developers and architects
- Software engineers working on containerized applications
- System administrators involved in application deployments
- Anyone aiming to modernize legacy applications with containers

4. Pre-Requisites

Participants should have:

- Participants should have a basic understanding of Linux system administration and familiarity with general application development concepts. Prior experience with command-line interfaces and a working knowledge of software development fundamentals will help learners gain the most from this course.
- Basic Linux skills (file system navigation, simple shell commands)
- Familiarity with software development processes
- Experience with command-line tools (recommended but not mandatory)

5. Course content

Module 1: Introduction to Containers and Podman

- Understanding container technology basics
- Exploring Podman features and architecture
- Installing and configuring Podman

Module 2: Working with Container Images

- Building custom container images
- Managing images with registries
- Best practices for image creation and storage

Module 3: Running and Managing Containers

- Running single and multi-container applications
- Managing container lifecycle (start, stop, restart)
- Persisting data with volumes and mounts

Module 4: Networking and Communication

- Configuring container networking
- Exposing containers to the network
- Connecting multiple containers securely

Module 5: Troubleshooting and Debugging Containers

- Inspecting containers and logs
- Identifying common issues in containerized applications
- Using Podman commands for debugging

Module 6: Preparing for OpenShift Development

- Transitioning from Podman to OpenShift
- Introduction to Kubernetes and OpenShift concepts
- Deploying applications to OpenShift environments

