

Red Hat OpenShift I: Containers & Kubernetes (DO180)

Duration: 4 days

Audience: Professionnel TI

Who is this training for?

- Developers who want to learn how to containerize software applications
- Administrators who want to master container technologies and container orchestration
- Architects considering the use of container technologies in a software architecture
- Site reliability engineers who want to base their technology infrastructure on Kubernetes and OpenShift

Training objectives

- Describe the architecture of containers and OpenShift
- Provision and create containerized services
- Manage containers and container images throughout their lifecycle
- Design and create custom container images
- Deploy containerized applications on OpenShift Container Platform
- Deploy applications in multiple containers using multiple container images

Summary

This course explains how to create and manage containers for deployment in a Kubernetes cluster.

You will acquire foundational knowledge and skills in container management through hands-on labs using containers, Kubernetes, and Red Hat OpenShift Container Platform. These skills are intended in particular for developers, administrators, and site reliability engineers. This course is based on Red Hat OpenShift Container Platform version 4.10.

Course outline

Introduction to container technologies

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Describe how software runs within containers orchestrated by Red Hat OpenShift Container Platform
Creating containerized services

- Provision a service using container technology Container management
- Create and manage containerized services by modifying predefined container images

Managing container images

- Manage a container image throughout its lifecycle, from creation to deletion Creating custom container images
- Design and code a container file to create a custom container image

Deploying containerized applications on OpenShift

- Deploy single-container applications on OpenShift

Container Platform

Deploying applications in multiple containers

- Deploy containerized applications using multiple container images

Troubleshooting containerized applications

- Troubleshoot issues affecting a containerized application deployed on OpenShift

Comprehensive course review

- Containerize a software application, test it with Podman, and deploy it in an OpenShift cluster

Approach and methodology

A practical and structured approach combining targeted theory and guided workshops.

Prerequisites

- Be able to use a Linux terminal session and the operating system command-line interface, and be able to write shell scripts
- Have basic knowledge of web application architectures and related technologies

Recommendations

Hold the RHCSA certification (Red Hat Certified System Administrator).