

[DO180]: Introduction to Containers, Kubernetes, and Red Hat OpenShift

Length : 2 Days
Delivery Method : Instructor-led (Classroom)

Course Overview

Introduction to Containers, Kubernetes, and Red Hat® OpenShift (DO180) introduces building and managing Docker containers for deployment on a Kubernetes cluster. This course helps participants build core knowledge and skills in managing containers through hands-on experience with Docker, Kubernetes, and Red Hat OpenShift Container Platform.

This course is based on Red Hat OpenShift Container Platform 3.5 and Red Hat Enterprise Linux® 7.

Audience Profile

- Developers who wish to containerize software applications
- Administrators who are new to container technology and container orchestration
- Architects who are considering using container technologies in software architectures

At Course Completion

- Container, Docker, and Red Hat OpenShift architecture
- Create containerized services
- Manage containers and container Images
- Create custom container images
- Deploy containerized applications on Red Hat OpenShift
- Deploy multi-container applications

Recommended exam or training

- Development track
 - OpenShift Enterprise Development (DO290)
 - Learn to create, update, and maintain applications using Red Hat OpenShift Container Platform.
- Administration track
 - Red Hat OpenShift Administration I (DO280)
 - Learn to install and configure an instance of Red Hat OpenShift Container Platform, test the instance by deploying a real world application, and manage projects/applications through hands-on labs.

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Pre-Requisites

- Be able to use a Linux terminal session and issue operating system commands
- Have Red Hat Certified System Administrator (RHCSA) certification or equivalent experience
- Have experience with web application architectures and their corresponding technologies

Course Outline

Module 1: Course introduction

Lessons

- Introduce and review the course

Module 2: Get started with container technology

Lessons

- Describe how software can run in containers orchestrated by Red Hat OpenShift Container Platform

Module 3: Create containerized services

Lessons

- Provision a server using container technology

Module 4: Manage containers

Lessons

- Manipulate pre-build container images to create and manage containerized services

Module 5: Manage container images

Lessons

- Manage the life cycle of a container image from creation to deletion

Module 6: Create custom container images

Lessons

- Design and code a Docker file to build a custom container image

Module 7: Deploy containerized applications on Red Hat OpenShift

Lessons

- Deploy single container applications on Red Hat OpenShift Container Platform

Module 8: Deploy multi-container applications

Lessons

- Deploy applications that are containerized using multiple container images

Module 9: Troubleshoot containerized applications

Lessons

- Troubleshoot a containerized application deployed on Red Hat OpenShift

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Module 10: Comprehensive review of Introduction to Container, Kubernetes, and Red Hat OpenShift

Lessons

- Demonstrate how to containerize a software application, test it with Docker, and deploy it on a Red Hat OpenShift cluster

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