

Introduction to Containers, Kubernetes, and Red Hat OpenShift

Code: DO180R
URL: [View Online](#)

Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180) introduces building and managing Docker containers for deployment on a Kubernetes cluster. This course helps students build core knowledge and skills in managing containers through hands-on experience with Docker, Kubernetes, and Red Hat® OpenShift Container Platform. The video classroom version is only available on Red Hat OpenShift Container Platform 3.5 and Red Hat Enterprise Linux 7.

Skills Gained

As a result of attending this class, students should be able to containerize simple software applications and services; deploy them with Docker, Kubernetes, and Red Hat OpenShift; test the containerized version; and troubleshoot issues with deployment. One of the key tenets of the DevOps movement is continuous integration and continuous deployment. Containers have become a key technology for the configuration and deployment of applications and microservices. Kubernetes is a container orchestration platform that provides foundational services in Red Hat OpenShift Container Platform.

- Understand 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.

Who Can Benefit

This course is intended to expose students to container and container orchestration technologies, such as Docker, Kubernetes, and Red Hat OpenShift. Students learn how to containerize software applications and services. Containers are rapidly becoming a deployment technology of choice in organizations adopting DevOps principles and practices. Moving applications and services from traditional deployment platforms to container deployments make the applications deployable on a single clustered cloud architecture instead of many disparate sets of hardware configurations.

Prerequisites

- 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 Details

Course Introduction

- Introduce and review the course.

Get started with container technology

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

Create containerized services

- Provision a server using container technology.

Manage containers

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

Manage container images

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

Create custom container images

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

Deploy containerized applications on Red Hat OpenShift

- Deploy single container applications on Red Hat OpenShift Container Platform.

Deploy multi-container applications

- Deploy applications that are containerized using multiple container images.

Troubleshoot containerized applications

- Troubleshoot a containerized application deployed on Red Hat OpenShift.

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

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