

# Red Hat OpenShift I: Containers & Kubernetes (DO-180)

## Course description

Introduction to building and managing containers for deployment on a Kubernetes and OpenShift 4 cluster

Red Hat OpenShift I: Containers & Kubernetes (DO180) introduces students to building and managing containers for deployment on a Kubernetes cluster. This course helps students build core knowledge and skills in managing containers through hands-on experience with containers, Kubernetes, and the Red Hat OpenShift Container Platform needed for multiple roles, including developers, administrators and site reliability engineers.

This course is based on Red Hat OpenShift® Container Platform 4.10.

## • Course content summary

- Container and OpenShift architecture
- Creating containerized services
- Managing containers and container images
- Creating custom container images
- Deploying containerized applications on OpenShift
- Deploying multi-container applications

#### Audience for this course

- Developers who want to containerize software applications.
- Administrators who are new to container technology and container orchestration.
- Architects who are looking to use container technologies in software architectures.
- Site Reliability Engineers who want to support their technology infrastructure using Kubernetes and OpenShift.

## Prerequisites for this course

- <u>Take our free assessment</u> to gauge whether this offering is the best fit for your skills.
- Experience in the use of a Linux terminal session, issuing operating system commands, and familiarity with shell scripting. A <u>Red Hat Certified System Administrator (RHCSA)</u> certification is recommended but not required.
- Some experience with web application architectures and their corresponding technologies.

## Technology considerations

This course requires Internet connectivity to access public facing resources.



## 1. Outline for this course

## Introducing container technology

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

#### **Creating containerized services**

Provision a service using container technology.

#### **Managing containers**

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

## Managing container images

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

#### **Creating custom container images**

Design and code a Container file to build a custom container image.

## Deploying containerized applications on OpenShift

Deploy single container applications on OpenShift Container Platform.

## **Deploying multi-container applications**

Deploy applications that are containerized using multiple container images.

#### **Troubleshooting containerized applications**

Troubleshoot a containerized application deployed on OpenShift.

#### Comprehensive review of introduction to container, Kubernetes, and Red Hat OpenShift

Demonstrate how to containerize a software application, test it with Podman, and deploy it on an OpenShift cluster.

**Note:** Course outline is subject to change with technology advances and as the nature of the underlying job evolves. For questions or confirmation on a specific objective or topic, <u>contact one</u> of our Red Hatters.

