

## DO180

### Introduction to Containers, Kubernetes, and Red Hat OpenShift – Version 4.2

#### Course description

#### **Learn to build and manage containers for deployment on a Kubernetes and Red Hat OpenShift cluster**

Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180) helps you build core knowledge in managing containers through hands-on experience with containers, Kubernetes, and the Red Hat® OpenShift® Container Platform. These skills are needed for multiple roles, including developers, administrators, and site reliability engineers.

This course is based on Red Hat OpenShift Container Platform 4.2.

#### **Course content summary**

- Understand container and 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.

#### **Audience for this course**

- 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
- Site reliability engineers who are considering using Kubernetes and Red Hat OpenShift

#### **Prerequisites for this course**

- Be able to use a Linux terminal session, issue operating system commands, and be familiar with shell scripting
- Have experience with web application architectures and their corresponding technologies
- Being a Red Hat Certified System Administrator (RHCSA®) is recommended, but not required

Outline for this course

### **Introduce 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-built container images to create and manage containerized services.

### **Manage container images**

Govern 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**

Use single container applications on Red Hat OpenShift Container Platform.

### **Deploy multi-container applications**

Set up applications that are containerized using multiple container images.

### **Troubleshoot containerized applications**

Regulate a containerized application deployed on Red Hat OpenShift.

### **Comprehensive review of curriculum**

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

### **Recommended next exam or course**

- Preliminary Exam in Containers, Kubernetes, & Openshift (PE180)
- Red Hat OpenShift Development I: Containerizing Applications (DO288)
- OpenShift Enterprise Administration (DO280)