# Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO 180)

**COURSE OVERVIEW**

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® Enterprise Linux® 8.2 and OpenShift® Container Platform 4.6.

**WHO WILL BENEFIT FROM 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**
- Take our free assessment 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 Red Hat Certified System Administrator (RHCSA) certification is recommended but not required.
- Some experience with web application architectures and their corresponding technologies.

**COURSE OBJECTIVES**

As a result of attending this course, students should gain the skills needed to perform basic tasks in Red Hat OpenShift Container Platform (OCP). This includes the ability to:
- Create containerized services using Podman.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on OpenShift.
- Deploy multi-container applications.

**COURSE OUTLINE**

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.

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Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their technology Investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

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- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

**Enhanced Learning Experience**
- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

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- You will work with a dedicated account manager to suggest the optimal learning path for you and/or your team
- An enthusiastic student services team is available to answer any questions and ensure a quality training experience

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