



Red Hat OpenShift I: Containers & Kubernetes (DO180)

Course content summary

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

Introduction to Containers, Kubernetes, and Red Hat OpenShift Container Platform (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.

Duration

3 days instructor led training, 4 days virtual training



Course overview

- 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

- 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 OpenShift.

Prerequisites for this course:

- [Take our free assessment](#) to gauge whether this offering is the best fit for your skills.
- Be able to use a Linux terminal session, issue operating system commands, and be familiar with shell scripting. An RHCSA certification is recommended but not required.
- Have experience with web application architectures and their corresponding technologies.



Course outline

| Action | Objective |
|---|---|
| Introducing Container Technology | Describe how software can run in containers orchestrated by the 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 Containerfile 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 | Demonstrate how to containerize a software application, test it with Podman, and deploy it on an OpenShift cluster. |



Impact of this course

Impact on the organization

Containers and OpenShift have quickly become the defacto solution for agile development and application deployment. Administrators and developers are increasingly seeking ways to improve application time-to-market and improve maintainability.

A container-based architecture, orchestrated with Kubernetes and OpenShift, improves application reliability, scalability, decreases developer overhead, and facilitates continuous integration and continuous deployment. DO180 is the jumping off point for GLS's OpenShift curriculum, providing the necessary foundation before advancing to OpenShift development or administration.

This course provides the gateway to organizational and digital transformation by providing an understanding of the potential of DevOps using a container-based architecture.

Impact on the individual

As a result of attending this course, students should be able to perform basic tasks in Red Hat OpenShift Container Platform (OCP).

Students should be able to demonstrate the following skills:

- Create containerized services using Podman.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on OpenShift.
- Deploy multi-container applications.



About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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