

**Module Title : DO288- Red Hat OpenShift Development I: Containerizing Applications**

**Duration : 4 days**

## Course description

### Design, build, and deploy containerized applications on an OpenShift cluster

Red Hat OpenShift Development I: Containerizing Applications (DO288) enhances understanding of containers as a key technology for configuring and deploying applications and microservices. As the second course in the OpenShift development track, this offering will teach you how to design, build, and deploy containerized software applications to an OpenShift cluster.

Whether you're writing container-native applications or migrating existing brownfield applications, you'll learn how to boost developer productivity powered by Red Hat® OpenShift Container Platform, a containerized application platform that allows enterprises to manage container deployments and scale their applications using Kubernetes.

This course is based on Red Hat OpenShift Container Platform 4.1.

## Course content summary

- Manager and trigger application builds.
- Customize an existing source-to-image base image.
- Create an OpenShift template.
- Create health checks to monitor and improve application reliability.
- Create and deploy a Jenkins pipeline for continuous integration and continuous deployment.
- Create and deploy cloud-native application for OpenShift.

## Audience for this course

- Enterprise application developers
- Site reliability engineers

## Recommended for this course

- Complete the [Introduction to Containers, Kubernetes, and Red Hat OpenShift course \(DO180\)](#), or have equivalent knowledge
- Being a [Red Hat Certified System Administrator](#) or having earned a higher certification is helpful for navigation and usage of the command line, but is not required

## Outline

### **Deploy and manage applications on an OpenShift cluster**

Deploy applications using various application packaging methods to an OpenShift cluster and manage their resources.

### **Design containerized applications for OpenShift**

Select a containerization method for an application and create a container to run on an OpenShift cluster.

### **Publish enterprise container images**

Create an enterprise registry and publish container images to it.

### **Manage building applications**

Describe the OpenShift build process, in addition to triggering and managing builds.

### **Customize source-to-image builds**

Customize an existing S2I base image and create a new one.

### **Create applications from OpenShift templates**

Describe the elements of a template and create a multicontainer application template.

### **Manage application deployments**

Monitor application health and implement various deployment methods for cloud-native applications.

### **Implement CI/CD pipelines in OpenShift**

Create and deploy Jenkins pipelines to facilitate continuous integration and continuous deployment (CI/CD) with OpenShift.

### **Build cloud-native applications on OpenShift**

Create and deploy cloud-native applications on OpenShift.

## Recommended next exam or course

- Red Hat Certified Specialist in OpenShift Application Development exam (EX288)
- Red Hat OpenShift Development II: Creating Microservices with Red Hat OpenShift Application Runtimes (DO292)