

# Red Hat OpenShift Developer II: Building and Deploying Cloud-native Applications with Exam

Course code: D0289

Design, build, and deploy containerized applications on Red Hat OpenShift. Red Hat OpenShift Development II: Containerizing Applications with exam (D0289) teaches you how to design, build, and deploy containerized software applications on an OpenShift cluster. Whether you are migrating existing applications or writing container-native applications, you will 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. The Red Hat Certified Specialist in OpenShift Application Development exam (EX288) is included in this offering, which is based on Red Hat® OpenShift Container Platform 4.10.

## Who is the course for

- Site reliability engineers
- Recommended for this course

## What we teach you

- 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.

## Required skills

- Complete the Introduction to Containers, Kubernetes, and Red Hat OpenShift course (D0180), 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

## Impact of this training

As administrators and developers seek ways to improve application time to market for minimum viable products, containers and OpenShift have quickly become the de facto solution for agile development and application deployment. A container-based architecture, orchestrated with Kubernetes and OpenShift, improves application reliability and scalability while decreasing developer overhead and facilitating continuous deployment. Building on the container foundations set in Introduction to Containers, Kubernetes, and Red Hat OpenShift (D0180), this offering represents the first developer-focused OpenShift course. This course provides the gateway to organizational and digital transformation by demonstrating the potential of DevOps using a container-based architecture. Red Hat has created this course in a way intended to benefit our customers, but each company and infrastructure is unique, and actual results or benefits may vary.

## Impact on the individual

As a result of completing this course, you should be able to understand the fundamental concepts behind containerizing, scaling, deploying, and managing applications in Red Hat OpenShift Container Platform. You will also acquire these skills:

- Design container images to containerize applications.
- Customize application builds and implement post-commit build hooks.
- Create a multicontainer application template.

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- Implement health checks to improve system reliability.

## 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 (D0292)

## Course 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.

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