



Containers, Kubernetes, and Red Hat OpenShift Development II (DO295)

Red Hat

- **Nível:**
 - **Duração:** 34h
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Sobre o curso

Accelerated hands-on training to boost developer productivity powered by Red Hat OpenShift

Containers, Kubernetes, and Red Hat OpenShift Development II (DO295) teaches you how to design, build, and deploy containerized software applications to an OpenShift® cluster. Whether you are tasked with writing container-native applications or migrating existing brownfield applications, this course provides hands-on training to boost developer productivity powered by Red Hat OpenShift.

Learn to:

- Explore container and OpenShift architecture
- Create containerized services
- Manage containers and container images
- Build custom container images
- Manage and trigger application builds
- Customize an existing source-to-image base image
- Develop an OpenShift template
- Generate health checks to monitor and improve application reliability

for the organization

Containers are a key technology for the configuration and deployment of applications and microservices, and containers and OpenShift have quickly become the de facto solution for agile development and application deployment. Administrators and developers are seeking ways to improve application time-to-market for minimum viable products. This course provides the gateway to organizational and digital transformation by providing an understanding of the potential of DevOps using a container-based architecture. Orchestrated with Kubernetes and OpenShift, a container-based architecture improves application reliability and scalability, while decreasing developer overhead and facilitating continuous

deployment.

for the individual

As a result of attending this course, you will understand the fundamental concepts behind containerizing, scaling, deploying, and managing applications on Red Hat OpenShift Container Platform, which is a containerized application platform that allows enterprises to manage container deployments and scale their applications using Kubernetes.

You should be able to demonstrate these skills:

- Design container images to containerize applications.
- Customize application builds and implement post-commit build hooks.
- Create a multicontainer application template.
- Implement health checks to improve system reliability.

Destinatários

- 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.

Pré-requisitos

- 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 Architect is recommended, but not required

Programa

- Introduction to container technology
- Create containerized services
- Manage containers
- Manage container images

- Create custom container images
- Deploy containerized applications on OpenShift
- Troubleshoot containerized applications
- Deploy and manage applications on an OpenShift cluster
- Design containerized applications for OpenShift
- Publish enterprise container images
- Build applications
- Customize source-to-image (S2I) builds
- Create applications from OpenShift templates
- Manage application deployments
- Perform comprehensive review

Introduction to 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 prebuilt container images to create and manage containerized services.

Manage container images

- Manage the life cycle of a container image from creation to deletion.

Create custom container images

- Design and code a Dockerfile to build a custom container image.

Deploy containerized applications on OpenShift

- Deploy single container applications on OpenShift Container Platform.

Troubleshoot containerized applications

- Troubleshoot a containerized application deployed on OpenShift.

Deploy and manage applications on an OpenShift cluster

- Use various application packaging methods to deploy applications to an OpenShift cluster, then 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.

Build applications

- Describe the OpenShift build process, then trigger and manage builds.

Customize source-to-image (S2I) 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.

Perform comprehensive review

- Create and deploy cloudnative applications on OpenShift.