

Red Hat Container Adoption Boot Camp for Administrators

Code:	DO700
Length:	10 days
URL:	View Online

The Container Adoption Boot Camp (DO700) immerses you in intensive, hands-on development of container-native applications deployed on Red Hat's implementation of Kubernetes, Red Hat® OpenShift® Container Platform. As part of enrollment, you will receive one year of Red Hat Learning Subscription Standard, which gives you unlimited access to all of our courses online, plus up to five certification exams and two retakes. This collection of courses is based on Red Hat OpenShift Container Platform 3.9 and Red Hat® Enterprise Linux® 7.5.

Skills Gained

As a result of attending this course, you should be able to configure and manage a Red Hat OpenShift Container Platform cluster and know how to develop, monitor, test, and deploy microservice-based Java EE applications using Wildfly Swarm and OpenShift. You should be able to demonstrate these skills:

- Create containerized services using Docker.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on Red Hat OpenShift.
- Deploy multi-container applications.
- Install Red Hat OpenShift Container Platform to create a simple cluster.
- Configure and manage Red Hat OpenShift masters and nodes.
- Secure Red Hat OpenShift with a simple internal authentication mechanism.
- Control access to resources on Red Hat OpenShift.
- Deploy applications on Red Hat OpenShift using source-to-image facility.
- Configure and manage Red Hat OpenShift pods, services, routes, secrets, and other resources.
- Deploy applications to a Red Hat OpenShift cluster and manage them with the command-line client and the web console.
- Design and build containers for applications for successful deployment to a Red Hat OpenShift cluster.
- Publish container images to an enterprise registry.
- Build containerized applications using the source-to-image facility.
- Create applications using Red Hat OpenShift templates.
- Extract a service from a monolithic application and deploy it to the cluster as a microservice.

- Migrate applications to run on a Red Hat OpenShift cluster.
- Design a microservices-based architecture for an enterprise application.
- Implement fault tolerance and health checks for microservices.
- Secure microservices to prevent unauthorized access.

Who Can Benefit

This collection of courses is designed for application developers and software architects interested in adopting container technology and container-native applications.

Prerequisites

- Be able to use a Linux terminal session and issue operating system commands
- Become a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent experience
- Have experience with web application architectures and their corresponding technologies
- Have a comfort level with the Red Hat Enterprise Linux command-line interface and bash scripting

Course Details

Course Outline

Create custom container images Create containers, manage containers, and manage container images. Deploy containerized applications Customize containers and deploy on Red Hat OpenShift. Troubleshoot containerized applications Troubleshoot Red Hat OpenShift deployments. Explore Red Hat OpenShift networking concepts Describe Red Hat OpenShift networking concepts and troubleshoot with CLI. Manage Red Hat OpenShift resources Control access to Red Hat OpenShift resources, implement persistent storage, and manage application deployments. Containerize applications Understand deployment methods, designing containers, and integrated registry and image streams. Manage application deployments Manage advanced application deployments and Red Hat OpenShift templates. Design a highly available cluster Design and install a highly available cluster, custom certificates, and log aggregation, in addition to gaining an understanding of Gluster container-native storage, managing system resources, and configuring advanced networking. Implement microservice architecture Describe microservice architectures, deploy microservices, and implement with MicroProfile. Test microservices Run microservices, inject configuration data, and perform health checks. Implement fault tolerance Apply fault tolerance, develop an API gateway for a series of microservices, and secure with JWT. Secure microservices with JWT Use the JSON Web Token specification to secure a microservice. Create microservices with Red Hat OpenShift Application Runtimes Receive an introduction to OpenShift Application Runtimes and Fabric8. Install Red Hat OpenShift Container Platform Install, monitor, and manage OpenShift Container Platform. Customize source-to-image builds Tailor source-to-image builds and migrate applications to Red Hat OpenShift. Develop and deploy runtimes Employ the WildFly Swarm, Vert.x, and Spring Boot runtimes to develop and deploy microservices. Monitor microservices Track the operation of a microservice using metrics, distributed tracing, and log aggregation.

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