



DO285 Containers, Kubernetes, and Red Hat OpenShift Administration II

Duración: 5 días

Course description

Learn to build and manage container images, administrate an OpenShift cluster, and troubleshoot applications running on Kubernetes

Containers, Kubernetes, and Red Hat OpenShift Administration II (DO285) helps you gain core knowledge in building and in configuring and managing Red Hat® OpenShift® Container Platform. This immersive and intensive, hands-on course shows you how to deploy applications to a local container engines and OpenShift clusters, manage the cluster on a day-to-day basis, and troubleshoot the deployment of containerized applications.

This course is based on Red Hat OpenShift Container Platform 4.6 and combines the content from Red Hat OpenShift I: Containers & Kubernetes (DO180) and Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (DO280).

Course content summary

- Manage containers and container images.
- Create custom container images.
- Describe the Red Hat OpenShift Container Platform cluster installation and update processes.
- Troubleshoot application deployment issues.
- Control access to projects using groups and role-based access control (RBAC).
- Configure service and container networking.
- Expose applications to clients external to the cluster using TLS encryption.
- Configure network isolation between services and applications using network policies.
- Configure application scheduling using labels and selectors.
- Limit compute resource usage of applications with resource limits and quotas.
- Install Kubernetes Operators with the web console.

Audience for this course

- System and software architects interested in understanding features and functionality of an OpenShift cluster
- System administrators who are interested in the ongoing management of clusters and containerized applications
- Cluster operators who are interested in managing access to cluster resources by users and applications
- Site reliability engineers interested in the ongoing maintenance and troubleshooting of a cluster

Prerequisites for this course

Become a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent Red Hat Enterprise Linux system administration experience

Technology considerations

Internet access is required.

Outline for this course

Introduction to container technology

Describe how applications run in containers orchestrated by Red Hat OpenShift Container Platform.

Create containerized services

Provision a service using container technology.

Manage containers

Modify 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

Use OpenShift Container Platform to deploy single container applications.

Deploy multicontainer applications

Deploy applications that are containerized using multiple container images.

Explore Red Hat OpenShift Container Platform

Describe the architecture of OpenShift Container Platform.

Verify the health of a cluster

Describe OpenShift installation methods and verify the health of a newly installed cluster.

Configure authentication and authorization

Configure authentication with the HTTPasswd identity provider and assign roles to users and groups.

Configuring application security

Restrict permissions of applications using security context constraints and protect access credentials using secrets.

Configure OpenShift networking for applications

Troubleshoot OpenShift software-defined networking (SDN) and configure network policies.

Control pod scheduling

Control the nodes on which a pod runs.

Scale an OpenShift cluster

Control the size of an OpenShift cluster.

Describe cluster updates

Describe how to perform a cluster update.

Manage a cluster with the web console

Use the web console to manage a Red Hat OpenShift cluster.

Execute a comprehensive review

Verify, manage, and troubleshoot an OpenShift cluster for enterprise use.

Note: Course outline is subject to change with technology advances and as the nature of the underlying job evolves. For questions or confirmation on a specific objective or topic, contact us.

Outcomes

Impact on the organization

This course provides novice administrators with the essential skills to configure and manage Red Hat OpenShift Container Platform clusters to support containerized applications that are highly available, resilient, and scalable. Red

Red Hat OpenShift Container Platform is an enterprise, hardened distribution of Kubernetes that enables rapid application development and deployment, as well as portability of applications and operational processes across cloud providers and traditional data centers.

Impact on the individual

After completing this course, you should be able to demonstrate the skills necessary to execute and build local containers, establish the health of a new OpenShift cluster, grant users and developers access to the cluster, and manage the cluster on a day-to-day basis. One major focus of the course is troubleshooting common problems that will be encountered beyond day one as users and applications use cluster resources.

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.

Recommended next exam or course

- Red Hat Certified Specialist in OpenShift Administration exam (EX280)
- Red Hat OpenShift Administration III: Scaling Kubernetes Deployments in the Enterprise (DO380)