

RHDO380 Red Hat OpenShift Administration III: Scaling Kubernetes Deployments in the Enterprise

Course Summary

Description

Red Hat OpenShift Administration II teaches you how to build robust clusters that provide high availability and the ability to run large numbers of applications. You will learn about OpenShift integration with datacenter infrastructure such as load balancers, identity management, monitoring, proxies, and storage. You will also develop more troubleshooting and Day 2 operations skills in this course. This course is based on Red Hat® OpenShift Container Platform 3.6.

Objectives

At the end of this course, students will be able to:

- Learn OpenShift cluster features, architecture, and sizing.
- Investigate OpenShift cluster installation methods.
- Configure storage providers and storage classes.
- Manage OpenShift certificates.
- Configure GlusterFS container-native storage.
- Diagnose cluster health.
- Scale OpenShift clusters.
- Manage OpenShift resources.

Topics

- Design a highly available cluster
- Prepare to install an HA cluster
- Configure OpenShift to use custom certificates
- Build an HA cluster
- Provision persistent storage
- Enable log aggregation
- Maintain an OpenShift cluster
- Manage system resources
- Configure security providers
- Configure networking options

Audience

This course is designed for Linux® system administrators who want to deploy and manage a large-scale Red Hat® OpenShift Container Platform environment in their datacenters.

Prerequisites

- Become a Red Hat Certified System Administrator, or demonstrate equivalent experience
- Attend Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180) or demonstrate equivalent experience with containers, Kubernetes, and OpenShift
- Attend Red Hat OpenShift Administration I (DO280) or demonstrate equivalent experience with OpenShift
- Recommended, but not required: become a Red Hat Certified Specialist in OpenShift Administration (EX280)

Duration

Five days

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Course Outline

- I. Design a highly available cluster*
 - A. Design an OpenShift cluster that supports high availability and resiliency.
- II. Prepare to install an HA cluster*
 - A. Configure the advanced installer and prepare the cluster environment for HA installation.
- III. Configure OpenShift to use custom certificates*
 - A. Configure the OpenShift cluster to use custom certificates.
- IV. Build an HA cluster*
 - A. Use the advanced installation method to build an HA OpenShift cluster.
- V. Provision persistent storage*
 - A. Describe storage providers, configure a provider, create a storage class, and test the configuration.
- VI. Enable log aggregation*
 - A. Consolidate useful data for analysis by enabling the log aggregation feature.
- VII. Maintain an OpenShift cluster*
 - A. Perform recurring maintenance activities on an OpenShift cluster.
- VIII. Manage system resources*
 - A. Manage operating system and cluster resources for optimal performance.
- IX. Configure security providers*
 - A. Configure security providers and advanced security options.
- X. Configure networking options*
 - A. Configure various advanced networking features and options.