

[DO380]: Red Hat OpenShift Administration II: High Availability

Length : 4 Days
Delivery Method : Instructor-led (Classroom)

Course Overview

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.

You will design an OpenShift HA cluster, then build and test it. You will use this cluster to examine more advanced topics in the administration and operation of a robust OpenShift cluster in the remainder of the course.

Course content summary

- Understand container and OpenShift architecture.
- Create containerized services.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on Red Hat OpenShift.
- Deploy multi-container applications.

Audience Profile

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.

At Course Completion

Impact on the organization

This course is intended to develop the skills needed to administer and operate large, fault-tolerant OpenShift clusters. You will design and implement a highly available and high-performance OpenShift cluster. These skills will allow the organization to provide and maintain a resilient platform on which developers can deploy production-scale containerized applications.

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.

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Impact on the individual

As a result of attending this course, you should be able to design, install, and configure a highly available and high-performance OpenShift cluster. You will learn how to adapt the OpenShift cluster to work with existing infrastructure, such as security and storage providers. You should be able to perform various Day 2 operational procedures intended to maintain an efficient OpenShift cluster.

You should be able to demonstrate these skills:

- Design and install a highly available cluster.
- Provision persistent storage using dynamic allocation.
- Install the GlusterFS Container Native Storage solution on an OpenShift cluster.
- Enable log aggregation across the cluster.
- Perform diagnostics on the cluster.
- Back up and restore critical data for the cluster.
- Manage OpenShift and operating system resources to keep the cluster running efficiently.
- Configure the LDAP security provider.
- Describe and install the Open vSwitch multitenant software-defined networking provider.

Pre-Requisites

- 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)

Course Outline

Module 1: Design a highly available cluster

Lessons

- Design an OpenShift cluster that supports high availability and resiliency

Module 2: Prepare to install an HA cluster

Lessons

- Configure the advanced installer and prepare the cluster environment for HA installation

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Module 3: Configure OpenShift to use custom certificates

Lessons

- Configure the OpenShift cluster to use custom certificates

Module 4: Build an HA cluster

Lessons

- Use the advanced installation method to build an HA OpenShift cluster

Module 5: Provision persistent storage

Lessons

- Describe storage providers, configure a provider, create a storage class, and test the configuration

Module 6: Enable log aggregation

Lessons

- Consolidate useful data for analysis by enabling the log aggregation feature

Module 7: Maintain an OpenShift cluster

Lessons

- Perform recurring maintenance activities on an OpenShift cluster

Module 8: Manage system resources

Lessons

- Manage operating system and cluster resources for optimal performance

Module 9: Configure security providers

Lessons

- Configure security providers and advanced security options

Module 10: Configure networking options

Lessons

- Configure various advanced networking features and options

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