COURSE OUTLINE

Course Code: DO-280

Course Name: Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster

DURATION	SKILL LEVEL	DELIVERY METHOD	TRAINING CREDITS	TECHNOLOGY
4 Days	Intermediate	Virtual Training	14	OpenShift Containers & Kubernetes

Course Overview

Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (DO280) teaches you how to configure, troubleshoot, and manage Red Hat® OpenShift® Container Platform. This hands-on, lab-based course shows you how to verify the successful installation of a cluster, manage it on a day-to-day basis, and troubleshoot the deployment of containerized applications. This course is based on Red Hat® Enterprise Linux® 8.2 and OpenShift Container Platform 4.5.

Prerequisites

• Become a Red Hat Certified System Administrator, or demonstrate equivalent Red Hat Enterprise Linux system administration experience
• Complete Red Hat OpenShift I: Containers & Kubernetes (DO180), or demonstrate equivalent experience with containers, Kubernetes, and OpenShift basics

Target Audience

This course is designed for system administrators, system architects, and developers who want to install and configure Red Hat OpenShift Container Platform.
• System and Software Architects interested in understanding features and functionality of an OpenShift cluster.
• System Administrators interested in the ongoing management of clusters and containerized applications.
• Cluster Operators interested in managing access to cluster resources by users and applications.
• Site Reliability Engineers interested in the ongoing maintenance and troubleshooting of a cluster.

Topics

Lesson 1: Describe the Red Hat OpenShift Container Platform

• Describe the architecture of the Red Hat OpenShift Container Platform (RHOCP).

Lesson 2: Verify the health of a cluster

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

Lesson 3: Configure authentication and authorization

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

Lesson 4: Configure application security

• Restrict permissions of applications using security Prerequisites:

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• Site Reliability Engineers interested in the ongoing maintenance and troubleshooting of a cluster. Learning Objectives: At the end of this course, students will be able to:

• Describe the Red Hat OpenShift Container Platform cluster installation and update processes

• Troubleshoot application deployments

• Configure authentication using local users • Control access to projects using role-based access control (RBAC)

• 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

• Manage a cluster and deployed applications with the Web Console WWW. NETCAM P US.COM context constraints and protect access credentials using secrets.

Lesson 5: Configure OpenShift networking for applications

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

Lesson 6: Control pod scheduling

• Control which nodes a pod runs on.

Lesson 7: Describe cluster updates

• Describe how to perform a cluster update.

Lesson 8: Manage a cluster with the web console

• Manage a Red Hat OpenShift cluster using the web console.

Exams and Certifications

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

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• Configure authentication using local users

• Control access to projects using role-based access control (RBAC)

• 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

• Manage a cluster and deployed applications with the Web Console

Associated Exam and Certification:

This course will prepare students to take the Red Hat Certified Specialist in OpenShift Administration exam EX-280 Successfully passing this exam will result in the attainment of the of the Red Hat Certified Specialist in OpenShift Administration After completing this course, students will receive a Netcampus course attendance certification.

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