Red Hat OpenShift Administration I: Operating a Production Cluster

Course code: DO180

As of January 2026, only in-person Red Hat training is available for purchase under the original terms. Virtual training (VT) courses are offered exclusively as part of the annual RHLS Course subscription can be found here.How to schedule a virtual course in the Red Hat Learning Subscription can be found here.Deploy, manage, and troubleshoot containerized applications running as Kubernetes workloads in OpenShift clusters.Red Hat OpenShift Administration I: Operating a Production Cluster (DO180) prepares OpenShift cluster administrators to manage Kubernetes workloads and to collaborate with developers, DevOps engineers, system administrators, and SREs to ensure the availability of application workloads. This course focuses on managing typical end-user applications that are often accessible from a web or mobile UI and that represent most cloud-native and containerized workloads. Managing applications also includes deploying and updating their dependencies, such as databases, messaging systems, and authentication systems.The skills that you learn in this course apply to all versions of OpenShift, including OpenShift Container Platform, Red Hat OpenShift on AWS (ROSA), and Azure Red Hat OpenShift.This course is based on Red Hat® OpenShift® Container Platform 4.22.

Who is the course for

- System Administrators who are interested in the ongoing management of OpenShift clusters and containerized applications.
- Site Reliability Engineers who are interested in the ongoing maintenance and troubleshooting of containerized applications on Kubernetes.
- System and Software Architects who are interested in understanding the features and functions of an OpenShift cluster.

What we teach you

- Manage OpenShift clusters by using both the command-line interface (CLI) and the unified web console.
- Deploy applications on OpenShift from container images, templates, and Kubernetes manifests.
- Troubleshoot network connectivity between applications inside and outside an OpenShift cluster.
- Connect Kubernetes workloads to persistent storage for application configuration and data.
- Configure Kubernetes workloads for high availability, reliability, and automated scaling.
- Manage safe and reproducible updates to container images, settings, and Kubernetes manifests.

Required skills

- Containers, Kubernetes and Red Hat OpenShift Technical Overview (DO080)
- or equivalent knowledge of Linux containers.
- Basic skills in operating a Bash shell, manipulating files and processes, and verifying system confirmations such as network addresses, are necessary and sufficient. Students are encouraged to take
- Getting Started with Linux Fundamentals (RH104)
- before enrolling in DO180.

We recommend completing our no-cost skills assessment before enrolling in any Red Hat training course. Learn more.

Course outline

Introducing container technology

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

Creating containerized services

Provision a service using container technology.

Managing containers

Modify pre-build container images to create and manage containerized services.

Managing container images

Manage the life cycle of a container image from creation to deletion.

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Creating custom container images

Design and code a Container file to build a custom container image.

Deploying containerized applications on OpenShift

Deploy single container applications on OpenShift Container Platform.

Deploying multi-container applications

Deploy applications that are containerized using multiple container images.

Troubleshooting containerized applications

Troubleshoot a containerized application deployed on OpenShift.

Comprehensive review of introduction to container, Kubernetes, and Red Hat OpenShift

Demonstrate how to containerize a software application, test it with Podman, and deploy it on an OpenShift cluster.

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