

Course Overview

Deploy, manage, and troubleshoot containerized applications running as Kubernetes workloads in OpenShift clusters.

Red Hat OpenShift Administration I: Managing Containers and Kubernetes (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, and authentication systems.

The skills that you learn in this course apply to all versions of OpenShift, including Red Hat OpenShift on AWS (ROSA), Azure Red Hat OpenShift, and OpenShift Container Platform.

This course is based on Red Hat OpenShift 4.14.

Audience Profile

Primary: Platform Engineers, System Administrators, Cloud Administrators, and other infrastructure-related IT roles who are responsible for tier-1 support of infrastructure for applications.who are interested in managing OpenShift clusters and containerized applications.

Secondary: Enterprise Architects, Site Reliability Engineers, DevOps Engineers, and other application-related IT roles who are responsible for designing infrastructure for applications.

Course Outcome

Impact on the Organization

This course is intended to develop the skills needed to manage Red Hat OpenShift clusters and support containerized applications that are highly available, resilient, and scalable. Red Hat OpenShift is an enterprise-hardened application platform based on Kubernetes that provides a common set of APIs and abstractions that enable application portability across cloud providers and traditional data centers. Red

Red Hat OpenShift Administration I: Operating a Production Cluster

4 Days Course • Instructor-Led Training

Red Hat OpenShift adds consistency and portability of operational processes across these environments and can also be deployed as a managed service. An external SRE team shares the responsibility of managing Red Hat OpenShift clusters with a customer's IT operations team when using a managed OpenShift offering such as Red Hat OpenShift on AWS (ROSA) or Azure Red Hat OpenShift.

Impact on the Individual

As a result of attending this course, students will understand the architecture of Red Hat OpenShift clusters and of Kubernetes applications, and will be able to deploy, manage, and troubleshoot applications on OpenShift. Students will also be able to identify and escalate application and infrastructure issues to development teams, operation teams, and IT vendors.

-- Next Page for Course Outline

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07 Modules

Module 01: Introduction to Kubernetes and OpenShift

Identify the main Kubernetes cluster services and OpenShift platform services, and monitor them from the web console.

Module 02: Kubernetes and OpenShift Command-Line Interfaces and APIs

Access an OpenShift cluster from the command line, and query its Kubernetes API resources to assess the health of a cluster.

Module 03: Run Applications as Containers and Pods

Run and troubleshoot containerized applications as unmanaged Kubernetes pods.

Module 04: Deploy Managed and Networked Applications on Kubernetes

Deploy applications and expose them to network access from inside and outside a Kubernetes cluster.

Module 05: Manage Storage for Application Configuration and Data

Externalize application configurations in Kubernetes resources, and provision storage volumes for persistent data files.

Module 06: Configure Applications for Reliability

Configure applications to work with Kubernetes for high availability and resilience.

Module 07: Manage Application Updates

Manage reproducible application updates and rollbacks of code and configurations.