Red Hat OpenShift Administration I: Operating a Production Cluster (DO180)

Red Hat

- **Nível:**
- **Duração:** 28h

Sobre o curso

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, 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.

SKILLS ASSESSMENT

Utilize o diagnóstico de competências para descobrir quais as oportunidades de formação que mais se adequam a si, ou à sua equipa.

Destinatários

- 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.
- Enterprise Architects, Site Reliability Engineers, DevOps Engineers, and other application-related IT roles who are responsible for designing infrastructure for applications.
- Developers and Site Reliability Engineers that are new to container technology should enroll in Red Hat OpenShift Development I: Introduction to Containers with Podman (DO188).

Objetivos

- Managing OpenShift clusters from the command-line interface and from the web console
- Deploying applications on OpenShift from container images, templates, and Kubernetes manifests
- Troubleshooting network connectivity between applications inside and outside an OpenShift cluster
- Connecting Kubernetes workloads to storage for application data
- Configuring Kubernetes workloads for high availability and reliability
- Managing updates to container images, settings, and Kubernetes manifests of an application

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 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.

Pré-requisitos

- Take our free assessment to gauge whether this offering is the best fit for your skills.
- Prerequisite: Containers, Kubernetes and Red Hat OpenShift Technical Overview or equivalent knowledge of Linux containers.

Metodologia

- This course requires internet access to access the cloud-based classroom environment that provides an OpenShift cluster and a remote administrator's workstation.

Programa

- Introduction to Kubernetes and OpenShift
- Kubernetes and OpenShift Command-Line Interfaces and APIs
- Run Applications as Containers and Pods

- Deploy Managed and Networked Applications on Kubernetes
- Manage Storage for Application Configuration and Data
- Configure Applications for Reliability
- Manage Application Updates

Introduction to Kubernetes and OpenShift

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

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.

Run Applications as Containers and Pods

- Run and troubleshoot containerized applications as unmanaged Kubernetes pods.

Deploy Managed and Networked Applications on Kubernetes

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

Manage Storage for Application Configuration and Data

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

Configure Applications for Reliability

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

Manage Application Updates

- Manage reproducible application updates and rollbacks of code and configurations.