

# DO432

## Multicluster Management with Red Hat Advanced Cluster Management for Kubernetes

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Address challenges with management, compliance, and productivity of a multicluster Kubernetes environment and its applications by using the capabilities of Red Hat Advanced Cluster Management for Kubernetes.

Multicluster Management with Red Hat Advanced Cluster Management for Kubernetes (RHACM) teaches the required skills to manage a fleet of containerized applications and Kubernetes clusters, by automating compliance with security, governance, and other organization policies, and by implementing GitOps practices.

### Course content summary

- Describe and implement the RHACM architecture and its components, and follow recommended practices for its installation.
- Import and manage a cluster by using the RHACM web console, configure user access to clusters, and troubleshoot common import issues.
- Deploy and manage policies in a multicluster environment by using RHACM governance.
- Monitor a fleet of managed clusters and troubleshoot performance and availability issues by using RHACM observability components.
- Deploy and manage applications in a multicluster environment by using RHACM and GitOps.
- Deploy and manage virtual machines in a multicluster environment by using RHACM and GitOps.

### Audience for this course

- **IT Operations** personnel who are responsible for managing the lifecycle and monitoring the usage of multiple clusters.
- **DevOps and Site Reliability Engineers** who are responsible for monitoring the health of clusters and Kubernetes deployments and for maximizing their uptime. These individuals also automate the provisioning or deprovisioning of clusters and the workload placement based on capacity and policy.
- **Security Operations** personnel who are responsible for ensuring that Kubernetes deployments comply with regulatory and organizational standards. These individuals create security policies across diverse environments and ensure enforcement.

## Prerequisites for this course

- Completing [Red Hat OpenShift Administration II: Configuring a Production Kubernetes Cluster \(DO280\)](#) and [Red Hat Certified OpenShift Administrator exam \(EX280\)](#) are strongly encouraged, or possessing equivalent Kubernetes and OpenShift administration skills.
- The following optional courses are recommended:
  - [Red Hat OpenShift Administration III: Scaling Deployments in the Enterprise \(DO380\)](#) is a course on how to configure and manage OpenShift clusters at scale to address increasing and complex demands from applications and to ensure reliability, performance, and availability.
  - [Managing Virtual Machines with Red Hat OpenShift Virtualization \(DO316\)](#) covers the essential skills to create and manage virtual machines on OpenShift by using the Red Hat OpenShift Virtualization operator.

## Outline for this course

- **Installing Red Hat Advanced Cluster Management for Kubernetes**
  - Describe and implement the RHACM architecture and its components, and follow recommended practices for its installation.
- **Managing Clusters by Using Red Hat Advanced Cluster Management for Kubernetes**
  - Import and manage a cluster by using the RHACM web console, configure user access to clusters, and troubleshoot common import issues.
- **Deploying and Managing Policies for Multiple Clusters with Red Hat Advanced Cluster Management for Kubernetes**
  - Deploy and manage policies in a multicluster environment by using RHACM governance.
- **Enabling and Customizing the Red Hat Advanced Cluster Management for Kubernetes Observability Stack**
  - Monitor a fleet of managed clusters and troubleshoot performance and availability issues by using RHACM observability components.
- **Managing the Multicluster Application Lifecycle by Using GitOps Practices and Red Hat Advanced Cluster Management for Kubernetes**
  - Deploy and manage applications in a multicluster environment by using RHACM and GitOps.
- **Managing Virtual Machines for Multiple Clusters with Red Hat Advanced Cluster Management for Kubernetes**
  - Deploy and manage virtual machines in a multicluster environment by using RHACM and GitOps.

## Impact on the individual

Multicluster Management with Red Hat Advanced Cluster Management for Kubernetes teaches the advanced skills to control multiple OpenShift clusters. Students will learn how to use GitOps practices for a multicluster environment, how to assess cluster compliance based on industry-standard benchmarks and

get remediation guidance, and how to apply their own security policies for workloads that are hosted on multicloud or hybrid cloud environments to meet internal standards for software engineering, secure engineering, resilience, security, and regulatory compliance.