Fast Lane

Red Hat Certified OpenShift Administrator Exam (EX280)

ID EX280 **Price** CHF 557.—(excl. VAT) **Duration** 3 hours

Who should attend

- System and Software Architects who need an understanding of the features and functionality of an OpenShift Container Platform cluster.
- System Administrators who need to support the initial establishment of an OpenShift cluster.
- Cluster Operators who need to support ongoing maintenance of an OpenShift cluster.
- Site Reliability Engineers who need to support the ongoing maintenance and troubleshooting of an OpenShift cluster.
- System administrators who want to demonstrate their OpenShift Container Platform skills
- Red Hat Certified Engineers who wish to become a Red Hat Certified Architect (RHCA)
- System administrators or developers who are working in a DevOps environment using Red Hat OpenShift Container Platform

This course is part of the following Certifications

Red Hat Certified OpenShift Administrator (RHCS-PAAS)

Prerequisites

Candidates for this exam should:

- Have taken Red Hat System Administration I (RH124) or have comparable experience. Red Hat Certified System Administrator (RHCSA) is strongly recommended but not required.
- Have taken Red Hat OpenShift Administration I: Operating a Production Cluster (DO180) course or have comparable work experience using OpenShift Container Platform
- Have taken Red Hat OpenShift Administration II: Configuring a Production Cluster (DO280) course or have comparable work experience using OpenShift Container Platform
- Review the Red Hat Certified OpenShift Administrator exam (EX280) objectives
- Experience with container technology is recommended
- Take our free assessment to find the course that best supports your preparation for this exam

Preparation

Red Hat encourages you to consider taking Red Hat OpenShift Administration I: Containers & Kubernetes and Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster to help prepare. Attendance in these classes is not required; students can choose to take just the exam.

While attending Red Hat classes can be an important part of your preparation, attending class does not guarantee success on the exam. Previous experience, practice, and native aptitude are also important determinants of success.

Many books and other resources on system administration for Red Hat products are available. Red Hat does not endorse any of these materials as preparation guides for exams. Nevertheless, you may find additional reading helpful to deepen your understanding.

Course Content

Study points for the exam

As with all Red Hat performance-based exams, configurations must persist after reboot without intervention.

- Manage OpenShift Container Platform
  - Use the web console to manage and configure an OpenShift cluster
  - Use the command-line interface to manage and configure an OpenShift cluster
  - Query, format, and filter attributes of Kubernetes resources
  - Import, export, and configure Kubernetes resources
  - Locate and examine container images
  - Create and delete projects
  - Examine resources and cluster status
  - View logs
  - Monitor cluster events and alerts
  - Assess the health of an OpenShift cluster
  - Troubleshoot common container, pod, and cluster events and alerts
  - Use product documentation
- Deploy Applications
  - Deploy applications from resource manifests
  - Use Kustomize overlays to modify application

- configurations
  - Deploy applications from images, OpenShift templates, and Helm charts
  - Deploy jobs to perform one-time tasks
  - Manage application deployments
  - Work with replica sets
  - Work with labels and selectors
  - Configure services
  - Expose both HTTP and non-HTTP applications to external access
  - Work with operators such as MetalLB and Multus
- Manage Storage for Application Configuration and Data
  - Create and use secrets
  - Create and use configuration maps
  - Provision Persistent Storage volumes for block and file-based data
  - Use storage classes
  - Manage non-shared storage with StatefulSets
- Configure Applications for Reliability
  - Configure and use health probes
  - Reserve and limit application compute capacity
  - Scale applications to meet increased demand
- Manage Application Updates
  - Identify images using tags and digests
  - Roll back failed deployments
  - Manage image streams
  - Use triggers to manage images
- Manage Authentication and Authorization
  - Configure the HTPasswd identity provider for authentication
  - Create and delete users
  - Modify user passwords
  - Create and manage groups
  - Modify user and group permissions
- Configure Network Security
  - Configure networking components
  - Troubleshoot software defined networking
  - Create and edit external routes
  - Control cluster network ingress
  - Secure external and internal traffic using TLS certificates
  - Configure application network policies
- Enable Developer Self-Service
  - Configure cluster resource quotas
  - Configure project quotas
  - Configure project resource requirements
  - Configure project limit ranges
  - Configure project templates
- Manage OpenShift Operators
  - Install an operator
  - Delete an operator
- Configure Application Security
  - Configure and manage service accounts
  - Run privileged applications

- Create service accounts
- Manage and apply permissions using security context constraints
- Create and apply secrets to manage sensitive information
- Configure application access to Kubernetes APIs
- Configure Kubernetes CronJobs

Exam format

This exam is a performance-based evaluation of skills and knowledge required to configure and manage a cloud application platform. Candidates perform routine configuration and administrative tasks using Red Hat OpenShift Container Platform and are evaluated on whether they have met specific objective criteria. Performance-based testing means that candidates must perform tasks similar to what they perform on the job.

Scores and reporting

Official scores for exams come exclusively from Red Hat Certification Central. Red Hat does not authorize examiners or training partners to report results to candidates directly. Scores on the exam are usually reported within 3 U.S. business days.

Exam results are reported as total scores. Red Hat does not report performance on individual items, nor will it provide additional information upon request.

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