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EX280 OpenShift Training: Red Hat Administrator Certification

2 days (14 hours)

Overview

OpenShift is Red Hat's containerization and application orchestration platform, based on Kubernetes. Designed to streamline the deployment, operation, and security of containerized applications, it has become a standard in DevOps, cloud, and hybrid environments.

Our EX280 OpenShift Training: Red Hat Administrator Certification will enable you to master the administration of an OpenShift cluster with a focus on passing the official Red Hat Certified Specialist in OpenShift Administration Exam (EX280).

You will learn to manage resources, secure access, deploy applications, configure storage, expose services, and diagnose incidents in an environment that closely mirrors real-world certification conditions.

This course focuses on the tasks expected on exam day, essential OC commands, troubleshooting scenarios, time management, and the systematic verification of results to significantly increase your chances of success.

By the end of the course, you will be able to manage an OpenShift environment in a production setting, troubleshoot common issues, and approach the EX280 exam with a clear, practical, and effective strategy.

Objectives

- Understand the architecture and essential components of an OpenShift cluster.
- Manage projects, access, resources, and security in OpenShift.
- Deploy, expose, and maintain containerized applications.
- Configure persistent storage, networking, and key operational objects.

- Diagnose and resolve common issues using troubleshooting techniques.
- Effectively prepare for the EX280 certification exam.

Target Audience

- System and platform administrators
- DevOps and SRE engineers
- Infrastructure professionals wishing to administer OpenShift
- Candidates preparing for the Red Hat EX280 certification

Prerequisites

- Basic knowledge of Linux and the command line.
- Understanding of containers and the Kubernetes ecosystem.
- General understanding of networking and storage concepts.
- Some experience in system or platform administration is recommended.

EX280 OpenShift Training: Red Hat Administrator Certification

[Day 1 - Morning]

OpenShift Architecture and Administration Fundamentals

- Understand the OpenShift Container Platform architecture, its master components, and the role of Kubernetes
- Get familiar with the oc CLI, the web console, and key administration objects
- Work with essential concepts: projects, pods, nodes, services, and routes
- Identify the differences between OpenShift and a standard Kubernetes cluster
- Apply the basic techniques for reading exam questions and completing them quickly, as required for the EX280 exam
- Hands-on Workshop: Comprehensive overview of an OpenShift cluster, navigation, verification, and
  essential commands.

[Day 1 - Afternoon]

Resource, access, and security management

- Create and manage projects, accounts, groups, and permissions in an exam-style format
- Configure roles, role bindings, and RBAC rules to secure access
- Manage quotas, limit ranges, secrets, and configmaps
- Implement security mechanisms related to Security Context Constraints and workload execution

- Systematically validate configuration compliance to avoid critical errors on exam day
- Hands-on workshop: Create a secure environment using RBAC, quotas, secrets, and execution constraints
  execution.

Application deployment, network exposure, and persistent storage

- Deploy applications with `oc new-app`, manage deployment objects, and control their lifecycle
- Expose applications with services and routes while validating their proper functioning
- Configure storage using Persistent Volumes (PV) and Persistent Volume Claims (PVC)
- Identify common errors related to deployment, network connectivity, and volume mounting
- Develop the necessary control reflexes for time-sensitive tasks such as EX280
- Hands-on workshop: Deploy a complete application with network exposure, persistence, and functional verification.

[Day 2 - Morning]

Troubleshooting and operational maintenance

- Analyze the status of the cluster, pods, events, and logs using a fast and reliable method
- Resolve common issues: permission errors, CrashLoopBackOff, deployment failures, and unreachable routes
- Monitor infrastructure objects, verify dependencies, and correct non-compliant configurations
- Use essential diagnostic commands to pinpoint a failure within a limited timeframe
- Implement a final validation process to secure the points earned on the exam
- Hands-on workshop: Troubleshooting a deliberately degraded OpenShift environment in a mock exam scenario.

[Day 2 - Afternoon]

Timed scenarios and strategies for success

- Complete a series of cross-functional exercises combining RBAC, deployment, networking, storage, and security
- Practice time management, task prioritization, and maximizing your score on the EX280 exam
- Learn to read instructions effectively, avoid wording pitfalls, and minimize oversights
- Review the most valuable OC commands to know without hesitation
- Implement a systematic verification method before moving on to the next question
- Hands-on workshop: Timed mock exam with a sequence of administrative tasks and targeted debriefing.

Preparation for the Red Hat Certified Specialist in OpenShift certification

Administration Exam (EX280)

- Understand the official exam process, its 100% hands-on format, and its operational requirements
- Review the skills actually assessed: administration, security, networking, storage, deployment, and troubleshooting
- Identify the most common errors, essential checkpoints, and best practices to follow
- Structure your testing strategy: order of execution, validation of results, and securing points
- Finalize a review checklist focused on commands, checks, and execution methodology
- Hands-on workshop: Taking the mock exam + grading.

Target Companies

This training is intended for both individuals and companies, large or small, wishing to train their teams in new advanced IT technology or to acquire specific professional knowledge or modern methods.

Entry-level assessment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency in various types of technologies, as well as their expectations and personal goals regarding the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth running of the training session.

Teaching Methods

Practical Course: 60% Practical, 40% Theory. Training materials distributed in digital format to all participants.

Organization

The course alternates between theoretical instruction from the instructor—supported by examples and discussion sessions—and group work.

Assessment

At the end of the session, a multiple-choice questionnaire is used to verify that the skills have been properly acquired.

Certification

A certificate will be issued to each trainee who has completed the entire training program.