Red Hat Certificate of Expertise in Clustering and Storage Management exam (EX436)

In preparation

Red Hat recommends that candidates earn Red Hat Certified System Administrator (RHCSA) or Red Hat Certified Engineer (RHCE) before attempting this exam but neither is required.

Study points for the exam

To help you prepare, review the exam objectives which highlights the task areas you can expect to see covered in the exam. Red Hat reserves the right to add, modify, and remove exam objectives. Such changes will be made public in advance.
Candidates should be able to perform the tasks listed below:

- Configure a high-availability cluster, using either physical or virtual systems, that:
  - Provides a service fail-over between the nodes
  - Provides a preferred node for the service
  - Selectively fails over based on node characteristics
- Manage logical volumes in a clustered environment such as:
  - Create volumes and volume groups that are available to all members of a highly-available cluster
  - Create snapshots of logical volumes
- Configure a GFS file system to:
  - Meet specified size, layout, and performance objectives
  - Support file system quotas
- Configure iSCSI targets and initiators
- Manage device configuration using udev
- Create and manage Red Hat Storage based clusters including:
  - Creating distributed clusters
  - Creating replicated clusters
  - Implementing and utilizing appropriate file systems

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

Audience and prerequisites

- Experienced Linux® system administrators responsible for the planning, deployment, and management of more than 1 physical or virtualized server
- An RHCE interested in earning a Red Hat Certificate of Expertise or an RHCDS or RHCA credential

Prerequisites for this exam

Exam candidates must:

- Hold a current RHCE certification at the time the exam is taken.
- Have Red Hat Enterprise Clustering and Storage Management (RH436) or equivalent experience.
- Understand that real-world system administration experience is also an important aspect of preparation for the exam.
- Review exam objectives for the Red Hat Certificate of Expertise in Clustering and Storage Management Exam.

Course Overview

Created for senior Linux® system administrators, this four-day course strongly emphasizes lab-based activities. You'll learn how to deploy and manage shared storage and server clusters that provide highly available network services to a mission-critical enterprise environment. This course can also help you in your preparation for the Red Hat Certificate of Expertise in Clustering and Storage Management exam (EX436). This version of the course includes the exam.

Course content summary

- Install and configure the Red Hat High Availability Add-On
- Create and manage highly available services
- Work with shared storage (iSCSI) and configure multipathing
- Configure GFS2 file systems
- Configure XFS® file systems
- Work with the Red Hat Storage Server

What is a Certificate of Expertise credential?

Red Hat Certificates of Expertise are specialized credentials available to individuals who pass performance-based exams. The certificates demonstrate skills and knowledge in specialized areas.

Audience and prerequisites

Audience for this course

- Senior Linux system administrators responsible for maximizing resiliency though high-availability clustering services and using fault-tolerant shared storage technologies
- Individuals interested in earning Red Hat Certificates of Expertise, as well as a Red Hat Certified Architects (RHCA) designation

Prerequisites for this course

- If you have not earned your Red Hat Certified Engineer (RHCE) certification, you can confirm whether you have the correct skill-set knowledge by passing the online skills assessment.

Outline for this course

- **Clusters and storage**
- Get an overview of storage and cluster technologies.
- **ISCSI configuration**
- Set up and manage iSCSI.
- **UDEV**
- Learn basic manipulation and creation of udev rules.
- **Multipathing**
- Combine multiple paths to SAN devices into one fault-tolerant virtual device.
- **Red Hat high-availability overview**
- Learn the architecture and component technologies in the Red Hat® High Availability Add-On.
- **Quorum**
- Understand quorum and quorum calculations.
- **Fencing**
- Understand fencing and fencing configuration.
- **Resources and resource groups**
- Understand rgmanager and the configuration of resources and resource groups.
- **Advanced resource management**
- Understand resource dependencies and complex resources.
- **Two-node cluster issues**
- Understand the use and limitations of two-node clusters.
- **LVM management**
- Review LVM commands and Clustered LVM (CLVM).
- **Global File System 2**
- Understand the GFS2 file system and use tools to create, maintain, and troubleshoot it.
- **XFS**
- Explore the features of the XFS® file system and tools required for creating, maintaining, and troubleshooting.
- **Red Hat Storage**
- Work with Gluster to create and maintain a scale-out storage solution.
- **Comprehensive review**
- Set up high-availability services and storage.

Recommended next exam or course

Red Hat Certificate of Expertise in Clustering and Storage Management exam (EX436)

Hands-on, performance-based, 4-hour exam.

Red Hat Enterprise Deployment and Systems Management (RH401)

Equips senior administrators for large-scale deployment and management of Red Hat Enterprise Linux systems, including Red Hat Network Satellite server.

Red Hat Enterprise System Monitoring and Performance Tuning (RH442)

Gives senior administrators the methodology and experience with performance tuning and capacity planning for Red Hat Enterprise Linux.

This course prepares you for these credentials

Red Hat Certified Architect — RHCA

RHCA certification incorporates the skills and knowledge of RHCDS plus advanced networking services security, system monitoring, and performance tuning.

Certificates of Expertise

Certificates of Expertise are incremental credentials attached to an RHCE certification that demonstrate skills and knowledge in specialized areas.