



# Red Hat High Availability Clustering (RH 436)

#### **COURSE OVERVIEW**

Deploy reliable, available critical production services in a high availability cluster

In the Red Hat High Availability Clustering (RH436) course, you will learn how to provide highly available network services to a mission-critical enterprise environment through the deployment and management of shared storage and server clusters. Created for senior Linux system administrators, this 4-day course strongly emphasizes lab-based activities.

You will set up a cluster of systems running the Pacemaker component of the Red Hat Enterprise Linux High-Availability Add-On, and deploy Linux-based services such as web servers and databases on that cluster. Cluster storage components from the Resilient Storage Add-On are also covered; installations and applications that require multiple cluster nodes can access the same storage simultaneously. This includes Logical Volume Manager (LVM) Shared Volume Groups, Red Hat Global File System 2 (GFS2), and Device-Mapper Multipath.

This course is based on Red Hat Enterprise Linux 8.3.

#### WHO WILL BENEFIT FROM THIS COURSE?

Senior Linux system administrators who use high-availability clustering and fault-tolerant shared storage technologies to maximize resiliency of production services.

## **PREREQUISITES**

- Take our free assessment to gauge whether this offering is the best fit for your skills.
- Red Hat Certified System Administrator (RHCSA) exam (EX200) and associated courses.
- Red Hat Certified Engineer (RHCE) exam (EX294) and associated courses.

#### **COURSE OBJECTIVES**

As a result of attending this course, you will be able to create, manage, and troubleshoot highly available network services and tightly-coupled cluster storage for business-critical applications.

Students should be able to demonstrate the following skills:

- Improve application uptime by using high availability clustering.
- Manage storage in an high availability environment using iSCSI initiators, HA-LVM or LVM Shared Volume Groups as appropriate, and GFS2 cluster file systems.
- Implement strategies to identify and eliminate single points of failure in high availability clusters.





#### **COURSE OUTLINE**

Creating high availability clusters

• Create a basic high availability cluster.

Managing cluster nodes and quorum

Manage node membership in the cluster and describe how it impacts cluster operation.

Isolating malfunctioning cluster nodes

• Isolate unresponsive cluster nodes to protect data and recover services and resources after a failure.

Creating and configuring resources

• Create basic resources and resource groups to provide highly available services.

Troubleshooting high availability clusters

Identify, diagnose, and fix cluster issues.

Automating cluster and resource deployment

Deploy a new high availability cluster and cluster resources using Ansible automation.

Managing two-node clusters

 Operate two-node clusters while identifying and avoiding issues specific to a two-node cluster configuration.

Accessing iSCSI storage

 Configure iSCSI initiators on your servers to access block-based storage devices provided by network storage arrays or Ceph storage clusters.

Accessing storage devices resiliently

Configure resilient access to storage devices that have multiple access paths.

Configuring LVM in clusters

Select, configure, and manage the correct LVM configuration for use in your cluster.

Providing storage with the GFS2 cluster file system

• Use the GFS2 cluster file system to simultaneously provide tightly coupled shared storage that can be accessed by multiple nodes.

Eliminating single points of failure

• Identify and eliminate single points of failure in your cluster to decrease risk and increase average service availability.

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 The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

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- An enthusiastic student services team is available to answer any questions and ensure a quality training experience

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