

RH436 - Red Hat High Availability Clustering

Duration: 32 Hours (4 Days)

Overview

The Red Hat High Availability Clustering course offers in-depth training on creating, managing, and troubleshooting Red Hat Clustering and RHEL HA clusters. Learners will gain a foundational understanding of cluster technologies and storage solutions, focusing on the Pacemaker-based high-availability clusters. Through this course, students will learn to maintain Cluster node membership, implement Quorum decision-making, and configure Fencing to safeguard cluster integrity. Additionally, the course covers the creation and management of Resource groups, troubleshooting clusters, and handling complex Resource groups with constraints. Two-node cluster issues, iSCSI initiators, Multipath storage configurations, and the use of LVM in clustered environments are also discussed. The course provides practical knowledge on GFS2, eliminating single points of failure, and culminates in a comprehensive review where students set up High-availability services and storage, preparing them to ensure service availability and business continuity in enterprise environments.

Audience Profile

The Red Hat High Availability Clustering course offers in-depth training on creating and managing robust clusters for IT professionals.

- System Administrators
- IT Architects
- System Engineers
- DevOps Engineers
- Technical Support Specialists
- IT Professionals involved in storage management
- Datacenter Managers
- Network Administrators
- Cloud Infrastructure Engineers
- Professionals working with Red Hat Enterprise Linux environments
- Individuals seeking RHCA (Red Hat Certified Architect) certification
- Technical Decision Makers planning high-availability solutions
- Disaster Recovery Specialists

Course Syllabus

Prerequisites for this course

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.

Understand Ansible basics, including, writing and running simple playbooks or equivalent experience

Outline for this course

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.