Red Hat High Availability Clustering

Course Duration: 40 Hours **Course Code : RH436**

1. Course Overview

The **Red Hat High Availability Clustering (RH436)** course provides system administrators with the skills to **deploy, configure, and manage high availability (HA) clusters** using **Red Hat Enterprise Linux (RHEL)**.

Participants learn how to ensure **maximum time and fault tolerance** for critical applications and services by implementing **cluster nodes, resource management, and failover strategies**. The course emphasizes hands-on labs for configuring **Red Hat High Availability Add-On, Pacemaker, Coro sync, and cluster resources** across physical and virtual environments.

2. What You'll Learn

- Design and configure **high availability clusters** in RHEL environments.
- Install and manage **Red Hat High Availability Add-On components**.
- Configure **Pacemaker and Coro sync** for cluster communication and resource management.
- Manage **cluster resources, services, and dependencies**.
- Implement **fencing and failover strategies** for fault tolerance.
- Monitor cluster health and troubleshoot common HA issues.
- Deploy HA clusters in **physical, virtual, and cloud environments**.
- Apply best practices for **high availability and business continuity**.

3. Target Audience

This course is intended for:

- Linux system administrators managing **critical enterprise services**.
- DevOps and IT operations engineers responsible for **service uptime and reliability**.
- System architects designing **high availability infrastructures**.
- Professionals planning **disaster recovery and fault-tolerant environments**.

4. Pre-Requisites

Participants should have:

- Red Hat Certified System Administrator (**RHCSA**) or equivalent experience.
- Knowledge of Linux system administration, networking, and storage concepts.
- Familiarity with RHEL services and virtualization environments is helpful.

5. Course Content

Module 1: Introduction to High Availability

- High availability concepts and benefits
- HA components in Red Hat Enterprise Linux

Module 2: Installing HA Clustering Components

- Installing Red Hat High Availability Add-On
- Configuring cluster nodes

Module 3: Cluster Communication with Coro sync

- Cluster messaging and quorum
- Coro sync configuration and testing

Module 4: Managing Cluster Resources

- Defining and configuring cluster resources
- Resource groups, constraints, and dependencies

Module 5: Pacemaker Administration

- Pacemaker architecture and configuration
- Managing cluster policies and failover

Module 6: Fencing and Node Recovery

- Understanding fencing mechanisms
- Configuring STONITH devices and automated recovery

Module 7: Monitoring and Troubleshooting Clusters

- Monitoring cluster health
- Diagnosing common HA issues

Module 8: High Availability for Services

- Configuring HA for web, database, and file services
- Load balancing and redundancy strategies

Module 9: HA in Virtual and Cloud Environments

- Deploying clusters in virtualized infrastructure
- Best practices for cloud-based HA

Module 10: Hands-On Labs

- Real-world HA cluster setup and testing
- Failover, fencing, and resource management exercises