

# Course Outline

## Red Hat Enterprise Deployment and Systems Management

### Introduction

RH401 Red Hat Enterprise Deployment and Systems Management is a 4-day intensive hands-on lab course in skills and methods critical to large-scale deployment and management of mission-critical Red Hat Linux systems, including Red Hat Enterprise Linux, failover and load-balancing; CVS for system administrators; RPM rebuilding, and performance tuning for specific applications.

### Pre-Requisites

RH401 requires RHCE-level skills. The RHCE certificate on 7.1 or higher is recommended but not required. Prerequisite skills can be evidenced by passing the RHCE Exam in either RH302, RH300, or by taking RH253 or comparable skills and knowledge.

Note: Persons should not enroll in RH401 without meeting the above prerequisites. All prospective course participants who do not possess RHCE certification are strongly advised to contact Red Hat Global Learning Services for a skills assessment when they enroll.

### Goal

RH401 is designed to train people with RHCE level competency on skills required to deploy and manage Red Hat systems to enterprise standards of reliability, availability, scalability and manageability (RASM). Central to the course is hands on training in the high availability and load-balancing capabilities of Red Hat Enterprise Linux.

Persons taking RH401 will learn how to implement and manage enterprise Red Hat Enterprise Linux deployments efficiently and effectively in ways that make the entire enterprise deployment manageable by a team.

Red Hat's RHCE training and certification programme provides fundamental skills and knowledge required by IT professionals who are deploying Red Hat Enterprise Linux in enterprise environments. RH401 goes further in that it trains senior system administrators to manage large numbers of Red Hat servers in a variety of roles, and/or manage Red Hat Enterprise Linux server(s) for mission critical applications that require failover and load-balancing.

RH401 is benchmarked on expert level competencies in managing operating systems for enterprise roles.

### Audience

RH401 is aimed at senior Red Hat Enterprise Linux system administrators and other IT professionals working in enterprise environments.



Learning Solutions

( 1300 86 87246  
1300 TO TRAIN

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## Course Details

Course code: RH401

Duration: 4 days

Starting time: 9.00 am

Finishing time: 5.00 pm

Lunch and refreshments are provided.

## Booking guidelines

Contact our Learning Consultants on 1300 86 87246 and we will assist you with your booking.

## Course Outline

### Enterprise System Management Concepts

- System management tasks
- Standardization, centralization, and scalability
- Provisioning and automation
- Red Hat tools for system management

### Provisioning using DHCP and PXE

- Bare metal provisioning
- Provisioning technologies: DHCP, TFTP, and PXE
- Network installations
- DHCP server configuration

### Installing a Red Hat Network Satellite Server

- Features and advantages of the RHN Satellite Server
- Types of RHN Satellite Servers
- RHN Satellite Server hardware requirements
- Understanding software channels
- Installing an RHN Satellite Server
- Populating an RHN Satellite Server with software channel content
- Troubleshooting an RHN Satellite Server installation

### Building RPMs

- Building open source software
- Using RPM macros
- Writing custom spec files
- Using rpm build to create and sign RPMs
- Guidelines for custom RPMs



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## Using CVS to Manage Configuration Files

- Basics of CVS for system administrators
- Creating local and remote repository access
- Structuring a CVS project
- Using CVS to track, log, and reverse configuration changes

## Managing the Red Hat Network Satellite Server

- Configuring clients to use a RHN Satellite Server
- Using activation keys to script installations
- Creating and managing custom software channels

## Red Hat Network Management and Provisioning

- Types of RHN service
- Elements of a deployment system
- Using custom software channels in a deployment system
- Using configuration channels to maintain system configuration
- Automating installations through kickstart

## Red Hat Network Proxy Server

- Hosted RHN versus Proxy Server
- Proxy Server software and hardware requirements
- Installing RHN Proxy Server
- Configuring clients to use a RHN Proxy Server

## Saving Kernel Crash Dumps

- Saving crash signatures over the network
- Saving crash dumps over the network
- Configuring netdump servers
- Configuring netdump clients
- Saving crash dumps locally using kexec and kdump

## Red Hat Virtualization Overview

- Virtualization concepts and terminology
- Hardware considerations

## Virtual Machine Management

- Identifying virtual machines
- Virtualization management tools: xm, xentop, virsh
- Creating and monitoring virtual machines
- Resource management
- Accessing consoles

## Installing and Configuring Virtual Machines

- Installing virtual machines
- Configuring virtual machine resources (CPU, memory, storage, network devices)

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## **Hypervisor Details**

- Understanding the hypervisor
- vnc console access
- xendomains

## **Virtualization: Advanced Techniques**

- Snapshot storage
- Creating virtual private networks
- Masquerading virtual machines
- Physical and logical network separation