

RHCA Syllabus

RH413

Manage Software Updates

Develop a process for applying updates to systems, including verifying properties of the update.

Create File Systems

Allocate an advanced file system layout, and use file system encryption.

Manage File Systems

Adjust file system properties through security-related options and file system attributes.

Manage Special Permissions

Work with set user ID (SUID), set group ID (SGID), and sticky (SVTX) permissions, and locate files with these permissions enabled.

Manage Additional File Access Controls

Modify default permissions applied to files and directories, and work with file access control lists.

Monitor for File System Changes

Configure software to monitor the files on your machine for changes.

Manage User Accounts

Set password-aging properties for users; audit user accounts.

Manage Pluggable Authentication Modules (PAMs)

Apply changes to PAMs to enforce different types of rules on users.

Secure Console Access

Adjust properties for various console services to enable or disable settings based on security.

Install Central Authentication and configure a Red Hat Identity Management server and client.

Manage Central Authentication

Configure Red Hat Identity Management rules to control both user access to client systems and additional privileges granted to users on those systems.

Configure System Logging

Configure remote logging to use transport layer encryption, and manage additional logs generated by remote systems.

Configure System Auditing

Enable and configure system auditing.

Control Access To Network Services

Manage firewall rules to limit connectivity to network services.

RH401

Manage Red Hat Enterprise Linux deployments

Install a Red Hat Network Satellite Server

Install a Red Hat Network Satellite Server and populate it with software channel content.

Manage changes with revision control

Deploy a Subversion repository and have multiple administrators use it to manage changes to configuration files and shell scripts.

Configure a Red Hat Network client

Register client systems with a RHN Satellite server, both interactively and with automation, and troubleshoot registration problems.

Manage Red Hat Network software ,Create and manage custom software channels, cloned software channels, and errata notifications with a

RHN Satellite server.

Build RPMs

Build and sign RPM packages that can be deployed by a RHN Satellite server.

Use the RHN application programmer interface

Modify and write simple scripts that will interact with a RHN Satellite server with its API.

Provision with Kickstart

Use RHN Satellite, with Cobbler, to create and manage a bare-metal provisioning environment.

Manage a virtual machine

Manage and provision kernel-based virtual machine (KVM) guests using RHN Satellite.

Administer RHN Satellite Server

Manage the embedded database, entitlement certificates, and export software channels from a RHN Satellite server.

RH318

The skills required to deploy and manage virtual environments

Red Hat Enterprise Virtualization overview

Understand general virtualization, KVM concepts, and Red Hat® Enterprise Virtualization platform. Red Hat Enterprise Virtualization Manager

Install, test, remove, and troubleshoot Red Hat Enterprise Virtualization Manager.

Red Hat Enterprise Virtualization Hypervisor

Install, configure, upgrade, and troubleshoot Red Hat Enterprise Virtualization Hypervisor.

Red Hat Enterprise Virtualization environment configuration

Create and configure datacenters, clusters, storage domains, and logical networks.

Red Hat Enterprise Virtualization for Servers

Install, perform basic management of, and troubleshoot virtual servers and images.

Red Hat Enterprise Virtualization for Desktops

Install virtual desktops and configure paravirtualized drivers.

Virtual machine templates

Create Microsoft Windows and Red Hat Enterprise Linux® virtual machines with template images.

Pools and users

Use pools and deploy the user portal with multilevel administrative roles.

Monitoring and reports

Monitor Red Hat Enterprise Virtualization and create custom reports.

Advanced Red Hat Enterprise Virtualization

Back up and restore Red Hat Enterprise Virtualization; CLI and API interfaces. Red

Hat Enterprise Linux hosts Manage virtual machines with Red Hat Network.

Migration and high availability

Migrate a virtual machine and explore high availability

Comprehensive review

Apply the performance objectives learned throughout the course

RH436

Manage Red Hat Enterprise Linux deployments

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 2-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.

RH442

Performance tuning and capacity planning for Red Hat Enterprise Linux

Introduction to performance tuning

Understand the basic principles of performance tuning and analysis.

Collecting, graphing, and interpreting data

Gain proficiency in using basic analysis tools and in evaluating data.

General tuning

Learn basic tuning theory and mechanisms used to tune the system. Hardware profiling

Understand and analyze hardware.

Software profiling

Analyze CPU and memory performance of applications.

Mail server tuning

Learn about basic storage tuning using an email server as an example.

Large memory workload tuning

Understand memory management and tuning.

HPC workload tuning

Understand tuning for CPU-bound applications.

File server tuning

Understand storage and network tuning in the context of a file server application.

Database server tuning

Tune memory and network performance using a database application as an example. Power usage tuning

Tune systems with power consumption in mind.

Virtualization tuning

Tune 'host' and 'guest' for efficient virtualization.

CL210

Install, configure, and maintain a cloud computing environment using Red Hat Enterprise Linux

OpenStack Platform

Red Hat Enterprise Linux OpenStack Platform architecture

Understand Red Hat Enterprise Linux OpenStack Platform features and terminology.

Red Hat Enterprise Linux OpenStack Platform installation

Install Red Hat Enterprise Linux OpenStack platform using packstack.

Use Horizon web interface manage it.

Message broker

Install and secure the Qpid message broker service.

Identity service

Install, configure, and use the Keystone authentication services.

Object storage service

Install and manage the Swift object storage service.

Image service

Install the Glance image service.

Import system images.

Block storage service

Install the Cinder block storage service. Manage Cinder volumes.

Networking service

Install, configure, and manage Red Hat Enterprise Linux OpenStack Platform networking service.

Compute and controller services

Install Nova compute and controller.

Learn how to add nova compute nodes.

Launch an instance from the command line.

Additional compute node

Learn to add and remove additional Nova compute nodes.

Orchestration service

Install the Heat orchestration service.

Metering service

Install and manage the Ceilometer metering service.

Launch a stack.

The future of Red Hat Enterprise Linux OpenStack Platform

Comprehensive review

Review the installation and management of Red Hat Enterprise Linux OpenStack Platform.

RH236

Introduction to Red Hat Storage

Understand Red Hat Storage server features and terminology.

Explore the classroom environment

Gain familiarity with the classroom environment.

Installation

Install Red Hat Storage Server.Basic configuration

Build a Red Hat Storage server volume.

Volume types

Understand different volume types.

Clients

Access data on Red Hat Storage server volumes from different client types.

ACLs and quotas

Implement quotas and Posix access control lists.

Extending volumes

Grow storage volumes online.

IP failover

Configure IP failover using CTDB.

Geo-replication

Configure geo-replication.

Unified file and object storage

Configure Swift object access.

Troubleshooting

Perform basic troubleshooting tasks.