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RHCSA preparation training

4 days (28 hours)

Presentation

[Red Hat](#) is a publisher of GNU/Linux distributions. It is one of the largest and most recognized Open Source software companies. It is also the leading distributor of the GNU/Linux operating system.

[Red Hat Certified System Administrator](#) (RHCSA) is an entry-level certification that focuses on real-world system administration skills, including the installation and configuration of a Red Hat Enterprise Linux system. To obtain RHCSA certification, trainees must pass EX200, a two-and-a-half-hour practical laboratory exam. The minimum passing score for the exam is 210 out of a possible 300 points (70%). There are no prerequisites for the exam, but Red Hat recommends preparing for it by taking Red Hat System Administration courses.

This 4-day course will cover all the topics and knowledge required to sit the RHCSA exam. However, as the pace is accelerated, a good experience of [RHEL](#) systems is essential. The aim is to detect any gaps and work on filling them through practical exercises intended for experienced administrators who wish to formalize their knowledge through certification.

As with all our training courses, this one will introduce you to the latest version ([RHEL 9.3](#) at the time of writing).

Objectives

Master the following points:

- Manage users and groups, files and file permissions
- Updating software packages with yum
- Systemd service management and troubleshooting during the start-up process
- Network configuration and basic troubleshooting
- Local storage management, file system creation and use
- Firewall management with firewalld

- KVM (Kernel-Based Virtual Machine) management
- Automating Red Hat Enterprise Linux installation with Kickstart

Target audience

Linux System Administrators

Prerequisites

Good knowledge of RedHat Linux systems, several years' full-time experience.

RHCSA preparation training program

This program is based directly on the objectives of the RHCSA exam. Each trainee will be asked to assess himself/herself on each point according to the following criteria (novice, user, advanced user, total mastery). Notions not mastered by everyone will be the subject of a theoretical reminder. Practical work will be organized so that everyone can work on their weak points.

Understanding and using essential tools

- Access a Shell command prompt and write commands with the appropriate syntax
- Use input/output redirection (>, >>, |, 2>, etc.)
- Use grep and regular expressions to analyze text
- Access remote systems using ssh
- Logging in and changing users in multi-user targets
- Archive, compress, decompress and unzip files, using tar, star, gzip and bzip2
- Creating and editing text files
- Create, delete, copy and move files and directories
- Creating physical and symbolic links
- List, define and modify standard ugo/rwx authorizations
- Locate, read and use system documentation, including manuals, information and files in /usr/share/doc

Use running systems

- Booting, rebooting and shutting down a system normally
- Start systems in different targets manually
- Interrupt boot process to gain access to a system
- Identify processor/memory-intensive processes, adjust process priority using the renice command and stop processes
- Locate and interpret system and log files
- Accessing the virtual machine console
- Starting and stopping virtual machines
- Start, stop and check status of network services

- Transfer files securely between systems

Configuring local storage

- List, create and delete partitions on MBR and GPT disks
- Create and delete physical volumes, assign physical volumes to volume groups, and create and delete logical volumes
- Configuring systems to mount file systems on startup by identifier UUID or label
- Add new partitions and logical volumes and change systems non-destructively

Creating and configuring file systems

- Create, mount, unmount and use vfat, ext4 and xfs file systems
- Mount and dismount CIFS and NFS network file systems
- Extend existing logic volumes
- Create and configure SetGID directories for collaboration
- Create and manage access control lists
- Detect and resolve file authorization problems

Deploy, configure and manage systems

- Set up static or dynamic hostname and networking resolution
- Schedule tasks using cron and at
- Start and stop services, and configure services to start automatically on startup
- Configure systems to start automatically in a specific target area
- Install Red Hat Enterprise Linux systems as virtual guests
- Configuring systems to launch virtual machines on startup
- Configure network services to start automatically on startup
- Configuring a system to use time services
- Install and update software packages from Red Hat Network, a remote repository or the local file system
- Update kernel package appropriately to ensure bootability the system
- Modify the system boot loader

Manage system users and groups

- Create, delete and modify local user accounts
- Change passwords and adjust password validity for local user accounts

- Create, delete and modify local groups and group memberships
- Configure a system to use an existing authentication service for user and group information

Managing safety

- Configure firewall settings using firewall-config, firewall-cmd or iptables
- Configure key-based authentication for SSH
- Define rule enforcement and permissive modes for SELinux
- List and identify the context of SELinux files and processes
- Restore default file contexts
- Use Boolean parameters to modify system SELinux settings
- Detect and manage routine SELinux policy violations

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.

