NETCAMPUS GROUP
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COURSE CODE: EX-200

Course Name: Red Hat Certified System Administrator (RHCSA) exam

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING UNITS
3 hours	Introduction	Red Hat	Online	3

Course Description:

The performance-based Red Hat Certified System Administrator (RHCSA) exam (EX-200) tests your knowledge in areas of system administration common across a wide range of environments and deployment scenarios.

The skills tested in this exam are the foundation for system administration across all Red Hat® products.

By passing this exam, you become a **Red Hat Certified System Administrator.** If you choose to continue your learning journey beyond RHCSA, the credential can also serve as a foundational step on your path toward our highest level of certification - **Red Hat Certified Architect.**

This exam is based on Red Hat® Enterprise Linux® 8.2.

Prerequisites:

- Have either taken Red Hat System Administration I (RH-124) and Red Hat System Administration II (RH-134) or the RHCSA Rapid Track course (RH-199) that combines those courses, or have comparable work experience as a system administrator on Red Hat Enterprise Linux
- Review the Red Hat Certified System Administrator exam (EX-200) objectives
- Take our free assessment to find the course that best supports your preparation exam.

Target Audience:

- Experienced Red Hat Enterprise Linux system administrators seeking validation of their skills
- Students who have attended Red Hat System Administration I (RH124) and Red Hat System Administration II (RH134) and are on the path to becoming an RHCSA
- Experienced Linux system administrators who require a certification either by their organization or based on a mandate (DoD 8570 directive)
- IT professionals who are on the path to becoming a Red Hat Certified Engineer (RHCE)
- An RHCE who is noncurrent or who is about to become noncurrent and wants to recertify as an RHCE
- DevOps professionals who wish to demonstrate their expertise with the fundamentals of container technology

Course Outline

Lesson 1: Understand and use essential tools

- Access a shell prompt and issue commands with correct syntax
- Use input-output redirection (>, >>, |, 2>, etc.)
- Use grep and regular expressions to analyze text
- Access remote systems using SSH
- Log in and switch users in multiuser targets
- Archive, compress, unpack, and uncompress files using tar, star, gzip, and bzip2

Lesson 2: Create and edit text files

- Create, delete, copy, and move files and directories
- Create hard and soft links
- List, set, and change standard ugo/rwx permissions
- Locate, read, and use system documentation including man, info, and files in /usr/share/doc
- Create simple shell scripts
- Conditionally execute code (use of: if, test, [], etc.)
- Use Looping constructs (for, etc.) to process file, command line input
- Process script inputs ($1, $2, etc.)
- Processing output of shell commands within a script
- Processing shell command exit codes

Lesson 3: Operate running systems

- Boot, reboot, and shut down a system normally
- Boot systems into different targets manually
- Interrupt the boot process in order to gain access to a system
- Identify CPU/memory intensive processes and kill processes
- Adjust process scheduling
- Manage tuning profiles
- Locate and interpret system log files and journals
- Preserve system journals
- Start, stop, and check the status of network services
- Securely transfer files between systems

Lesson 4: Configure local storage

- List, create, delete partitions on MBR and GPT disks
- Create and remove physical volumes
- Assign physical volumes to volume groups
- Create and delete logical volumes
- Configure systems to mount file systems at boot by universally unique ID (UUID) or label
- Add new partitions and logical volumes, and swap to a system non-destructively

Lesson 5: Create and configure file systems

- Create, mount, unmount, and use vfat, ext4, and xfs file systems
- Mount and unmount network file systems using NFS
- Extend existing logical volumes
- Create and configure set-GID directories for collaboration
- Configure disk compression
- Manage layered storage
- Diagnose and correct file permission problems

Lesson 6: Deploy, configure, and maintain systems

- Schedule tasks using at and cron
- Start and stop services and configure services to start automatically at boot
- Configure systems to boot into a specific target automatically
- Configure time service clients
- Install and update software packages from Red Hat Network, a remote repository, or from the local file system
- Work with package module streams
- Modify the system bootloader

Lesson 7: Manage basic networking

- Configure IPv4 and IPv6 addresses
- Configure hostname resolution
- Configure network services to start automatically at boot
- Restrict network access using firewall-cmd/firewall

Lesson 8: Manage users and groups

- Create, delete, and modify local user accounts
- Change passwords and adjust password aging for local user accounts
- Create, delete, and modify local groups and group memberships
- Configure superuser access

Lesson 9: Manage security

- Configure firewall settings using firewall-cmd/firewalld
- Create and use file access control lists
- Configure key-based authentication for SSH
- Set enforcing and permissive modes for SELinux
- List and identify SELinux file and process context
- Restore default file contexts
- Use boolean settings to modify system SELinux settings
- Diagnose and address routine SELinux policy violations

Lesson 10: Manage containers

- Find and retrieve container images from a remote registry
- Inspect container images
- Perform container management using commands such as podman and skopeo
- Perform basic container management such as running, starting, stopping, and listing running containers
- Run a service inside a container
- Configure a container to start automatically as a systemd service
- Attach persistent storage to a container
- As with all Red Hat performance-based exams, configurations must persist after reboot without intervention.

Recommended Next Exam or Course:

- Red Hat Linux Automation with Ansible (RH-294)
- Red Hat Certified Engineer (RHCE) exam (EX-294)