

RHCSA Objectives

<https://www.redhat.com/en/services/training/ex200-red-hat-certified-system-administrator-rhcsa-exam>

1. Understand and use essential tools

- a) Access a shell prompt and issue commands with correct syntax
- b) Use input-output redirection (>, >>, |, 2>, etc.)
- c) Use grep and regular expressions to analyze text
- d) Access remote systems using ssh
- e) Log in and switch users in multiuser targets
- f) Archive, compress, unpack, and uncompress files using tar, star, gzip, and bzip2
- g) Create and edit text files
- h) Create, delete, copy, and move files and directories
- i) Create hard and soft links
- j) List, set, and change standard ugo/rwx permissions
- k) Locate, read, and use system documentation including man, info, and files in /usr/share/doc

2. Operate running systems

- a) Boot, reboot, and shut down a system normally
- b) Boot systems into different targets manually
- c) Interrupt the boot process in order to gain access to a system
- d) Identify CPU/memory intensive processes, adjust process priority with renice, and kill processes
- e) Locate and interpret system log files and journals
- f) Access a virtual machine's console
- g) Start and stop virtual machines
- h) Start, stop, and check the status of network services
- i) Securely transfer files between systems

3. Configure local storage

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

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5. Create and configure file systems

- a) Create, mount, unmount, and use vfat, ext4, and xfs file systems
- b) Mount and unmount CIFS and NFS network file systems
- c) Extend existing logical volumes
- d) Create and configure set-GID directories for collaboration
- e) Create and manage Access Control Lists (ACLs)
- f) Diagnose and correct file permission problems

5. Deploy, configure, and maintain systems

- a) Configure networking and hostname resolution statically or dynamically
- b) Schedule tasks using at and cron
- c) Start and stop services and configure services to start automatically at boot
- d) Configure systems to boot into a specific target automatically
- e) Install Red Hat Enterprise Linux systems as virtual guests
- f) Configure systems to launch virtual machines at boot
- g) Configure network services to start automatically at boot
- h) Configure a system to use time services
- i) Install and update software packages from Red Hat Network, a remote repository, or from the local file system
- j) Update the kernel package appropriately to ensure a bootable system
- k) Modify the system bootloader

6. Manage users and groups

- a) Create, delete, and modify local user accounts
- b) Change passwords and adjust password aging for local user accounts
- c) Create, delete, and modify local groups and group memberships
- d) Configure a system to use an existing authentication service for user and group information

7. Manage security

- a) Configure firewall settings using firewall-config, firewall-cmd, or iptables
- b) Configure key-based authentication for SSH
- c) Set enforcing and permissive modes for SELinux
- d) List and identify SELinux file and process context
- e) Restore default file contexts
- f) Use boolean settings to modify system SELinux settings
- g) Diagnose and address routine SELinux policy violations