
■ RHCSA v10 Updated Syllabus Outline

Module 1: Essential Tools and Command Line Operations

- Access the shell, use CLI with proper syntax
- Redirect input and output (>, >>, |, 2>, etc.)
- Use grep and regular expressions
- Access remote systems with ssh
- Use su, sudo, whoami, id
- Archive and compress files using:
 - tar, gzip, gunzip, bzip2, bunzip2
- File operations:
 - touch, cp, mv, rm, mkdir, rmdir
- Create and edit text files using vi, nano
- Use hard and symbolic links (ln, ln -s)
- Manage file permissions (chmod, chown, chgrp, umask)
- Use system documentation:
 - man, info, /usr/share/doc, --help

Module 2: Package Management

- Configure YUM/DNF repositories
- Install/remove RPM packages:
 - rpm, dnf install, dnf remove
- Flatpak package management:
 - Add Flatpak remotes
 - Install and remove Flatpak apps

Module 3: Shell Scripting Basics

- Use of conditional logic: if, test, []
- Use of loops: for, while, until
- Handling script inputs: \$1, \$2, etc.
- Capture and use command outputs with \$(...), `command`

Module 4: Operating Running Systems

- Boot/reboot/shutdown system
- Boot into specific targets (e.g., multi-user.target)
- Interrupt boot (e.g., GRUB rescue mode)
- Process management:
 - top, ps, kill, nice, renice
- Use tuned, tuned-adm
- View logs using journalctl, /var/log/*
- Preserve journals (/etc/systemd/journald.conf)
- Manage services:
 - systemctl start|stop|enable|status
- Transfer files securely using scp, rsync, sftp

Module 5: Storage Management

- Disk partitioning with fdisk, gdisk, parted
- Create and manage LVM:
 - pvcreate, vgcreate, lvcreate, lvextend, lvremove
- Mount file systems:
 - Temporary: mount

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- Persistent: /etc/fstab, using UUID or labels
- Add partitions or swap non-destructively (mkswap, swapon, swapoff)

Module 6: File System Management

- File systems: VFAT, ext4, XFS
 - mkfs.vfat, mkfs.ext4, mkfs.xfs
- Mount/unmount file systems: mount, umount
- Network file systems:
 - NFS client setup, mount NFS
 - Configure autofs
- Extend logical volumes: lvextend, resize2fs, xfs_growfs
- Resolve permission issues using chmod, chown, ls -l

Module 7: System Configuration and Maintenance

- Schedule tasks:
 - One-time: at, atq, atrm
 - Recurring: cron, crontab, /etc/crontab
- Manage services:
 - Enable/disable with systemctl
- Set default boot target: systemctl get-default, set-default
- Configure NTP client: chronyd, timedatectl
- Software updates:
 - dnf update, yum update
 - Install from .rpm or local repo
- Bootloader: GRUB2 configuration (/etc/default/grub, grub2-mkconfig)

Module 8: Networking

- Set IPv4/IPv6 manually and persistently:
 - nmcli, nmtui, /etc/sysconfig/network-scripts/
- Set hostnames: hostnamectl
- DNS resolution: /etc/hosts, /etc/resolv.conf
- Enable/disable network services on boot
- Firewall management:
 - firewalld, firewall-cmd
 - Zones, services, ports

Module 9: User and Group Management

- User account management:
 - useradd, userdel, passwd, chage
- Group management:
 - groupadd, groupdel, usermod -aG
- Superuser configuration: sudoers, visudo

Module 10: Security and SELinux

- Firewall configuration:
 - Add/remove services and ports using firewall-cmd
- Default permissions:
 - umask, chmod, setfacl, getfacl
- SSH key-based authentication:
 - ssh-keygen, ssh-copy-id, ~/.ssh/authorized_keys
- SELinux management:
 - Enforcing/permissive: setenforce, /etc/selinux/config

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- View context: ls -Z, ps -eZ
- Restore contexts: restorecon
- Port labeling: semanage port
- Booleans: getsebool, setsebool

Persistence Requirement

All configurations **must persist after reboot** unless otherwise stated.

Key Changes from RHEL 9 → RHEL 10 RHCSA Exam

1. Flatpak Replaces Snap/Podman Apps in Focus

- **RHEL 9:** Podman and container management basics were included.
- **RHEL 10: Flatpak support** is now explicitly listed.
 - You now need to know how to **add Flatpak remotes**, install/uninstall apps using Flatpak.
 - Podman is expected to **move to** other certification exam syllabus (EX188).

New:

✓ flatpak remote-add, flatpak install, flatpak uninstall

✗ Container creation or Podman networking not in v10 RHCSA scope.