

RHCSA Command Cheat Sheet (RHEL 9)

Basic Linux Commands

```
pwd                # Print current directory
cd /path/to/dir    # Change directory
ls -l / ls -a / ls -lh # List files (long, hidden, human-readable)
cp file1 file2     # Copy files
mv old new         # Rename or move
rm -rf file_or_dir # Delete file or directory
touch filename     # Create empty file
mkdir dirname      # Create directory
history            # Show command history
```

User & Group Management

```
useradd john       # Add user
passwd john        # Set user password
usermod -aG wheel john # Add user to group
groupadd dev       # Create group
id john            # Check user's UID, GID, groups
chage -l john      # View password aging
chage -M 30 john   # Set max password age
```

File Permissions & Ownership

```
chmod 755 file     # Set permissions (rwxr-xr-x)
chown user:group file # Change owner and group
getfacl file       # View ACLs
setfacl -m u:john:rwx file # Give 'john' full access
setfacl -x u:john file # Remove 'john's ACL
```

Package Management (DNF/YUM)

```
dnf install httpd # Install package
dnf remove httpd  # Remove package
dnf list installed # List installed packages
dnf update        # Update all packages
```

Service & Systemd Management

```
systemctl status sshd.service # Check status
systemctl start|stop|restart sshd
systemctl enable|disable sshd # Start on boot
systemctl is-enabled sshd     # Is it enabled?
systemctl list-units --type=service
```

Network Configuration (nmcli)

```
nmcli connection show
nmcli device status
```

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```
nmcli con add con-name eth0 ifname eth0 type ethernet ip4 192.168.1.100/24 gw4
192.168.1.1
nmcli con mod eth0 ipv4.dns 8.8.8.8
nmcli con up eth0
hostnamectl set-hostname server1
```

Firewalld

```
firewall-cmd --state
firewall-cmd --list-all
firewall-cmd --add-service=http --permanent
firewall-cmd --reload
```

SELinux

```
getenforce          # Current mode
setenforce 0        # Set to permissive
sestatus            # Detailed status
restorecon -Rv /var/www/html # Restore SELinux context
semanage port -a -t http_port_t -p tcp 8080
```

Storage: Partitions & LVM

```
lsblk              # List block devices
fdisk /dev/sdb     # Partition disk (MBR)
parted /dev/sdb    # GPT disk
```

```
# Format and mount
mkfs.xfs /dev/sdb1
mount /dev/sdb1 /mnt
echo '/dev/sdb1 /mnt xfs defaults 0 0' >> /etc/fstab
```

```
# LVM
pvcreate /dev/sdb1
vgcreate myvg /dev/sdb1
lvcreate -L 1G -n mylv myvg
mkfs.xfs /dev/myvg/mylv
mount /dev/myvg/mylv /mnt
```

```
lvextend -L +500M /dev/myvg/mylv # Extend
xfs_growfs /mnt
```

Scheduled Tasks

```
crontab -e          # Edit user cron
at 10:00             # Schedule one-time task
```

Boot & Target Management

```
systemctl get-default
```

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```
systemctl set-default multi-user.target
systemctl isolate multi-user.target
grub2-editenv list
```

Containers (Podman)

```
podman images                # List images
podman pull httpd            # Pull image
podman run -d -p 8080:80 httpd # Run container
podman ps -a                 # Show all containers
podman start|stop|rm <container>
podman exec -it <container> bash # Run command inside
```

Troubleshooting

```
journalctl -xe                # View system logs
dmesg                         # Kernel messages
ip a                           # Show IP addresses
ping google.com                # Network check
df -h                          # Disk space
free -h                        # RAM usage
```