

# Common administrative commands in Red Hat Enterprise Linux 5, 6, 7, and 8

## System basics

TASK		RHEL
View subscription information	/etc/sysconfig/rhn/systemid	5 6
	subscription-manager identity	6 7 8
Configure subscription	rhnreg_ks	6
	rhn_register <sup>1,3</sup>	5 6 7 8
	subscription-manager <sup>2</sup>	6 7 8
View system profile	hwbrowser	5
	sosreport	5 6 7 8
	dmidecode	5 6 7 8
	lstopo	6 7 8
	lscpu	6 7 8
View RHEL version information	cat/proc/cpuinfo	8
	lshw	8
View RHEL version information	/etc/redhat-release	5 6 7 8

- 1 Be aware of potential issues when using subscription-manager on Red Hat Enterprise Linux 5: <https://access.redhat.com/solutions/129003>.
- 2 Subscription-manager is used for Satellite 6, Satellite 5.6 with SAM and newer, and Red Hat's CDN.
- 3 RHN tools are deprecated on Red Hat Enterprise Linux 7. rhn\_register should be used for Satellite server 5.6 and newer only. For details, see: [What subscription management services are offered by RHSM?, Transition of Red Hat Network Classic Hosted to Red Hat Subscription Management, and Satellite 5.6 unable to register RHEL 7 client system due to rhn-setup package not included in Minimal installation.](#)

## Security and identity

TASK		RHEL
Configure system security	/etc/selinux/config	5 6 7 8
	chcon restorecon semanage setsebool system-config-selinux	5 6 7 8
Report on system security	sealert	5 6 7 8
LDAP, SSSD, Kerberos	authconfig authconfig-tui authconfig-gtk	5 6 7
	authselect	8
Network users	getent	5 6 7 8

## Basic configuration

TASK		RHEL
Graphical configuration tools	system-config-*	5 6
	gnome-control-center	7 8
Text-based configuration tools	system-config-* -tui	5 6
Configure printer	system-config-printer	5 6 7
	gnome-control-center	8
Configure network	system-config-network	5 6
	nmcli	7 8
	nmtui	7 8
	nm-connection-editor	7 8
Configure system language	gnome-control-center	8
	system-config-language	5 6
	localectl	7 8
Configure time and date	gnome-control-center	8
	system-config-date	5 6
	timedatectl	7 8
	date	5 6 7 8
Synchronize time and date	gnome-control-center	8
	/etc/ntp.conf	5 6
	ntpdate	5 6 7
	timedatectl	7 8
	/etc/chrony.conf	7 8
Configure keyboard	date	8
	chronyc	8
	system-config-keyboard	5 6
Configure SSH	localectl	7 8
	gnome-control-center	8
	/etc/ssh/ssh_config /etc/ssh/sshd_config ~/.ssh/config ssh-keygen	5 6 7 8

## Jobs and services

TASK	RHEL	
List all services	chkconfig --list ls /etc/init.d/	5 6
	systemctl -at service ls /etc/systemd/system/*.service ls /usr/lib/systemd/system/*.service	7
	systemctl list-units -at service find /etc/systemd/ /usr/lib/systemd/ /run/systemd/ -name *.service"	8
List running services	service --status-all	5 6
	systemctl -t service --state=active	7 8
Start/stop service	service <i>name</i> start service <i>name</i> stop	5 6
	systemctl start <i>name</i> .service systemctl stop <i>name</i> .service	7 8
Enable/disable service	chkconfig <i>name</i> on chkconfig <i>name</i> off	5 6
	systemctl enable <i>name</i> .service systemctl disable <i>name</i> .service	7 8
View service status	service <i>name</i> status	5 6
	systemctl status <i>name</i> .service	7 8
Check if service is enabled	chkconfig <i>name</i> --list	5 6
	systemctl is-enabled <i>name</i>	7 8
Create new service file or modify configuration	chkconfig --add	5 6
	systemctl daemon-reload /etc/systemd/system/*.service	7 8
View run level/target	runlevel	5 6
	systemctl get-default	7 8
	who -r	5 6 7 8
Change run level/target	/etc/inittab init <i>run_level</i>	5 6
	systemctl isolate <i>name</i> .target systemctl set-default	7 8
Configure logging	/etc/syslog.conf	5
	/etc/rsyslog.conf	6 7 8
	/etc/rsyslog.d/*.conf /var/log/journal systemd-journald.service	7 8
View logs	journalctl	7 8
	/var/log	5 6 7 8
Configure system audit	pam_tty_audit kernel module	5 6 7
	tlog	8
	add <b>audit=1</b> to kernel cmdline auditctl /etc/audit/auditd.conf /etc/audit/audit.rules	5 6 7 8
	authconfig /etc/pam.d/system-auth	
View audit output	aureport /var/log/faillog	5 6 7

## Jobs and services (cont.)

TASK	RHEL	
Schedule/batch tasks	cron at batch	5 6 7 8
	systemd-run --on-calendar	8
Find file by name	locate	5 6 7 8
Find file by characteristic	find	5 6 7 8
Create archive	tar cpio zip xz	5 6 7 8

## User management

TASK	RHEL	
Graphical user management	system-config-users	5 6 7
	gnome-control-center	8
Create user account	useradd	5 6 7
	gnome-control-center	8
Delete user account	userdel	5 6 7
	gnome-control-center	8
View/change user account details	usermod /etc/passwd vipw id	5 6 7
	gnome-control-center	8
Create user group	groupadd	5 6 7
	gnome-control-center	8
Delete user group	groupdel	5 6 7
	gnome-control-center	8
Change group details	groupmod /etc/group	5 6 7
	gnome-control-center	8
Change user password	passwd	5 6 7
	gnome-control-center	8
Change user permissions	usermod visudo	5 6 7
	gnome-control-center	8
Change password policy	chage	5 6 7
	gnome-control-center	8
View user sessions	w	5 6 7
	gnome-control-center	8

## Software management

TASK		RHEL
Install software	yum groupinstall	5 6
	yum group install	7 8
	yum install	5 6 7 8
View software info	yum groupinfo	5 6
	yum group info	7 8
	yum info	5 6 7 8
Update software	yum update	5 6 7 8
Upgrade software	yum upgrade	5 6 7 8
Configure software repository	subscription-manager repos /etc/yum.repos.d/*.repo	5 6 7 8
Find package owning file	rpm -qf <i>filename</i> yum provides <i>filename-glob</i>	5 6 7 8
View software version	rpm -q <i>packagename</i>	5 6
	yum list installed packagename	7 8
	rpm -q packagename	7 8
View installed software	rpm -qa yum list installed	5 6 7 8
Install a module	yum module install module_name	8
View info on a module	yum module info module_name	8
View a module's streams	yum module info module_name	8
Change module streams	yum module remove module_name:stream yum module reset module:stream yum module install module:new_stream	8
List available modules	yum module list	8

## Kernel, boot, and hardware

TASK		RHEL
Single user/ rescue mode	append 1 or s or <code>init=/bin/bash</code> to kernel cmdline	5 6
	append 1 or s or <code>rd.break</code> or <code>init=/bin/bash</code> to kernel cmdline	7 8
Shut down system	shutdown	5 6 7 8
Power off system	systemctl poweroff	7 8
	poweroff	5 6 7 8
Halt system	systemctl halt	7 8
	halt	5 6 7 8
Reboot system	systemctl reboot	7 8
	reboot	5 6 7 8
Configure default run level/target	/etc/inittab	5 6
	systemctl set-default	7 8
Configure GRUB bootloader	/boot/grub/grub.conf	5 6
	/etc/default/grub grub2-mkconfig grub-set-default	7 8
	hwbrowser	5
View hardware configured	lshw (in EPEL)	6 7
	lshw	8
	modprobe	5 6 7 8
Configure kernel module	modprobe	5 6 7 8
Configure hardware device	udev	5 6 7 8
View kernel parameters	sysctl -a cat /proc/cmdline	5 6 7 8
Load kernel module	modprobe	5 6 7 8
Remove kernel module	modprobe -r	5 6 7 8
View kernel version	rpm -q kernel uname -r	5 6 7 8

## File systems, volumes, and disks

TASK		RHEL
Default file system	ext3	5
	ext4	6
	xfs	7 8
Create/modify disk partitions	ssm create	7
	gdisk	7 8
	ssm_create	8
	fdisk	5 6 7 8
	parted	5 6 7 8
Format disk partition	ssm create	7 8
	mkfs.filesystem_type (ext4, xfs)	5 6 7 8
	mkswap	5 6 7 8
Defragment disk space	xfs_fsr	6 7 8
	copy data to new file system fsck (look for 'non-contiguous inodes')	5 6 7 8
Mount storage	ssm mount	7 8
	mount	5 6 7 8
	/etc/fstab	5 6 7 8
Mount and activate swap	/etc/fstab swapon -a	5 6 7 8
Configure static mounts	/etc/fstab	5 6 7 8
View free disk space	df	5 6 7 8
View logical volume info	lvdisplay	
	lvs	
	vgdisplay	5 6 7 8
	vgs	5 6 7 8
	pvdisplay pvs	5 6 7 8
Create physical volume	ssm create (if backend is lvm)	8
	pvcreate	5 6 7 8
Create volume group	ssm create (if backend is lvm)	8
	vgcreate	5 6 7 8
Create logical volume	ssm create (if backend is lvm)	8
	lvcreate	5 6 7 8
Enlarge volumes formatted with default file system	resize2fs	5 6
	xfs_growfs	
	ssm resize	7 8
	vgextend	5 6 7 8
	lvextend	5 6 7 8
Shrink volumes formatted with default file system	resize2fs	5 6
	lvreduce	5 6
	vgreduce	5 6
Check/repair file system	XFS cannot currently be shrunk; copy desired data to a smaller file system.	7 8
	ssm check	8
	fsck	5 6 7 8

## File systems, volumes, and disks (cont.)

TASK		RHEL
View NFS share	showmount -e mount	5 6 7 8
	service nfs reload	5 6
Configure NFS share	systemctl reload nfs.service	7 8
	/etc/exports	5 6 7 8
Configure on-demand auto-mounts	/etc/auto.master.d/*.autoofs /etc/auto.*	8
Change file permissions	chmod chown chgrp umask (future file creation)	8
Change file attributes	chattr	8
Change access control list	setfacl	8

## Resource management

TASK		RHEL
Trace system calls	strace	5 6 7 8
Trace library calls	ltrace	5 6 7 8
Change process priority	nice renice	5 6 7 8
Change process run location	taskset	5 6 7 8
Kill a process	kill pkill killall	5 6 7 8
	netstat	5 6
View system usage	ss tuna	6 7 8
	pcp atop	8
	top ps sar	
	iostat vmstat mpstat numastat	5 6 7 8
	iostat	6 7 8
View disk usage	pcp-dstat pmiostat	8
	df	5 6 7 8

# Networking

TASK	RHEL
Configure name resolution	nmcli con mod <span>7 8</span>
	/etc/hosts /etc/resolv.conf <span>5 6 7 8</span>
Configure hostname	/etc/sysconfig/network <span>5 6</span>
	hostnamectl /etc/hostname nmtui <span>7 8</span>
View network interface info	ifconfig <span>5 6</span>
	nmcli dev show teamdctl bridge <span>7 8</span>
	ip addr brctl <span>5 6 7 8</span>
Configure network interface	nmcli con [add mod edit] nmtui nm-connection-editor <span>7 8</span>
	/etc/sysconfig/network-scripts/ ifcfg-* <span>5 6 7 8</span>
View routes	ip route <span>5 6 7 8</span>
Configure routes	system-config-network <span>5 6</span>
	nmcli nmtui nm-connection-editor <span>7 8</span>
	ip route add /etc/sysconfig/route- <i>iface</i> <span>5 6 7 8</span>
Configure firewall	iptables and ip6tables /etc/sysconfig/ip*tables <span>5 6</span>
	system-config-firewall <span>6</span>
	firewall-cmd firewall-config <span>7 8</span>
	nftables <span>8</span>
View ports/sockets	pcp-dstat --socket <span>8</span>
	ss lsof netstat <span>5 6 7 8</span>