

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 1,3 5 6 7 8
	subscription-manager 2 6 7 8
View system profile	hwbrowser 5
	sosreport dmidecode 5 6 7 8
	lstopo lscpu 6 7 8
	cat/proc/cpuinfo 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.

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 filename yum provides filename-glob 5 6 7 8
View software version	rpm -q packagename 5 6
	yum list installed packagename 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

Networking

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

Kernel, boot, and hardware

TASK	RHEL
Single user/rescue mode	append 1 or s or init=/bin/bash to kernel cmdline 5 6
	append 1 or s or rd.break or init=/bin/bash 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
Configure default run level/target	reboot 5 6 7 8
	/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
View hardware configured	hwbrowser 5
	lshw (in EPEL) 6 7
	lshw 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

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

Security and identity

TASK	RHEL
Configure system security	/etc/selinux/config chcon restorecon semanage setsebool system-config-selinux 5 6 7 8
	sealert 5 6 7 8
Report on system security	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
	system-config-printer 5 6 7
Configure printer	gnome-control-center 8
	system-config-date 5 6
Configure time and date	timedactl 7 8
	date 5 6 7 8
	gnome-control-center 8
Synchronize time and date	/etc/ntp.conf 5 6
	ntdate 5 6 7
	timedactl /etc/chrony.conf 7 8
	date chronyc 8
Configure keyboard	system-config-keyboard 5 6
	localectl 7 8
	gnome-control-center 8
Configure SSH	/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 name start service name stop 5 6
	systemctl start name.service systemctl stop name.service 7 8
Enable/disable service	chkconfig name on chkconfig name off 5 6
	systemctl enable name.service systemctl disable name.service 7 8
View service status	service name status 5 6
	systemctl status name.service 7 8
Check if service is enabled	chkconfig name --list 5 6
	systemctl is-enabled name 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
Change run level/target	who -r 5 6 7 8
	/etc/inittab init run_level 5 6
	systemctl isolate name.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 audit=1 to kernel cmdline auditctl /etc/audit/auditd.conf /etc/audit/audit.rules authconfig /etc/pam.d/system-auth 5 6 7 8
View audit output	aureport /var/log/faillog 5 6 7
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

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 parted 5 6 7 8
Format disk partition	ssm create 7 8
	mkfs.filesystem_type (ext4, xfs) 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 /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 vgs pvdisplay pvs 5 6 7 8
	ssm create (if backend is lvm) 8
	pvcreate 5 6 7 8
	ssm create (if backend is lvm) vgcreate 5 6 7 8
Create logical volume	ssm create (if backend is lvm) lvcreate 5 6 7 8
	resize2fs 5 6
Enlarge volumes formatted with default file system	xfs_growfs ssm resize 7 8
	vgextend lvextend 5 6 7 8
Shrink volumes formatted with default file system	resize2fs lvreduce vgreduce 5 6
	XFS cannot currently be shrunk; copy desired data to a smaller file system. 7 8
Check/repair file system	ssm check 8
	fsck 5 6 7 8
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/*.autofs /etc/auto.* 8
Change file permissions	chmod chown chgrp umask (future file creation) 8
	chattr 8
Change access control list	setfacl 8

Resource management

TASK	RHEL
Trace system calls	strace 5 6 7 8
	ltrace 5 6 7 8
Change process priority	nice renice 5 6 7 8
	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