

# RED HAT ENTERPRISE LINUX 5, 6, AND 7

## Common administrative commands

### SYSTEM BASICS

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

<sup>1</sup> Be aware of potential issues when using subscription-manager on Red Hat Enterprise Linux 5: <https://access.redhat.com/solutions/129003>.

<sup>2</sup> Subscription-manager is used for Satellite 6, Satellite 5.6 with SAM and newer, and Red Hat's CDN.

<sup>3</sup> 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: [Satellite 5.6 unable to register RHEL 7 client system due to rhn-setup package not included in Minimal installation](#) (<https://access.redhat.com/solutions/737373>)

### BASIC CONFIGURATION

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

### RESOURCE MANAGEMENT

TASK		RHEL
View system usage	<code>top</code> <code>ps</code> <code>sar</code> <code>iostat</code> <code>netstat</code> <code>vmstat</code> <code>mpstat</code> <code>numastat</code>  <code>top</code> <code>ps</code> <code>sar</code> <code>iostat</code> <code>netstat</code> <code>ss</code> <code>vmstat</code> <code>mpstat</code> <code>numastat</code> <code>tuna</code>	5 6 7
View disk usage	<code>df</code>  <code>df</code> <code>iostat</code>	5 6 7
Trace system calls	<code>strace</code>	5 6 7
Trace library calls	<code>ltrace</code>	5 6 7
Change process priority	<code>nice</code> <code>renice</code>	5 6 7
Change process run location	<code>taskset</code>	5 6 7
Kill a process	<code>kill</code> <code>pkill</code> <code>killall</code>	5 6 7

### USER MANAGEMENT

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

### JOB AND SERVICES

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

### NETWORKING

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

### SOFTWARE MANAGEMENT

TASK		RHEL
Install software	<code>yum install</code> <code>yum groupinstall</code>  <code>yum install</code> <code>yum group install</code>	5 6 7
View software info	<code>yum info</code> <code>yum groupinfo</code>  <code>yum info</code> <code>yum group info</code>	5 6 7
Update software	<code>yum update</code>	5 6 7
Upgrade software	<code>yum upgrade</code>	5 6 7
Configure software repository	<code>subscription-manager repos</code> <code>/etc/yum.repos.d/*.repo</code>	5 6 7
Find file in package	<code>rpm -qf filename</code> <code>yum provides filename-glob</code>	5 6 7
View software version	<code>rpm -q packagename</code>	5 6 7
View installed software	<code>rpm -qa</code> <code>yum list installed</code>	5 6 7

### KERNEL, BOOT, AND HARDWARE

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

### FILE SYSTEMS, VOLUMES, AND DISKS

TASK		RHEL
Default file system	<code>ext3</code>  <code>ext4</code>  <code>xfs</code>	5 6 7
Defragment disk space	<code>copy data to new file system</code> <code>fsck</code> (look for 'non-contiguous inodes')  <code>copy data to new file system</code> <code>fsck</code> (look for 'non-contiguous inodes') <code>xfs_fsr</code>	5 6 7
Create/modify disk partitions	<code>fdisk</code> <code>parted</code>  <code>fdisk</code> <code>gdisk</code> <code>parted</code> <code>ssm create</code>	5 6 7
Format disk partition	<code>mkfs.filesystem_type</code> (ext4, xfs) <code>mkswap</code>  <code>mkfs.filesystem_type</code> (ext4, xfs) <code>mkswap</code> <code>ssm create</code>	5 6 7
Mount storage	<code>mount</code> <code>/etc/fstab</code>  <code>mount</code> <code>/etc/fstab</code> <code>ssm mount</code>	5 6 7
Create physical volume	<code>pvcreate</code>  <code>pvcreate</code> <code>ssm create</code> (if backend is lvm)	5 6 7
Create volume group	<code>vgcreate</code>  <code>vgcreate</code> <code>ssm create</code> (if backend is lvm)	5 6 7
Create logical volume	<code>lvcreate</code>  <code>lvcreate</code> <code>ssm create</code> (if backend is lvm)	5 6 7
Enlarge volumes formatted with default file system	<code>vgextend</code> <code>lvextend</code> <code>resize2fs</code>  <code>vgextend</code> <code>lvextend</code> <code>xfs_growfs</code> <code>ssm resize</code>	5 6 7
Shrink volumes formatted with default file system	<code>resize2fs</code> <code>lvreduce</code> <code>vgreduce</code>  XFS cannot currently be shrunk; copy desired data to a smaller file system.	5 6 7
Check/repair file system	<code>fsck</code>  <code>fsck</code> <code>ssm check</code>	5 6 7
Configure NFS share	<code>/etc/exports</code> <code>service nfs reload</code>  <code>/etc/exports</code> <code>systemctl reload nfs.service</code>	5 6 7
Mount and activate swap	<code>/etc/fstab</code> <code>swapon -a</code>	5 6 7
Configure static mounts	<code>/etc/fstab</code>	5 6 7
View free disk space	<code>df</code>	5 6 7
View logical volume info	<code>lvdisplay</code> <code>lvs</code> <code>vgdisplay</code> <code>vgs</code> <code>pvdisplay</code> <code>pvs</code>	5 6 7
View NFS share	<code>showmount -e</code> <code>mount</code>	5 6 7
Configure on-demand auto-mounts	<code>/etc/auto.master.d/*.autoifs</code> <code>/etc/auto.*</code>	5 6 7
Change file permissions	<code>chmod</code> <code>chown</code> <code>chgrp</code> <code>umask</code> (future file creation)	5 6 7
Change file attributes	<code>chattr</code>	5 6 7
Change access control list	<code>setfacl</code>	5 6 7

### SECURITY AND IDENTITY

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