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

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Lists common administrative commands for Red Hat Enterprise Linux 5, 6 and 7. Printable poster also available.

System basics

Task	RHEL5	RHEL6	RHEL7
View subscription information	/etc/sysconfig/rhn/systemid	/etc/sysconfig/rhn/systemid subscription-manager identity	subscription-manager identity
Configure subscription	rhn_register subscription-manager [1]	rhn_register rhnreg_ks subscription-manager	subscription-manager [2] rhn_register [3]
View RHEL version information	/etc/redhat-release		
View system profile	sosreport dmidecode hwbrowser	sosreport dmidecode lstopo lscpu	

Basic configuration

Task	RHEL5	RHEL6	RHEL7
Graphical configuration tools	system-config-*		gnome-control-center
Text-based configuration tools	system-config-*-tui		
Configure printer	system-config-printer		
Configure network	system-config-network		nmcli nmtui nm-connection-editor
Configure system language	system-config-language		localectl
Configure time and date	system-config-date date		timedatectl date
Synchronize time and date	ntpdate /etc/ntp.conf		timedatectl /etc/chrony.conf ntpdate
Configure keyboard	system-config-keyboard		localectl
Configure SSH	/etc/ssh/ssh_config /etc/ssh/sshd_config ~/.ssh/config ssh-keygen		

Jobs and services

Task	RHEL5	RHEL6	RHEL7

List all services	chkconfig --list ls /etc/init.d/	systemctl -at service ls /etc/systemd/system/*.service ls /usr/lib/systemd/system/*.service
List running services	service --status-all	systemctl -t service --state=active
Start/stop service	service *name* start service *name* stop	systemctl start *name*.service systemctl stop *name*.service
Enable/disable service	chkconfig *name* on chkconfig *name* off	systemctl enable *name*.service systemctl disable *name*.service
View service status	service *name* status	systemctl status *name*.service
Check if service is enabled	chkconfig *name* --list	systemctl is-enabled *name*
Create new service file or modify configuration	chkconfig --add	systemctl daemon-reload /etc/systemd/system/*.service
View run level/target	runlevel who -r	systemctl get-default who -r
Change run level/target	/etc/inittab init *run_level*	systemctl isolate *name*.target systemctl set-default

Configure logging	/etc/syslog.conf	/etc/rsyslog.conf	/etc/rsyslog.conf /etc/rsyslog.d/*.conf /var/log/journal systemd-journald.service
View logs	/var/log		/var/log journalctl

Configure system audit	add **audit=1** to kernel cmdline auditctl /etc/audit/auditd.conf /etc/audit/audit.rules authconfig /etc/pam.d/system-auth pam_tty_audit kernel module
View audit output	aureport /var/log/faillog
Schedule/batch tasks	cron at batch
Find file by name	locate
Find file by characteristic	find
Create archive	tar cpio zip

Kernel, boot, and hardware

Task	RHEL5	RHEL6	RHEL7
Single user/rescue mode	append **1** or **s** or **init=/bin/bash** to kernel cmdline		append **rd.break** or **init=/bin/bash** to kernel cmdline
Shut down system	shutdown		

Power off system	poweroff	poweroff systemctl poweroff
Halt system	halt	halt systemctl halt
Reboot system	reboot	reboot systemctl reboot
Configure default run level/target	/etc/inittab	systemctl set-default
Configure GRUB bootloader	/boot/grub/grub.conf	/etc/default/grub grub2-mkconfig grub-set-default
Configure kernel module	modprobe	
View hardware configured	hwbrowser	lshw (in EPEL)
Configure hardware device	udev	
View kernel parameters	sysctl -a cat /proc/cmdline	
Load kernel module	modprobe	
Remove kernel module	modprobe -r	
View kernel version	rpm -q kernel uname -r	

Software management

Task	RHEL5	RHEL6	RHEL7
Install software	yum install yum groupinstall		yum install yum group install
View software info	yum info yum groupinfo		yum info yum group info
Update software	yum update		
Upgrade software	yum upgrade		
Configure software repository	subscription-manager repos /etc/yum.repos.d/*.repo		
Find package owning file	rpm -qf *filename* yum provides *filename-glob*		
View software version	rpm -q *packagename*		
View installed software	rpm -qa yum list installed		

User management

Task	RHEL5	RHEL6	RHEL7
Graphical user management	system-config-users		
Create user account	useradd		

Delete user account	userdel
View/change user account details	usermod /etc/passwd vipw id
Create user group	groupadd
Delete user group	groupdel
Change group details	groupmod /etc/group
Change user password	passwd
Change user permissions	usermod visudo
Change group permissions	groupmod visudo
Change password policy	chage
View user sessions	w

File systems, volumes, and disks

Task	RHEL5	RHEL6	RHEL7
Default file system	ext3	ext4	xfs
Create/modify disk partitions	fdisk parted		fdisk gdisk parted ssm create
Format disk partition	mkfs.filesystem_type (ext4, xfs) mkswap		mkfs.filesystem_type (ext4, xfs) mkswap ssm create
Defragment disk space	copy data to new file system fsck (look for 'non-contiguous inodes')	copy data to new file system fsck (look for 'non-contiguous inodes') xfs_fsr	
Mount storage	mount /etc/fstab		mount /etc/fstab ssm mount
Mount and activate swap	/etc/fstab swapon -a		
Configure static mounts	/etc/fstab		
View free disk space	df		
View logical volume info	lvdisplay lvs vgdisplay vgs pvdisplay pvs		

Create physical volume	pvcreate	pvcreate ssm create (if backend is lvm)
Create volume group	vgcreate	vgcreate ssm create (if backend is lvm)
Create logical volume	lvcreate	lvcreate ssm create (if backend is lvm)
Enlarge volumes formatted with default file system	vgextend lvextend resize2fs	vgextend lvextend xfs_growfs ssm resize
Shrink volumes formatted with default file system	resize2fs lvreduce vgreduce	XFS cannot currently be shrunk; copy desired data to a smaller file system.
Check/repair file system	fsck	fsck ssm check
View NFS share	showmount -e mount	
Configure NFS share	/etc/exports service nfs reload	/etc/exports systemctl reload nfs.service
Configure on-demand auto-mounts	/etc/auto.master.d/*.autofs /etc/auto.*	
Change file permissions	chmod chown chgrp umask (future file creation)	
Change file attributes	chattr	
Change access control list	setfacl	

Networking

Task	RHEL5	RHEL6	RHEL7
Configure name resolution	/etc/hosts /etc/resolv.conf		/etc/hosts /etc/resolv.conf nmcli con mod
Configure hostname	/etc/sysconfig/network		hostnamectl /etc/hostname nmtui
View network interface info	ip addr ifconfig brctl		ip addr nmcli dev show teamdctl brctl bridge
Configure network interface	/etc/sysconfig/network-scripts/ifcfg-*		/etc/sysconfig/network-scripts/ifcfg-* nmcli con [add|mod|edit] nmtui nm-connection-editor
View routes	ip route		

Configure routes	ip route add system-config-network /etc/sysconfig/route-*iface*		ip route add nmcli nmtui nm-connection-editor /etc/sysconfig/route-*iface*
Configure firewall	iptables and ip6tables /etc/sysconfig/ip*tables	iptables and ip6tables /etc/sysconfig/ip*tables system-config-firewall	firewall-cmd firewall-config
View ports/sockets	ss lsof netstat		ss lsof

Security and identity

Task	RHEL5	RHEL6	RHEL7
Configure system security	/etc/selinux/config chcon restorecon semanage setsebool system-config-selinux		
Report on system security	sealert		
LDAP, SSSD, Kerberos	authconfig authconfig-tui authconfig-gtk		
Network users	getent		

Resource management

Task	RHEL5	RHEL6	RHEL7
Trace system calls	strace		
Trace library calls	ltrace		
Change process priority	nice renice		
Change process run location	taskset		
Kill a process	kill pkill killall		
View system usage	top ps sar iostat netstat vmstat mpstat numastat	top ps sar iostat netstat ss vmstat mpstat numastat tuna	top ps sar iostat ss vmstat mpstat numastat tuna

View disk usage	df	df
		iostat

1. Be aware of potential issues when using subscription-manager on Red Hat Enterprise Linux 5: https://access.redhat.com/solutions/129003 (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's the difference between management services provided by Red Hat Network (RHN) Classic and Red Hat Customer Portal Subscription Management/RHSM? (https://access.redhat.com/articles/63269), Transition of Red Hat Network Classic Hosted to Red Hat Subscription Management (https://access.redhat.com/rhn-to-rhsm), and 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)↵

Attachments

- rhel_5_6_7_cheatsheet_24x36_0417_jcs.pdf (/node/1189123/40/0)
- rhel_5_6_7_cheatsheet_11x17_0417_jcs.pdf (/node/1189123/40/1)
        CUSTOMER (https://access.redhat.com/)
        PORTAL
- rhel_5_6_7_cheatsheet_8.5x11_0417_jcs.pdf (/node/1189123/40/2)
- rhel_5_6_7_cheatsheet_a3_0417_jcs.pdf (/node/1189123/40/3)
- rhel_5_6_7_cheatsheet_a4_0417_jcs.pdf (/node/1189123/40/4)

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Tags   rhel (/tags/rhel)   rhel_5 (/tags/rhel_5)   rhel_6 (/tags/rhel_6)   rhel_7 (/taxonomy/tags/rhel7)   **Article Type**   General (/article-type/general)