

Basic info

pwd	show present working directory
uname	show name of the kernel
uname -r	show kernel version
cd	change directory
clear	clear the screen
whoami	show current login user name
history	show list of previously used commands
date	show time and date
echo "Hello"	display <i>Hello</i> text
sudo	run commands as super user

Working with directory and files

mkdir dir	create single directory <i>dir</i>
mkdir dir1 dir2	create multiple directories <i>dir1 dir2</i>
mkdir -p dir/a/b/c	create nested directory <i>dir/a/b/c</i>
mkdir dir{1..10}	created 10 numbered directories from <i>dir1</i> to <i>dir10</i>
rm -r dir	remove <i>dir</i> recursively
touch file	create empty file <i>file</i>
touch file1 file2	create multiple files <i>file1 file2</i>
touch file{1..10}	create 10 numbered files from <i>file1</i> to <i>file10</i>
cp -rf /dir/file1 /dir2	copy file <i>file1</i> to <i>dir2</i> directory recursively and forcefully
mv /dir/file1 /dir2	move file <i>file1</i> to <i>dir2</i> directory
rm file1	remove file <i>file1</i>

Working with directory and files (cont)

ls -al	show files - both regular & hidden files and their permissions
cat file1	display contents of <i>file1</i>
find /dir1 -name file1	find <i>file1</i> under <i>/dir1</i> directory
find /dir1 -perm 664	find all files/directories with read, write permission to owner and group, read permission for others in directory <i>dir1</i>
find /dir1 -empty -exec rm -r {}**	find and remove all empty files/directories from <i>/dir1</i>
wc -l file1	count the number of lines in <i>file1</i>
wc -w file1	count the number of words in "file1"
head file1	display top 10 lines of <i>file1</i>
head -n 20 file1	display top 20 lines of <i>file1</i>
tail file1	display last 10 lines of <i>file1</i>
tail -n 20 file1	display last 20 lines of <i>file1</i>

Networking

ifconfig or ip addr	show ip address
nmcli con show	show list of connections
nslookup	queries the DNS server for information about a domain name or IP address



Networking (cont)

iptables	sets up, maintains, and inspects the tables of IPv4/IPv6 packet filter rules in the Linux kernel firewall
ping <i>host</i>	send packets to <i>host</i> to check the connectivity
ping -c 5 <i>host</i>	send 5 packets to <i>host</i>
curl	facilitates the transfer of data to or from a server, using any of the protocols it supports
netstat	Displays network connections and network statistics, such as active sockets, routing tables, and network interface statistics
ss-keygen	Creates a pair of public and private authentication keys
ssh <i>user@host</i>	connect <i>user</i> to <i>host</i> using ssh
scp <i>file1 user1@-host:/dir</i>	copy <i>file1</i> from local to remote host <i>host</i> to <i>/dir</i> location

System and process monitoring

uptime	show current uptime
df	show disk usage
du	show directory space usage
free	show memory and swap usage
ps	show all current active processes
top	task manager program displays information about CPU and memory utilization
kill <i>pid</i>	kill process with process id <i>pid</i>
bg	list stopped or background jobs
lsdf	Lists all files opened by any process of a system
lsdf -u <i>user1</i>	Lists all files opened by <i>user1</i>

File permissions

chmod [symbolic] <i>file1</i>	change file permissions of file <i>file1</i> based on [symbolic] code
chmod u+r <i>file1</i>	add read permission to owner for <i>file1</i>
chmod g+rw <i>file1</i>	add read, write permission to group for <i>file1</i>
chmod o-r <i>file1</i>	remove read permission to others for <i>file1</i>
chmod [octal] <i>file1</i>	change file permissions of file <i>file1</i> based on [octal] code
chmod 777 <i>file1</i>	add read, write, execute permission to owner, group, others for <i>file1</i>
chmod 754 <i>file1</i>	add read, write, execute permission to owner, read and execute permission to group, read permission to others for <i>file1</i>
chown <i>user1 file1</i>	change ownership of <i>file1</i> to <i>user1</i>
chgrp <i>group1 file1</i>	change group ownership of <i>file1</i> to <i>group1</i>
setfacl -m u:<i>user1</i>:1:rx <i>file1</i>	add read, write, execute permission to user <i>user1</i> for <i>file1</i>
setfacl -x u:<i>user1</i>:<i>file1</i>	remove all permissions for <i>user1</i> for <i>file1</i>
setfacl -b <i>file1</i>	remove all acl permissions for <i>file1</i>



User and Group Management

useradd <i>user1</i>	create <i>user1</i> user account
passwd <i>user1</i>	create password for <i>user1</i> user
su	switch user account
exit	logout user
userdel <i>user1</i>	delete user account <i>user1</i>
usermod -l <i>user2 user1</i>	change <i>user1</i> login name to <i>user2</i>
groupadd <i>group1</i>	add group <i>group1</i>
groupdel <i>group1</i>	delete group <i>group1</i>
gpasswd -a <i>user1 group1</i>	add single user <i>user1</i> to group <i>group1</i>
gpasswd -M <i>user1,user2 group1</i>	add multiple users <i>user1 user2</i> to group <i>group1</i>
gpasswd -d <i>user1 group1</i>	remove user <i>user1</i> from group <i>group1</i>
gpasswd -A <i>user1 group1</i>	make <i>user1</i> as admin of <i>group1</i>

Text search and manipulation

grep <i>text file1</i>	display the lines that contains <i>text</i> in <i>file1</i>
grep -ni <i>text file1</i>	ignore the case and display line numbers of the matched lines
awk -F',' '{print \$1"@"\$3}'	print col1@col3
awk -F'\t' '/str/{print \$0}'	print line with str

Compress and archive

tar -cf <i>/dir1/backup.tar /dir2</i>	create tar archive file <i>/dir1/backup.tar</i> for <i>/dir2</i>
tar -xvf <i>/dir1/backup.tar -C /dir2/</i>	extract tar archive file <i>/dir1/backup.tar</i> to <i>/dir2/</i>

cron jobs

at <i>time</i>	schedule command to run at <i>time</i>
atq	view pending jobs
atrm <i>2</i>	remove job <i>2</i> from the scheduled commands
crontab -e	set cron jobs
0 2 * * * /dir1/script.sh	run script <i>/dir1/script.sh</i> at 2pm daily
crontab -l	show the list the cron jobs of current user

Package management

apt update	update the local package index with the latest changes made in the repositories
apt upgrade	upgrade installed packages
apt install <i>package</i>	install <i>package</i>
apt remove <i>package</i>	remove installed <i>package</i>
systemctl start <i>service</i>	start <i>service</i>
systemctl <i>status service</i>	check the status of <i>service</i>
systemctl stop <i>service</i>	stop <i>service</i>
systemctl enable <i>service</i>	enable the <i>service</i> to start at system startup

