

# Cloud Computing

## Assignment 1 – Linux Commands

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1) ls

**Description:** The most frequently used command in Linux to list directories.

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
'Linux Commands for DevOps Engineer'  test
```

2) Pwd

**Description:** Print working directory command in Linux.

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ pwd
/home/kali/Desktop/Cloud & DevOps
```

3) Cd

**Description:** Linux command to navigate through directories.

**Output:**

```
File Actions Edit View Help
(kali㉿kali)-[~]
$ cd Desktop/Cloud\ \&\ DevOps
```

4) Mkdir

**Description:** Command used to create directories in Linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ mkdir viit

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
'Linux Commands for DevOps Engineer'  test  viit
```

5) mv

**Description:** Move or rename files in Linux.

**Output:**

```

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ mv Linux\ Commands\ for\ DevOps\ Engineer test

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
test viit

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ cd test

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
'Linux Commands for DevOps Engineer'

```

6) cp

**Description:** Similar usage as mv but for copying files in Linux

**Output:**

```

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cp new sample
cp: cannot stat 'new': No such file or directory

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cp new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
'Linux Commands for DevOps Engineer' new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat sample.txt
Hi there! My name's Stark and I'm trying out some linux cmds.

```

7) rm

**Description:** Delete files or directories

**Output:**

```

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ rm -r viit

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
test

```

8) touch

**Description:** Create blank/empty files

**Output:**

```

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ touch new.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat new.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat >> new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.
^C

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.

```

9) ln

**Description:** Create symbolic links (shortcuts) to other files

**Output:**

```
(kali㉿kali)-[~]  
$ ln --help  
Usage: ln [OPTION] ... [-T] TARGET LINK_NAME  
or: ln [OPTION] ... TARGET  
or: ln [OPTION] ... TARGET ... DIRECTORY  
or: ln [OPTION] ... -t DIRECTORY TARGET ...
```

10) cat

**Description:** Display file contents on the terminal

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ cat new.txt  
  
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ cat >> new.txt  
Hi there! My name's Stark and I'm trying out some linux cmds.  
^C  
  
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ cat new.txt  
Hi there! My name's Stark and I'm trying out some linux cmds.
```

11) clear

**Description:** Clear the terminal display

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]  
$
```

12) echo

**Description:** Print any text that follows the command

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ echo new.txt  
new.txt  
  
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ echo "Jarvis at your service,sir"  
Jarvis at your service,sir
```

13) less

**Description:** Linux command to display paged outputs in the terminal

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ less Linux\ Commands\ for\ DevOps\ Engineer
```

There are the top 55 Linux Commands You Must Know as a cloud&devops engineer:

```
01. ls - The most frequently used command in Linux to list directories
02. pwd - Print working directory command in Linux
03. cd - Linux command to navigate through directories
04. mkdir - Command used to create directories in Linux
05. mv - Move or rename files in Linux
06. cp - Similar usage as mv but for copying files in Linux
07. rm - Delete files or directories
07. touch - Create blank/empty files
07. ln - Create symbolic links (shortcuts) to other files
08. cat - Display file contents on the terminal
09. clear - Clear the terminal display
10. echo - Print any text that follows the command
11. less - Linux command to display paged outputs in the terminal
12. man - Access manual pages for all Linux commands
13. uname - Linux command to get basic information about the OS
14. whoami - Get the active username
15. tar - Command to extract and compress files in Linux
16. grep - Search for a string within an output
17. head - Return the specified number of lines from the top
18. tail - Return the specified number of lines from the bottom
19. diff - Find the difference between two files
20. cmp - Allows you to check if two files are identical
21. comm - Combines the functionality of diff and cmp
22. sort - Linux command to sort the content of a file while outputting
23. export - Export environment variables in Linux
24. zip - Zip files in Linux
25. unzip - Unzip files in Linux
25. ssh - Secure Shell command in Linux
26. service - Linux command to start and stop services
:
```

#### 14) man

**Description:** Access manual pages for all Linux commands

**Output:**

```
MAN(1)                                Manual pager utils                                MAN(1)

NAME
  man - an interface to the system reference manuals

SYNOPSIS
  man [man options] [[section] page ...] ...
  man -k [apropos options] regexp ...
  man -K [man options] [section] term ...
  man -f [whatis options] page ...
  man -l [man options] file ...
  man -w|-W [man options] page ...

DESCRIPTION
  man is the system's manual pager. Each page argument given to man
  is normally the name of a program, utility or function. The man-
  ual page associated with each of these arguments is then found and
  displayed. A section, if provided, will direct man to look only
  in that section of the manual. The default action is to search in
  all of the available sections following a pre-defined order (see
  DEFAULTS), and to show only the first page found, even if page ex-
  ists in several sections.

  The table below shows the section numbers of the manual followed
  by the types of pages they contain.

  1 Executable programs or shell commands
  2 System calls (functions provided by the kernel)
  3 Library calls (functions within program libraries)
  4 Special files (usually found in /dev)
  5 File formats and conventions, e.g. /etc/passwd

Manual page man(1) line 1 (press h for help or q to quit)
```

### 15) uname

**Description:** Linux command to get basic information about the OS

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ uname -a
Linux kali 5.18.0-kali5-amd64 #1 SMP PREEMPT_DYNAMIC Debian 5.18.5-1kali6 (2022-07-07) x86_64 GNU/Linux
```

### 16) whoami

**Description:** Get the active username

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ whoami
kali
```

### 17) tar

**Description:** Command to extract and compress files in Linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ tar -cf archive.tar new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
archive.tar 'Linux Commands for DevOps Engineer' new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ tar -xf archive.tar

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
archive.tar 'Linux Commands for DevOps Engineer' new.txt sample.txt
```

### 18) grep

**Description:** Search for a string within an output

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ grep -i "Stark" new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ grep -c "Hi" new.txt
1

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ grep -l "Stark" *
archive.tar
new.txt
sample.txt
```



## 19) head

**Description:** Return the specified number of lines from the top

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ head Linux\ Commands\ for\ DevOps\ Engineer
There are the top 55 Linux Commands You Must Know as a cloud&devops engineer:

01. ls - The most frequently used command in Linux to list directories
02. pwd - Print working directory command in Linux
03. cd - Linux command to navigate through directories
04. mkdir - Command used to create directories in Linux
05. mv - Move or rename files in Linux
06. cp - Similar usage as mv but for copying files in Linux
07. rm - Delete files or directories
07. touch - Create blank/empty files
```

## 20) tail

**Description:** Return the specified number of lines from the bottom

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ tail Linux\ Commands\ for\ DevOps\ Engineer
49. kill --Command to kill the process (PID)
50. w -- to check how many users logged into the linux
51. date -- used to check the current date, time in linux
52. ls -a --List the hidden files in directory (hidden files are denoted as .
.)
53. ls -l --Use to check the permissions on all the files
54. ls -R -- used to list information about files and directories within the f
ile system.
55. rm -rf -- remove directory with the files

Reference: Collected this, from the post of Kishan Patro.
```

## 21) diff

**Description:** Find the difference between two files

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ diff new.txt archive.tar
Binary files new.txt and archive.tar differ
```

## 22) cmp

**Description:** Allows you to check if two files are identical

**Output:** \$\_ means that they are identical

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cmp new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$
```

```
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$ cmp new.txt archive.tar
new.txt archive.tar differ: byte 1, line 1
Options:
  -b (print-bytes) - If you want cmp
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$
```

23) comm

**Description:** Combines the functionality of diff and cmp

**Output:**

```
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$ comm new.txt archive.tar
Hi there! My name's Stark and I'm trying out some linux cmds.
new.txt0000644000175000017500000000007614363004564011042 0ustar  kalikaliHi there! My name's Sta
k and I'm trying out some linux cmds.
comm: file 2 is not in sorted order
sample.txt0000644000175000017500000000007614363004746011534 0ustar  kalikaliHi there! My name's
tark and I'm trying out some linux cmds.
comm: input is not in sorted order
```

24) sort

**Description:** Linux command to sort the content of a file while outputting

**Output:**

```
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$ sort -f new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.
```

25) export

**Description:** Export environment variables in Linux

**Output:**

```
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$ export -p
export COLORFGBG='15;0'
export COLORTERM=truecolor
export COMMAND_NOT_FOUND_INSTALL_PROMPT=1
export DBUS_SESSION_BUS_ADDRESS='unix:path=/run/user/1000/bus'
export DESKTOP_SESSION=lightdm-xsession
export DISPLAY=:0.0
export DOTNET_CLI_TELEMETRY_OPTOUT=1
export GDMSESSION=lightdm-xsession
export GTK_MODULES=gail:atk-bridge
export HOME=/home/kali
export LANG=en_US.UTF-8
export LANGUAGE=''
export LESS_TERMCAP_mb=$'\C-[[1;31m'
export LESS_TERMCAP_md=$'\C-[[1;36m'
export LESS_TERMCAP_me=$'\C-[[0m'
export LESS_TERMCAP_se=$'\C-[[0m'
export LESS_TERMCAP_so=$'\C-[[01;33m'
export LESS_TERMCAP_ue=$'\C-[[0m'
export LESS_TERMCAP_us=$'\C-[[1;32m'
export LOGNAME=kali
```

26) zip

**Description:** Zip files in Linux

**Output:**

```
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$ zip sample.zip sample.txt
adding: sample.txt (stored 0%)
(kali@kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
archive.tar  'Linux Commands for DevOps Engineer'  new.txt  sample.txt  sample.zip
```



27) unzip

**Description:** Unzip files in Linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ unzip sample.zip
Archive:  sample.zip
replace sample.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
extracting: sample.txt
```

28) ssh

**Description:** Secure shell command Linux

**Output:**

```
(root㉿kali)-[~]
# ssh
usage: ssh [-46AaCfGgKkMNnqsTtVvXxYy] [-B bind_interface]
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
          [-i identity_file] [-J [user@]host[:port]] [-L address]
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] destination [command [argument ...]]
```

29) service

**Description:** Linux command to start and stop services

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ service --status-all
[ - ] apache-htcacheclean
[ - ] apache2
[ - ] apparmor
[ - ] atftpd
[ - ] avahi-daemon
[ + ] binfmt-support
[ - ] bluetooth
[ - ] console-setup.sh
[ + ] cron
[ - ] cryptdisks
[ - ] cryptdisks-early
[ + ] dbus
[ - ] dns2tcp
[ + ] haveged
[ - ] hwclock.sh
[ - ] inetsim
[ - ] iodined
[ - ] ipsec
[ - ] keyboard-setup.sh
[ + ] kmod
[ + ] lightdm
[ - ] lm-sensors
[ - ] mariadb
[ - ] miredo
```

### 30) ps

**Description:** Display active processes

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ps
  PID TTY          TIME CMD
  6892 pts/0        00:00:01 zsh
 11175 pts/0        00:00:00 ps
```

### 31) kill/killall

**Description:** Kill active processes by process ID or name

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ kill -l
HUP INT QUIT ILL TRAP IOT BUS FPE KILL USR1 SEGV USR2 PIPE ALRM TERM STKFLT CHLD CONT STOP TSTP TTIN TTO
U URG XCPU XFSZ VTALRM PROF WINCH POLL PWR SYS
```

### 32) df

**Description:** Display disk filesystem information

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ df
Filesystem      1K-blocks      Used Available Use% Mounted on
udev             974100          0    974100   0% /dev
tmpfs            202028        1172    200856   1% /run
/dev/sda1       82083148 13443304  64424296  18% /
tmpfs            1010132          0    1010132   0% /dev/shm
tmpfs             5120           0         5120   0% /run/lock
tmpfs            202024          80     201944   1% /run/user/1000
```

### 33) mount

**Description:** Mount file systems in Linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ mount -l
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=974100k,nr_inodes=243525,mode=755,inode64)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=202028k,mode=755,inode64)
/dev/sda1 on / type ext4 (rw,relatime,errors=remount-ro) [root]
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,inode64)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k,inode64)
cgroup2 on /sys/fs/cgroup type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate,memory_recursiveprot)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
bpf on /sys/fs/bpf type bpf (rw,nosuid,nodev,noexec,relatime,mode=700)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=29,pgrp=1,timeout=0,minproto=5,maxprot
o=5,direct,pipe_ino=16270)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime,pagesize=2M)
mqueue on /dev/mqueue type mqueue (rw,nosuid,nodev,noexec,relatime)
debugfs on /sys/kernel/debug type debugfs (rw,nosuid,nodev,noexec,relatime)
tracefs on /sys/kernel/tracing type tracefs (rw,nosuid,nodev,noexec,relatime)
fusectl on /sys/fs/fuse/connections type fusectl (rw,nosuid,nodev,noexec,relatime)
configfs on /sys/kernel/config type configfs (rw,nosuid,nodev,noexec,relatime)
ramfs on /run/credentials/systemd-sysusers.service type ramfs (ro,nosuid,nodev,noexec,relatime,mode=700)
```

### 34) chmod

**Description:** Command to change file permissions

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ chmod u=rw,g=rw sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls -l sample.txt
-rw-rw-rw- 1 kali kali 62 Jan 21 10:51 sample.txt
```

35) chown

**Description:** Command for granting ownership of files or folders

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ sudo chown root sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls -l sample.txt
-rw-rw-rw- 1 root kali 62 Jan 21 10:51 sample.txt
```

36) ifconfig

**Description:** Display network interfaces and IP addresses

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.238.129 netmask 255.255.255.0 broadcast 192.168.238.255
    inet6 fe80::eeb4:a252:ef06:5ea4 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:17:f3:fb txqueuelen 1000 (Ethernet)
    RX packets 41068 bytes 38282679 (36.5 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 23248 bytes 4982616 (4.7 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

37) traceroute

**Description:** Trace all the network hops to reach the destination

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ traceroute google.com
traceroute to google.com (142.250.182.238), 30 hops max, 60 byte packets
 1  192.168.238.2 (192.168.238.2)  0.145 ms  0.071 ms  0.119 ms
 2  * * *
 3  * * *
 4  * * *
 5  * * *
 6  * * *
```

38) wget

**Description:** Direct download files from the internet

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ wget http://ftp.gnu.org/gnu/wget/wget2-2.0.0.tar.gz
--2023-01-22 15:30:10-- http://ftp.gnu.org/gnu/wget/wget2-2.0.0.tar.gz
Resolving ftp.gnu.org (ftp.gnu.org)... 209.51.188.20, 2001:470:142:3::b
Connecting to ftp.gnu.org (ftp.gnu.org)|209.51.188.20|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3565643 (3.4M) [application/x-gzip]
Saving to: 'wget2-2.0.0.tar.gz'

wget2-2.0.0.tar.gz      100%[=====>] 3.40M  1.78MB/s  in 1.9s
2023-01-22 15:30:12 (1.78 MB/s) - 'wget2-2.0.0.tar.gz' saved [3565643/3565643]
```

### 39) ufw

**Description:** Firewall command

**Output:**

```
(root㉿kali)-[~]
# ufw enable
Firewall is active and enabled on system startup
```

### 40) iptables

**Description:** Base firewall for all other firewall utilities to interface with

**Output:**

```
(root㉿kali)-[~]
# iptables -h
iptables v1.8.8 (nf_tables)

Usage: iptables -[ACD] chain rule-specification [options]
       iptables -I chain [rulenum] rule-specification [options]
       iptables -R chain rulenum rule-specification [options]
       iptables -D chain rulenum [options]
       iptables -[LS] [chain [rulenum]] [options]
       iptables -[FZ] [chain] [options]
       iptables -[NX] chain rule-specification [options]
       iptables -E old-chain-name new-chain-name
       iptables -P chain target [options]
       iptables -h (print this help information)
```

### 41) apt, pacman, yum, rpm

**Description:** Package managers depending on the distro

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ sudo apt install ncal
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
 ncal
0 upgraded, 1 newly installed, 0 to remove and 1718 not upgraded.
```

### 42) sudo

**Description:** Command to escalate privileges in Linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ sudo apt install ncal
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
 ncal
0 upgraded, 1 newly installed, 0 to remove and 1718 not upgraded.
```

### 43) cal

**Description:** View a command-line calendar

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cal
    January 2023
Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
```

44) alias

**Description:** Create custom shortcuts for regularly used commands

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ alias -- CD='cd Desktop'
```

45) dd

**Description:** Majorly used for creating bootable USB sticks

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ dd
-dd
^C0+1 records in
0+0 records out
0 bytes copied, 8.03898 s, 0.0 kB/s
```

46) whereis

**Description:** Locate the binary, source, and manual pages for a command

**Output:**

```
(kali㉿kali)-[~]
$ whereis wget
wget: /usr/bin/wget /usr/share/man/man1/wget.1.gz /usr/share/info/wget.info.gz
```

47) whatis

**Description:** Find what a command is used for

**Output:**

```
(kali㉿kali)-[~]
$ whatis wget
wget (1) - The non-interactive network downloader.
```

48) top

**Description:** View active processes live with their system usage

**Output:**



```
top - 07:32:41 up 27 min, 1 user, load average: 0.42, 0.25, 0.19
Tasks: 193 total, 1 running, 192 sleeping, 0 stopped, 0 zombie
%Cpu(s): 3.9 us, 9.2 sy, 0.0 ni, 86.8 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 1972.9 total, 402.3 free, 631.1 used, 939.4 buff/cache
MiB Swap: 1024.0 total, 1024.0 free, 0.0 used. 1176.4 avail Mem

  PID USER      PR  NT   VIRT   RFS   SHR S  %CPU  %MEM   TIME+ COMMAND

```

49) useradd and usermod

**Description:** Add new user or change existing users data

**Output:**

```
(root@kali)-[~]
# sudo useradd test_user

(root@kali)-[~]
# cat etc/passwd | grep test_user
cat: etc/passwd: No such file or directory

(root@kali)-[~]
# cat /etc/passwd | grep test_user
test_user:x:1002:1002::/home/test_user:/bin/sh

```

50) passwd

**Description:** Create or update passwords for existing users

**Output:**

```
(root@kali)-[~]
# passwd -s test_user
test_user L 2023-01-23 0 99999 7 -1

```

51) ls -l | wc -l

**Description:** Command to get the count of the files present into directory.

**Output:**

```
(kali@kali)-[~/Desktop/Cloud & DevOps]
$ ls -l | wc -l
1

```

52) Kill-

**Description:** Command to kill the process (PID)

**Output:**

```
(kali@kali)-[~/Desktop/Cloud & DevOps]
$ kill -l
HUP INT QUIT ILL TRAP IOT BUS FPE KILL USR1 SEGV USR2 PIPE ALRM TERM STKFLT CHLD CONT STOP TSTP TTIN TTO
U URG XCPU XFSZ VTALRM PROF WINCH POLL PWR SYS

```

53) W

**Description:** to check how many users logged into the linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ w
07:46:04 up 40 min,  1 user,  load average: 0.13, 0.38, 0.35
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
kali      tty7      :0               07:05    40:46  2:24   0.73s xfce4-session
```

#### 54) Date

**Description:** used to check the current date, time in linux

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ date
Mon Jan 23 07:46:11 AM EST 2023
```

#### 55) Ls-a

**Description:** List the hidden files in directory (hidden files are denoted as ..)

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls -a
.  ..  test
```

#### 56) Ls-l

**Description:** Use to check the permissions on all the files

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls -l
total 4
drwxr-xr-x 2 kali kali 4096 Jan 22 15:30 test
```

#### 57) Ls-r

**Description:** used to list information about files and directories within the file system.

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls -r
test
```

#### 58) Rm--rf

**Description:** remove directory with the files

**Output:**

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/case]
$ cd

(kali㉿kali)-[~]
$ cd Desktop/Cloud\ \&\ DevOps/

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ rm -rf case

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
test
```