Assessment-1
Title: Linux Command List Assessment

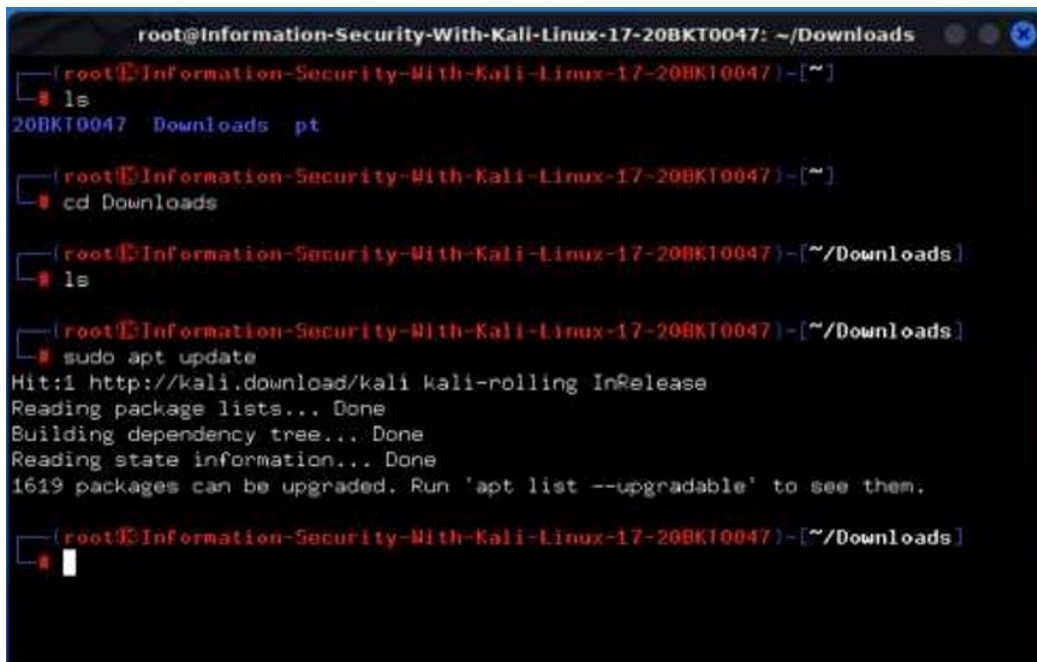**Submitted by:**
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File and Directory Operations:

ls: List files and directories

cd: Change directory

Pwd: Print working directory

File Viewing and Editing:

cat: Concatenate and display file content less: View file content with pagination head: Display the beginning of a file

tail: Display the end of a file

nano: Text editor for creating and editing files

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vi/vim: Powerful text editor for experienced users

File Permissions: chmod: Change file permissions

chown: Change file owner

chgrp: Change file group

File Compression and Archiving:

tar: Archive files

```
File  Edit  View  Search  Terminal  Help
Movies  newfile  Photos  Videos

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─# tarp -cf arch newfile
Command 'tarp' not found, did you mean:
  command 'tar' from deb tar
  command 'arp' from deb net-tools
  command 'rarp' from deb net-tools
  command 'warp' from deb libghc-wai-app-static-dev
  command 'tap' from deb node-tap
Try: apt install <deb name>

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─# tar -cf arch newfile

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─# tar -xf arch

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─# ls
arch  Movies  newfile  Photos  Videos

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─#
```

gzip: Compress files

```
root@Information-Security-With-Kali-Linux-17-20BKT0047: ~/Downloads

File  Edit  View  Search  Terminal  Help
┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# cd Downloads

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─# gzip newfile

┌──(root㉿Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
└─#
```

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unzip: Extract files from a ZIP archive

Process Management:

ps: List running processes

unzip: Extract files from a ZIP archive

top: Display real-time system information and processes

```
File  Edit  View  Search  Terminal  Help
top - 10:01:06 up  2:38,  0 users,  load average: 0.16, 0.13, 0.17
Tasks:  74 total,   1 running,  73 sleeping,   0 stopped,   0 zombie
%Cpu(s):  2.7 us,  0.0 sy,  0.0 ni, 97.3 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :   3814.7 total,   2701.4 free,    642.6 used,    470.7 buff/cache
MiB Swap:      0.0 total,      0.0 free,      0.0 used.   3172.1 avail Mem

   PID USER       PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   327 root       20   0  157272  50112   8336 S   1.3   1.3   1:03.06 nessusd
 10636 root       20   0 3335728 323192  99120 S   0.7   8.3   0:26.14 gnome-s+
 10632 root       20   0  274512  89572  44356 S   0.3   2.3   0:08.02 Xtigerv+
 12346 root       20   0  698644  38664  27204 S   0.3   1.0   0:00.27 gnome-t+
     1 root       20   0  168676  10460   6168 S   0.0   0.3   0:01.02 systemd
    75 root       20   0   33144  12360  10996 S   0.0   0.3   0:03.45 systemd+
    94 root       20   0   23496   4600   2856 S   0.0   0.1   0:00.07 systemd+
   111 root       20   0    8252   4232   1100 S   0.0   0.1   0:00.40 haveged
   124 root       20   0  236844   4760   3888 S   0.0   0.1   0:00.26 account+
   125 root       20   0    6600   1628   1384 S   0.0   0.0   0:00.04 cron
   126 message+   20   0   10848   4820   2572 S   0.0   0.1   0:01.77 dbus-da+
   131 polkitd    20   0  240372   7968   4572 S   0.0   0.2   0:00.10 polkitd
   132 syslog     20   0  156496   3116   2532 S   0.0   0.1   0:00.27 rsyslogd
   133 root       20   0   16880   5988   4912 S   0.0   0.2   0:00.10 systemd+
   134 root       20   0    6916   2132   1828 S   0.0   0.1   0:00.77 bash
   141 root       20   0  258092  11828   9180 S   0.0   0.3   0:00.16 Network+
```

kill: Terminate processes

```
                root@Information-Security-With-Kali-Linux-17-20BKT0047: ~
File  Edit  View  Search  Terminal  Help
┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill
-l [sigspec]

┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# kill -l
 1) SIGHUP       2) SIGINT       3) SIGQUIT      4) SIGILL       5) SIGTRAP
 6) SIGABRT      7) SIGBUS       8) SIGFPE       9) SIGKILL     10) SIGUSR1
11) SIGSEGV     12) SIGUSR2     13) SIGPIPE     14) SIGALRM     15) SIGTERM
16) SIGSTKFLT   17) SIGCHLD     18) SIGCONT     19) SIGSTOP     20) SIGTSTP
21) SIGTTIN     22) SIGTTOU     23) SIGURG      24) SIGXCPU     25) SIGXFSZ
26) SIGVTALRM   27) SIGPROF     28) SIGWINCH    29) SIGIO       30) SIGPWR
31) SIGSYS      34) SIGRTMIN    35) SIGRTMIN+1  36) SIGRTMIN+2  37) SIGRTMIN+3
38) SIGRTMIN+4  39) SIGRTMIN+5  40) SIGRTMIN+6  41) SIGRTMIN+7  42) SIGRTMIN+8
43) SIGRTMIN+9  44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8  57) SIGRTMAX-7
58) SIGRTMAX-6  59) SIGRTMAX-5  60) SIGRTMAX-4  61) SIGRTMAX-3  62) SIGRTMAX-2
63) SIGRTMAX-1  64) SIGRTMAX

┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─#
```

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bg: Run processes in the background fg: Bring background

processes to the foreground

System Information:

uname: Print system information df: Display disk space usage

free: Display memory usage uptime: Show system uptime who

Display logged-in users w: Display logged-in users and their activities


```
File  Edit  View  Search  Terminal  Help
┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# free
              total        used        free      shared  buff/cache   available
Mem:        3906248      657260     2766840       11284      482148     3248988
Swap:             0           0           0

┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# uptime
 10:05:03 up  2:42,  0 users,  load average: 0.04, 0.09, 0.15

┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# who

┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# w
 10:05:10 up  2:42,  0 users,  load average: 0.04, 0.09, 0.15
USER      TTY       FROM             LOGIN@   IDLE   JCPU   PCPU WHAT

┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─#
```

Networking: ifconfig: Configure network interfaces


```
        root@Information-Security-With-Kali-Linux-17-20BKT0047: ~      ● ● ✕
File  Edit  View  Search  Terminal  Help
┌──(root☉Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.12.197.185  netmask 255.255.0.0  broadcast 10.12.255.255
        inet6 fe80::216:3eff:fe64:6548  prefixlen 64  scopeid 0x20<link>
        ether 00:16:3e:64:65:48  txqueuelen 1000  (Ethernet)
        RX packets 126023  bytes 10523825 (10.0 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 97464  bytes 178180942 (169.9 MiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 162264  bytes 179993769 (171.6 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 162264  bytes 179993769 (171.6 MiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

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ping: Send ICMP echo requests to a network host


```
root@Information-Security-With-Kali-Linux-17-20BKT0047: ~
File  Edit  View  Search  Terminal  Help
┌──(root@ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# ping www.google.com
PING www.google.com (142.250.182.68): 56 data bytes
64 bytes from 142.250.182.68: icmp_seq=0 ttl=116 time=33.690 ms
64 bytes from 142.250.182.68: icmp_seq=1 ttl=116 time=32.716 ms
64 bytes from 142.250.182.68: icmp_seq=2 ttl=116 time=32.717 ms
64 bytes from 142.250.182.68: icmp_seq=3 ttl=116 time=32.727 ms
64 bytes from 142.250.182.68: icmp_seq=4 ttl=116 time=32.709 ms
64 bytes from 142.250.182.68: icmp_seq=5 ttl=116 time=32.679 ms
64 bytes from 142.250.182.68: icmp_seq=6 ttl=116 time=32.681 ms
64 bytes from 142.250.182.68: icmp_seq=7 ttl=116 time=32.654 ms
64 bytes from 142.250.182.68: icmp_seq=8 ttl=116 time=32.685 ms
64 bytes from 142.250.182.68: icmp_seq=9 ttl=116 time=32.690 ms
64 bytes from 142.250.182.68: icmp_seq=10 ttl=116 time=32.723 ms
64 bytes from 142.250.182.68: icmp_seq=11 ttl=116 time=32.712 ms
64 bytes from 142.250.182.68: icmp_seq=12 ttl=116 time=32.681 ms
64 bytes from 142.250.182.68: icmp_seq=13 ttl=116 time=32.689 ms
```

ssh: Securely connect to a remote system

```
File  Edit  View  Search  Terminal  Help
┌──(root@ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# 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 ...]]

┌──(root@ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─#
```

scp: Securely copy files between systems

```
File  Edit  View  Search  Terminal  Help
┌──(root@ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# scp
usage: scp [-346ABCOpqRrsTv] [-c cipher] [-D sftp_server_path] [-F ssh_config]
           [-i identity_file] [-J destination] [-l limit]
           [-o ssh_option] [-P port] [-S program] source ... target
```

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wget: Download files from the web

System Administration:

sudoExecute commands with superuser privileges

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apt-get: Package management for Debian-based distributions

yum: Package management for Red Hat-based distributions

systemctl: Manage system services

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crontab: Schedule recurring tasks

```
  ─(root⊙ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
  └─# crontab -i
crontab: usage error: file name must be specified for replace
usage:  crontab [-u user] file
        crontab [ -u user ] [ -i ] { -e | -l | -r }
                (default operation is replace, per 1003.2)
        -e      (edit user's crontab)
        -l      (list user's crontab)
        -r      (delete user's crontab)
        -i      (prompt before deleting user's crontab)

  ─(root⊙ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
  └─# cd Downloads

  ─(root⊙ Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
  └─# crontab -i newfile
"newfile":0: bad minute
errors in crontab file, can't install.

  ─(root⊙ Information-Security-With-Kali-Linux-17-20BKT0047)-[~/Downloads]
  └─#
```

useradd: Add a new user

```
File   Edit   View   Search   Terminal   Help
  ─(root⊙ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
  ─# useradd
Usage: useradd [options] LOGIN
       useradd -D
       useradd -D [options]

Options:
      --badname                    do not check for bad names
  -b, --base-dir BASE_DIR          base directory for the home directory of the
                                   new account
      --btrfs-subvolume-home       use BTRFS subvolume for home directory
  -c, --comment COMMENT            GECOS field of the new account
  -d, --home-dir HOME_DIR          home directory of the new account
  -D, --defaults                   print or change default useradd configuration
  -e, --expiredate EXPIRE_DATE     expiration date of the new account
  -f, --inactive INACTIVE          password inactivity period of the new account
  -F, --add-subids-for-system      add entries to sub[ud]id even when adding a syst
em user
  -g, --gid GROUP                  name or ID of the primary group of the new
                                   account
  -G, --groups GROUPS              list of supplementary groups of the new
                                   account
  -h, --help                       display this help message and exit
  -k, --skel SKEL_DIR              use this alternative skeleton directory
```

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passwd: Change user password

```
┌──(root☉ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# passwd
New password:
Retype new password:
passwd: password updated successfully
```

```
root@Information-Security-With-Kali-Linux-17-20BKT0047: ~

File  Edit  View  Search  Terminal  Help

┌──(root☉ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# adduser new
Adding user `new' ...
Adding new group `new' (1001) ...
Adding new user `new' (1001) with group `new (1001)' ...
Creating home directory `/home/new' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for new
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n]
Adding new user `new' to supplemental / extra groups `users' ...
Adding user `new' to group `users' ...
```

```
┌──(root☉ Information-Security-With-Kali-Linux-17-20BKT0047)-[~]
└─# passwd new
New password:
Retype new password:
passwd: password updated successfully
```

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