```
[sudo] contraseña para brayan:
root@brayan-VirtualBox:/home/brayan# passwd
Nueva contraseña:
Vuelva a escribir la nueva contraseña:
passwd: contraseña actualizada correctamente
root@brayan-VirtualBox:/home/brayan# ls /
bin     dev    lib    libx32        mnt    root    snap        sys    usr
boot    etc    lib32  lost+found    opt    run     srv         test   var
cdrom   home   lib64  media                proc    sbin        swapfile  tmp
root@brayan-VirtualBox:/home/brayan# cd /
root@brayan-VirtualBox:/# pwd
/
root@brayan-VirtualBox:/# mkdir /home/prueba
root@brayan-VirtualBox:/# touch /home/prueba/test
root@brayan-VirtualBox:/# whoami
root
root@brayan-VirtualBox:/# cat /root/.bash_history
passwd
ls /
cd /
pwd
mkdir /home/prueba
touch /home/prueba/test
mkdir home/prueba
passwd
ls /
cd /
pwd
mkdir /home/prueba
sudo rm -r prueba
passwd
ls /
cd /
pwd
mkdir /home/prueba
touch /home/prueba/test
whoami
cat /root/.bash_history
cp /home/prueba/test /root/
rm /home/prueba/test
mv /root/test /
ping www.google.com
sudo rm -r prueba
passwd
ls /
cd /
pwd
mkdir /home/prueba
/home/prueba/test
```

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ls /
cd /
pwd
mkdir /home/prueba
/home/prueba/test
sudo rm -r prueba
passwd
ls /
cd /
pwd
mkdir /home/prueba
touch /home/prueba/test
whoami
cat /root/ .bash_history
cat /root/.bash_history
cp /home/prueba/test /root/
rm /home/prueba/test
mv/root/test /
mv /root/test /
ping www.google.com
sudo rm -r prueba
passwd
apt install net-tools
root@brayan-VirtualBox:/# cp /home/prueba/test /root/
root@brayan-VirtualBox:/# rm /home/prueba/test
root@brayan-VirtualBox:/# mv /root/test /
root@brayan-VirtualBox:/# ping www.google.com
PING www.google.com (172.217.215.106) 56(84) bytes of data.
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=1 ttl=106 time=33.1 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=2 ttl=106 time=32.9 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=3 ttl=106 time=35.2 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=4 ttl=106 time=33.5 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=5 ttl=106 time=32.9 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=6 ttl=106 time=35.8 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=7 ttl=106 time=34.3 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=8 ttl=106 time=33.9 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=9 ttl=106 time=34.0 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=10 ttl=106 time=33.3 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=11 ttl=106 time=32.8 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=12 ttl=106 time=36.7 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=13 ttl=106 time=34.5 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=14 ttl=106 time=37.4 ms
64 bytes from yo-in-f106.1e100.net (172.217.215.106): icmp_seq=15 ttl=106 time=34.3 ms
^C
--- www.google.com ping statistics ---
15 packets transmitted, 15 received, 0% packet loss, time 14024ms
rtt min/avg/max/mdev = 32.774/34.306/37.395/1.363 ms
root@brayan-VirtualBox:/# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::df98:52a0:4357:213a  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:79:45:b1  txqueuelen 1000  (Ethernet)
        RX packets 1502  bytes 945602 (945.6 KB)
```

```
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inetó fe80::df98:52a0:4357:213a  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:79:45:b1  txqueuelen 1000  (Ethernet)
        RX packets 1502  bytes 945602 (945.6 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 1331  bytes 194536 (194.5 KB)
        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
        inetó ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Bucle local)
        RX packets 392  bytes 35135 (35.1 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 392  bytes 35135 (35.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

root@brayan-VirtualBox:/# netstat
Conexiones activas de Internet (servidores w/o)
Proto  Recib Enviad Dirección local        Dirección remota      Estado
udp        0      0 brayan-VirtualBo:bootpc _gateway:bootps       ESTABLECIDO
Sockets activos de dominio UNIX (servidores w/o)
Proto RefCnt Flags     Type      State      I-Node   Ruta
unix   2      [ ]      DGRAM                26522    /run/user/1000/systemd/notify
unix   3      [ ]      DGRAM     CONECTADO  17665    /run/systemd/notify
unix   2      [ ]      DGRAM                17681    /run/systemd/journal/syslog
unix   20     [ ]      DGRAM     CONECTADO  17691    /run/systemd/journal/dev-log
unix   8      [ ]      DGRAM     CONECTADO  17695    /run/systemd/journal/socket
unix   2      [ ]      DGRAM                32780
unix   3      [ ]      FLUJO     CONECTADO  31649    /run/user/1000/bus
unix   3      [ ]      FLUJO     CONECTADO  23319    /run/dbus/system_bus_socket
unix   3      [ ]      FLUJO     CONECTADO  37493    /run/systemd/journal/stdout
unix   3      [ ]      FLUJO     CONECTADO  31757
unix   3      [ ]      FLUJO     CONECTADO  29388    @/tmp/.X11-unix/X0
unix   3      [ ]      FLUJO     CONECTADO  25739    /run/dbus/system_bus_socket
unix   3      [ ]      FLUJO     CONECTADO  39332
unix   3      [ ]      FLUJO     CONECTADO  27852    /run/user/1000/bus
unix   2      [ ]      DGRAM     CONECTADO  26851
unix   3      [ ]      FLUJO     CONECTADO  37629
unix   3      [ ]      FLUJO     CONECTADO  31760    /run/systemd/journal/stdout
unix   3      [ ]      FLUJO     CONECTADO  27890    /run/user/1000/bus
unix   2      [ ]      FLUJO     CONECTADO  44622    @touchegg
unix   3      [ ]      FLUJO     CONECTADO  37143    /run/user/1000/bus
unix   3      [ ]      FLUJO     CONECTADO  32341
unix   3      [ ]      FLUJO     CONECTADO  29403    /run/user/1000/bus
unix   2      [ ]      DGRAM                29897
unix   3      [ ]      FLUJO     CONECTADO  27457
unix   3      [ ]      FLUJO     CONECTADO  31313
unix   3      [ ]      DGRAM     CONECTADO  21505
unix   3      [ ]      FLUJO     CONECTADO  50920
unix   3      [ ]      FLUJO     CONECTADO  37174
unix   3      [ ]      FLUJO     CONECTADO  33798    /run/user/1000/bus
```

```
MiB Intercambio:      701.9 total,      653.3 libre,      48.5 usado.      699.6 dispon Mem

   PID USUARIO    PR  NI    VIRT    RES    SHR S  %CPU  %MEM     HORA+ ORDEN
  1035 brayan     20   0 4059224 422908 141180 R  18.8  21.0   2:25.51 gnome-shell
   762 brayan     20   0  320776 104180  62132 S   6.8   5.2   1:09.18 Xorg
  4760 brayan     20   0  825644  58500  43996 S   4.7   2.9   0:03.24 gnome-terminal-
   553 root       20   0  334164  14040  12184 S   0.5   0.7   0:03.30 touchegg
   751 brayan      9 -11 1936212  16084  13780 S   0.5   0.8   0:00.84 pulseaudio
  1174 brayan     20   0  350352  29248  19256 S   0.5   1.5   0:00.47 gsd-power
  2444 brayan     20   0  895996  66980  50804 S   0.5   3.3   0:00.48 gnome-calendar
     1 root       20   0  168000  11180   8228 S   0.0   0.6   0:01.19 systemd
     2 root       20   0       0      0      0 S   0.0   0.0   0:00.00 kthreadd
     3 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
     4 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
     5 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 slub_flushwq
     6 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
     8 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
    10 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
    11 root       20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
    12 root       20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
    13 root       20   0       0      0      0 S   0.0   0.0   0:00.06 ksoftirqd/0
    14 root       20   0       0      0      0 I   0.0   0.0   0:00.52 rcu_sched
    15 root       rt   0       0      0      0 S   0.0   0.0   0:00.05 migration/0

top - 17:58:22 up  1:03,  1 user,  load average: 0.08, 0.16, 0.14
Tareas: 194 total,   1 ejecutar,  193 hibernar,    0 detener,    0 zombie
%Cpu(s):  1.2 usuario,  0.2 sist,  0.0 adecuado, 98.5 inact,  0.2 en espera,  0.0 hardw int,  0.0 softw int,  0.0 robar tiempo
MiB Mem :   1963.9 total,    172.1 libre,   1081.1 usado,    710.7 búfer/caché
MiB Intercambio:    701.9 total,    653.3 libre,     48.5 usado.    699.9 dispon Mem

   PID USUARIO    PR  NI    VIRT    RES    SHR S  %CPU  %MEM     HORA+ ORDEN
  1035 brayan     20   0 4058520 422024 140380 S   2.0  21.0   2:26.63 gnome-shell
   762 brayan     20   0  327492 110648  61180 S   0.3   5.5   1:09.46 Xorg
  4760 brayan     20   0  826284  58996  43996 S   0.3   2.9   0:03.44 gnome-terminal-
  4919 root       20   0   14796   4120   3340 R   0.3   0.2   0:00.23 top
     1 root       20   0  168000  11180   8228 S   0.0   0.6   0:01.20 systemd
     2 root       20   0       0      0      0 S   0.0   0.0   0:00.00 kthreadd
     3 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
     4 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
     5 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 slub_flushwq
     6 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
     8 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
    10 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
    11 root       20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
    12 root       20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
    13 root       20   0       0      0      0 S   0.0   0.0   0:00.06 ksoftirqd/0
    14 root       20   0       0      0      0 I   0.0   0.0   0:00.52 rcu_sched
    15 root       rt   0       0      0      0 S   0.0   0.0   0:00.05 migration/0
    16 root      -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
    18 root       20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
    19 root       20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
    20 root      -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/1
    21 root       rt   0       0      0      0 S   0.0   0.0   0:00.21 migration/1
    22 root       20   0       0      0      0 S   0.0   0.0   0:00.12 ksoftirqd/1
    24 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/1:0H-kblockd
    25 root       20   0       0      0      0 S   0.0   0.0   0:00.00 kdevtmpfs
    26 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 inet_frag_wq
    27 root       20   0       0      0      0 S   0.0   0.0   0:00.00 kauditd
    28 root       20   0       0      0      0 S   0.0   0.0   0:00.00 khungtaskd
    29 root       20   0       0      0      0 S   0.0   0.0   0:00.00 oom_reaper
    30 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 writeback
    31 root       20   0       0      0      0 S   0.0   0.0   0:00.56 kcompactd0
    32 root       25   5       0      0      0 S   0.0   0.0   0:00.00 ksmd
    33 root       39  19       0      0      0 S   0.0   0.0   0:00.00 khugepaged
    80 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 kintegrityd
    81 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 kblockd
    82 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 blkcg_punt_bio
    83 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 tpm_dev_wq
    84 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 ata_sff
    85 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 md
    86 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 edac-poller
    87 root        0 -20       0      0      0 I   0.0   0.0   0:00.00 devfreq_wq
    88 root      -51   0       0      0      0 S   0.0   0.0   0:00.00 watchdogd
    90 root        0 -20       0      0      0 I   0.0   0.0   0:00.16 kworker/0:1H-kblockd
    92 root       20   0       0      0      0 S   0.0   0.0   0:00.54 kswapd0
    93 root       20   0       0      0      0 S   0.0   0.0   0:00.00 ecryptfs-kthrea
```

```
0 actualizados, 1 nuevos se instalarán, 0 para eliminar y 0 no actualizados.
Se necesita descargar 41.6 kB de archivos.
Se utilizarán 273 kB de espacio de disco adicional después de esta operación.
Des:1 http://mx.archive.ubuntu.com/ubuntu focal-updates/universe amd64 inetutils-traceroute amd64 2:1.9.4-11ubuntu0.2 [41.6 kB]
Descargados 41.6 kB en 1s (64.1 kB/s)
Seleccionando el paquete inetutils-traceroute previamente no seleccionado.
(Leyendo la base de datos ... 278676 ficheros o directorios instalados actualmente.)
Preparando para desempaquetar .../inetutils-traceroute_2%3a1.9.4-11ubuntu0.2_amd64.deb ...
Desempaquetando inetutils-traceroute (2:1.9.4-11ubuntu0.2) ...
Configurando inetutils-traceroute (2:1.9.4-11ubuntu0.2) ...
update-alternatives: utilizando /usr/bin/inetutils-traceroute para proveer /usr/bin/traceroute (traceroute) en modo automático
Procesando disparadores para man-db (2.9.1-1) ...
root@brayan-VirtualBox:/# traceroute www.google.com
traceroute to www.google.com (172.217.215.103), 64 hops max
  1   10.0.2.2  0.266ms  0.157ms  0.195ms
  2   *  *  *
  3   *  *  *
  4   *  *  *
  5   *  *  *
  6   *  *  *
  7   *  *  *
^C
root@brayan-VirtualBox:/# nslookup www.google.com
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
Name:    www.google.com
Address: 64.233.185.103
Name:    www.google.com
Address: 64.233.185.106
Name:    www.google.com
Address: 64.233.185.104
Name:    www.google.com
Address: 64.233.185.105
Name:    www.google.com
Address: 64.233.185.147
Name:    www.google.com
Address: 64.233.185.99
Name:    www.google.com
Address: 2607:f8b0:4002:c1b::68
Name:    www.google.com
Address: 2607:f8b0:4002:c1b::69
Name:    www.google.com
Address: 2607:f8b0:4002:c1b::67
Name:    www.google.com
Address: 2607:f8b0:4002:c1b::93

root@brayan-VirtualBox:/# exit
```