Instalación de net tools

```
laura@laura-VirtualBox:~$ sudo apt install net-tools
[sudo] password for laura:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Ign:1 http://es.archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5
Ign:1 http://es.archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5
Get:1 http://es.archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 4s (48,2 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 185334 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Processing triggers for man-db (2.10.2-1) ...
```

```
laura@laura-VirtualBox:~$ sudo 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::5709:45e5:e3ac:15fc  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:dc:a6:b5  txqueuelen 1000  (Ethernet)
        RX packets 426  bytes 517470 (517.4 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 310  bytes 30061 (30.0 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
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 190  bytes 16817 (16.8 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 190  bytes 16817 (16.8 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

laura@laura-VirtualBox:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:dc:a6:b5 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
       valid_lft 86335sec preferred_lft 86335sec
    inet6 fe80::5709:45e5:e3ac:15fc/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
```

Creo el grupo:

```
laura@laura-VirtualBox:~$ sudo groupadd compañeros
[sudo] password for laura:
```

Creo dos miembros en el grupo:

```
laura@laura-VirtualBox:~$ sudo useradd -m -g compañeros -s /bin/bash laura1
laura@laura-VirtualBox:~$ sudo useradd -m -g compañeros -s /bin/bash laura2
```

Compruebo los miembros del grupo:

```
laura@laura-VirtualBox:~$ sudo apt install members
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  members
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 9.320 B of archives.
After this operation, 34,8 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu jammy/universe amd64 members amd64 20080128.1+nmu1build1 [9.320 B]
Fetched 9.320 B in 0s (21,6 kB/s)
Selecting previously unselected package members.
(Reading database ... 185383 files and directories currently installed.)
Preparing to unpack .../members_20080128.1+nmu1build1_amd64.deb ...
Unpacking members (20080128.1+nmu1build1) ...
Setting up members (20080128.1+nmu1build1) ...
Processing triggers for man-db (2.10.2-1) ...
laura@laura-VirtualBox:~$ members compañeros
laura1 laura2
```

Cree para ello un **alias de comandos.** Permita a todos los pertenecientes al grupo estudiantes ejecutar los comandos ifconfig, ifup y ifdown en la máquina actual.

```
laura@laura-VirtualBox:~$ sudo apt install ifupdown
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  rdnssd
The following NEW packages will be installed:
  ifupdown
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 65,0 kB of archives.
After this operation, 248 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu jammy/universe amd64 ifupdown amd64 0.8.36+nmu1ubuntu3 [65,0 kB]
Fetched 65,0 kB in 1s (86,4 kB/s)
Selecting previously unselected package ifupdown.
(Reading database ... 185389 files and directories currently installed.)
Preparing to unpack .../ifupdown_0.8.36+nmu1ubuntu3_amd64.deb ...
Unpacking ifupdown (0.8.36+nmu1ubuntu3) ...
Setting up ifupdown (0.8.36+nmu1ubuntu3) ...
Creating /etc/network/interfaces.
Created symlink /etc/systemd/system/multi-user.target.wants/networking.service → /lib/systemd/system/networking.service.
Created symlink /etc/systemd/system/network-online.target.wants/networking.service → /lib/systemd/system/networking.service.
Processing triggers for man-db (2.10.2-1) ...
```

Necesito saber la ruta completa de los comandos: whereis

```
laura@laura-VirtualBox:~$ whereis ifconfig ifup ifdown
ifconfig: /usr/sbin/ifconfig /usr/share/man/man8/ifconfig.8.gz
ifup: /usr/sbin/ifup /usr/share/man/man8/ifup.8.gz
ifdown: /usr/sbin/ifdown /usr/share/man/man8/ifdown.8.gz
```

Ahora vamos a modificar las reglas de acceso:

```
laura@laura-VirtualBox:~$ sudo visudo /etc/sudoers
[sudo] password for laura:
```

```
# User privilege specification
root    ALL=(ALL:ALL) ALL

# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d

# ALIAS PERSONALIZADOS LAURA

Cmnd_Alias REDES= /sbin/ifconfig,/sbin/ifdown,/sbin/ifup
%compañeros ALL=(ALL) REDES
%compañeros ALL=(ALL) NOPASSWD:REDES
```

Compruebe que se cumple el punto anterior iniciando sesión como laura1 y modifique lo que sea oportuno para que al ejecutar dicho comando no le pida autentificarse a los usuarios.

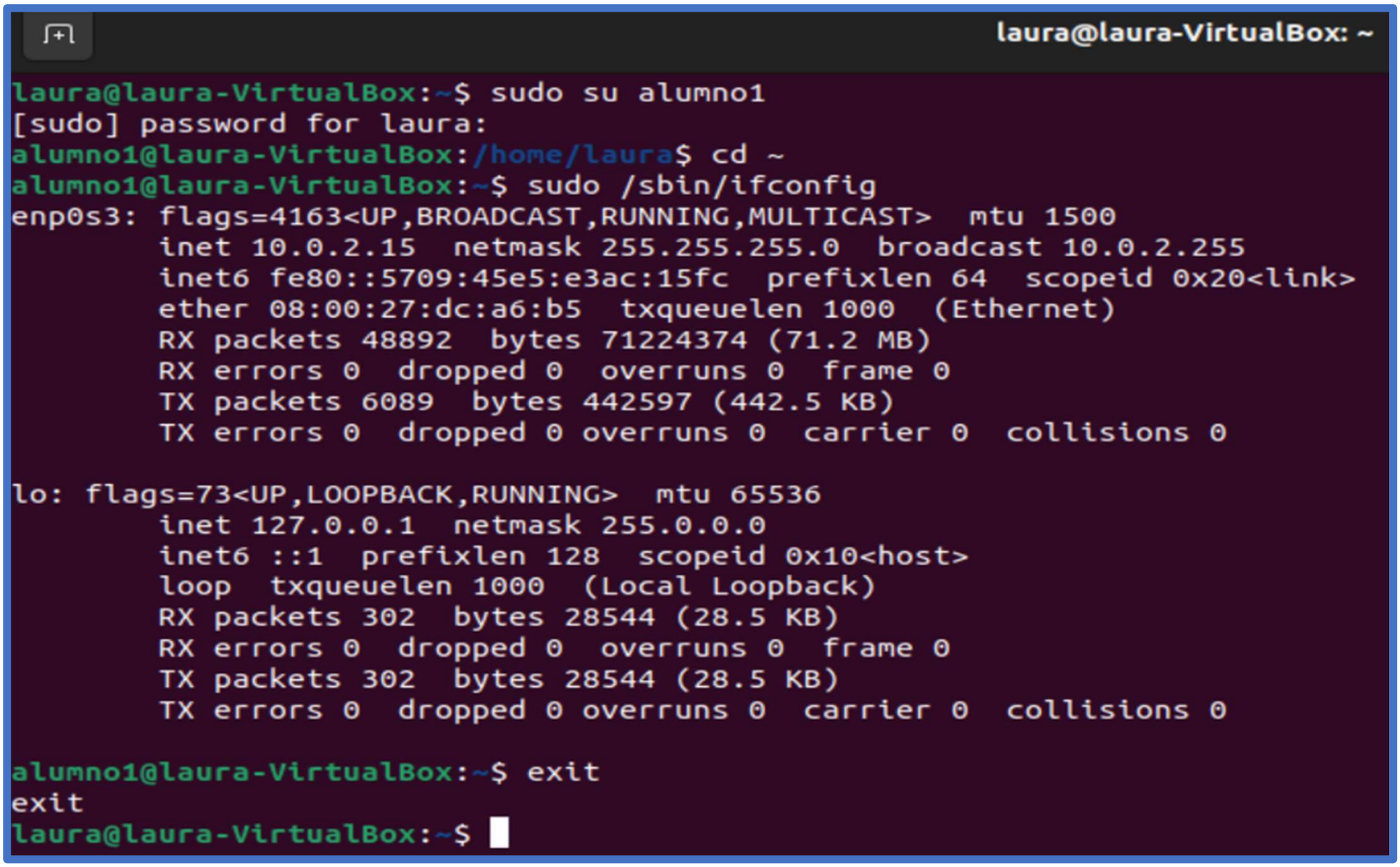
```
laura@laura-VirtualBox:~$ sudo su laura1
laura1@laura-VirtualBox:/home/laura$ ~
bash: /home/laura1: Is a directory
laura1@laura-VirtualBox:/home/laura$ cd ~
laura1@laura-VirtualBox:~$ sudo /sbin/ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::5709:45e5:e3ac:15fc  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:dc:a6:b5  txqueuelen 1000  (Ethernet)
        RX packets 48612  bytes 71154971 (71.1 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 5757  bytes 406253 (406.2 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
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 276  bytes 25922 (25.9 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 276  bytes 25922 (25.9 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

Permita también a los grupos alumnos y usuarios ejecutar dichos comandos. Cree para ello el alias oportuno.

```
laura@laura-VirtualBox:~$ sudo groupadd alumnos
[sudo] password for laura:
laura@laura-VirtualBox:~$ sudo groupadd usuarios
laura@laura-VirtualBox:~$ sudo useradd alumno1 -m -s /bin/bash -g alumnos
laura@laura-VirtualBox:~$ sudo useradd alumno2 -m -s /bin/bash -g alumnos
laura@laura-VirtualBox:~$ sudo useradd usuario1 -m -s /bin/bash -g usuarios
laura@laura-VirtualBox:~$ sudo useradd usuario2 -m -s /bin/bash -g usuarios
```

```
laura@laura-VirtualBox:~$ sudo visudo /etc/sudoers
[sudo] password for laura:
```

```
laura@laura-VirtualBox: ~
  GNU nano 6.2                                  /etc/sudoers.tmp *

# User privilege specification
root    ALL=(ALL:ALL) ALL

# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d

# ALIAS PERSONALIZADOS LAURA

Cmnd_Alias REDES= /sbin/ifconfig,/sbin/ifdown,/sbin/ifup
%compañeros ALL=(ALL) REDES
%compañeros ALL=(ALL) NOPASSWD:REDES

User_Alias ADMINREDES = %alumnos, %usuarios
ADMINREDES ALL=(ALL) REDES
ADMINREDES ALL=(ALL) NOPASSWD:REDES
```



Modifique lo que sea necesario para que dichos comandos se ejecuten en todas las máquinas.

No tenemos que modificar nada porque es este ALL. EJERCICIO4 ALL =(ALL) NOPASSWD: REDES

Permita al usuario ana ejecutar todos los comandos del directorio /usr/bin en todos los equipos.

visudo:

ana ALL =(ALL) /usr/bin/*

Cree los alias necesarios para que ana, a partir de ahora, pueda ejecutar los comandos del primer punto con las palabras configurar, levantar y bajar respectivamente.

Estos alias son alias de ahorrar trabajo a la hora de escribir, no alias de visudo.

Ana pertenece a estudiantes y en visudo ya tiene permiso para poder ifdown, ifup e ifconfig, y el comando que tendría que escribir para poder usar seria:

sudo /sbin/ifdown

sudo /sbin/ifup

sudo /sbin/ifconfig

Como le parece muy dificil vamos a crearle unos alias más fáciles:

Siendo ana:

alias configurar = "sudo /sbin/ifconfig …. (más todas las opciones)"

alias levantar = "sudo /sbin/ifup"

alias bajar = "sudo /sbin/ifdown"

Compruebe que funciona con uno de los alias creados en el punto anterior. **levantar eth0**