

SER

Práctica 2

SSH

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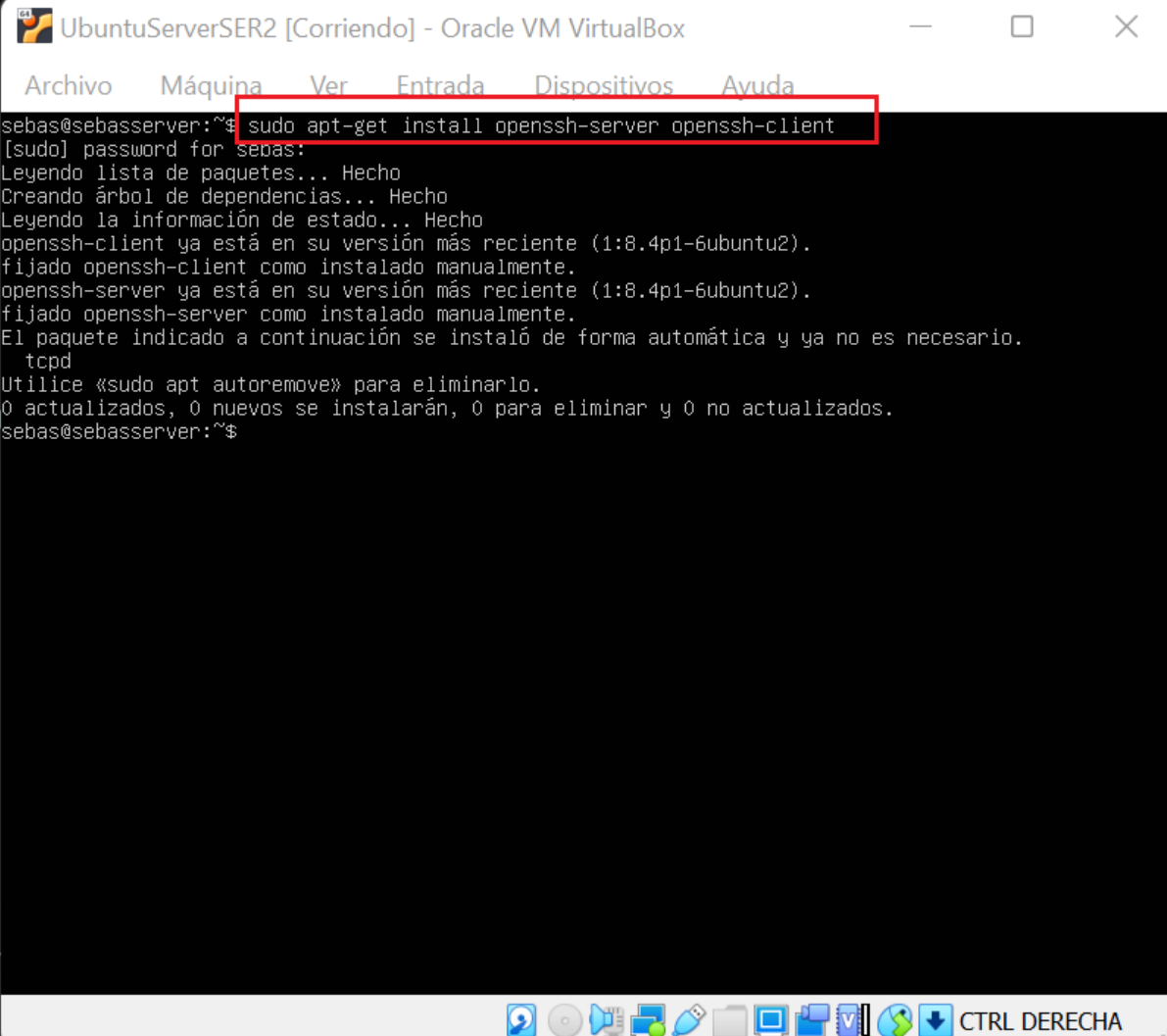
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Instalar servidor SSH

Nos aseguramos de que tenemos instalado el servidor SSH, si no, lo instalamos.



The screenshot shows a terminal window titled "UbuntuServerSER2 [Corriendo] - Oracle VM VirtualBox". The terminal output is as follows:

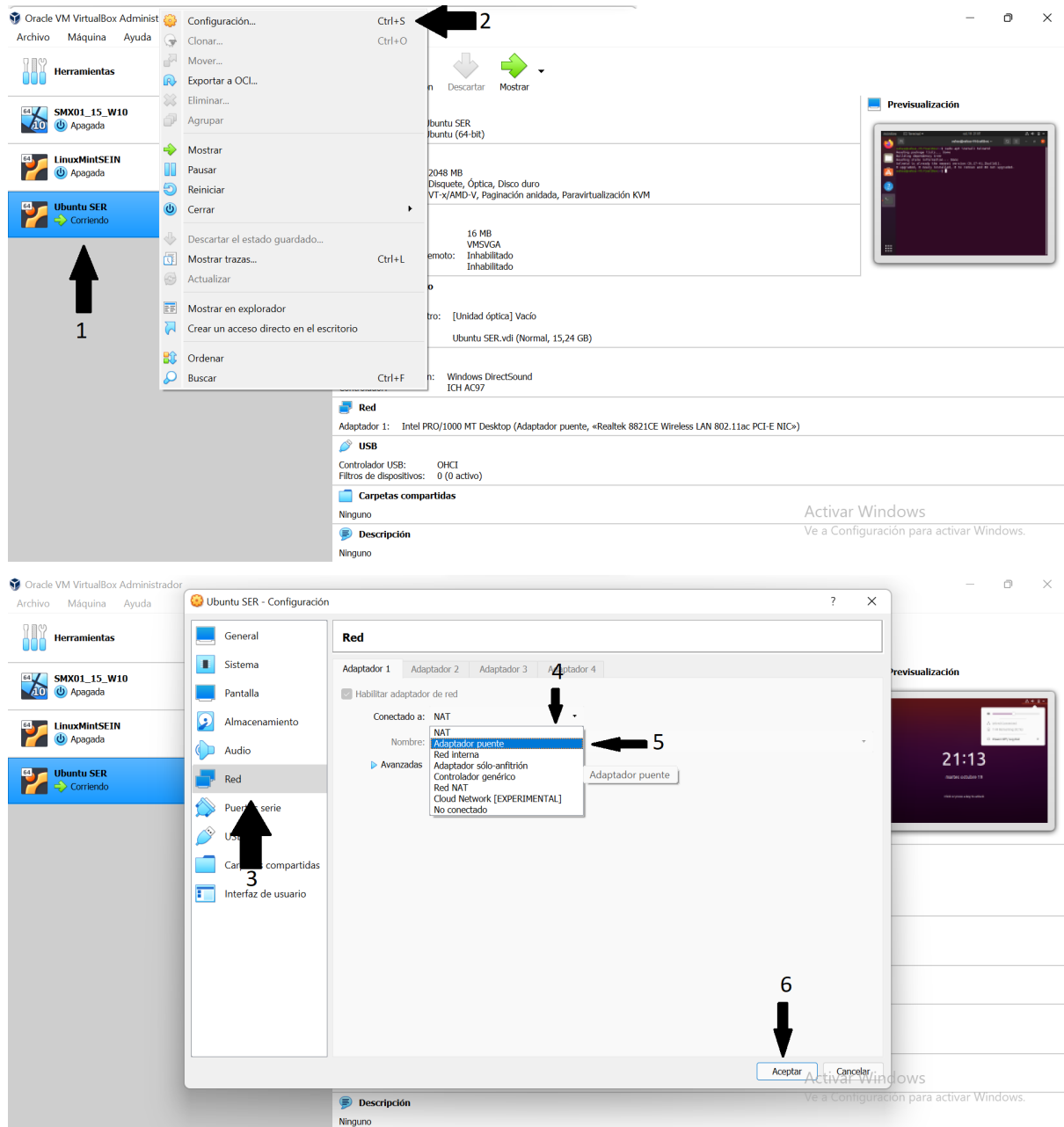
```
sebas@sebasserver:~$ sudo apt-get install openssh-server openssh-client
[sudo] password for sebas:
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
openssh-client ya está en su versión más reciente (1:8.4p1-6ubuntu2).
fijado openssh-client como instalado manualmente.
openssh-server ya está en su versión más reciente (1:8.4p1-6ubuntu2).
fijado openssh-server como instalado manualmente.
El paquete indicado a continuación se instaló de forma automática y ya no es necesario.
  tcpd
Utilice «sudo apt autoremove» para eliminarlo.
0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 0 no actualizados.
sebas@sebasserver:~$
```

The command `sudo apt-get install openssh-server openssh-client` is highlighted with a red box. The terminal shows that both packages are already installed at their latest versions. The bottom of the window features a toolbar with various icons and the text "CTRL DERECHA".

Ubuntu server lo instala automáticamente.

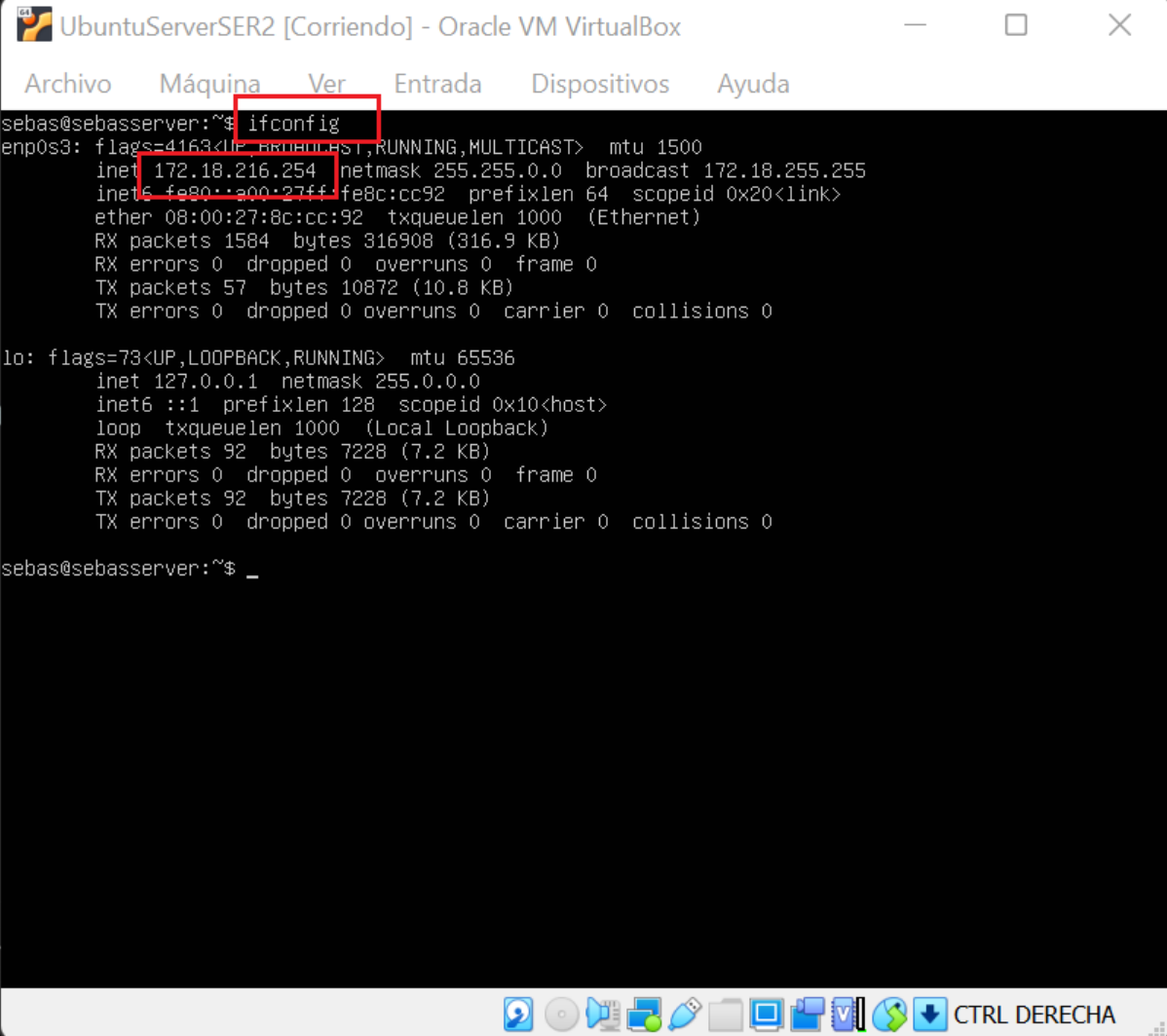
Red de la VM en modo Bridge

Configuramos la red en modo Bridge, como en el ejercicio anterior.



Ver la IP de la VM

Con ifconfig vemos la ip de nuestra máquina virtual.



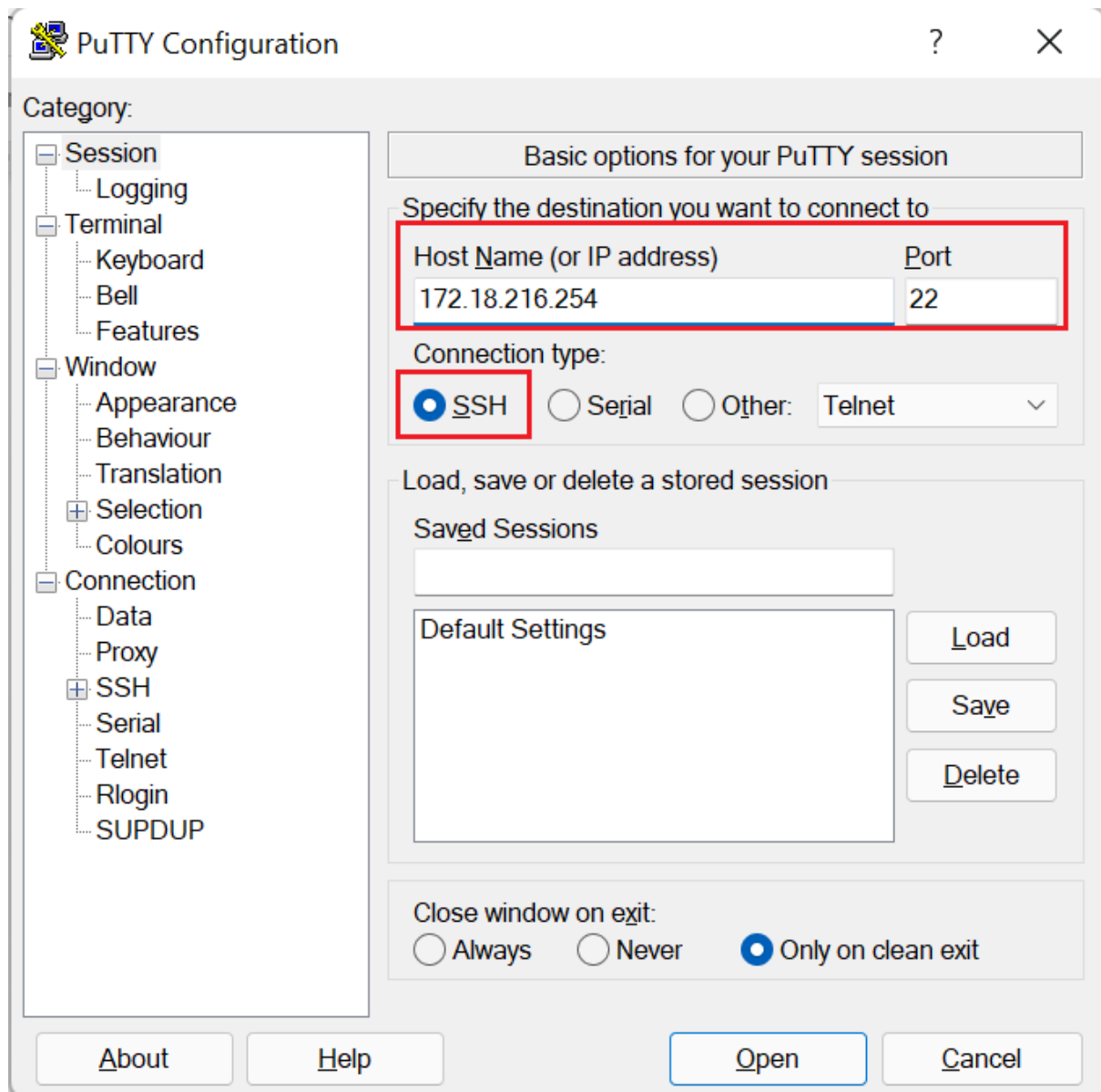
```
sebas@sebasserver:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.18.216.254 netmask 255.255.0.0 broadcast 172.18.255.255
    inet6 fe80::a00:27ff:fe8c:cc92 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:8c:cc:92 txqueuelen 1000 (Ethernet)
    RX packets 1584 bytes 316908 (316.9 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 57 bytes 10872 (10.8 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 92 bytes 7228 (7.2 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 92 bytes 7228 (7.2 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

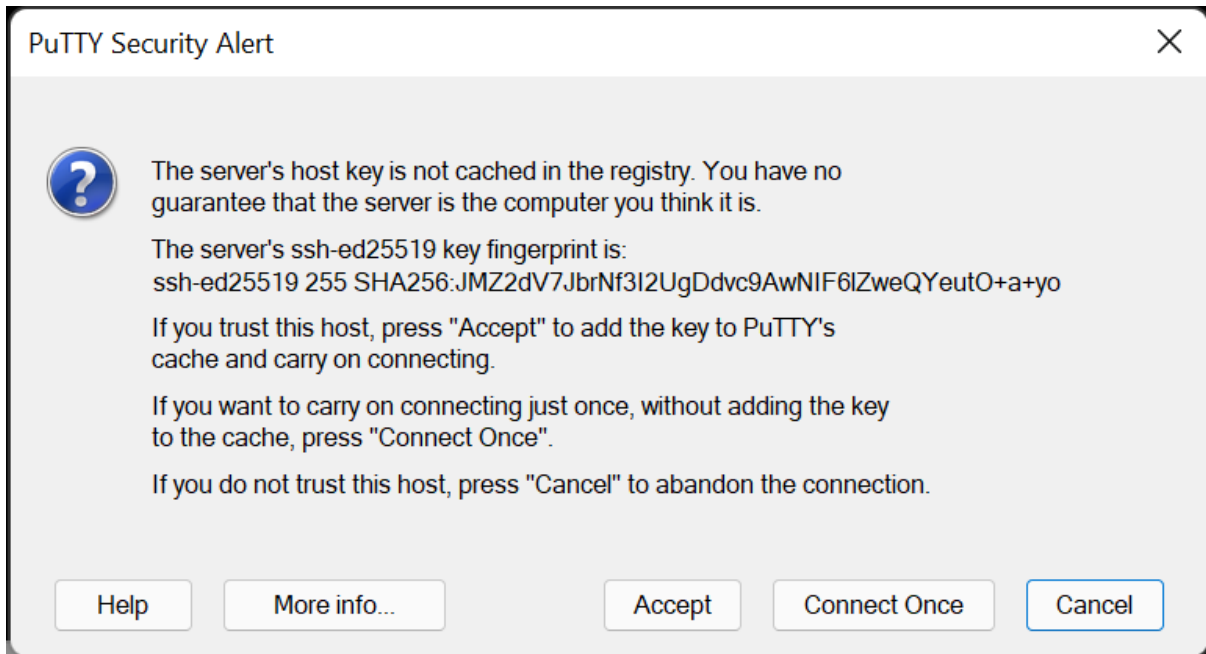
sebas@sebasserver:~$ _
```

Conectarse a la VM con Putty y llave SSH

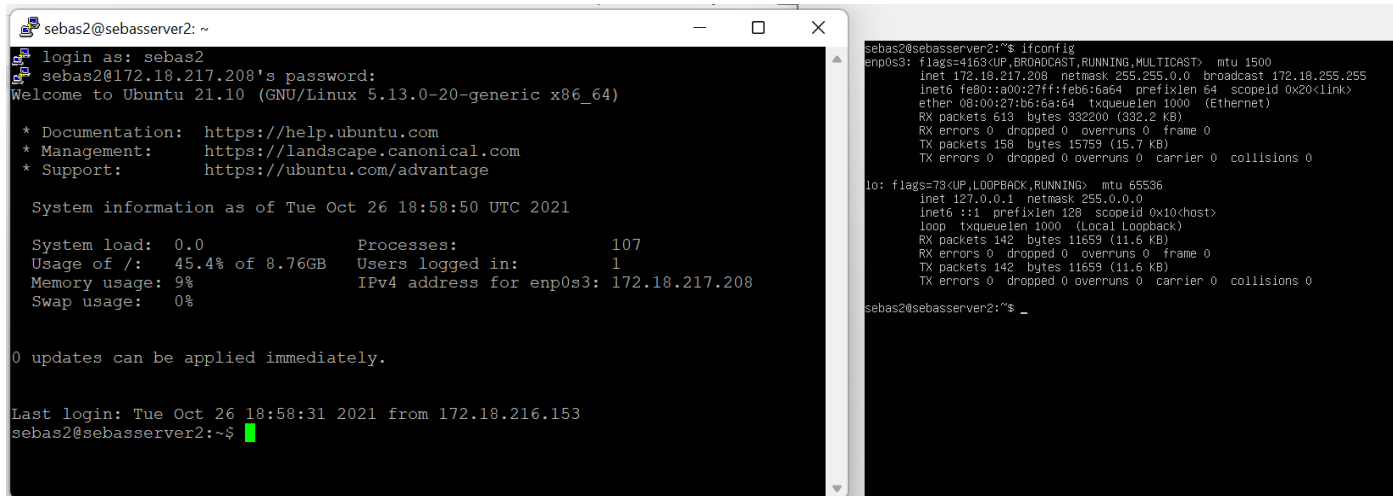
Insertamos la IP de la máquina virtual, en tipo de conexión, elegimos SSH



La primera vez que nos conectemos a la máquina virtual, nos saldrá esto.
Si le damos a aceptar, Putty guardará la clave pública en su caché.



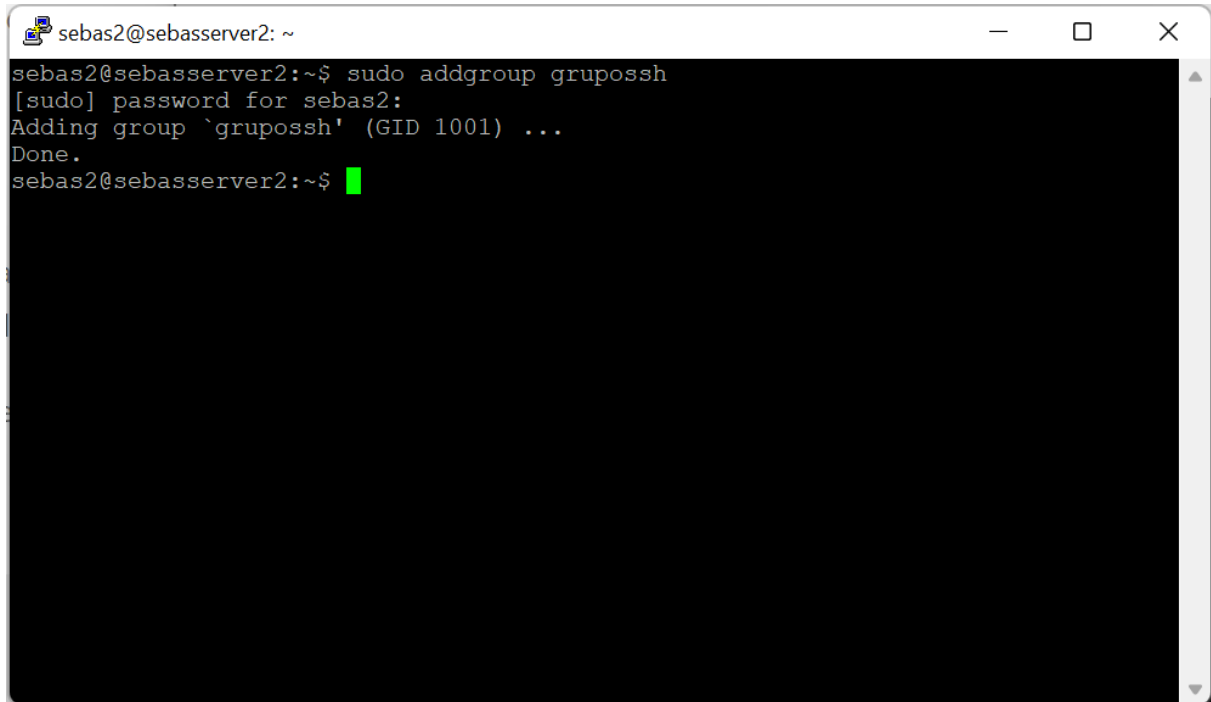
Así, la siguiente vez que nos conectemos, no nos pedirá nada.



Extra

Configurar un único usuario autorizado para entrar en ssh. (Extra 2p)

Creamos un grupo que se llamará grupossh.

A terminal window with a title bar showing 'sebas2@sebaserver2: ~'. The terminal content shows the execution of the 'sudo addgroup grupossh' command. It prompts for a password, shows the group being added with GID 1001, and confirms completion. The prompt returns to the user.

```
sebas2@sebaserver2:~$ sudo addgroup grupossh
[sudo] password for sebas2:
Adding group `grupossh' (GID 1001) ...
Done.
sebas2@sebaserver2:~$
```


Crearemos también un usuario llamado sebas_ssh y lo añadiremos a grupossh.

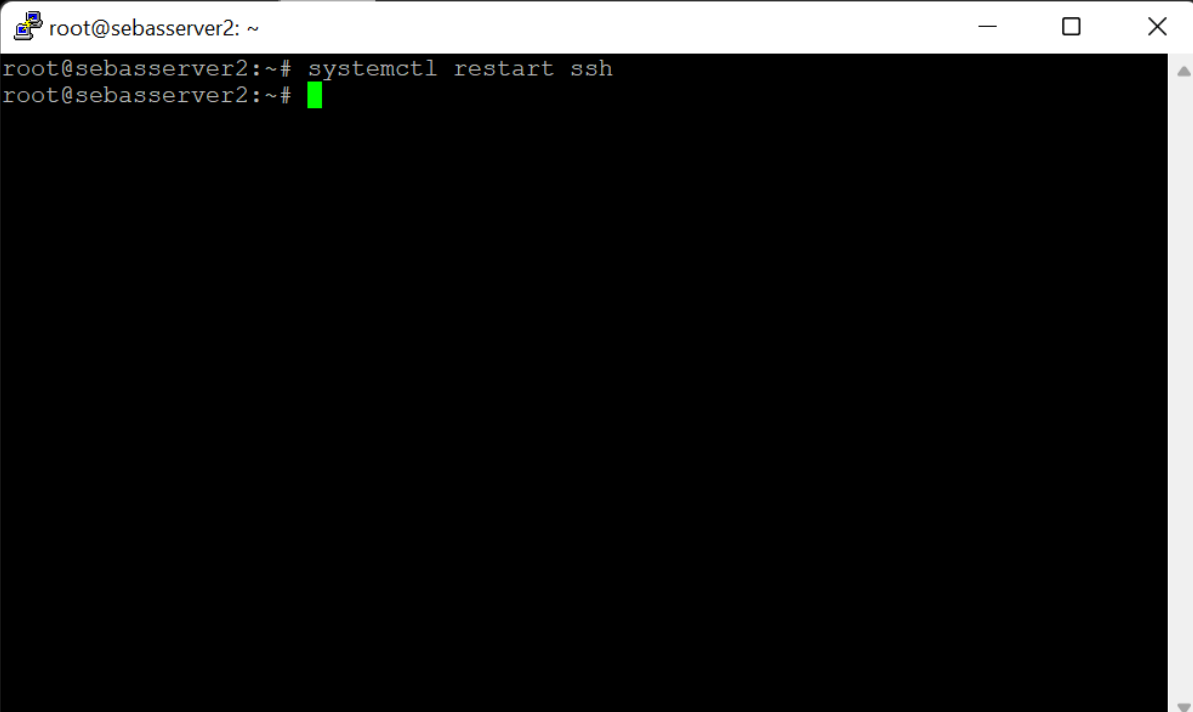
```
sebas2@sebasserver2: ~  
sebas2@sebasserver2:~$ sudo adduser --ingroup grupossh sebas_ssh  
Adding user `sebas_ssh' ...  
Adding new user `sebas_ssh' (1001) with group `grupossh' ...  
Creating home directory `/home/sebas_ssh' ...  
Copying files from `/etc/skel' ...  
New password: 
```

Vamos a modificar el archivo /etc/ssh/sshd_config.

En él escribiremos lo que está enmarcado en rojo, lo que estamos haciendo es prohibir a los demás grupos, excepto a grupossh, acceder a ssh.

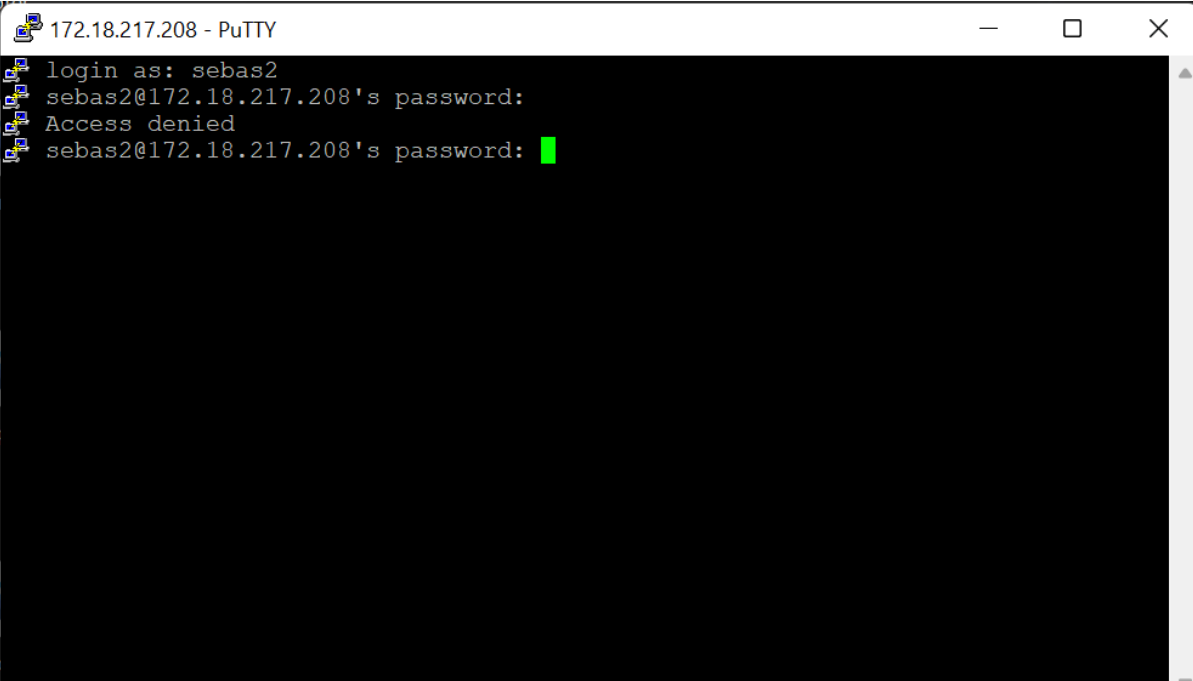
```
GNU nano 5.6.1 /etc/ssh/sshd config *  
# $OpenBSD: sshd_config,v 1.103 2018/04/09 20:41:22 tj Exp $  
  
# This is the sshd server system-wide configuration file. See  
# sshd_config(5) for more information.  
  
# This sshd was compiled with PATH=/usr/bin:/bin:/usr/sbin:/sbin  
  
# The strategy used for options in the default sshd_config shipped with  
# OpenSSH is to specify options with their default value where  
# possible, but leave them commented. Uncommented options override the  
# default value.  
  
Include /etc/ssh/sshd_config.d/*.conf  
DenyGroups All  
AllowGroups grupossh  
#Port 22  
#AddressFamily any  
#ListenAddress 0.0.0.0  
#ListenAddress ::  
  
^G Help      ^O Write Out ^W Where Is  ^K Cut      ^T Execute  ^C Location  
^X Exit      ^R Read File ^\ Replace   ^U Paste    ^J Justify  ^_ Go To Line
```

Reiniciamos ssh.



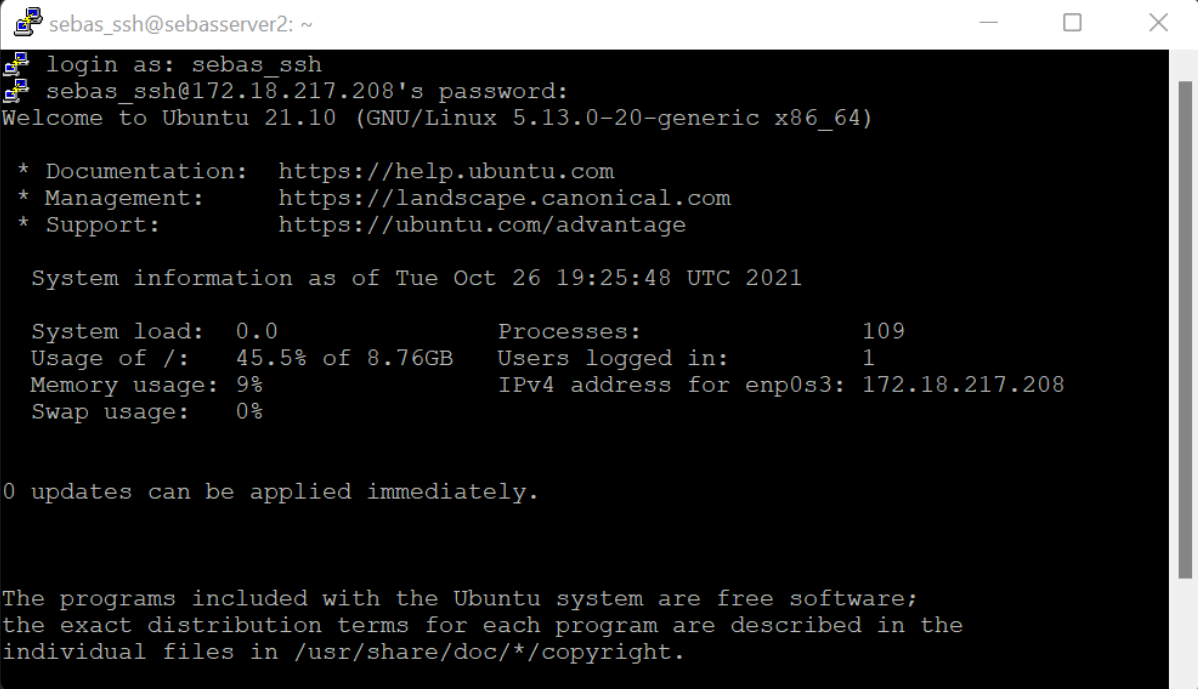
```
root@sebaserver2: ~  
root@sebaserver2:~# systemctl restart ssh  
root@sebaserver2:~#
```

En Putty, nos logeamos con otro usuario que no sea sebas_ssh y vemos que no nos deja.



```
172.18.217.208 - PuTTY  
login as: sebas2  
sebas2@172.18.217.208's password:  
Access denied  
sebas2@172.18.217.208's password:
```

En cambio, con sebas_ssh sí nos deja.

A terminal window titled 'sebas_ssh@sebasserver2: ~' with standard window controls. The terminal shows a successful SSH login for 'sebas_ssh' at IP '172.18.217.208'. It displays the Ubuntu 21.10 welcome message, links for documentation, management, and support, and system information as of Tuesday, October 26, 2021, at 19:25:48 UTC. The system info includes system load (0.0), processes (109), disk usage (45.5% of 8.76GB), memory usage (9%), swap usage (0%), users logged in (1), and the IPv4 address for enp0s3 (172.18.217.208). It also states that 0 updates can be applied immediately and provides information about the free software included with Ubuntu.

```
sebas_ssh@sebasserver2: ~
login as: sebas_ssh
sebas_ssh@172.18.217.208's password:
Welcome to Ubuntu 21.10 (GNU/Linux 5.13.0-20-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Tue Oct 26 19:25:48 UTC 2021

System load:  0.0               Processes:           109
Usage of /:   45.5% of 8.76GB   Users logged in:    1
Memory usage: 9%               IPv4 address for enp0s3: 172.18.217.208
Swap usage:   0%

0 updates can be applied immediately.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
```

Configurar un banner al entrar por ssh. (Extra 1p)

Hacemos sudo nano /etc/ssh/motd para modificar dicho archivo.

```
sebas@sebasserver:~$ sudo nano /etc/motd
sebas@sebasserver:~$
```

Modificamos el archivo poniendo lo que queramos. He generado estas letras en [ASCII Generator](#), encuentro que queda bastante bien.

```
GNU nano 5.6.1 /etc/motd
```

i
> > (>

Reiniciamos SSH.

```
sebas@sebasserver:~$ service ssh restart
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to restart 'ssh.service'.
Authenticating as: sebas
Password:
==== AUTHENTICATION COMPLETE ====
sebas@sebasserver:~$
```

Al entrar desde putty, nos saldrá el mensaje.

```
login as: sebas
sebas@172.18.220.68's password:
Welcome to Ubuntu 21.10 (GNU/Linux 5.13.0-20-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of vie 29 oct 2021 16:49:47 UTC

System load:  0.05               Processes:           111
Usage of /:   48.6% of 8.76GB    Users logged in:    1
Memory usage: 18%               IPv4 address for enp0s3: 172.18.220.68
Swap usage:   0%

0 updates can be applied immediately.

The list of available updates is more than a week old.
To check for new updates run: sudo apt update
```

