

## Práctica de Evaluación 9 – SSH

Fecha: 30 de noviembre de 2023

Resultados de aprendizaje y Criterios de evaluación que se evalúan: RA 3: e, f, g

### ¿Qué es SSH?

SSH o **Secure Shell**, es un protocolo de administración remota que le permite a los usuarios controlar y modificar sus servidores remotos a través de Internet a través de un mecanismo de autenticación.

Proporciona un mecanismo para autenticar un usuario remoto, transferir entradas desde el cliente al host y retransmitir la salida de vuelta al cliente. El servicio se creó como un reemplazo seguro para el Telnet sin cifrar y utiliza técnicas criptográficas para garantizar que todas las comunicaciones hacia y desde el servidor remoto sucedan de manera encriptada.

### Más información

[https://www.hostinger.es/tutoriales/que-es-ssh#¿Que\\_es\\_SSH](https://www.hostinger.es/tutoriales/que-es-ssh#¿Que_es_SSH)

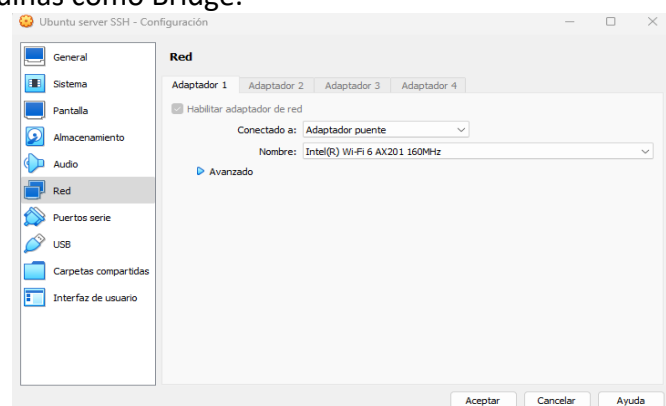
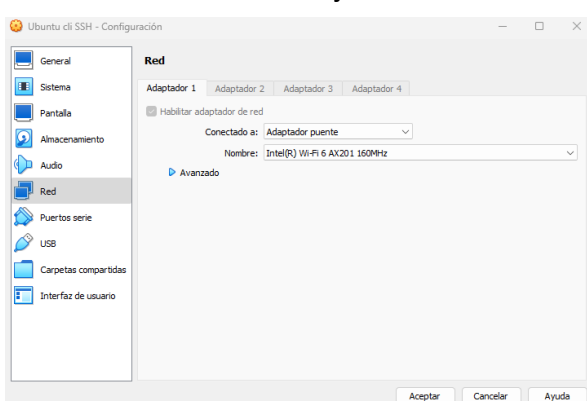
Los mejores clientes SSH para Windows (Putty)

<https://www.redeszone.net/tutoriales/servidores/mejores-clientes-ssh-windows/>

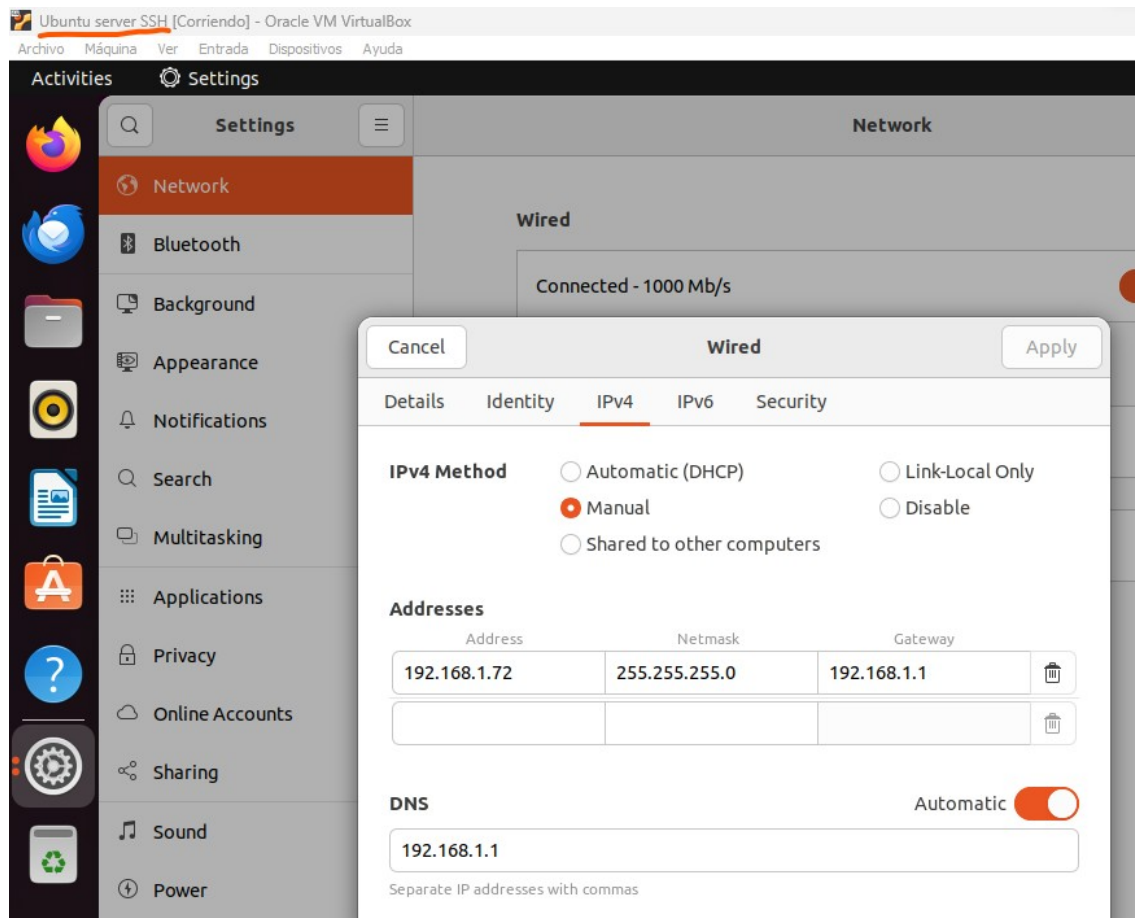
### Descripción de la actividad

Realiza un documento en .pdf donde expliques paso a paso como has realizado la comunicación vía SSH con el servidor,. El documento debe tener capturas de pantalla de cada uno de los pasos a realizar y deberá incluir todos los puntos que se piden. **NO REALICES LA PRÁCTICA A LA PRISA Y CON POCA JUSTIFICACIÓN O INFORMACIÓN, cada falta o error de la práctica quita -0,5. La puntuación total de la práctica es de 10.**

1. Crea dos máquinas con UBUNTU. Una de ellas hará de Servidor SSH y otra de cliente SSH.
2. Establece las tarjetas de red de las máquinas como Bridge.



3. Deberás configurar la tarjeta de red de la máquina servidora del servicio SSH con una IP FIJA.



4. Realiza las instalaciones y configuraciones SSH en cada uno de los UBUNTU.

SERVER:

Primero instalares ssh en la maquina servidor.

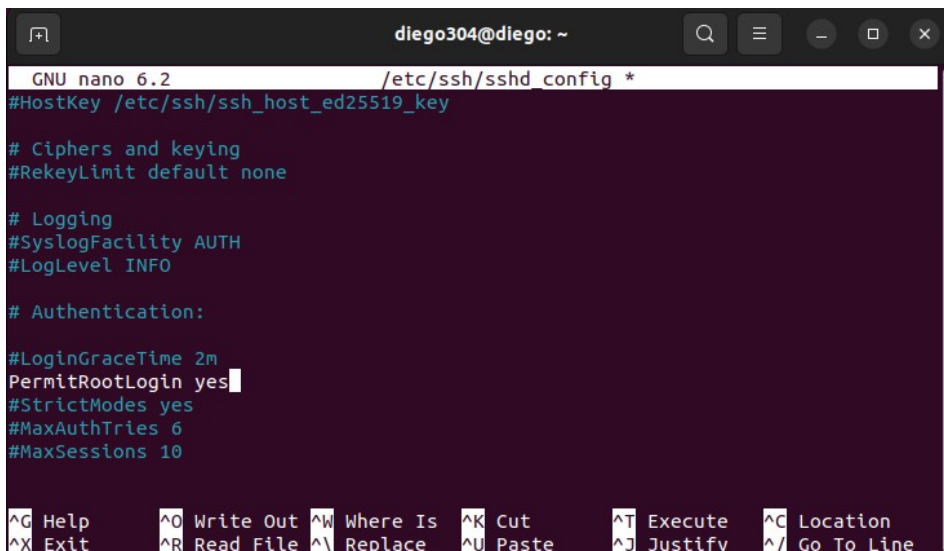
```
diego304@diego:~$ sudo apt install openssh-server
[sudo] password for diego304:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.9p1-3ubuntu0.4).
0 upgraded, 0 newly installed, 0 to remove and 95 not upgraded.
```

Comprobamos que el estado del servicio funciona correctamente

```
diego304@diego:~$ sudo service sshd status
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: en
   Active: active (running) since Sun 2023-12-03 02:38:39 WET; 3min 39s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Process: 686 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
  Main PID: 701 (sshd)
    Tasks: 1 (limit: 4599)
   Memory: 3.7M
      CPU: 19ms
   CGroup: /system.slice/ssh.service
           └─701 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

dic 03 02:38:39 diego systemd[1]: Starting OpenBSD Secure Shell server...
dic 03 02:38:39 diego sshd[701]: Server listening on 0.0.0.0 port 22.
dic 03 02:38:39 diego sshd[701]: Server listening on :: port 22.
dic 03 02:38:39 diego systemd[1]: Started OpenBSD Secure Shell server.
lines 1-17/17 (FND)
```

Ahora configuraremos en el archivo “sshd\_config” el apartado PERMITROOTLOGIN poniéndolo en yes para que permita hacer login a los usuarios root.



```
diego304@diego: ~
GNU nano 6.2 /etc/ssh/sshd_config *
#HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
#RekeyLimit default none

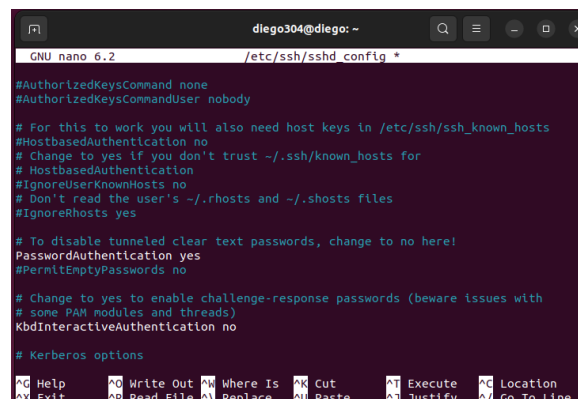
# Logging
#SyslogFacility AUTH
#LogLevel INFO

# Authentication:

#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10

^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
```

Y también ponemos el yes en el apartado para que nos pida autorización con contraseña al loguearnos.



```
diego304@diego: ~
GNU nano 6.2 /etc/ssh/sshd_config *
#AuthorizedKeysCommand none
#AuthorizedKeysCommandUser nobody

# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes
#PermitEmptyPasswords no

# Change to yes to enable challenge-response passwords (beware issues with
# some PAM modules and threads)
KbdInteractiveAuthentication no

# Kerberos options

^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
```

También crearemos un par de claves para nuestra maquina servidor para poder diferenciar las claves de cliente y servidor como veremos mas adelante.

```
diego304@diego:/etc/ssh$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/diego304/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/diego304/.ssh/id_rsa
Your public key has been saved in /home/diego304/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:5xm4JedKHRdN4RpprUs2ZpTNAAd75Gbzrlppy9TlnT8 diego304@diego
The key's randomart image is:
+---[RSA 3072]---+
|
|  oo+ o.
|  = @
|  o & *
|  . B O
|  o S =
|  . o B @ o
|  o o * =
|  * + o .E
|  ..+ o o...
|
+---[SHA256]---+
diego304@diego:/etc/ssh$
```

```
diego304@diego:~$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDQoJVs0idBxk2PNOcUf9o2hVxL10NSCBZASj4d0i19E1EPTV62169k3HGagPCC2NHLXrKPCeQgbi+we5HLb2BEPq4Zr0Lh4uJzacrRryt3me+0MEL3w/xUpBmetvSPJ1NC1p7cVwAdf10Y21Y/1Lr9BbZvAs9
70ZcL60ob0zVid1oaDrzXclCOMXf/zx0Q0J3R1C0Zw1q8qccAC1McU1Pk1pJ1u7BP7DX17kCw931SUwVcCw03d1gsSebWj1FRu1HhVq91p//7WAbctX1YfGq9D7WcKp1hK4hM5zmbR1tAcue/omkRDR1EBolZq78ayd31ngG0ePzasc251
b5bkb0uZNBf/6Zvd31Vbmy+K5NusudhNw0eED1J1NfDs+QUBLL6bW5061dF6VSEtAfy1+86JNymP2M/X3NnX1hZVbJ1PnkzSF+t3HLH1X21H8Y7k1AgHT0hQopV1vuw6E= diego304@diego
diego304@diego:~$ cat id_rsa
-----BEGIN OPENSSH PRIVATE KEY-----
b3BlbnNzaC1rZXktdjEAAAABGSwbUAAAEbn9uZQAAAAAAAAAAAAAB1wAAAdzc2gtcn
NMAAAAQAQAAAEABKCVbd1HQCZj1UArNjtoVvy9Tj0QgdEo3eDtc/RCLT01Yutou
V2XxmqyQBL11Saj17MkV1NfSHuH52BwR0Xgaz14eC709hK8B7d211v1DB1LVf/8
VKQZur7bX7SYDXNAX31qHx5Gcno2P4y6/VQ81QFBpeBMCZ0JqW8/GHvwhj8BSPKfF
zXFf8BQ8FFCTYH2e1pa3DarAAnCDNHf01p15z47uWt+w14re5wsP5ZULHFrxunMGL3Vol
EngcAooxLmY3Faf41qf/+2UHQ3LV01XZHUkuz2FmDqV1eYCFUcUcVER0EArvncpC
EXU1dR6CZc991Gm8M1Z770K1r1K1fK1N1K1241p1w1t110E1h835S17255Y1UV1K1Y
R1Vg3h4a04jZxXbPkFAsyxGwBEG+onX3RFUkEzn1so/v01ThJp6X91v19Z14YowVWv9
TS5N0hFrdxyXGdVfGae53Q1B891UKKVVyl7S0hAAAF1DG768XhuVAAAAB3NzaC1yc2
EAAAQAAACg1hwhh8HGTYS1K5j1TfR1cV1K241H19K3gYfR9Q1R9M1L1aL121Cczq81L
ZyY1Ls0u81SryDX7DB7hEtVMEQyfhms4UhgU6P2oZovK43dp277Qw511a//FSKCb2+yk8
Kq1m1y9YB1-XR1a1J+Muv1UFVUBz31DBmT06hSPXhR23povZPEqVyhC1X/PENBR0
18hM1p1w02q1h2w1p1T1a50C-074E1JmK3uclD6W13A8Bp1c1dK0C1HAKM1N1Y5
BsdR1qCkn//tq1o1y1d1hV84Vc5tch2wK1U3jGHZb2nobEQ1MAK57+qGR1E/ERug1t
oDxp1hJeyweZ145k3z3z23N1LtaQGa7Y0EX/pm9819ubL4rLay532EdVnQ0K01
20V250QES1R1P1q1918W1Z10M91K1P1Z011aE1ZBf1cdeG1LVEGR1e1N1E1K3cc
s1XF1M1K1h1u1S1UC1AD1P1L1Vc1+7D01AAA1BAA1AA1G1D1G1R1T1N1N1t11a7P05C1F
2M1D1+
argsq1kP0Q6HfN2o0601hqqCXtpo29aZ+C8P6vY1J1N1E1X2bsQm1LxbXC1g1Jw1
TbH8R1T1P1S11d1a1T1fE1U1B1W1S1P1G1D1F1W1P1R21V1X17g1c52F1R1N1U1K1V1c51R1J15
6R01P1w1o7w1U1v1w1n137h1a0H1L1c1M1e1P1C0051M1G1D1B1B1R1t1S1Y1d1+P1X1Q0C6Z1V1Y1U
x01TbH82F1w1k1C1n045H1nu1Z1u1a1a1R1Z5D+5Cd1ND1u1e1K1u1e1r1b75SQ1E1k1s1e1u1E1S1G1d5
H1d1R1F1B1J1K1Z1K1S1h1a1Z1V1A1B1K1E1K1E1S1h1S1e1Z1w1e1S1R11P1E1h1h1Z1h1E1P1K1Z1J1e1
+K1A1V1a1C1Q1K1Q1K1Z1n1Q1E1F1V1L1Q1G1d1K1u1c111E1S1P1P1K1D1R1h1q1h1C1c1a1o1r1Y1L1X1U18P
L1B1V1K1Z1e1h1F1S1C1S1F1X1q1B1C1ND1P1S1E1W1U191P1o1J17+d1Q1U1X1b1S1Y1M1X1V168B0S1F1a1R1A1A1A
W1C1D1S1K1O1N1Z1Y1K1N1S1J1Q1B1J1K1K1Z1P1M1Y1L1K1J1Z1G1C1Z1K1N1Y1N1F1T1B1E1S1P1C141V1S1V1e1Z
c1q1h1T1o1Z1K11K1a1I1c1a1T1P1U111E1C1V1F1J1S1e1Q1Z171h1b1S1Y1K1E1y1u1710131c1Q1e1b
p1j1W1h1S1W1Z1o1H1K1C1B1T1n131A1F1L1Z1M1Y1G1B1T1I191P1d1Y1u11742Y1D1Q1W1Z1U1N1H1Z1G1N1L
1R1Z1A1L1J1R1D1Y1Z1F1Y1B1D1K1L1V1Q11B11S1S1D1Q11P1q1E1C1S1E1U1Q1A1A1D1A1N1K1O1Y1L1U1J171F1D1
V1O1T1C1e1Z141K1F1C1F1B1H1F1B1K1O11F1G1Z1A1281W1R1U1B1F1171T1K1Y1S1F11L1o1d1S1e1K1
qE57E1J1M1L1Z1AR1XORC0466H1Y0H0z+b9V268mbuPcE1TLk083Jv1VgVqoFkykwoP
yGL1Xuz1C1T1H1W1G1Y1S1K1U1S1V17Xp11k2F255v1JpKHu1DB1u1X1G1e1C117+NOE1txZ1A1A27
F1g1S1m1Y1W1F1F1A1G1C1M1G1V1Y1A1U1J1R1O1A1N1E1A12D1Z1N1E1L1h1F1Z1P1S1C1S1V1K1Y4
dE1C1+n1K1N1g1R1u1t1a1y1U1G1k1Nz3Z1a1q1K1W1G1F1z1q1r1C1Z1c1Z1A127K1H1B1S1H1B1D1C14Y1o1F1
K1Y1H1C1R171V1V1G1Z1q1S1Y1X1B1a1V1r1g1U1B1E1S1T1n131F1J1Q1659X1L1S1Z1F1A1u1C1J1F1K1G1T1M1/+0d2
U0R1S1A1N1B1J1F1W1I1E1T1C1L1E1B1H1K1L1P1E1W1g1a1L1q1X1V1Z1Y1F1Q1e1T1e1W1S1H1R1E1B1L
eBR0eDY1T1HKS1AAA1D1N1B1Z1W1Z1A1D1Q1G1Z1W1V1Q1D1B1A=
-----END OPENSSH PRIVATE KEY-----
```

CLIENTE:

En nuestra maquina cliente instalaremos la versión cliente de ssh

```
diego4@diegocli:~$ sudo apt-get install openssh-client
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-client is already the newest version (1:8.9p1-3ubuntu0.4).
openssh-client set to manually installed.
The following packages were automatically installed and are no longer required:
  ncurses-term openssh-sftp-server ssh-import-id
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 95 not upgraded.
diego4@diegocli:~$
```

Y comprobamos que ambas maquinas tengan conexión entre ellas

```
diego4@diegocli:~$ ping 192.168.1.72
PING 192.168.1.72 (192.168.1.72) 56(84) bytes of data.
64 bytes from 192.168.1.72: icmp_seq=1 ttl=64 time=0.025 ms
64 bytes from 192.168.1.72: icmp_seq=2 ttl=64 time=0.043 ms
64 bytes from 192.168.1.72: icmp_seq=3 ttl=64 time=0.039 ms
64 bytes from 192.168.1.72: icmp_seq=4 ttl=64 time=0.039 ms
64 bytes from 192.168.1.72: icmp_seq=5 ttl=64 time=0.035 ms
64 bytes from 192.168.1.72: icmp_seq=6 ttl=64 time=0.058 ms
64 bytes from 192.168.1.72: icmp_seq=7 ttl=64 time=0.059 ms
64 bytes from 192.168.1.72: icmp_seq=8 ttl=64 time=0.025 ms
64 bytes from 192.168.1.72: icmp_seq=9 ttl=64 time=0.058 ms
64 bytes from 192.168.1.72: icmp_seq=10 ttl=64 time=0.045 ms
64 bytes from 192.168.1.72: icmp_seq=11 ttl=64 time=0.052 ms
64 bytes from 192.168.1.72: icmp_seq=12 ttl=64 time=0.038 ms
64 bytes from 192.168.1.72: icmp_seq=13 ttl=64 time=0.055 ms
64 bytes from 192.168.1.72: icmp_seq=14 ttl=64 time=0.052 ms
64 bytes from 192.168.1.72: icmp_seq=15 ttl=64 time=0.053 ms
64 bytes from 192.168.1.72: icmp_seq=16 ttl=64 time=0.042 ms
^C
--- 192.168.1.72 ping statistics ---
16 packets transmitted, 16 received, 0% packet loss, time 15360ms
rtt min/avg/max/mdev = 0.025/0.044/0.059/0.010 ms
diego4@diegocli:~$
```

5. La máquina que hará de server tendrá dos usuarios, "homer" que será el usuario administrador y otro que será "peter" que tendrá simples privilegios de usuario. Desde la máquina cliente lo que haremos será manejar la máquina server de manera remota...Esto lo haremos en el punto 6 y 7 con dos de las maneras de autenticarse en SSH.

Creamos el usuario homer

```
diego304@diego:~$ sudo adduser homer
Adding user `homer' ...
Adding new group `homer' (1003) ...
Adding new user `homer' (1003) with group `homer' ...
Creating home directory `/home/homer' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: password updated successfully
Changing the user information for homer
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] Y
diego304@diego:~$
```

Y le damos privilegios de administrador

```
diego304@diego:~$ sudo usermod -aG sudo homer
diego304@diego:~$
```

Haremos lo mismo con el usuario peter pero a este no le daremos estos permisos.

```
diego304@diego:~$ sudo adduser peter
Adding user `peter' ...
Adding new group `peter' (1004) ...
Adding new user `peter' (1004) with group `peter' ...
Creating home directory `/home/peter' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: password updated successfully
Changing the user information for peter
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] Y
diego304@diego:~$
```



6. Realiza las configuraciones pertinentes para que desde tu máquina cliente puedas conectarte con los usuarios **root**, **homer** y **peter** al servidor ssh usando únicamente como control de acceso un **login** y un **password**.

En primera instancia para que nos deje logear con sudo deberemos restablecer la contraseña ya que si no nos dará un fallo al tratar de entrar

```
diego304@diego:~$ sudo usermod -aG sudo root
diego304@diego:~$ sudo passwd root
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: password updated successfully
diego304@diego:~$
```

Ya desde el cliente después de las configuraciones dichas anteriormente ejecutamos el comando “ssh usuario@IP\_SERVIDOR” para iniciar sesión poniendo la contraseña que en nuestro caso es “qwerty1234”.

```
diego4@diegocli:~$ ssh root@192.168.1.73
The authenticity of host '192.168.1.73 (192.168.1.73)' can't be established.
ED25519 key fingerprint is SHA256:Cfq+rc076i3hc1G73hIA+MJCaedQhKdZAl7BTLEdGw.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.1.73' (ED25519) to the list of known hosts.
root@192.168.1.73's password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-35-generic x86_64)

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

Expanded Security Maintenance for Applications is not enabled.

32 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

*** System restart required ***
Last login: Sun Dec  3 21:11:37 2023 from 192.168.1.72
root@diego:~# exit
logout
Connection to 192.168.1.73 closed.
diego4@diegocli:~$
```

Y hacemos lo mismo con los otros dos usuarios para comprobar que funciona correctamente

```
diego4@diegocli:~$ ssh homer@192.168.1.73
homer@192.168.1.73's password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-35-generic x86_64)

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

Expanded Security Maintenance for Applications is not enabled.

32 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

*** System restart required ***

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.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

homer@diego:~$ exit
logout
Connection to 192.168.1.73 closed.
diego4@diegocli:~$
```

```
diego4@diegocli:~$ ssh peter@192.168.1.73
peter@192.168.1.73's password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-35-generic x86_64)

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

Expanded Security Maintenance for Applications is not enabled.

32 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

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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.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

peter@diego:~$ exit
logout
Connection to 192.168.1.73 closed.
diego4@diegocli:~$
```



7. Realiza las configuraciones pertinentes para que desde tu máquina cliente puedas conectarte con los usuarios root, homer y peter al servidor ssh usando únicamente como control de acceso una **clave pública SSH**.

Empezamos creando las claves en la maquina cliente ya que estas las usaremos para confirmar la conexión con el servidor. Para que no nos requiera ningún tipo de contraseña para loguear no le pondremos contraseña a las claves y la conexión la autenticara el servidor.

```
diego4@diegocli:~$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/diego4/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/diego4/.ssh/id_rsa
Your public key has been saved in /home/diego4/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:KrzxQzcQfEpVw/tGKWEKp5HA4y2oj1gXzTHLAIzHGg diego4@diegocli
The key's randomart image is:
+---[RSA 3072]-----+
|o=O  +O.. .O+O. |
|.Eo.o+B+.....+. |
|. .O++= . .+. |
|... ..+ + . . |
|.+. . . =S. |
|. oo  +.+ |
| .+. .O . |
| . =. |
|. . . |
+-----[SHA256]-----+
diego4@diegocli:~$
```

Copiamos las claves desde los usuarios del cliente al servidor poniendo el usuario que se autentica y la ip del servidor. Esto lo hacemos con todos los usuarios

```
diego4@diegocli:~$ ssh-copy-id root@192.168.1.73
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter
out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompt
ed now it is to install the new keys
root@192.168.1.73's password:

Number of key(s) added: 1

Now try logging into the machine, with:  "ssh 'root@192.168.1.73'"
and check to make sure that only the key(s) you wanted were added.

diego4@diegocli:~$
```

```
diego4@diegocli:~$ ssh-copy-id homer@192.168.1.73
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter
out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompt
ed now it is to install the new keys
homer@192.168.1.73's password:

Number of key(s) added: 1

Now try logging into the machine, with:  "ssh 'homer@192.168.1.73'"
and check to make sure that only the key(s) you wanted were added.

diego4@diegocli:~$
```

```
diego4@diegocli:~$ ssh-copy-id peter@192.168.1.73
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter
out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompt
ed now it is to install the new keys
peter@192.168.1.73's password:

Number of key(s) added: 1

Now try logging into the machine, with:  "ssh 'peter@192.168.1.73'"
and check to make sure that only the key(s) you wanted were added.

diego4@diegocli:~$
```

Probamos a conectarnos igual que antes pero ahora ya que nos registra por la clave no nos pide ningún tipo de contraseña con ninguno de los 3 usuarios.

```
diego4@diegocli:~$ ssh root@192.168.1.73
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-35-generic x86_64)

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

Expanded Security Maintenance for Applications is not enabled.

32 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your
Internet connection or proxy settings

*** System restart required ***
Last login: Sun Dec  3 21:13:44 2023 from 192.168.1.72
root@diego:~# exit
logout
Connection to 192.168.1.73 closed.
diego4@diegocli:~$
```

```
diego4@diegocli:~$ ssh homer@192.168.1.73
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-35-generic x86_64)

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

Expanded Security Maintenance for Applications is not enabled.

32 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

*** System restart required ***
Last login: Sun Dec  3 21:14:31 2023 from 192.168.1.72
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

homer@diego:~$ exit
logout
Connection to 192.168.1.73 closed.
diego4@diegocli:~$
```

```
diego4@diegocli:~$ ssh peter@192.168.1.73
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-35-generic x86_64)

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

Expanded Security Maintenance for Applications is not enabled.

32 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

*** System restart required ***
Last login: Sun Dec  3 21:15:48 2023 from 192.168.1.72
peter@diego:~$ exit
logout
Connection to 192.168.1.73 closed.
diego4@diegocli:~$
```

Para comprobar que se paso correctamente en la maquina servidor en el archivo /home/diego304/.ssh/authorized\_keys podremos ver que nos llego correcta mente la clave autorizada desde diego@diegocli que es nuestro cliente.

```
diego304@diego:~$ ssh ls
authorized_keys id_rsa id_rsa.pub
diego304@diego:~$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGC2RcFR58XJc2b2EeAY83TpnE0Tm54pb3e0JZY0LtnUNwRCFNBLkZ40cLfsbXfcrUMJNBuBgEdwLuCVxshu3XT8Ahb9Ls19PtXLQ7cezCzWYXn3bf+/OVaxjWcoWLKEjXTRRjINELGvywsqAGNoS/6CzZBA/qMPLj
QKMO7omaV4eGyBT5j3RzpThXpgT5SD5aQKDXRWBbLGuMgEFQ66yLHR/18Y15nUvLba/Zw7Rluf/FRXgskutdMB2sF3jVcpIA2s/TL2N0bKUFa/SSoEvRV8BDBon3fBR5jsG30E9JpFZjYbLw+54FHcT1iqTPps/03qAGcFm6t20L6nr75ECqK6/918u2N1Urw3KkPU98N
QmpFwpVKjqlVQ9R2dAp+BjEccCnaMVFjEz/7EU0QrVcMS8NTtPEdb4yHfDn/hM4CHZ0sKtB/v1KvKaduJk9b7MCCFUUFASJRf6062TUVKvdbKbn7q5L8AVK+4kELDaaKhMvrvVGH10d+DE= diego4@diegocli
diego304@diego:~$
```

## 8. ¿Qué método recomiendan como método de autenticación en SSH? ¿Por qué?

Principalmente yo recomendaría el método de autenticación por clave publica que ya es mas seguro a la hora de transmitir información ademas de tener un login mas ameno al no pedir contraseña.

Esto lo puede llegar a ser un problema de seguridad ya que si consiguen la clave podrían entrar pero igualmente recomendaría el método de claves ya que la autenticación por login es vulnerable a ataques por diccionario sobre todo usando el usuario root que es conocido por la mayoría de usuarios.