SSH (administració remota)

Instal·lar SSH:

```
sudo apt-get install ssh
```

Comprovar que els fitxers estan instal·lats:

```
dpkg -l | grep ssh
dpkg -L ssh
```

Veure si el port 22 està escoltant (arrencat):

```
netstat -atunp | grep ssh
```

LOGS:

```
sudo tail -f /var/log/auth.log | grep ssh
```

Comprovar sintaxis dels fitxers de configuració:

```
sshd -t
```

Canviar a ip estatica:

```
  GNU nano 6.2                    /etc/netplan/00-installer-config.yaml
# This is the network config written by 'subiquity'
network:
  ethernets:
    enp0s3:
      dhcp4: no
      addresses: [172.16.23.110/24]
  version: 2
```

```
dawid@dawid:~$ sudo netplan apply_
```

```
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 100
0
    link/ether 08:00:27:bb:c2:cc brd ff:ff:ff:ff:ff:ff
    inet 172.16.23.110/24 brd 172.16.23.255 scope global enp0s3
       valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:febb:c2cc/64 scope link
       valid_lft forever preferred_lft forever
```

Fitxer de configuració:

`/etc/ssh/sshd_config`

Màquina SSH en NAT:

1. Primer fer el reenviament de ports en el virtual vox.
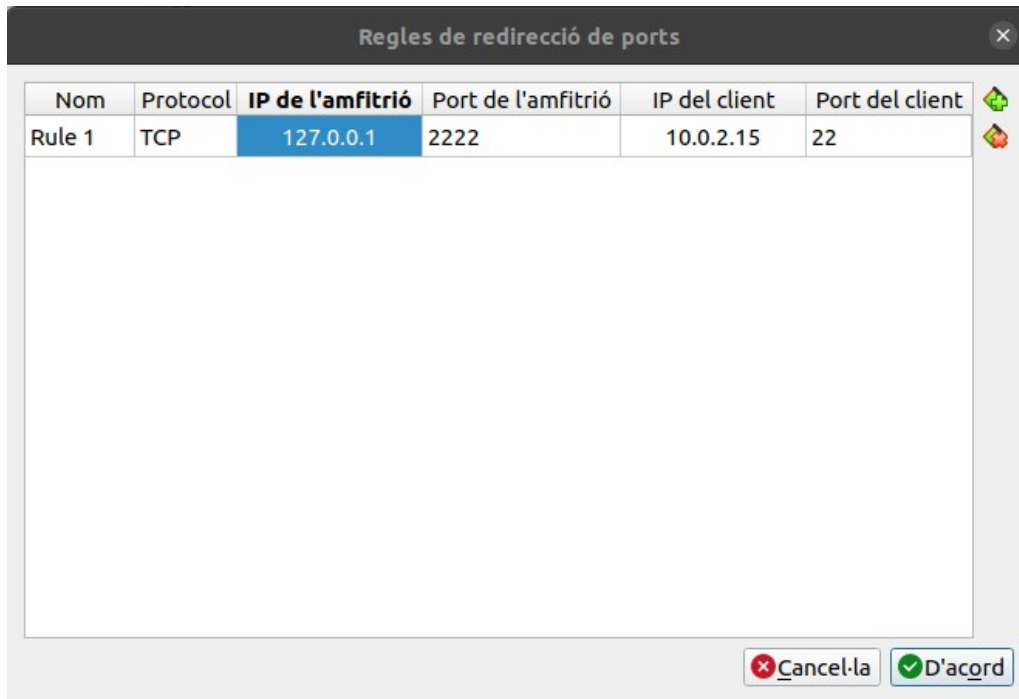
Comprovació:
`ssh -p 2222 nom_usuari@ip_maquina`

Màquina Bridge:

Configurar ip estatica.

```
  GNU nano 6.2                    /etc/netplan/00-installer-config.yaml *
# This is the network config written by 'subiquity'
network:
  ethernets:
    enp0s3:
      dhcp4: no
      addresses: [172.16.23.110/24]
  version: 2
```

Comprovació:
ssh nom_usuari@ip_maquina

```
usuari@dawid-eibin:~$ ssh dawid@192.168.1.200
The authenticity of host '192.168.1.200 (192.168.1.200)' can't be established.
ECDSA key fingerprint is SHA256:6wH//cHU+gaiPIfBXEMmBSgFTPbILe2dYE2EcA/JAl0.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.1.200' (ECDSA) to the list of known hosts.
dawid@192.168.1.200's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-48-generic x86_64)
```

Connectar usuario por defecto sin contrasenya:

Generar clau:

```
usuari@dawid-eibin:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/usuari/.ssh/id_rsa):
/home/usuari/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/usuari/.ssh/id_rsa
Your public key has been saved in /home/usuari/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:smV3DHagGUDjjT+Zk99PiNrmujGYz8FXQ4PdALnigTE usuari@dawid-eibin
The key's randomart image is:
+---[RSA 3072]----+
|     .+.. oo.    |
|     .E+ +.+ o   |
|      o++ +.= .  |
|      ..o=.= .   |
|      ..So. =    |
|      O.= = o    |
|      + = + o .  |
|       o B.  o   |
|        *=o   .  |
+----[SHA256]-----+
```

copiar clau en bridge:

```
usuari@dawid-eibin:~$ ssh-copy-id dawid@172.16.23.110
/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
Benvingut al server1
dawid@172.16.23.110's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh 'dawid@172.16.23.110'"
and check to make sure that only the key(s) you wanted were added.
```

copiar clau en NAT:

```
usuari@dawid-eibin:~$ ssh-copy-id -p 2222 dawid@localhost
/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
dawid@localhost's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh -p '2222' 'dawid@localhost'"
and check to make sure that only the key(s) you wanted were added.
```

Bridge:

```
usuari@dawid-eibin:~$ ssh dawid@172.16.23.110
Benvingut al server1
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-60-generic x86_64)

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

  System information as of dijous, 23 de febrer de 2023, 08:34:29 UTC

  System load:  0.0              Processes:             102
  Usage of /:   65.8% of 6.06GB  Users logged in:       1
  Memory usage: 10%              IPv4 address for enp0s3: 172.16.23.110
  Swap usage:   0%


 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.
```

NAT:

```
usuari@dawid-eibin:~$ ssh-copy-id -p 2222 dawid@localhost
/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
dawid@localhost's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh -p '2222' 'dawid@localhost'"
and check to make sure that only the key(s) you wanted were added.
```

Connectar usuario root sin contrasenya:

Adaptador pont:

```
usuari@dawid-eibin:~/.ssh$ scp id_rsa.pub dawid@192.168.1.200:/home/dawid
id_rsa.pub                                   100%  572     1.7MB/s   00:00
```

```
dawid@dawid:~$ ls
id_rsa.pub
dawid@dawid:~$ cp id_rsa.pub /root/.ssh/authorized_keys
cp: failed to access '/root/.ssh/authorized_keys': Permission denied
dawid@dawid:~$ sudo cp id_rsa.pub /root/.ssh/authorized_keys
[sudo] password for dawid:
dawid@dawid:~$
```

```
usuari@dawid-eibin:~$ ssh root@192.168.1.200
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-48-generic x86_64)

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

  System information as of dimecres, 1 de març de 2023, 19:15:08 UTC

  System load:  0.0078125        Processes:             103
  Usage of /:   66.0% of 6.06GB  Users logged in:       1
  Memory usage: 11%              IPv4 address for enp0s3: 192.168.1.200
  Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

 * Introducing Expanded Security Maintenance for Applications
```

NAT:

```
usuari@dawid-eibin:~/.ssh$ scp -P 2222 id_rsa.pub dawid@localhost:/home/dawid
id_rsa.pub                                   100%  572     1.6MB/s   00:00
```

```
dawid@dawid:~$ ls
id_rsa.pub
dawid@dawid:~$ sudo cp id_rsa.pub /root/.ssh/authorized_keys
[sudo] password for dawid:
dawid@dawid:~$
```

```
usuari@dawid-eibin:~$ ssh -p 2222 root@localhost
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-48-generic x86_64)

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

  System information as of dimecres, 1 de març de 2023, 19:46:05 UTC

  System load:  0.01953125       Processes:             108
  Usage of /:   67.0% of 6.06GB  Users logged in:       1
  Memory usage: 11%              IPv4 address for enp0s3: 10.0.2.15
  Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
```

SCP:

Local a NAT:

```
usuari@dawid-eibin:~$ scp -P 2222 a.txt dawid@localhost:/home/dawid/
Benvingut al Server 2
dawid@localhost's password:
a.txt                                          100%    5      9.6KB/s   00:00
```

Local a Adaptador pont:

```
usuari@dawid-eibin:~$ sudo scp a.txt dawid@172.16.23.110:/home/dawid/
Benvingut al Server 1
dawid@172.16.23.110's password:
a.txt                                          100%    5      4.0KB/s   00:00
```

Adaptador pont a Local *(feta des de la terminal de la local):*

```
usuari@dawid-eibin:~$ sudo scp dawid@172.16.23.110:/home/dawid/a1.txt /home/usua
ri/Escriptori
Benvingut al Server 1
dawid@172.16.23.110's password:
a1.txt                                         100%    5      1.9KB/s   00:00
```

Banner:

/etc/issue.net

```
  GNU nano 4.8                          /etc/issue.net
Benvingut al ordinador de Dawid Eibin
#Ubuntu 20.04.5 LTS
```

Entrem al etc/ssh/sshd_config (tabular).

```
# no default banner path
Banner   /etc/issue.net
```

Comprovacio:

```
usuari@dawid-eibin:~$ ssh dawid@172.16.23.110
Benvingut al server1
dawid@172.16.23.110's password:
```