

1.) Servidor vsftpd. Instalación

- Instalamos el servidor de transferencia de ficheros vsftpd con el comando `sudo apt-get install vsftpd`

```
root@mariachaparro-virtual-machine:/home/mariachaparro# sudo apt-get install vsftpd
```

```
root@mariachaparro-virtual-machine:/home/mariachaparro# sudo apt-get install vsftpd
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  vsftpd
0 upgraded, 1 newly installed, 0 to remove and 4 not upgraded.
Need to get 123 kB of archives.
After this operation, 326 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu jammy/main amd64 vsftpd amd64 3.0.5-0ubuntu1 [123 kB]
Fetched 123 kB in 1s (241 kB/s)
Preconfiguring packages ...
Selecting previously unselected package vsftpd.
(Reading database ... 199770 files and directories currently installed.)
Preparing to unpack .../vsftpd_3.0.5-0ubuntu1_amd64.deb ...
Unpacking vsftpd (3.0.5-0ubuntu1) ...
Setting up vsftpd (3.0.5-0ubuntu1) ...
Created symlink /etc/systemd/system/multi-user.target.wants/vsftpd.service → /lib/systemd/system/vsftpd.service.
Processing triggers for man-db (2.10.2-1) ...
root@mariachaparro-virtual-machine:/home/mariachaparro#
```

- Iniciamos el servicio vsftpd (`sudo service vsftpd start`) y luego comprobamos el estado (`sudo service vsftpd status`):

```
root@mariachaparro-virtual-machine:/home/mariachaparro# sudo service vsftpd start
```

```
root@mariachaparro-virtual-machine:/home/mariachaparro# sudo service vsftpd status
● vsftpd.service - vsftpd FTP server
   Loaded: loaded (/lib/systemd/system/vsftpd.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-02-02 10:10:40 CET; 1min 2s ago
     Process: 2801 ExecStartPre=/bin/mkdir -p /var/run/vsftpd/empty (code=exited, status=0/SUCCESS)
    Main PID: 2802 (vsftpd)
       Tasks: 1 (limit: 4554)
      Memory: 864.0K
         CPU: 4ms
      CGroup: /system.slice/vsftpd.service
              └─2802 /usr/sbin/vsftpd /etc/vsftpd.conf

feb 02 10:10:40 mariachaparro-virtual-machine systemd[1]: Starting vsftpd FTP server...
feb 02 10:10:40 mariachaparro-virtual-machine systemd[1]: Started vsftpd FTP server.
root@mariachaparro-virtual-machine:/home/mariachaparro#
```

2) Transferir un archivo al servidor remoto mediante la terminal. Usuario local y al directorio compartido con los usuarios anonymous

- Abrimos el archivo de configuración para el servidor vsftpd (`sudo nano /etc/vsftpd.conf`)

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Descomentamos la directiva **write_enable=YES** para poder escribir comandos de escritura en el servicio FTP

```
# This file controls the operation of the vsftpd daemon.
#
# The default compiled in settings are fairly paranoid. This sample file
# loosens things up a bit, to make the ftp daemon more usable.
# Please see vsftpd.conf.5 for all compiled in defaults.
#
# READ THIS: This example file is NOT an exhaustive list of vsftpd options.
# Please read the vsftpd.conf.5 manual page to get a full idea of vsftpd's
# capabilities.
#
# Run standalone? vsftpd can run either from an inetd or as a standalone
# daemon started from an initscript.
listen=NO
#
# This directive enables listening on IPv6 sockets. By default, listening
# on the IPv6 "any" address (:::) will accept connections from both IPv6
# and IPv4 clients. It is not necessary to listen on *both* IPv4 and IPv6
# sockets. If you want that (perhaps because you want to listen on specific
# addresses) then you must run two copies of vsftpd with two configuration
# files.
listen_ipv6=YES
#
# Allow anonymous FTP? (Disabled by default).
anonymous_enable=NO
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftpd's)
local_umask=022
Save modified buffer?
Y Yes
N No ^C Cancel
```

- Reiniciamos el servicio ftp para aplicar cambios (**sudo service vsftpd restart**)

```
root@mariachaparro-virtual-machine:/etc# sudo service vsftpd restart
```

- Creamos un archivo de texto, el cual será transferido al servidor remoto. Este archivo ha sido creado en el directorio Downloads (**sudo touch /home/mariachaparro/Downloads/un_archivo.txt**)

```
root@mariachaparro-virtual-machine:/home/mariachaparro/Downloads# sudo touch /home/mariachaparro/Downloads/un_archivo.txt
```

- Escribimos algún mensaje dentro del archivo (**sudo nano /home/mariachaparro/Downloads/un_archivo.txt**)

```
root@mariachaparro-virtual-machine:/home/mariachaparro/Downloads# sudo nano /home/mariachaparro/Downloads/un_archivo.txt
GNU nano 6.2 /home/mariachaparro/Downloads/un_archivo.txt *
esto es un archivo txt
```

- Concedemos todos los permisos al usuario mariachaparro (yo) sobre el archivo que acabamos de crear con el comando **sudo chown mariachaparro /home/mariachaparro/Downloads/un_archivo.txt**

```
root@mariachaparro-virtual-machine:/home/mariachaparro/Downloads# sudo chown mariachaparro /home/mariachaparro/Downloads/un_archivo.txt
```

- Creamos un directorio o donde los usuarios anónimos volcarán las subidas que realicen al servidor remoto con el comando **sudo mkdir /srv/ftp/subidas**

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo mkdir /srv/ftp/subidas
```

- Cambiamos los permisos al usuario sobre el directorio creado con **sudo chown mariachaparro /srv/ftp/subidas**

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo chown mariachaparro /srv/ftp/subidas
```

- Entramos a **ftp localhost** e iniciamos sesión con nuestro usuario

```
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): mariachaparro
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

- Transferimos el archivo un_archivo.txt al directorio creado subidas renombrando el nombre del archivo a subido.txt. Para ello utilizaremos **put**, la ruta del archivo que transferimos (**/home/mariachaparro/Downloads/un_archivo.txt**) y la nueva ruta a donde se transfiere con el nuevo nombre (**/srv/ftp/subidas/subido.txt**)

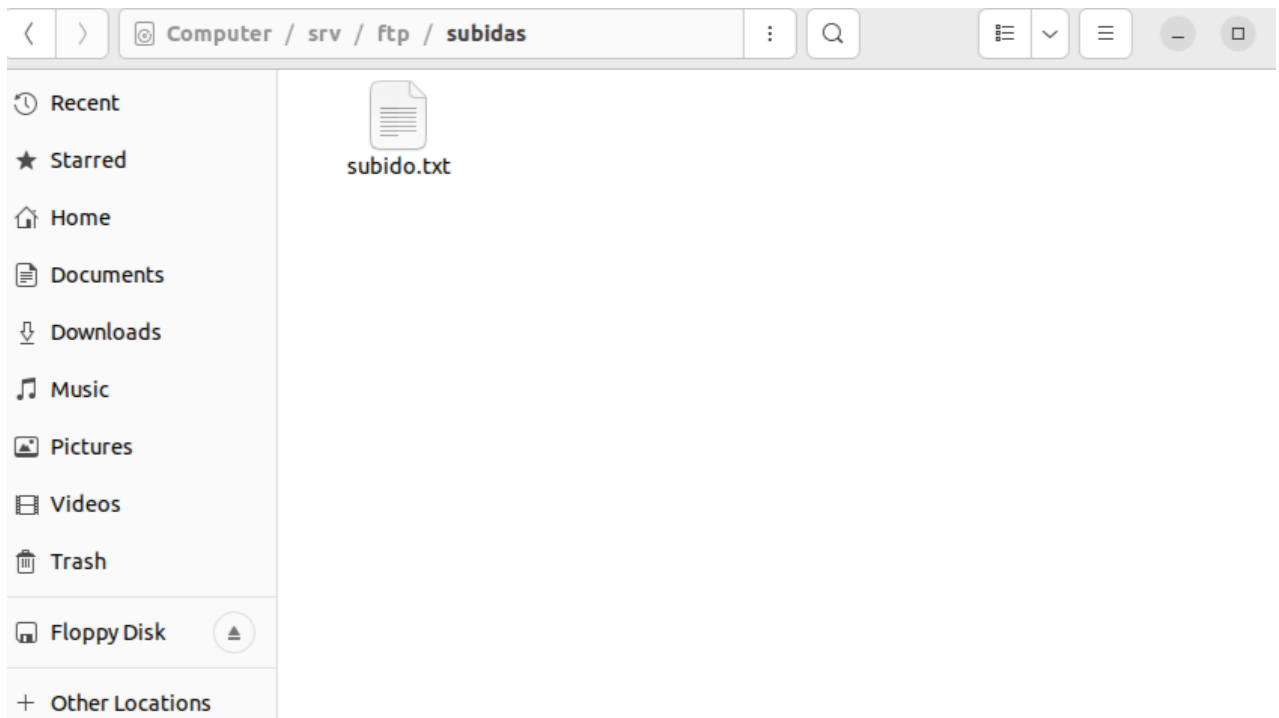
```
ftp> put /home/mariachaparro/Downloads/un_archivo.txt /srv/ftp/subidas/subido.txt
```

```

ftp> put /home/mariachaparro/Downloads/un_archivo.txt /srv/ftp/subidas/subido.txt
local: /home/mariachaparro/Downloads/un_archivo.txt remote: /srv/ftp/subidas/subido.txt
ftp: Can't open '/home/mariachaparro/Downloads/un_archivo.txt': No such file or directory
ftp> put /home/mariachaparro/Downloads/un_archivo.txt /srv/ftp/subidas/subido.txt
local: /home/mariachaparro/Downloads/un_archivo.txt remote: /srv/ftp/subidas/subido.txt
229 Entering Extended Passive Mode (|||8050|)
150 Ok to send data.
100% |*****| 23 31.19 KiB/s 00:00 ETA
226 Transfer complete.
23 bytes sent in 00:00 (12.77 KiB/s)
ftp>

```

- Comprobamos que se halla trasladado bien



3) Transferir un archivo al servidor remoto mediante Filezilla. Usuario local al servidor FTP (directorio usuario)

- Instalamos Filezilla

```

mariachaparro@mariachaparro-virtual-machine:~$ sudo apt-get install filezilla
[sudo] password for mariachaparro:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  filezilla-common libfilezilla-common libfilezilla24 libpugixml1v5 libwxbase3.0-0v5 libwxgtk3.0-gtk3-0v5
The following NEW packages will be installed:
  filezilla filezilla-common libfilezilla-common libfilezilla24 libpugixml1v5 libwxbase3.0-0v5 libwxgtk3.0-gtk3-0v5
0 upgraded, 7 newly installed, 0 to remove and 4 not upgraded.
Need to get 10,1 MB of archives.
After this operation, 36,9 MB of additional disk space will be used.
Do you want to continue? [Y/n]

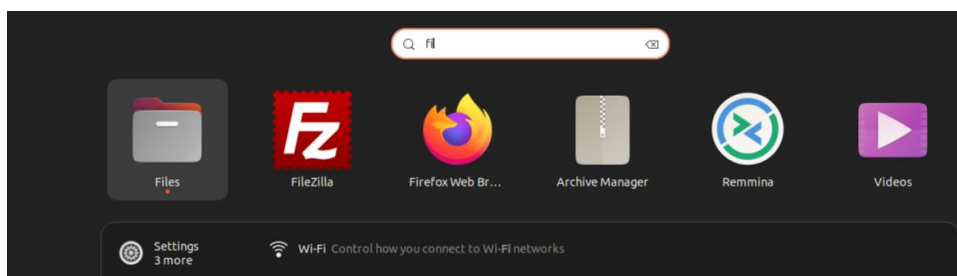
```

```

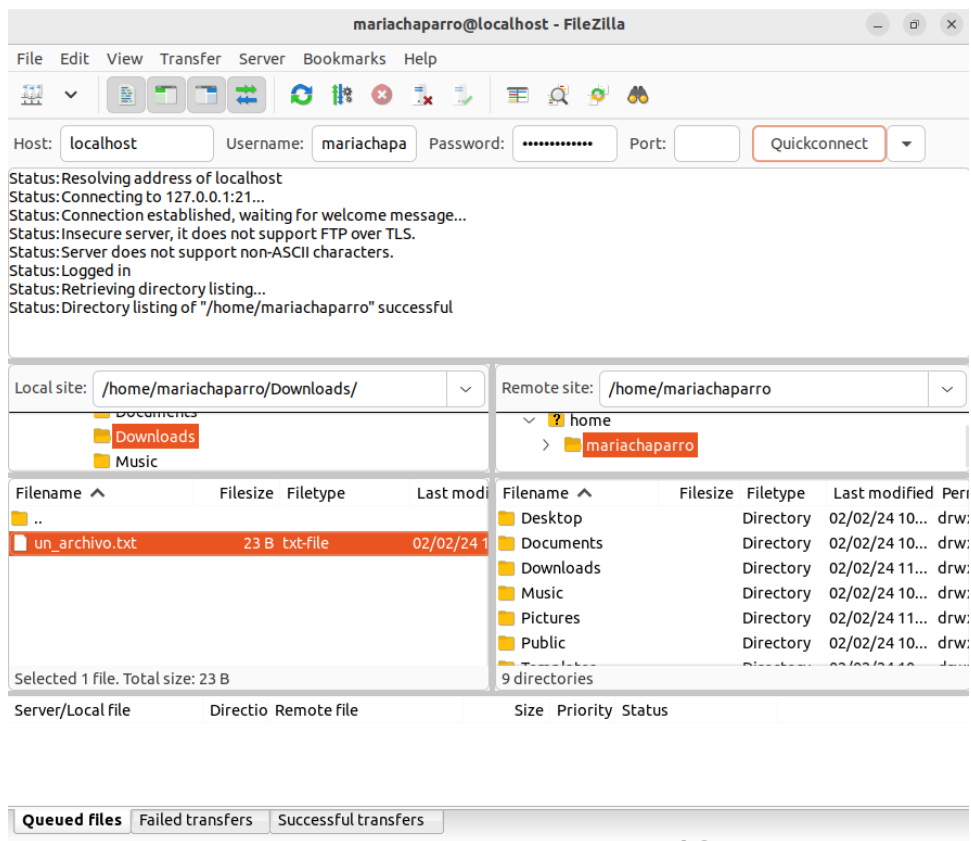
Get:5 http://es.archive.ubuntu.com/ubuntu jammy/universe amd64 libwxbase3.0-0v5 amd64 3.0.5.1+dfsg-4 [881 kB]
Get:6 http://es.archive.ubuntu.com/ubuntu jammy/universe amd64 libwxgtk3.0-gtk3-0v5 amd64 3.0.5.1+dfsg-4 [4.368 kB]
Get:7 http://es.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 filezilla amd64 3.58.0-1ubuntu0.1 [1.945 kB]
Fetched 10,1 MB in 1s (15,3 MB/s)
Selecting previously unselected package filezilla-common.
(Reading database ... 199827 files and directories currently installed.)
Preparing to unpack .../0-filezilla-common_3.58.0-1ubuntu0.1_all.deb ...
Unpacking filezilla-common (3.58.0-1ubuntu0.1) ...
Selecting previously unselected package libfilezilla-common.
Preparing to unpack .../1-libfilezilla-common_0.36.0-2_all.deb ...
Unpacking libfilezilla-common (0.36.0-2) ...
Selecting previously unselected package libfilezilla24:amd64.
Preparing to unpack .../2-libfilezilla24_0.36.0-2_amd64.deb ...
Unpacking libfilezilla24:amd64 (0.36.0-2) ...
Selecting previously unselected package libpugixml1v5:amd64.
Preparing to unpack .../3-libpugixml1v5_1.12.1-1_amd64.deb ...
Unpacking libpugixml1v5:amd64 (1.12.1-1) ...
Selecting previously unselected package libwxbase3.0-0v5:amd64.
Preparing to unpack .../4-libwxbase3.0-0v5_3.0.5.1+dfsg-4_amd64.deb ...
Unpacking libwxbase3.0-0v5:amd64 (3.0.5.1+dfsg-4) ...
Selecting previously unselected package libwxgtk3.0-gtk3-0v5:amd64.
Preparing to unpack .../5-libwxgtk3.0-gtk3-0v5_3.0.5.1+dfsg-4_amd64.deb ...
Unpacking libwxgtk3.0-gtk3-0v5:amd64 (3.0.5.1+dfsg-4) ...
Selecting previously unselected package filezilla.
Preparing to unpack .../6-filezilla_3.58.0-1ubuntu0.1_amd64.deb ...
Unpacking filezilla (3.58.0-1ubuntu0.1) ...
Setting up libfilezilla-common (0.36.0-2) ...
Setting up libpugixml1v5:amd64 (1.12.1-1) ...
Setting up filezilla-common (3.58.0-1ubuntu0.1) ...
Setting up libwxbase3.0-0v5:amd64 (3.0.5.1+dfsg-4) ...
Setting up libfilezilla24:amd64 (0.36.0-2) ...
Setting up libwxgtk3.0-gtk3-0v5:amd64 (3.0.5.1+dfsg-4) ...
Setting up filezilla (3.58.0-1ubuntu0.1) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for libc-bin (2.35-0ubuntu3.6) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...

```

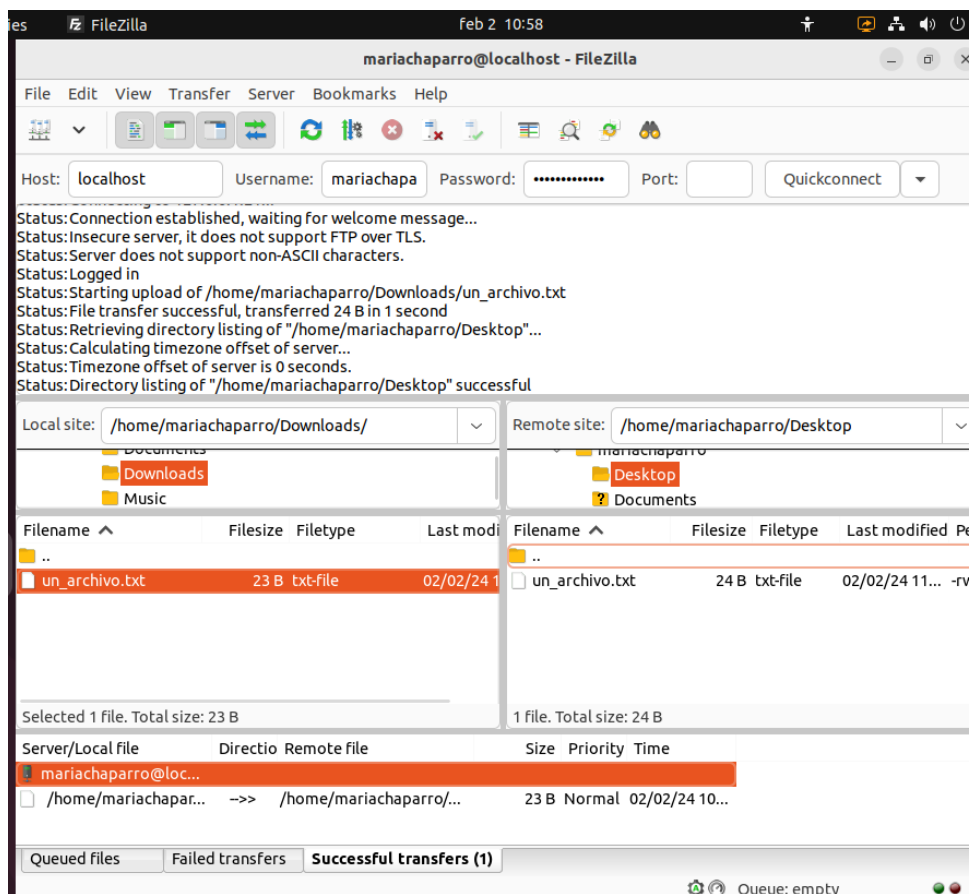
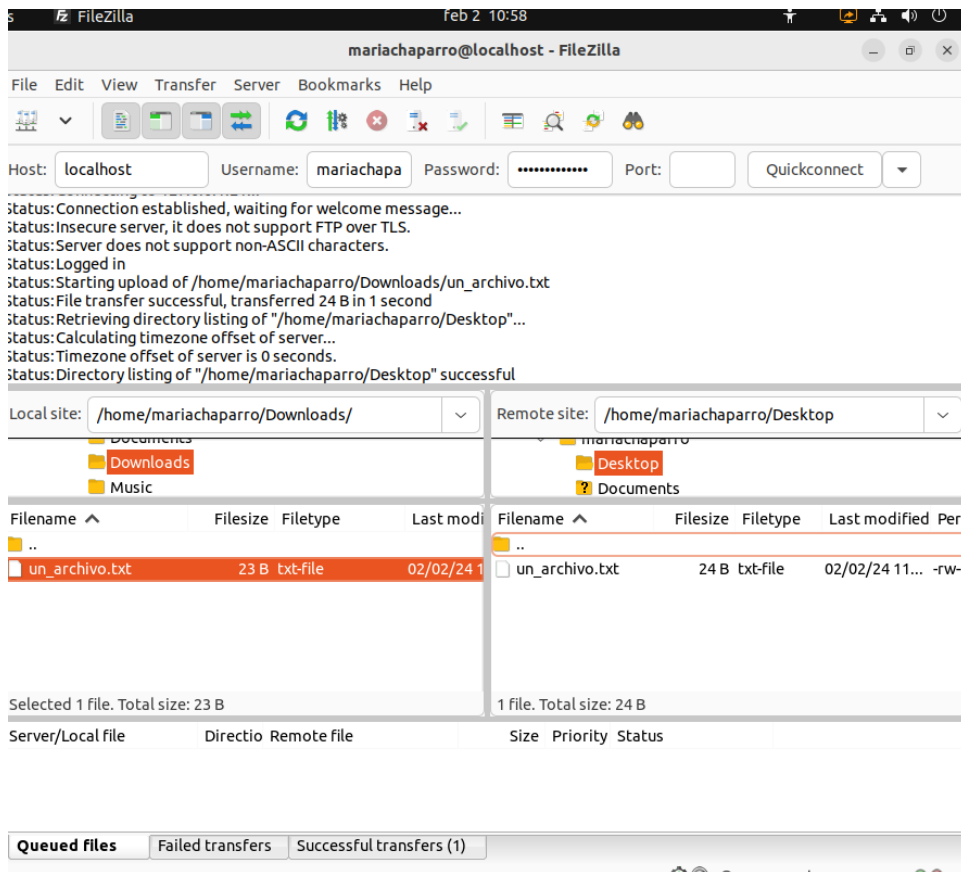
- Comprobamos que se ha instalado



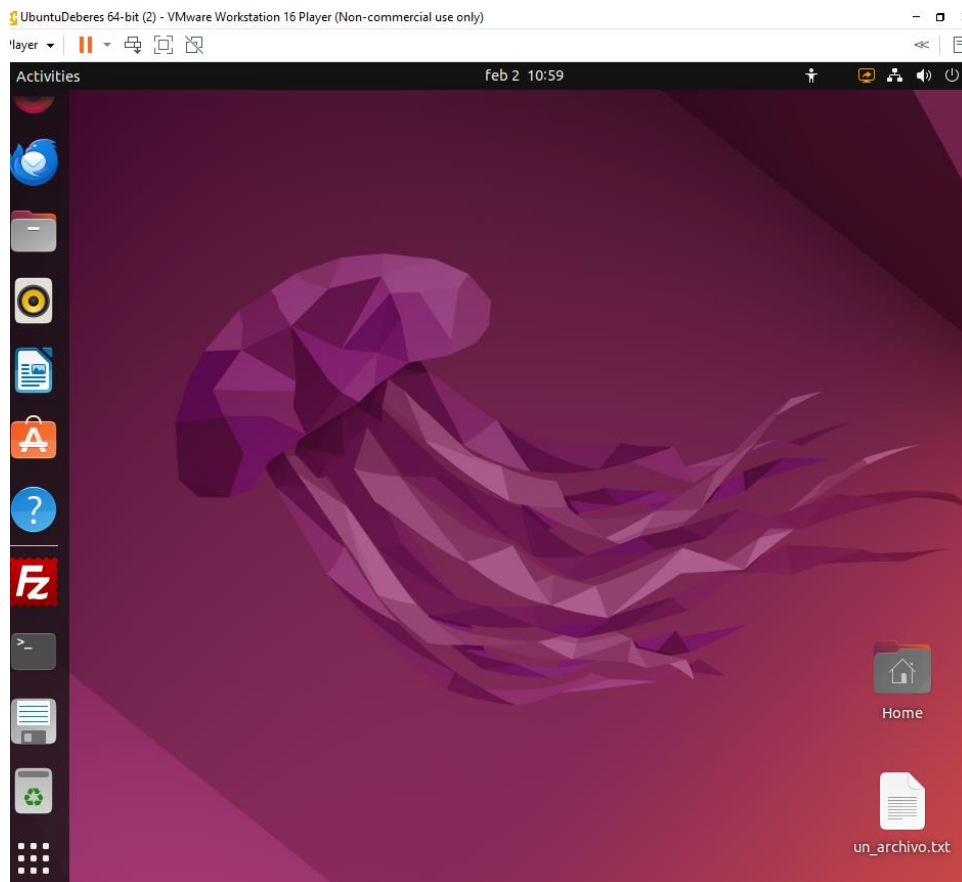
- Ejecutamos Filezilla y nos conectamos con nuestro usuario al servidor ftp:



- Seleccionamos mediante la interfaz el directorio local que contiene en nuestro ordenador el archivo a transferir y el directorio remoto que es nuestro ordenador:



- Comprobamos que el archivo este en el escritorio



4) Permite el acceso al usuario anónimo, cambia la dirección que el usuario puede visualizar y descarga un archivo

- Accedemos al archivo de configuración vsftpd.conf

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

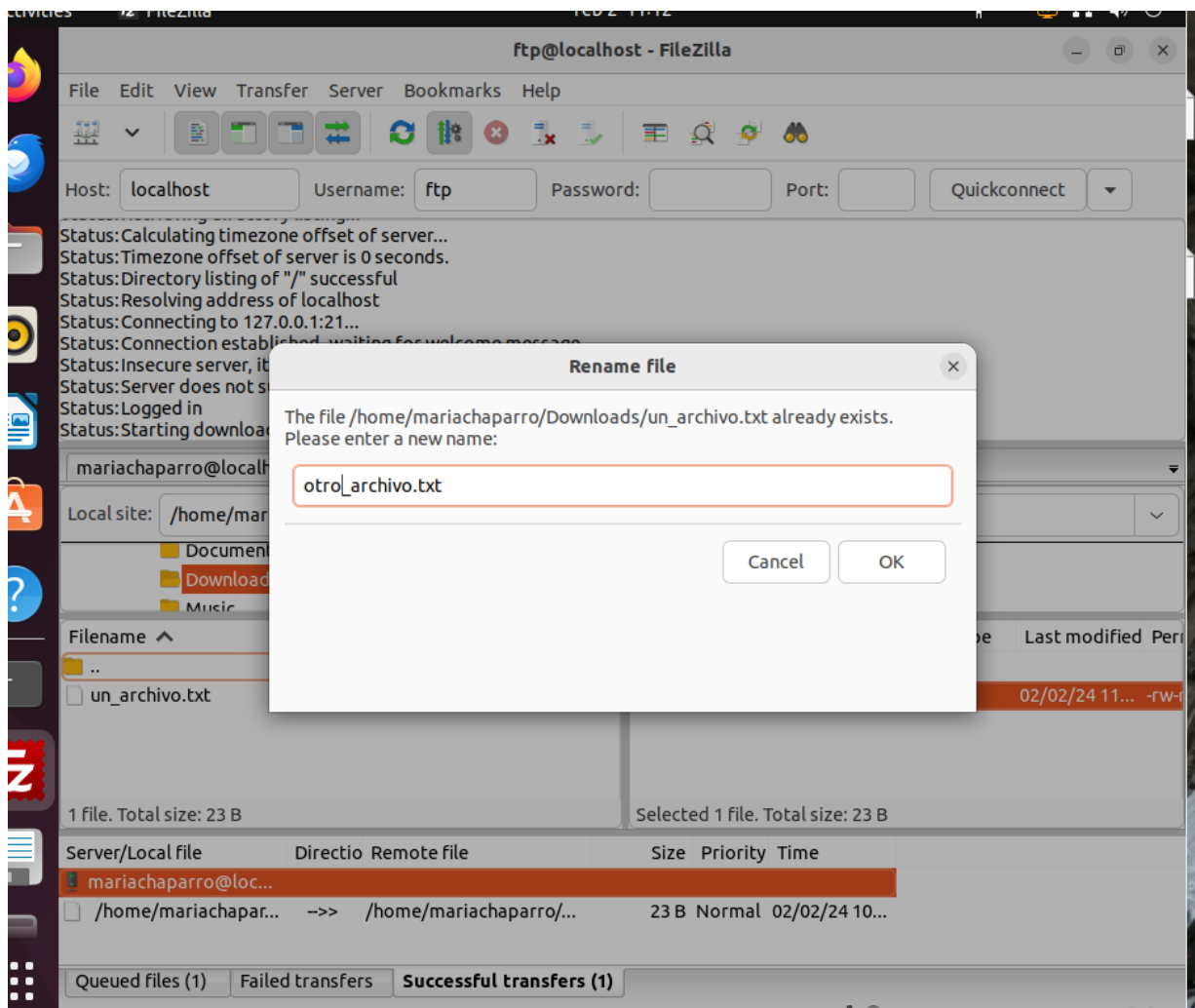
- Permitimos el acceso ("anonymous" y "ftp") y cambiamos el acceso al directorio /Downloads para ello descomentaremos **anonymous=YES** y **anon_root=/home/villa/Descargas/**


```
GNU nano 6.2 /etc/vsftpd.conf *
#
# Run standalone? vsftpd can run either from an inetd or as a standalone
# daemon started from an initscript.
listen=NO
#
# This directive enables listening on IPv6 sockets. By default, listening
# on the IPv6 "any" address (:::) will accept connections from both IPv6
# and IPv4 clients. It is not necessary to listen on *both* IPv4 and IPv6
# sockets. If you want that (perhaps because you want to listen on specific
# addresses) then you must run two copies of vsftpd with two configuration
# files.
listen_ipv6=YES
#
# Allow anonymous FTP? (Disabled by default).
anonymous_enable=YES
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftpd's)
#local_umask=022
#
# Uncomment this to allow the anonymous FTP user to upload files. This only
# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.
#anon_upload_enable=YES
anon_root=/home/mariachaparro/Downloads/
# Uncomment this if you want the anonymous FTP user to be able to create
# new directories.
#anon_mkdir_write_enable=YES
#
# Activate directory messages - messages given to remote users when they
# go into a certain directory.
Save modified buffer?
Y Yes
N No ^C Cancel
```

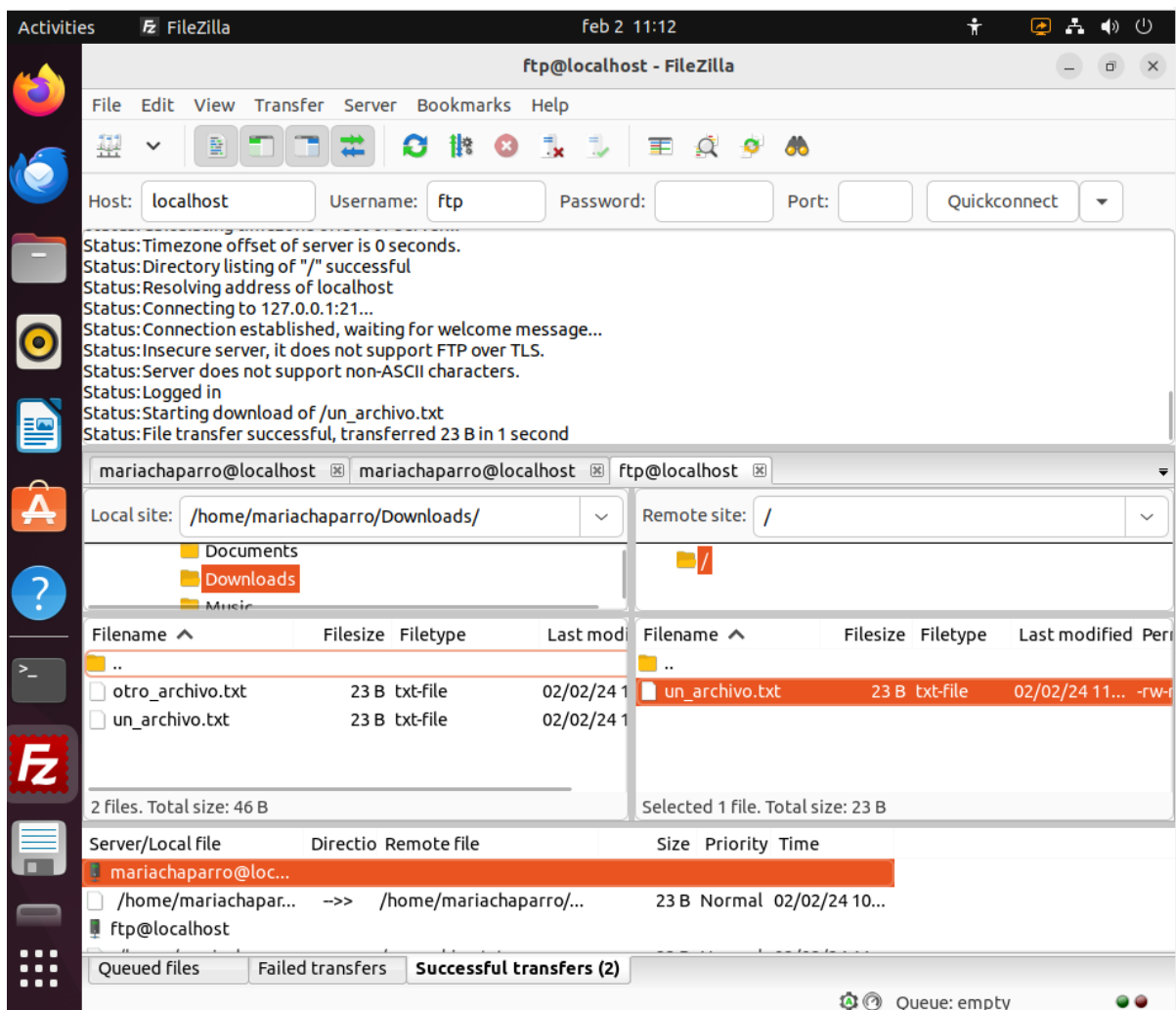
- Reiniciamos el servicio ftp:

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

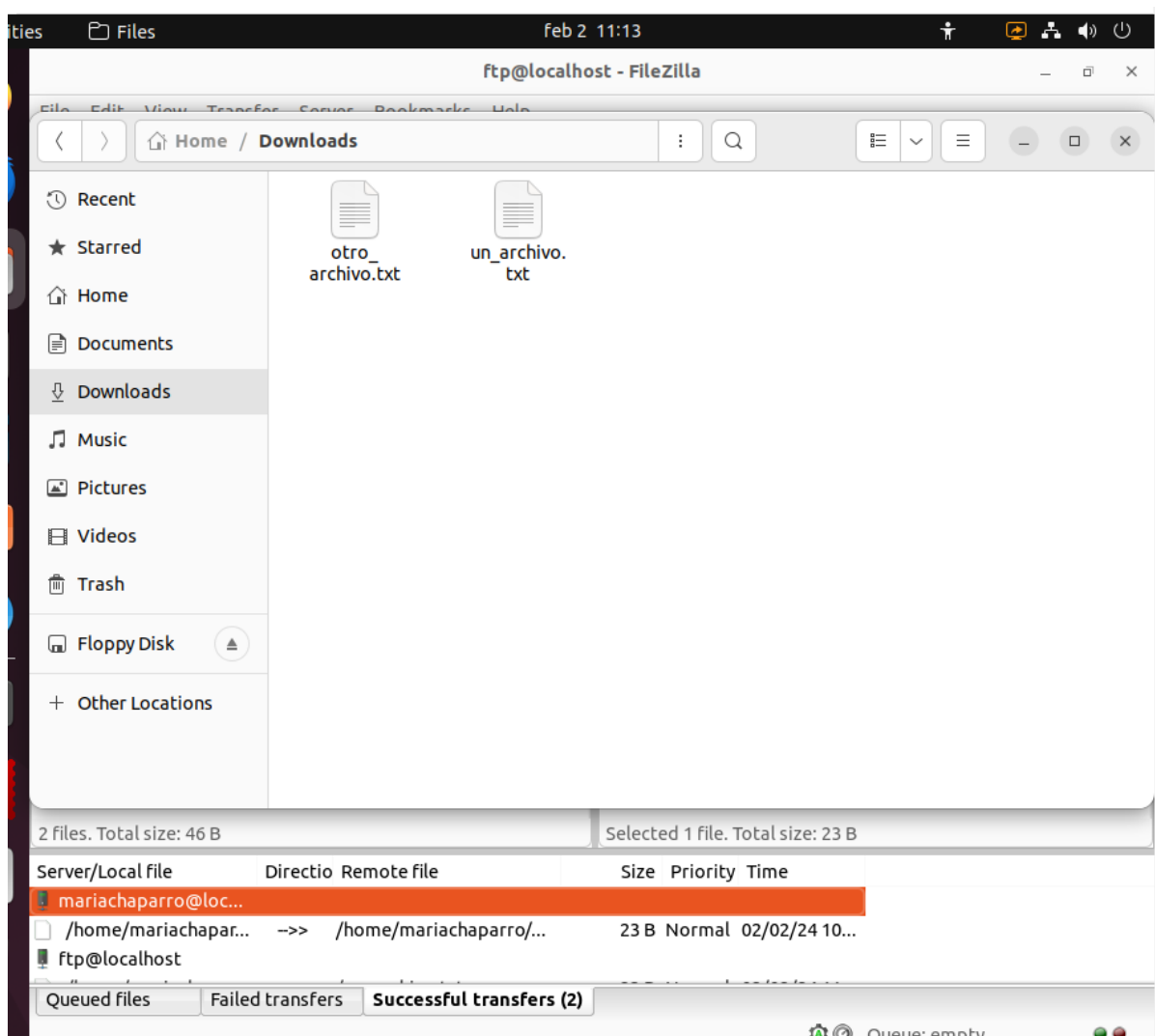
- Nos conectamos al servidor como anónimo (**ftp**) y le damos a la opción de **descargar** del un_archivo para luego elegir **rename** y descargarlo con otro nombre en Downloads



- Comprobamos que este en local:



- Comprobamos que este en downloads



5) Modificar el tiempo de sesión

- Accedemos al archivo de configuración vsftpd.conf

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Cambiamos el tiempo de sesión descomentando **idle_session_timeout** y poniéndolo **=30** segundos

```
GNU nano 6.2 /etc/vsftpd.conf *
# go into a certain directory.
dirmessage_enable=YES
#
# If enabled, vsftpd will display directory listings with the time
# in your local time zone. The default is to display GMT. The
# times returned by the MDTM FTP command are also affected by this
# option.
use_localtime=YES
#
# Activate logging of uploads/downloads.
xferlog_enable=YES
#
# Make sure PORT transfer connections originate from port 20 (ftp-data).
connect_from_port_20=YES
#
# If you want, you can arrange for uploaded anonymous files to be owned by
# a different user. Note! Using "root" for uploaded files is not
# recommended!
#chown_uploads=YES
#chown_username=whoever
#
# You may override where the log file goes if you like. The default is shown
# below.
#xferlog_file=/var/log/vsftpd.log
#
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.
#xferlog_std_format=YES
#
# You may change the default value for timing out an idle session.
idle_session_timeout=30
#
# You may change the default value for timing out a data connection.
#data_connection_timeout=120
#
# It is recommended that you define on your system a unique user which the
# ftp server can use as a totally isolated and unprivileged user.

^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 para que se apliquen los cambios

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

- Nos conectamos para comprobar el tiempo de sesión

```
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): mariachaparro
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

- Si todo es correcto después de los 30 segundos te dará un mensaje de error al intentar hacer algo en el ftp

```
Using binary mode to transfer files.  
ftp> ls  
421 Timeout.  
ftp> █
```

6) Crear usuarios

- Creamos el primer usuario usando **sudo adduser primero**, añadiendo nombre, contraseña y los demás campos en blanco

```
ftp> exit  
mariachaparro@mariachaparro-virtual-machine:~$ sudo adduser primero █
```

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo adduser primero  
Adding user `primero' ...  
Adding new group `primero' (1001) ...  
Adding new user `primero' (1001) with group `primero' ...  
Creating home directory `/home/primero' ...  
Copying files from `/etc/skel' ...  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: password updated successfully  
Changing the user information for primero  
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] █
```

- introducimos el comando **sudo adduser segundo** añadiendo nombre, contraseña y los demás campos en blanco para añadir al segundo usuario

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo adduser segundo
Adding user `segundo' ...
Adding new group `segundo' (1002) ...
Adding new user `segundo' (1002) with group `segundo' ...
Creating home directory `/home/segundo' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for segundo
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
```

- introducimos el comando **sudo adduser tercero** añadiendo nombre, contraseña y los demás campos en blanco para añadir al tercer usuario

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo adduser tercero
Adding user `tercero' ...
Adding new group `tercero' (1003) ...
Adding new user `tercero' (1003) with group `tercero' ...
Creating home directory `/home/tercero' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for tercero
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
```

- Finalmente introducimos el comando **sudo adduser cuarto** añadiendo nombre, contraseña y los demás campos en blanco para añadir al cuarto usuario


```

mariachaparro@mariachaparro-virtual-machine:~$ sudo adduser cuarto
Adding user `cuarto' ...
Adding new group `cuarto' (1004) ...
Adding new user `cuarto' (1004) with group `cuarto' ...
Creating home directory `/home/cuarto' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for cuarto
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

```

7) Limitar cantidad de usuarios acceden simultáneamente

- Accedemos al archivo de configuración vsftpd.conf

```

mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf

```

- Cambiamos el límite de clientes máximo (tenemos que escribir nosotros la sentencia) poniendo el valor de **max_clients=3** (y tambien aumentamos a 120 el **idle_session_timeout** para que no nos moleste)

```

GNU nano 6.2 /etc/vsftpd.conf *
# You may override where the log file goes if you like. The default is shown
# below.
#xferlog_file=/var/log/vsftpd.log
#
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.
#xferlog_std_format=YES
#
# You may change the default value for timing out an idle session.
idle_session_timeout=120
#
# You may change the default value for timing out a data connection.
#data_connection_timeout=120
#
max_clients=3
#
# It is recommended that you define on your system a unique user which the
# ftp server can use as a totally isolated and unprivileged user.
#nopriv_user=ftpsecure
#
# Enable this and the server will recognise asynchronous ABOR requests. Not
# recommended for security (the code is non-trivial). Not enabling it,
# however, may confuse older FTP clients.
#async_abor_enable=YES
#
# By default the server will pretend to allow ASCII mode but in fact ignore
# the request. Turn on the below options to have the server actually do ASCII
# mangling on files when in ASCII mode.
# Beware that on some FTP servers, ASCII support allows a denial of service
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^G Location  M-U Undo     M-A Set Mark M-T To Bracket
^X Exit      ^R Read File ^_ Replace   ^U Paste     ^D Justify   ^/ Go To Line M-E Redo     M-C Copy     ^Q Where Was

```

- Reiniciamos el servidor ftp para aplicar los cambios

```

mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart

```

- Ahora probaremos a conectarnos al localhost con los 4 usuarios en diferentes terminales, si todo está bien en el cuarto nos dirá que no se puede o algo por el estilo:

```
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): primero
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ftp localhost
Already connected to localhost, use close first.
ftp>
```

- Conectándose con el Segundo usuario:

```
mariachaparro@mariachaparro-vir... x mariachaparro@mariachaparro-vir... x
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): segundo
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

- Conectándose con el tercer usuario:

```
mariachaparro@mariachaparro-virtual-machine: ~
mariachaparro@mariachaparro-vir... x mariachaparro@mariachaparro-vir... x mariachaparro@mariachaparro-vir... x
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): tercero
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> █
```

- Conectándose con el cuarto usuario:

```
es Feb 4 00:38 mariachaparro@mariachaparro-virtual-machine: ~
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost
Connected to localhost.
421 There are too many connected users, please try later.
ftp>
```

8) Archivo login

- Accedemos al archivo de configuración vsftpd.conf.

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Descomentamos el `xferlog_enable` a `yes` para ver los logs y la siguiente línea del archivo `vsftpd.log` para que el archivo de registro de transferencia se escriba en el formato estándar `xferlog`, utilizado por `wu-ftp`.

```
# Activate logging of uploads/downloads.
xferlog_enable=YES
#
# Make sure PORT transfer connections originate from port 20 (ftp-data).
connect_from_port_20=YES
#
# If you want, you can arrange for uploaded anonymous files to be owned by
# a different user. Note! Using "root" for uploaded files is not
# recommended!
#chown_uploads=YES
#chown_username=whoever
#
# You may override where the log file goes if you like. The default is shown
# below.
#xferlog_file=/var/log/vsftpd.log
#
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.
xferlog_std_format=YES
#
# You may change the default value for timing out an idle session.
idle_session_timeout=120
#
# You may change the default value for timing out a data connection.
#data_connection_timeout=120
#
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark  M-J To Bracket
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^_ Justify    ^/ Go To Line M-E Redo      M-6 Copy      ^Q Where Was
```

- Reiniciamos para aplicar los cambios

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

- Mostramos los logs mediante el comando `sudo nano /var/log/vsftpd.log`

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /var/log/vsftpd.log
```

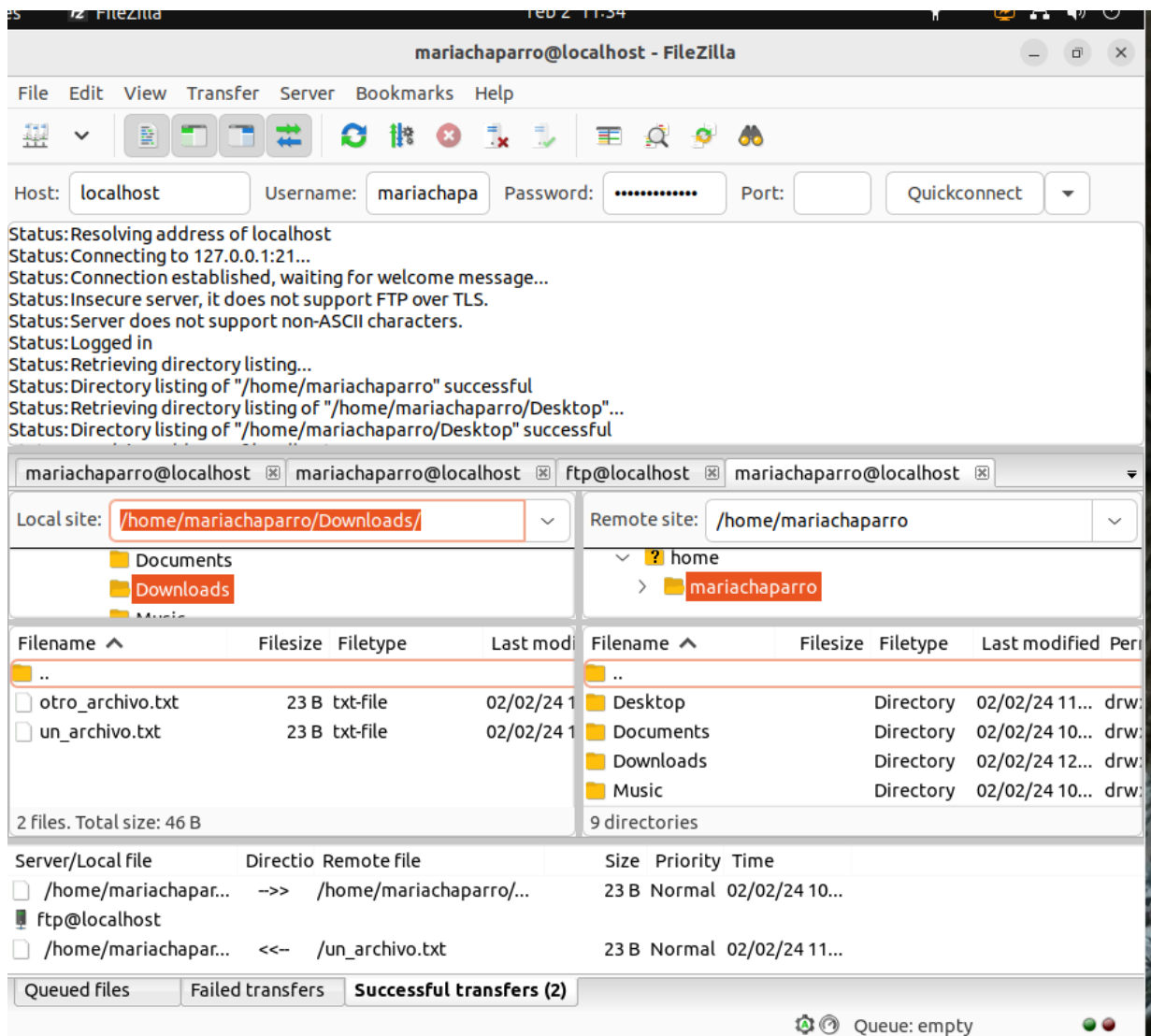
- Los logs:

```
GNU nano 6.2 /var/log/vsftpd.log
Sun Feb 4 00:16:02 2024 [pid 3261] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:16:21 2024 [pid 3260] [mariachaparro] OK LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:17:06 2024 [pid 3263] [mariachaparro] OK UPLOAD: Client "::ffff:127.0.0.1", "/srv/ftp/subidas/subido.txt", 24 bytes, 16.91Kbyte/sec
Sun Feb 4 00:19:17 2024 [pid 3560] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:19:23 2024 [pid 3559] [mariachaparro] OK LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:20:34 2024 [pid 3577] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:20:35 2024 [pid 3576] [mariachaparro] OK LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:20:35 2024 [pid 3578] [mariachaparro] OK UPLOAD: Client "::ffff:127.0.0.1", "/home/mariachaparro/Desktop/un_archivo.txt", 26 bytes, 5.08Kbyte/sec
Sun Feb 4 00:21:35 2024 [pid 3615] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:21:37 2024 [pid 3614] [ftp] FAIL LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:24:45 2024 [pid 3634] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:24:45 2024 [pid 3633] [ftp] OK LOGIN: Client "::ffff:127.0.0.1", anon password "?"
Sun Feb 4 00:27:19 2024 [pid 3640] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:27:19 2024 [pid 3639] [ftp] OK LOGIN: Client "::ffff:127.0.0.1", anon password "?"
Sun Feb 4 00:27:37 2024 [pid 3641] [ftp] OK DOWNLOAD: Client "::ffff:127.0.0.1", "/un_archivo.txt", 24 bytes, 5.08Kbyte/sec
Sun Feb 4 00:29:06 2024 [pid 3709] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:37:04 2024 [pid 3841] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:37:10 2024 [pid 3840] [primero] OK LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:37:23 2024 [pid 3852] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:37:37 2024 [pid 3851] [segundo] OK LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:37:44 2024 [pid 3863] CONNECT: Client "::ffff:127.0.0.1"
Sun Feb 4 00:37:49 2024 [pid 3862] [tercero] OK LOGIN: Client "::ffff:127.0.0.1"
Sun Feb 4 00:38:20 2024 [pid 3874] CONNECT: Client "::ffff:127.0.0.1", "Connection refused: too many sessions."

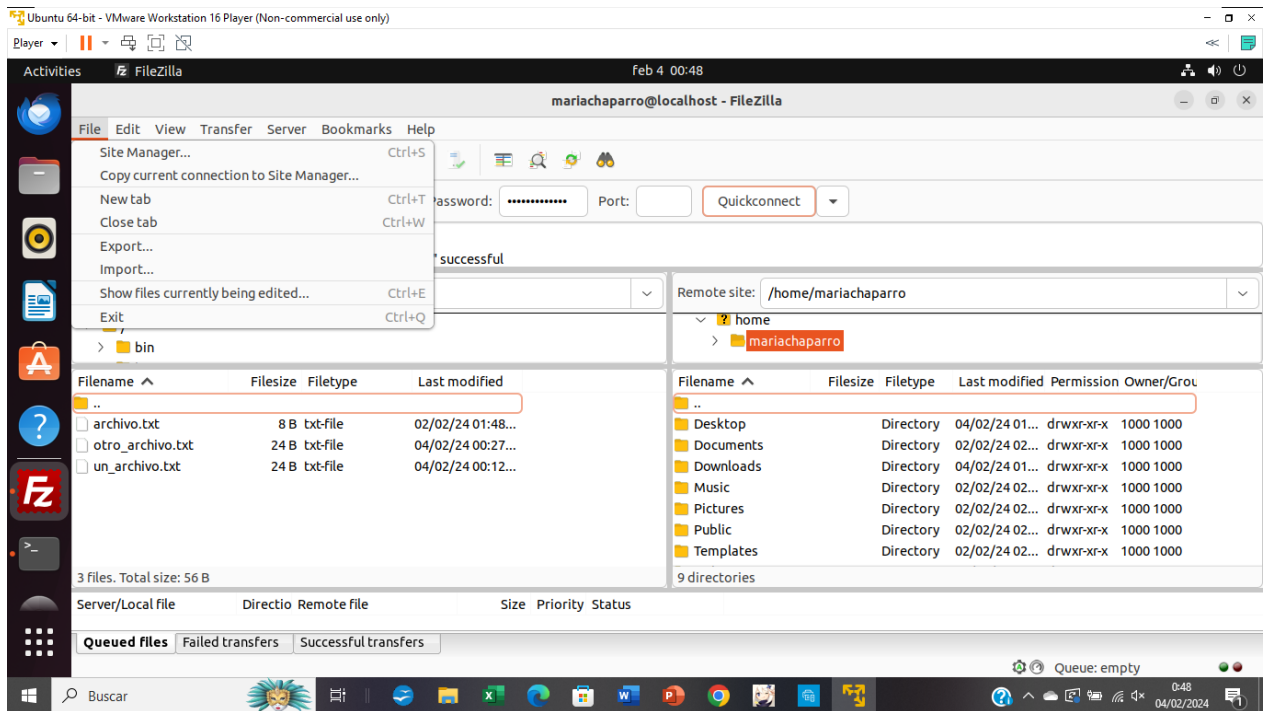
[ Read 23 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo     M-A Set Mark  M-I To Bracket
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Justify    ^_ Go To Line M-E Redo     M-G Copy     ^Q Where Was
```

9) Acceder al servicio mediante Filezilla y el puerto de conexión 25

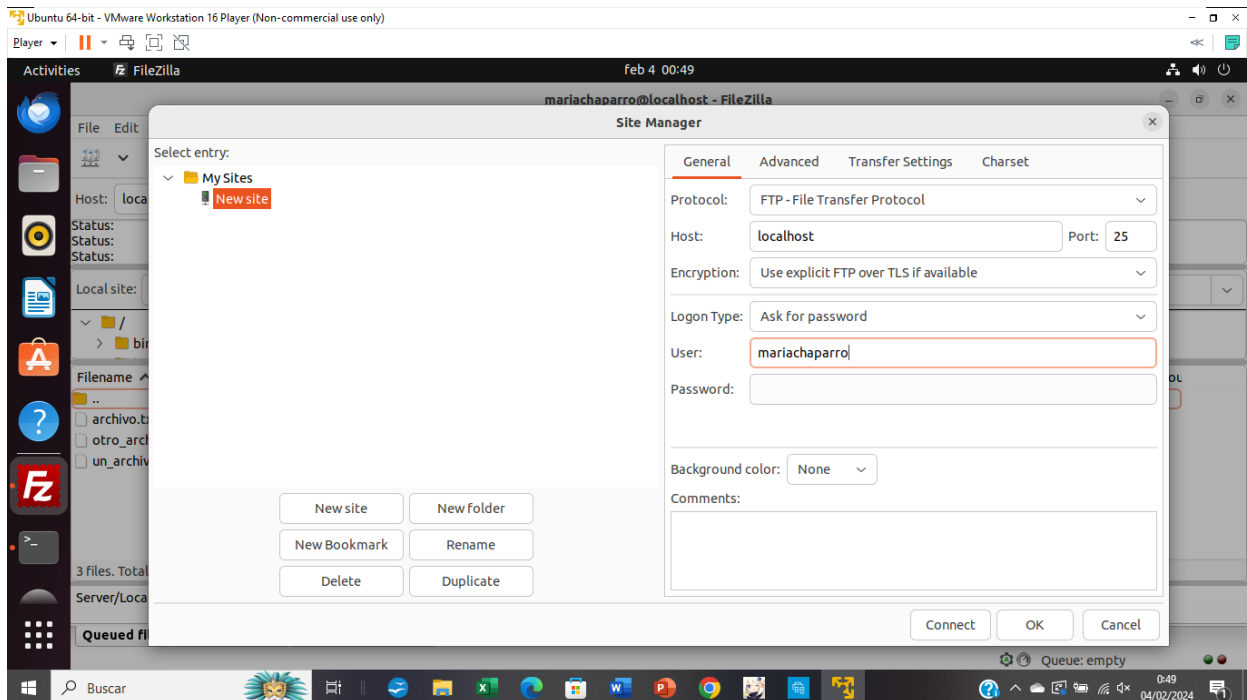
- Al iniciar Filezilla y conectarse en el servidor localhost con nuestro nombre de usuario y contraseña con el puerto en blanco nos indicara por pantalla que hemos accedió al puerto por defecto que es el 21: osea **Estado: Conectado 127.0.0.1:21** esto indica que todo es correcto



- Pulsamos el site manager para empezar a modificar que puerto queremos



- Le damos a new site y ahí ponemos el puerto 25



- Pero si intentamos realizar conexión al puerto 25 no nos permitirá acceder por no estar indicado dicho puerto en el archivo de configuración vsftpd.conf. Por lo tanto, accedemos a dicho archivo:

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Cambiamos el **listen_port** al **25** para que nos permita conectarnos al puerto 25

```

# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.
anon_upload_enable=YES
anon_root=/home/mariachaparro/Downloads/
# Uncomment this if you want the anonymous FTP user to be able to create
# new directories.
#anon_mkdir_write_enable=YES
#
# Activate directory messages - messages given to remote users when they
# go into a certain directory.
dirmessage_enable=YES
#
# If enabled, vsftpd will display directory listings with the time
# in your local time zone. The default is to display GMT. The
# times returned by the MDTM FTP command are also affected by this
# option.
use_localtime=YES
#
# Activate logging of uploads/downloads.
xferlog_enable=YES
#
# Make sure PORT transfer connections originate from port 20 (ftp-data).
connect_from_port_20=YES
listen_port=25
# If you want, you can arrange for uploaded anonymous files to be owned by
# a different user. Note! Using "root" for uploaded files is not
# recommended!
#chown_uploads=YES
#chown_username=whoever
#
# You may override where the log file goes if you like. The default is shown
# below.
#xferlog_file=/var/log/vsftpd.log
#
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.

```

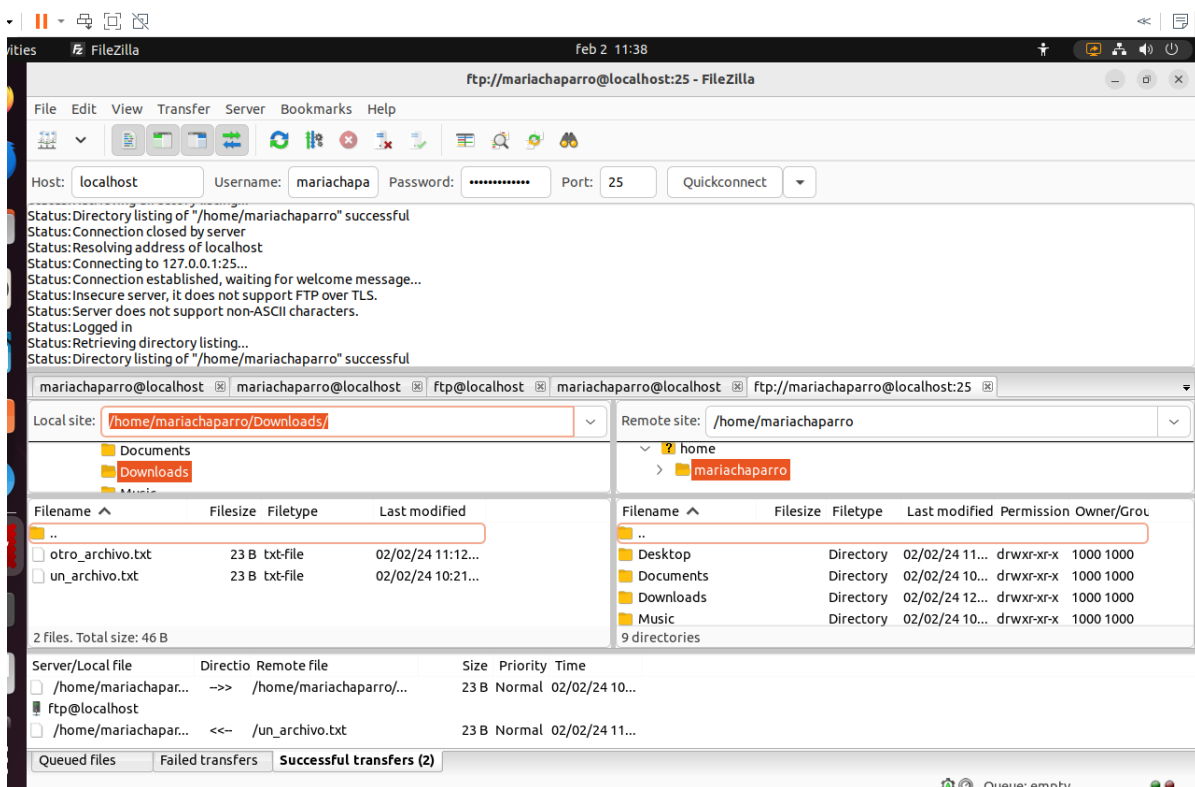
- Reiniciamos para aplicar cambios

```

mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart

```

- Nos conectamos con el filezilla y comprobamos que la conexion ha sido exitosa



10) Impide que los usuarios creados pueden acceder a un directorio de trabajo distinto de trabajo

- Para ello debemos acceder al archivo de configuración (sudo nano etc/vsftpd.conf)


```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

Activar Windo

- Luego descomentar **chroot_local_user=YES** y **allow_writeable_chroot=YES**

```
# You may restrict local users to their home directories. See the FAQ for
# the possible risks in this before using chroot_local_user or
# chroot_list_enable below.
chroot_local_user=YES
allow_writeable_chroot=YES
# You may specify an explicit list of local users to chroot() to their home
# directory. If chroot_local_user is YES, then this list becomes a list of
# users to NOT chroot().
# (Warning! chroot'ing can be very dangerous. If using chroot, make sure that
# the user does not have write access to the top level directory within the
# chroot)
chroot_local_user=YES
#chroot_list_enable=YES
# (default follows)
#chroot_list_file=/etc/vsftpd.chroot_list
#
# You may activate the "-R" option to the builtin ls. This is disabled by
# default to avoid remote users being able to cause excessive I/O on large
# sites. However, some broken FTP clients such as "ncftp" and "mirror" assume
# the presence of the "-R" option, so there is a strong case for enabling it.
#ls_recurse_enable=YES
#
# Customization
#
# Some of vsftpd's settings don't fit the filesystem layout by
```

- Reiniciamos para aplicar cambios

```
■■■ mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

y tengan permisos de escritura dentro de su directorio de inicio chroot. Asegurate de

11) Impedir el acceso al servidor remoto a los usuarios anónimos

- Primero nos conectamos al puerto 25 para ver que todo bien y correcto

```
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost 25
```

```
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost 25
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): mariachaparro
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

- Accedemos al archivo de configuración para poder cambiar el acceso de los anónimos

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Descomentamos **anonymus_enable** a **no** para impedir que se conecten anónimos

```
GNU nano 6.2 /etc/vsftpd.conf *
# addresses) then you must run two copies of vsftpd with two configuration
# files.
listen_ipv6=YES
#
# Allow anonymous FTP? (Disabled by default).
anonymous_enable=NO
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftpd's)
#local_umask=022
#
# Uncomment this to allow the anonymous FTP user to upload files. This only
# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.
#anon_upload_enable=YES
#
# Uncomment this if you want the anonymous FTP user to be able to create
# new directories.
#anon_mkdir_write_enable=YES
anon_root=/home/mariachaparro/Downloads/

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location  M-U Undo     M-A Set Mark  M-T To Bracket
^X Exit      ^R Read File ^\ Replace   ^U Paste      ^J Justify   ^_ Go To Line  M-E Redo     M-G Copy     ^Q Where Was
```

- Reiniciamos para aplicar los cambios

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
mariachaparro@mariachaparro-virtual-machine:~$
```

- Comprobamos que ahora ya no deja conectarse a los anónimos:

```
mariachaparro@mariachaparro-virtual-machine:~$ ftp localhost 25
Connected to localhost.
220 (vsFTPd 3.0.5)
Name (localhost:mariachaparro): ftp
331 Please specify the password.
Password:
mar530 Login incorrect.
ftp: Login failed
ftp> 
```

12) Limitar por terminal el tamaño de subida de los archivos y subir un archivo con un peso superior al límite establecido

- Primero hay que instalar curl (**sudo apt-get install curl**)

```

mariachaparro@mariachaparro-virtual-machine:~$ sudo apt-get install curl
[sudo] password for mariachaparro:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  curl
0 upgraded, 1 newly installed, 0 to remove and 4 not upgraded.
Need to get 194 kB of archives.
After this operation, 454 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu jammy-updates/main amd64 curl amd64 7.81.0-1ubuntu1.15 [194 kB]
Fetched 194 kB in 0s (569 kB/s)
Selecting previously unselected package curl.
(Reading database ... 200788 files and directories currently installed.)
Preparing to unpack .../curl_7.81.0-1ubuntu1.15_amd64.deb ...
Unpacking curl (7.81.0-1ubuntu1.15) ...
Setting up curl (7.81.0-1ubuntu1.15) ...
Processing triggers for man-db (2.10.2-1) ...

```

- Creas un archivo con **touch** y luego usando **curl -limit-rate (limite) -T el archivo a limitar ftp://ruta**

```

mariachaparro@mariachaparro-virtual-machine:~/Downloads$ touch archivo_grande.txt
mariachaparro@mariachaparro-virtual-machine:~/Downloads$ curl --limit-rate 20k -T archivo_grande.txt ftp://localhost/home/mariachaparro/Downlo
ads/
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left   Speed
0         0    0     0    0     0      0      0      0      0

```

13) Limitar la velocidad máxima de transferencia de archivos a 30 KBytes/seg para usuarios locales y 20 KBytes/seg para usuarios anónimos

- Primero vas al archivo de configuración

```

mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf

```

- Tendrás que escribir el **anon_max_rate** para limitar la velocidad de transferencia de los usuarios anónimos y **local_Max_rate** para el usuario local

```
GNU nano 6.2 /etc/vsftpd.conf
#
# You may override where the log file goes if you like. The default is shown
# below.
#xferlog_file=/var/log/vsftpd.log
#
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.
xferlog_std_format=YES
#
# You may change the default value for timing out an idle session.
idle_session_timeout=120
#
# You may change the default value for timing out a data connection.
#data_connection_timeout=120
#
max_clients=3

anon_max_rate=20000
local_max_rate=30000
# It is recommended that you define on your system a unique user which the
# ftp server can use as a totally isolated and unprivileged user.
#nopriv_user=ftpsecure
#
# Enable this and the server will recognise asynchronous ABOR requests. Not
# recommended for security (the code is non-trivial). Not enabling it,
# however, may confuse older FTP clients.
```

- Reinicias para aplicar los cambios

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

14) Transfiere un archivo muy grande con un usuario y que la transferencia se cancele tras 1 minuto de inactividad

- Primero vas a el archivo de configuración

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Descomentas el **data_connection** y lo pones a **60** para que se cancele tras un minuto de inactividad

```
# Activate logging of uploads/downloads.
xferlog_enable=YES
#
# Make sure PORT transfer connections originate from port 20 (ftp-data).
connect_from_port_20=YES
listen_port=25
# If you want, you can arrange for uploaded anonymous files to be owned by
# a different user. Note! Using "root" for uploaded files is not
# recommended!
#chown_uploads=YES
#chown_username=whoever
#
# You may override where the log file goes if you like. The default is shown
# below.
#xferlog_file=/var/log/vsftpd.log
#
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.
xferlog_std_format=YES
#
# You may change the default value for timing out an idle session.
idle_session_timeout=120
#
# You may change the default value for timing out a data connection.
data_connection_timeout=60
#
```

- Reiniciamos para aplicar los cambios

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

- Después de eso puedes o por terminal o por filezilla hacer la transferencia (put o arrastrar)

15) Mostrar un mensaje informativo (banner) cuando un cliente quiera iniciar conexión

- Accedemos a el archivo de configuración

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Descomentamos y el **ftp_banner** y cambiamos el mensaje de este para cambiar el mensaje de inicio de conexión al servidor

```
GNU nano 0.2 /etc/vsftpd.conf
# however, may confuse older FTP clients.
#async_abor_enable=YES
#
# By default the server will pretend to allow ASCII mode but in fact ignore
# the request. Turn on the below options to have the server actually do ASCII
# mangling on files when in ASCII mode.
# Beware that on some FTP servers, ASCII support allows a denial of service
# attack (DoS) via the command "SIZE /big/file" in ASCII mode. vsftpd
# predicted this attack and has always been safe, reporting the size of the
# raw file.
# ASCII mangling is a horrible feature of the protocol.
#ascii_upload_enable=YES
#ascii_download_enable=YES
#
# You may fully customise the login banner string:
ftpd_banner=Esta es la interfaz de acceso del servicio FTP
#
# You may specify a file of disallowed anonymous e-mail addresses. Apparently
# useful for combatting certain DoS attacks.
#deny_email_enable=YES
# (default follows)
#banned_email_file=/etc/vsftpd.banned_emails
#
# You may restrict local users to their home directories. See the FAQ for
# the possible risks in this before using chroot_local_user or
# chroot_list_enable below.

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   ^U Undo       ^A Set Mark   ^_ To Bracket
^X Exit      ^R Read File  ^I Replace    ^U Paste      ^J Justify    ^/ Go To Line  ^E Redo       ^G Copy       ^Q Where Was
```

- Reiniciamos para aplicar los cambios:

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

- Después simplemente te conectas con un ftp localhost (a mi me esta dando error el puerto asique no lo puedo mostrar)

16) Cambiar el nombre del usuario anónimo de “ftp” a “ftpCambiado”.

- Entrás en el archivo de configuración

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Escribes que el usuario ftp (aka el anónimo) ahora sera = nuevo nombre (aka ftpCambiado) mediante **ftp_username=nuevonombre**

```
# mangling on files when in ASCII mode.
# Beware that on some FTP servers, ASCII support allows a denial of service
# attack (DoS) via the command "SIZE /big/file" in ASCII mode. vsftpd
# predicted this attack and has always been safe, reporting the size of the
# raw file.
# ASCII mangling is a horrible feature of the protocol.
#ascii_upload_enable=YES
#ascii_download_enable=YES
#
# You may fully customise the login banner string:
ftpd_banner=Esta es la interfaz de acceso del servicio FTP

ftp_username=ftpCambiado
#
# You may specify a file of disallowed anonymous e-mail addresses. Apparently
# useful for combatting certain DoS attacks.
#deny_email_enable=YES
# (default follows)
#banned_email_file=/etc/vsftpd.banned_emails
#
# You may restrict local users to their home directories. See the FAQ for
# the possible risks in this before using chroot_local_user or
# chroot_list_enable below.
chroot_local_user=YES
allow_writeable_chroot=YES
# You may specify an explicit list of local users to chroot() to their home

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   ^U Undo       ^A Set Mark   ^_ To Bracket
^X Exit      ^R Read File  ^I Replace    ^U Paste      ^J Justify    ^/ Go To Line  ^E Redo       ^G Copy       ^Q Where Was
```

- Reinicias el servidor para aplicar los cambios:

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```

19) El servidor FTP sólo escuche al cliente localhost, es decir, una dirección IP distinta a la localhost no podrá acceder al servidor

- Abrimos el archivo de configuración

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo nano /etc/vsftpd.conf
```

- Escribimos el **listen_address** y le ponemos el valor del servidor local (aka 127.0.0.1)

```
GNU nano 6.2 /etc/vsftpd.conf *
# If you want, you can have your log file in standard ftpd xferlog format.
# Note that the default log file location is /var/log/xferlog in this case.
xferlog_std_format=YES
#
# You may change the default value for timing out an idle session.
idle_session_timeout=120
#
# You may change the default value for timing out a data connection.
data_connection_timeout=60
#
max_clients=3

listen_address=127.0.0.1
anon_max_rate=20000
local_max_rate=30000
# It is recommended that you define on your system a unique user which the
# ftp server can use as a totally isolated and unprivileged user.
#nopriv_user=ftpsecure
#
# Enable this and the server will recognise asynchronous ABOR requests. Not
# recommended for security (the code is non-trivial). Not enabling it,
# however, may confuse older FTP clients.
#async_abor_enable=YES
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark   M-] To Bracket
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line  M-E Redo      M-G Copy      ^Q Where Was
```

- Reiniciamos para aplicar los cambios:

```
mariachaparro@mariachaparro-virtual-machine:~$ sudo service vsftpd restart
```