

1.

## SAMBA SHARE

Ajay Aji – 22UBCA7312

### Experiment no. 1

Date: 06/06/2024

Aim: Installation and configuration of Samba share.

Description: SAMBA One of the most common ways to network Ubuntu and Windows computers is to configure Samba as a File Server. This section covers setting up a Samba server to share files with Windows clients. The server will be configured to share files with any client on the network without prompting for a password. If your environment requires stricter Access Controls see Share Access Control

Port No: 139

Package name: samba

Configuration file: /etc/samba/smb.conf.

Procedure: 1. To install Samba, we can run:

\$sudo apt update

\$sudo apt install samba

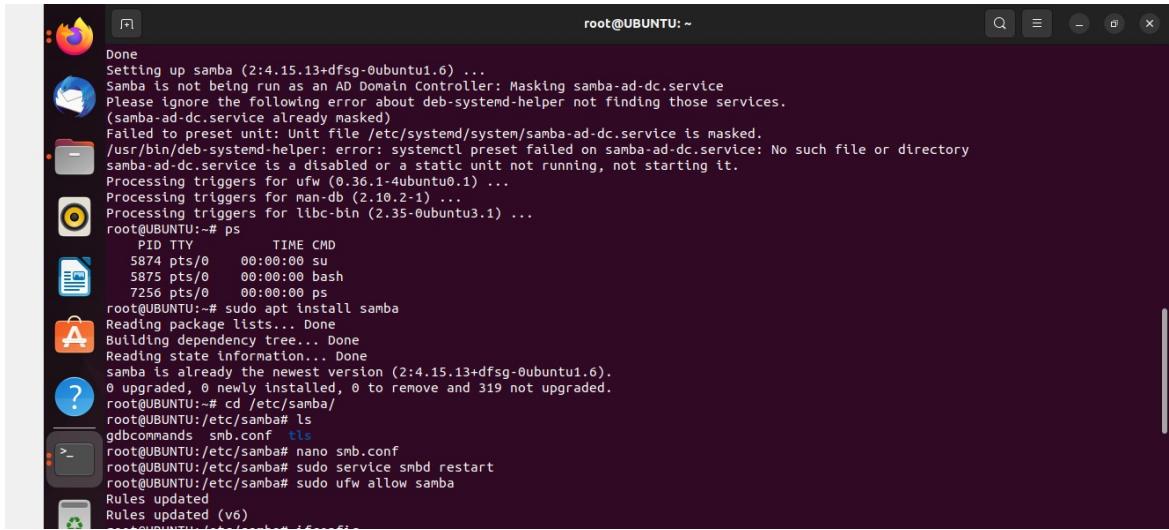
```
Activities Terminal Jun 6 16:16
root@UBUNTU: ~
ubuntu22@UBUNTU:~$ su -
Password:
su: Authentication failure
ubuntu22@UBUNTU:~$ 12345
12345: command not found
ubuntu22@UBUNTU:~$ su -
Password:
root@UBUNTU:~# sudo apt update
Hit:1 http://archive.canonical.com/ubuntu jammy InRelease
Hit:2 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:3 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Hit:4 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:5 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:6 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:7 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:8 http://archive.ubuntu.com/ubuntu jammy-security InRelease
Hit:9 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
328 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@UBUNTU:~# sudo apt install samba
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  lib smbclient libwbclient0 python3-samba samba-common samba-common-bin samba-dsdb-modules samba-libs samba-vfs-modules
Suggested packages:
  bind9 bind9utils ctdb ldb-tools ntp | chrony smbldap-tools winbind heimdal-clients
The following packages will be upgraded:
  lib smbclient libwbclient0 python3-samba samba-common samba-common-bin samba-dsdb-modules samba-libs samba-vfs-modules
9 upgraded, 0 newly installed, 0 to remove and 319 not upgraded.
Need to get 12.3 MB of archives.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 lib smbclient amd64 2:4.15.13+dfsg-0ubuntu1.6 [65.9 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 samba-dsdb-modules amd64 2:4.15.13+dfsg-0ubuntu1.6 [313 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3-samba amd64 2:4.15.13+dfsg-0ubuntu1.6 [3,115 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 samba-vfs-modules amd64 2:4.15.13+dfsg-0ubuntu1.6 [419 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 samba amd64 2:4.15.13+dfsg-0ubuntu1.6 [1,192 kB]
```

2. We can check if the installation was successful by running:

\$whereis samba

**3.** Now that Samba is installed, we need to create a directory for it to share:

```
$mkdir /home/<username>/sambashare/
```



```
root@UBUNTU:~# Done
Setting up samba (2:4.15.13+dfsg-0ubuntu1.6) ...
Samba is not being run as an AD Domain Controller: Masking samba-ad-dc.service
Please ignore the following error about deb-systemd-helper not finding those services.
(samba-ad-dc.service already masked)
Failed to preset unit: Unit file /etc/systemd/system/samba-ad-dc.service is masked.
/usr/bin/deb-systemd-helper: error: systemctl preset failed on samba-ad-dc.service: No such file or directory
samba-ad-dc.service is a disabled or a static unit not running, not starting it.
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
root@UBUNTU:# ps
  PID TTY      TIME CMD
 5874 pts/0    00:00:00 su
 5875 pts/0    00:00:00 bash
 7256 pts/0    00:00:00 ps
root@UBUNTU:# sudo apt install samba
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
samba is already the newest version (2:4.15.13+dfsg-0ubuntu1.6).
0 upgraded, 0 newly installed, 0 to remove and 319 not upgraded.
root@UBUNTU:~# cd /etc/samba/
root@UBUNTU:/etc/samba# ls
gdbcommands smb.conf tls
root@UBUNTU:/etc/samba# nano smb.conf
root@UBUNTU:/etc/samba# sudo service smbd restart
root@UBUNTU:/etc/samba# sudo ufw allow samba
Rules updated
Rules updated (v6)
root@UBUNTU:/etc/samba#
```

The command above creates a new folder samba share in our home directory which we will share later. The configuration file for Samba is located at /etc/samba/smb.conf. To add the new directory as a share, we edit the file by running:

```
$sudo nano /etc/samba/smb.conf
```

At the bottom of the file, add the following lines:

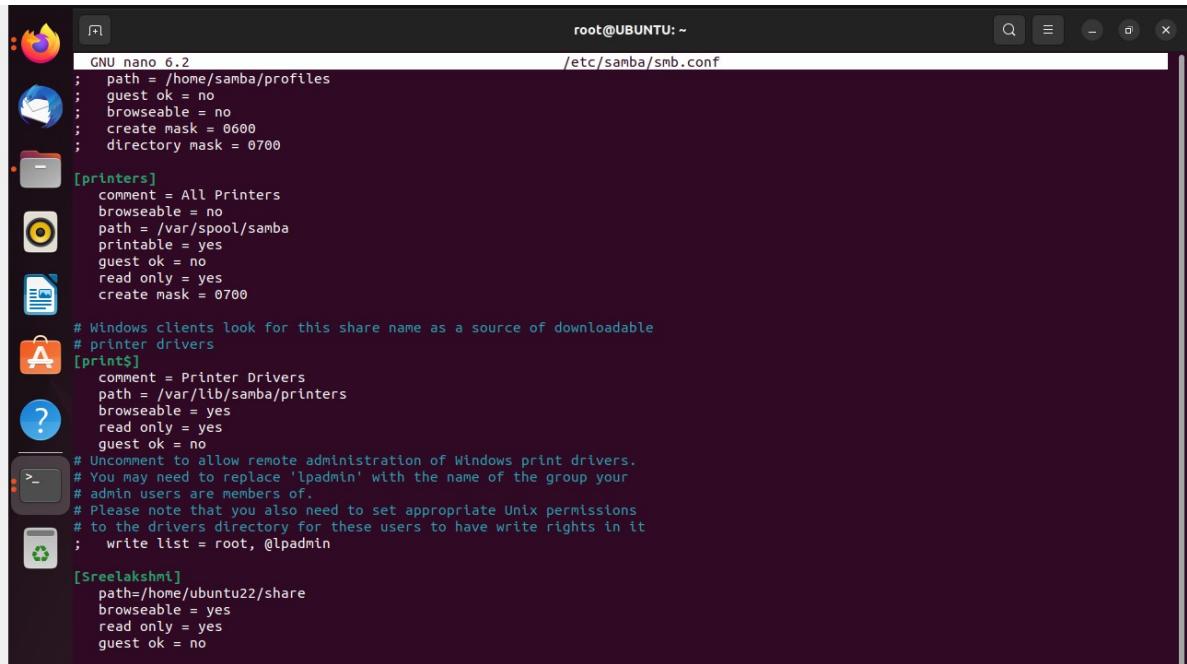
```
[sambashare]
```

```
comment = Samba on Ubuntu
```

```
path = /home/username/sambashare
```

```
read only = no
```

```
browsable = yes
```



```
root@UBUNTU: ~
GNU nano 6.2
; path = /home/samba/profiles
; guest ok = no
; browseable = no
; create mask = 0600
; directory mask = 0700
[printers]
comment = All Printers
browseable = no
path = /var/spool/samba
printable = yes
guest ok = no
read only = yes
create mask = 0700
# Windows clients look for this share name as a source of downloadable
# printer drivers
[prints]
comment = Printer Drivers
path = /var/lib/samba/printers
browseable = yes
read only = yes
guest ok = no
# Uncomment to allow remote administration of Windows print drivers.
# You may need to replace 'lpadmin' with the name of the group your
# admin users are members of.
# Please note that you also need to set appropriate Unix permissions
# to the drivers directory for these users to have write rights in it
; write list = root, @lpadmin
[Sreelakshmi]
path=/home/ubuntuzz/share
browseable = yes
read only = yes
guest ok = no
```

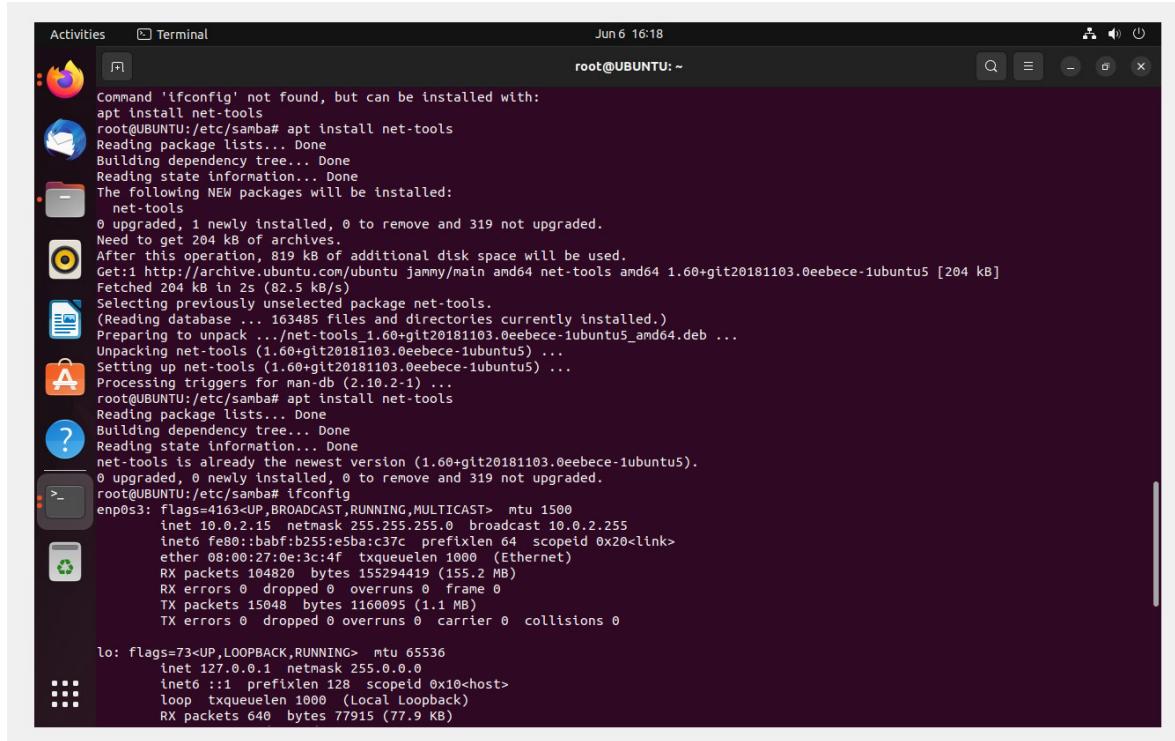
**4.** Then press Ctrl-O to save and Ctrl-X to exit from the nano text editor.

**5.** Now that we have our new share configured, save it and restart Samba for it to take effect:

```
$sudo service smbd restart
```

**6.** Update the firewall rules to allow Samba traffic:

```
$sudo ufw allow samba
```



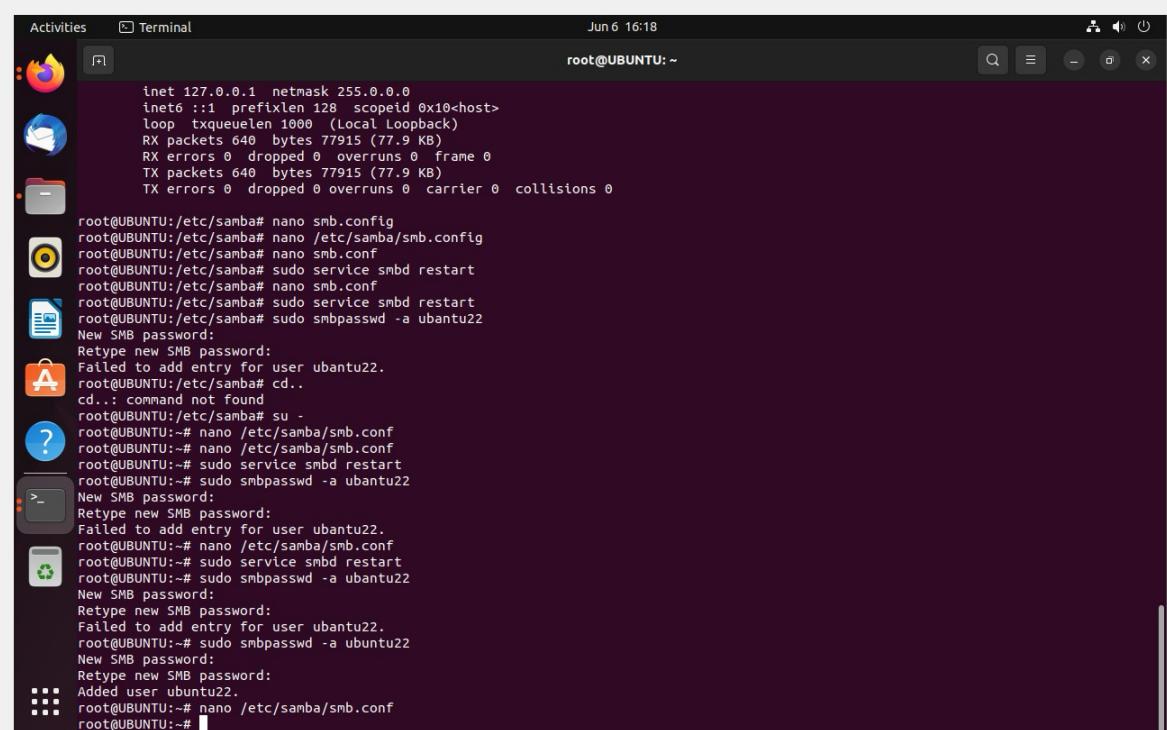
```
Activities Terminal Jun 6 16:18
root@UBUNTU: ~
Command 'ifconfig' not found, but can be installed with:
apt install net-tools
root@UBUNTU:/etc/samba# apt install net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 319 not upgraded.
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 2s (82.5 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 163485 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) ...
root@UBUNTU:/etc/samba# apt install net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
net-tools is already the newest version (1.60+git20181103.0eebece-1ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 319 not upgraded.
root@UBUNTU:/etc/samba# 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::babf:b255:e5ba:c37c  prefixlen 64  scopeid 0x20<link>
            ether 08:00:27:0e:3c:4f  txqueuelen 1000  (Ethernet)
              RX packets 104820  bytes 155294419 (155.2 MB)
              RX errors 0  dropped 0  overruns 0  frame 0
              TX packets 15048  bytes 1160095 (1.1 MB)
              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 640  bytes 77915 (77.9 KB)
```

## SETTING UP USER ACCOUNTS AND CONNECTING TO SHARE

7. Since Samba doesn't use the system account password, we need to set up a Samba password for our user account:

```
$sudo smbpasswd -a username
```



The screenshot shows a terminal window titled "Terminal" with the command "root@UBUNTU: ~" at the top. The terminal displays the following steps to add a user to Samba:

```
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 640 bytes 77915 (77.9 KB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 640 bytes 77915 (77.9 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

root@UBUNTU:/etc/samba# nano smb.conf
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# nano smb.conf
root@UBUNTU:/etc/samba# sudo service smbd restart
root@UBUNTU:/etc/samba# nano smb.conf
root@UBUNTU:/etc/samba# sudo service smbd restart
root@UBUNTU:/etc/samba# sudo smbpasswd -a ubantu22
New SMB password:
Retype new SMB password:
Failed to add entry for user ubantu22.
root@UBUNTU:/etc/samba# cd..
cd..: command not found
root@UBUNTU:/etc/samba# su -
root@UBUNTU:# nano /etc/samba/smb.conf
root@UBUNTU:# nano /etc/samba/smb.conf
root@UBUNTU:# sudo service smbd restart
root@UBUNTU:# sudo smbpasswd -a ubantu22
New SMB password:
Retype new SMB password:
Failed to add entry for user ubantu22.
root@UBUNTU:# nano /etc/samba/smb.conf
root@UBUNTU:# sudo service smbd restart
root@UBUNTU:# sudo smbpasswd -a ubantu22
New SMB password:
Retype new SMB password:
Failed to add entry for user ubantu22.
root@UBUNTU:-# sudo smbpasswd -a ubuntu22
New SMB password:
Retype new SMB password:
Added user ubuntu22.
root@UBUNTU:# nano /etc/samba/smb.conf
root@UBUNTU:-#
```

## CONNECTING TO SHARE

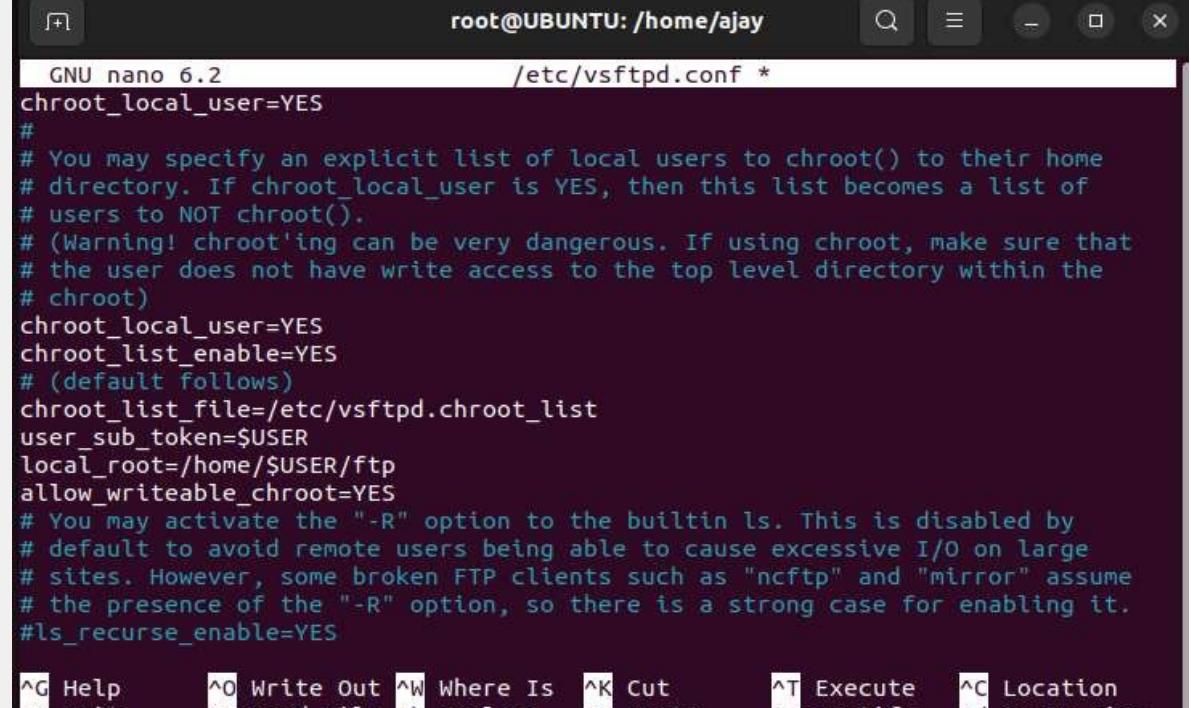
8. On Ubuntu: Open up the default file manager and click Connect to Server then enter:

Connecting to samba via smb://127.0.0.1/sambashare

Note: ip-address is the Samba server IP address and sambashare is the name of the share.  
You'll be prompted for your credentials. Enter them to connect!

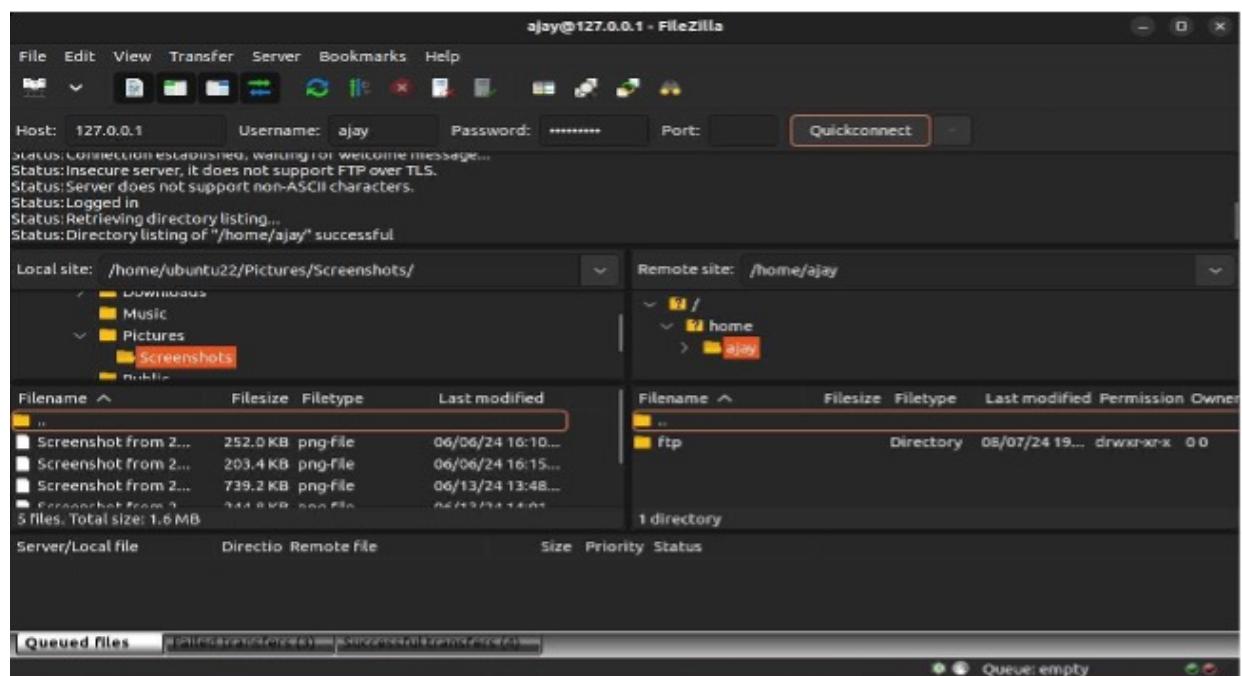
- Click "Connect"

The folder is now accessible via the network



```
GNU nano 6.2          /etc/vsftpd.conf *
chroot_local_user=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
user_sub_token=$USER
local_root=/home/$USER/ftp
allow_writeable_chroot=YES
# 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

^G Help      ^O Write Out ^W Where Is  ^K Cut      ^T Execute   ^C Location
^X Exit      ^R Read File ^Y Replace   ^U Paste      ^J Justify   ^/ Go To Line
```



Conclusion: The samba share server installed and configured successfully.