

1. SAMBA SHARE

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Experiment no. 1

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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

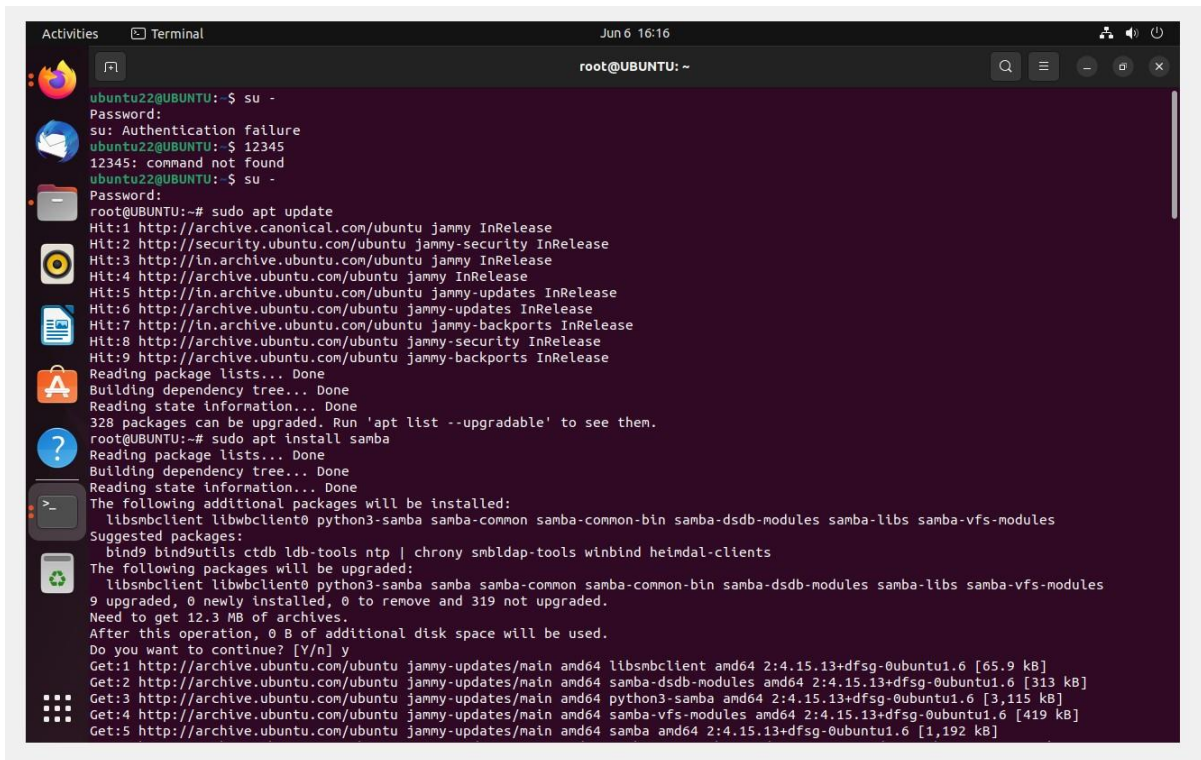
Package name: samba

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

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

\$sudo apt update

\$sudo apt install samba



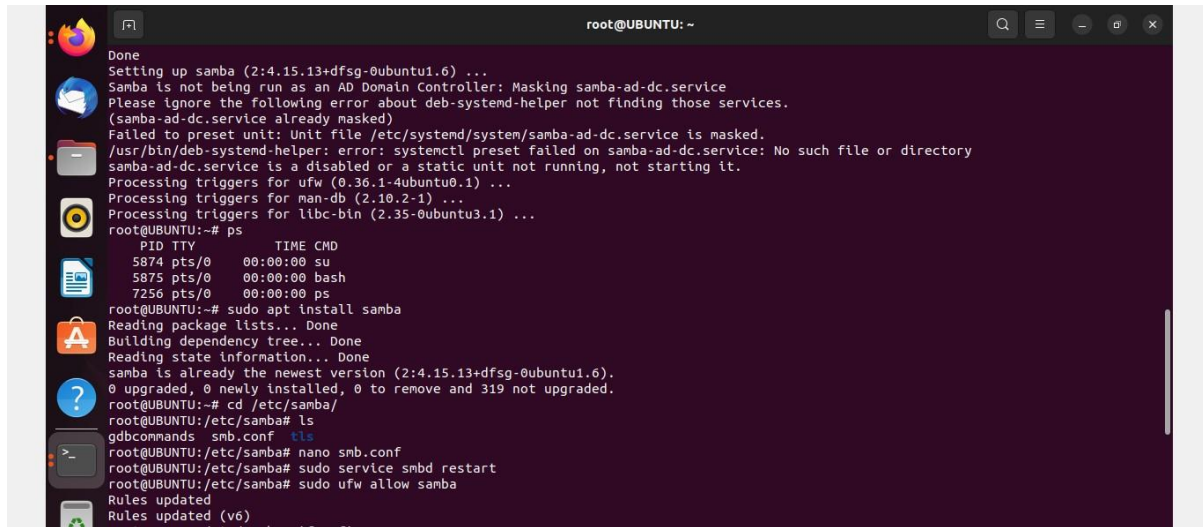
```
root@UBUNTU: ~  
ubuntu22@UBUNTU:~$ su -  
Password:  
su: Authentication failure  
ubuntu22@UBUNTU:~$ 12345  
12345: command not found  
ubuntu22@UBUNTU:~$ su -  
Password:  
root@UBUNTU:~# sudo apt update  
Hit:1 http://archive.canonical.com/ubuntu jammy InRelease  
Hit:2 http://security.ubuntu.com/ubuntu 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:  
  libsmclient 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:  
  libsmclient libwbclient0 python3-samba 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 libsmclient 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/
```

A terminal window titled 'root@UBUNTU: ~' showing the installation and configuration of Samba. The output includes: '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', a table with columns PID, TTY, TIME, and CMD showing processes 5874 (pts/0), 5875 (pts/0), and 7256 (pts/0), '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)', and 'root@UBUNTU:/etc/samba# ifconfig'.

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:

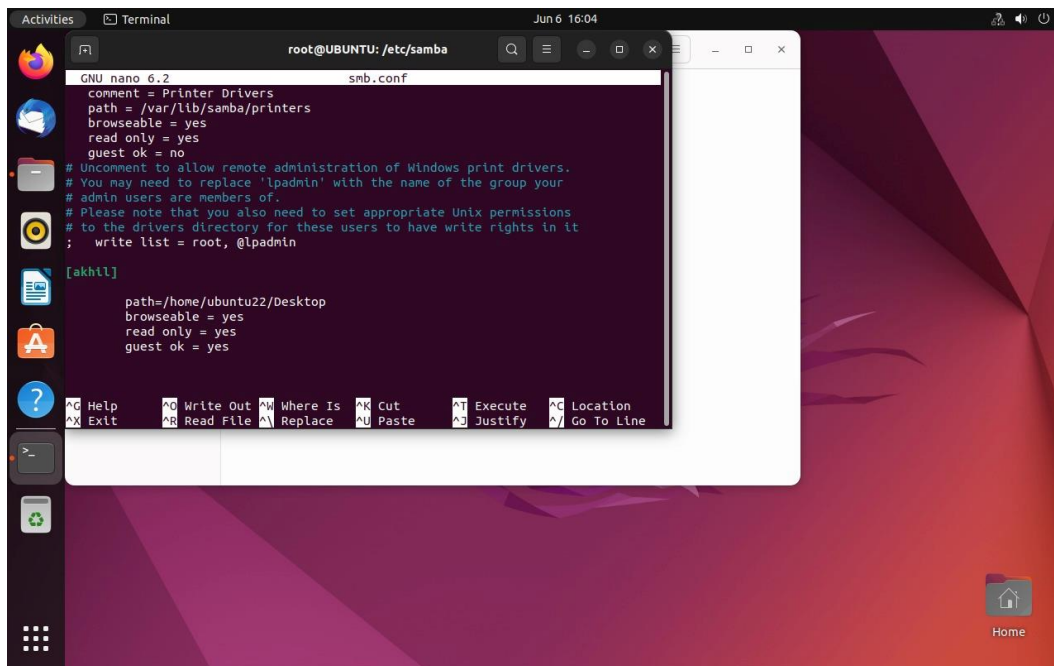
```
[sambashare]
```

```
comment = Samba on Ubuntu
```

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

```
read only = no
```

```
browsable = yes
```



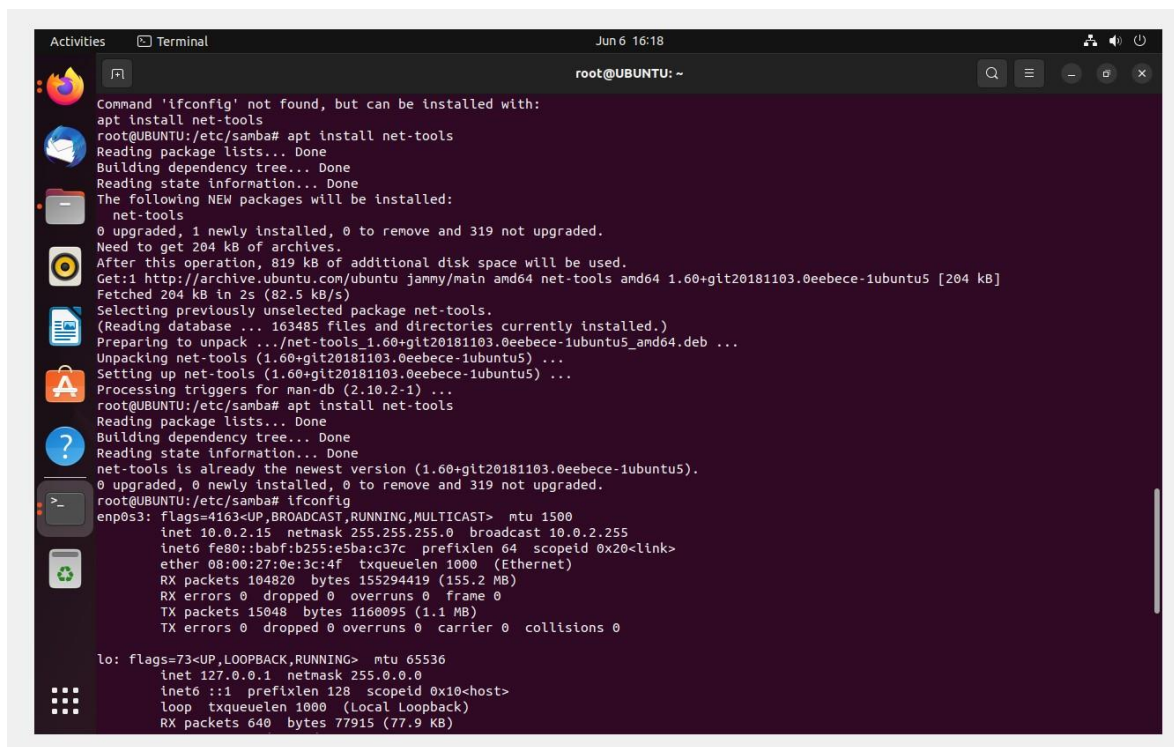
4. Then press Ctrl-O to save and Ctrl-X to exit from the nano text editor.

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:

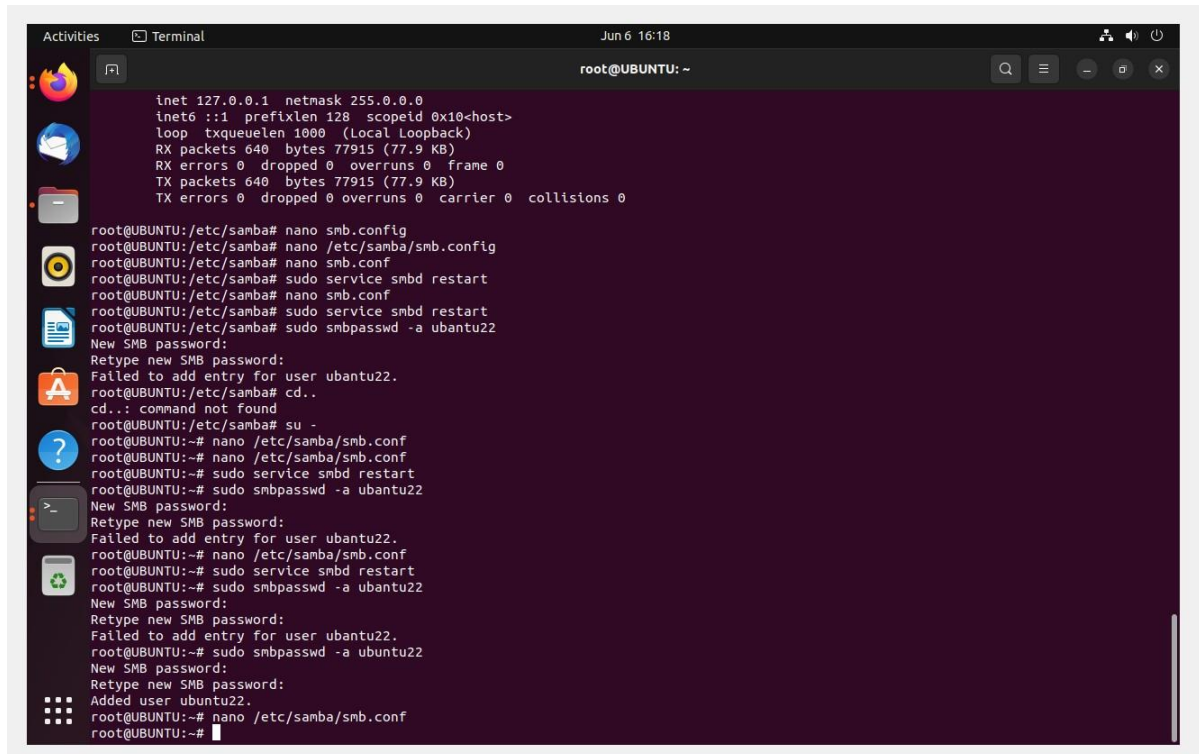
`$sudo ufw allow samba`



SETTING UP USER ACCOUNTS AND CONNECTING TO SHARE

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

\$sudo smbpasswd -a username



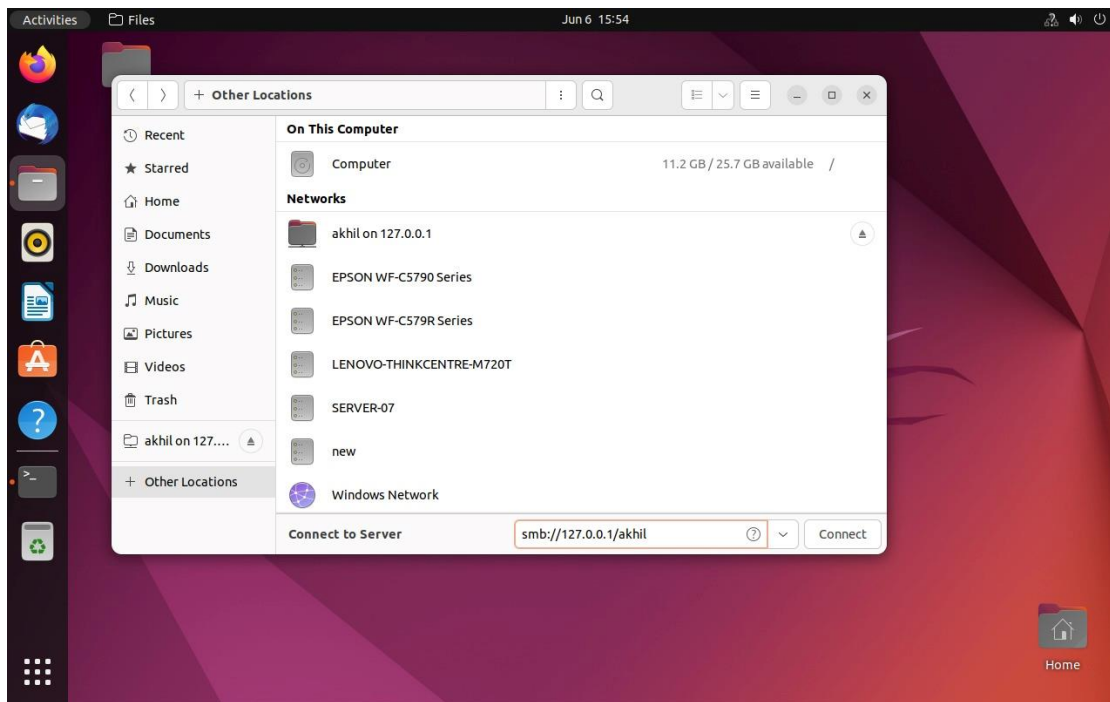
```
root@UBUNTU: ~  
inet 127.0.0.1 netmask 255.0.0.0  
inet6 ::1 prefixlen 128 scopeid 0x10<host>  
loop txqueuelen 1000 (Local Loopback)  
RX packets 640 bytes 77915 (77.9 KB)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 640 bytes 77915 (77.9 KB)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
root@UBUNTU:/etc/samba# nano smb.config  
root@UBUNTU:/etc/samba# nano /etc/samba/smb.config  
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 ubuntu22  
New SMB password:  
Retype new SMB password:  
Failed to add entry for user ubuntu22.  
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 ubuntu22  
New SMB password:  
Retype new SMB password:  
Failed to add entry for user ubuntu22.  
root@UBUNTU:~# nano /etc/samba/smb.conf  
root@UBUNTU:~# sudo service smbd restart  
root@UBUNTU:~# sudo smbpasswd -a ubuntu22  
New SMB password:  
Retype new SMB password:  
Failed to add entry for user ubuntu22.  
root@UBUNTU:~# sudo smbpasswd -a ubuntu22  
New SMB password:  
Retype new SMB password:  
Failed to add entry for user ubuntu22.  
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

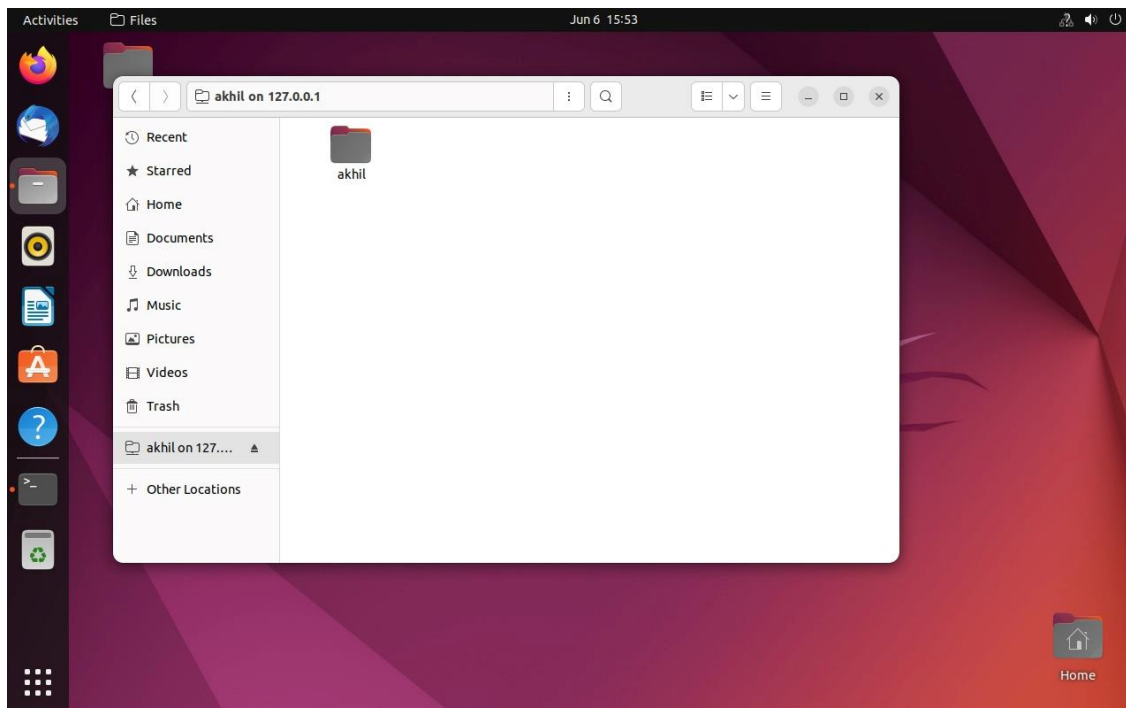
8. On Ubuntu: Open up the default file manager and click Connect to Server then enter:
Connecting to samba via smb://127.0.0.1/sambashare

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



Conclusion: The samba share server installed and configured successfully.