Samba Server in Linux System

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Overview

A Samba file server enables file sharing across different operating systems over a network. It lets you access your desktop files from a laptop and share files with Windows and macOS users.

What you'll learn

- How to set up a Samba file server
- How to share files across a local network

What you'll need

- Linux Mint [Debian] -- LTS
- A Local Area Network (LAN) to share files over

Installing Samba Server

To install Samba, we run:

```
sudo apt update
```

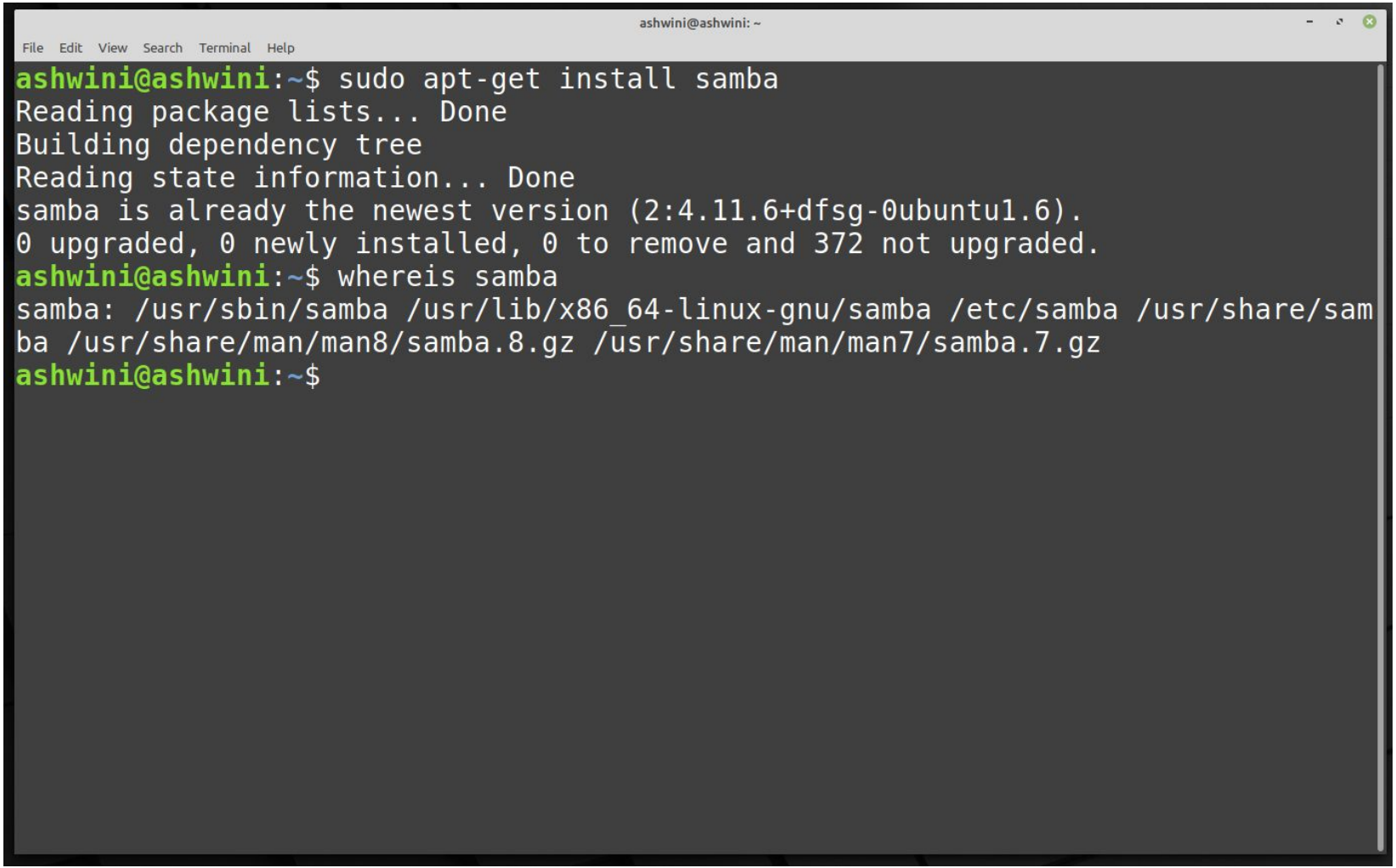
```
sudo apt-get install samba
```

We can check if the installation was successful by running:

```
whereis samba
```

The following should be its output:

```
samba: /usr/sbin/samba /usr/lib/samba /etc/samba /usr/share/samba
/usr/share/man/man7/samba.7.gz /usr/share/man/man8/samba.8.gz
```


ashwini@ashwini: ~
File Edit View Search Terminal Help
ashwini@ashwini:~$ sudo apt-get install samba
Reading package lists... Done
Building dependency tree
Reading state information... Done
samba is already the newest version (2:4.11.6+dfsg-0ubuntu1.6).
0 upgraded, 0 newly installed, 0 to remove and 372 not upgraded.
ashwini@ashwini:~$ whereis samba
samba: /usr/sbin/samba /usr/lib/x86_64-linux-gnu/samba /etc/samba /usr/share/sam
ba /usr/share/man/man8/samba.8.gz /usr/share/man/man7/samba.7.gz
ashwini@ashwini:~$

Setting up Samba

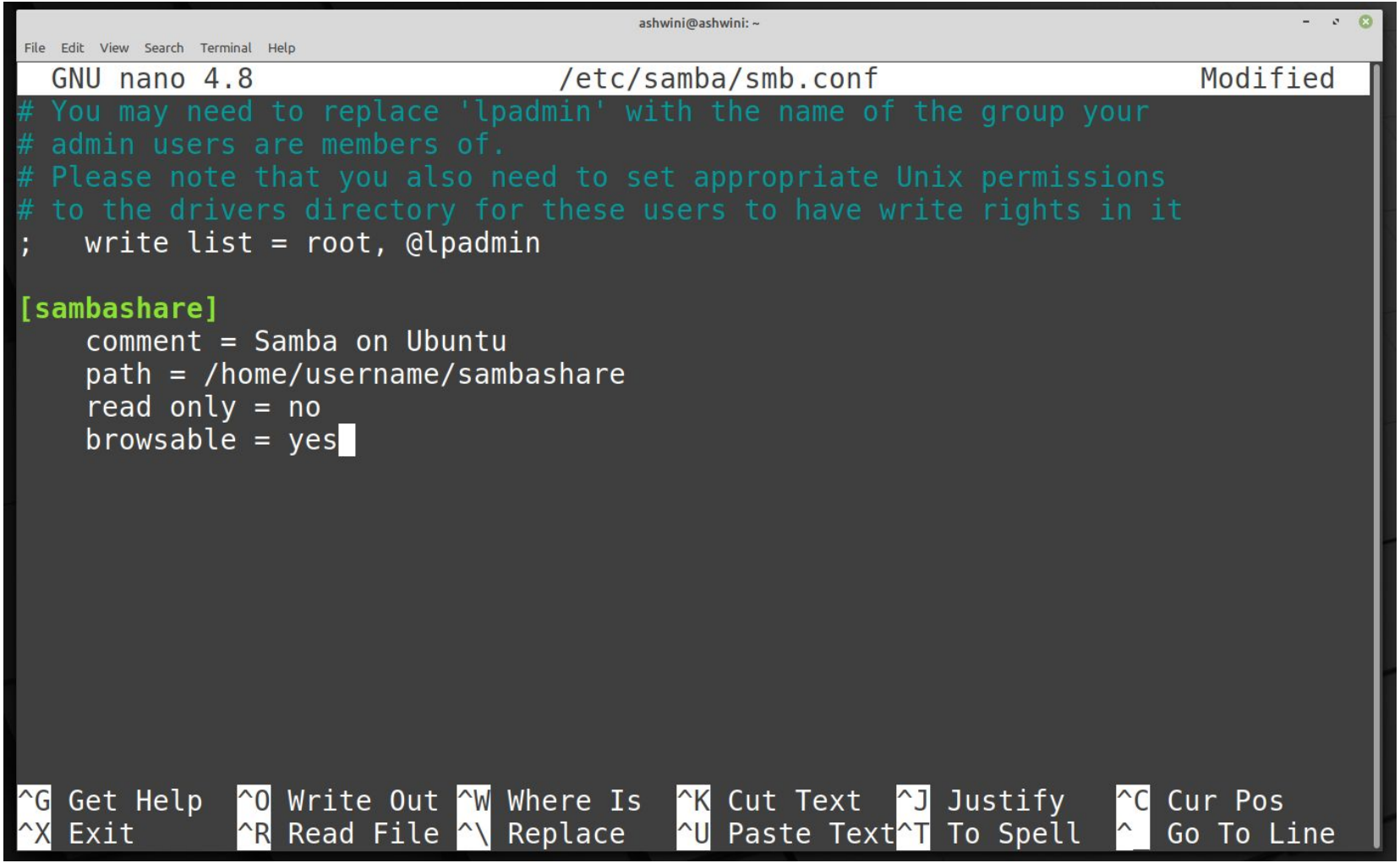
Now that Samba is installed, we need to create a directory for it to share:

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

The command above creates a new folder `sambashare` 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
```


ashwini@ashwini: ~
File Edit View Search Terminal Help
GNU nano 4.8 /etc/samba/smb.conf Modified
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
[sambashare]
comment = Samba on Ubuntu
path = /home/username/sambashare
read only = no
browsable = yes
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line

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

```
[sambashare]

    comment = Samba on Ubuntu

    path = /home/username/sambashare

    read only = no

    browsable = yes
```

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

What we’ve just added

    - comment: A brief description of the share.
- path: The directory of our share.
- read only: Permission to modify the contents of the share folder is only granted when the value of this directive is `no`.
- browsable: When set to `yes`, file managers such as Ubuntu’s default file manager will list this share under “Network” (it could also appear as browseable).

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

```
sudo service smbd restart
```

Update the firewall rules to allow Samba traffic:

```
sudo ufw allow samba
```

Setting up User Accounts and Connecting to Share

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
```

Note

Username used must belong to a system account, else it won’t save.

```
ashwini@ashwini:~$ sudo smbpasswd -a ashwini
New SMB password:
Retype new SMB password:
Added user ashwini.
ashwini@ashwini:~$ useradd student
useradd: Permission denied.
useradd: cannot lock /etc/passwd; try again later.
ashwini@ashwini:~$ sudo useradd student
ashwini@ashwini:~$ sudo smbpasswd -a student
New SMB password:
Retype new SMB password:
Added user student.
ashwini@ashwini:~$
```

On Windows, open up File Manager and edit the file path to:

```
\\ip-address\sambashare
```

Note: `ip-address` is the Samba server IP address and `sambashare` is the name of the share.

Connecting to Share

On windows: Open up the default file manager and click *Connect to Server* then enter: