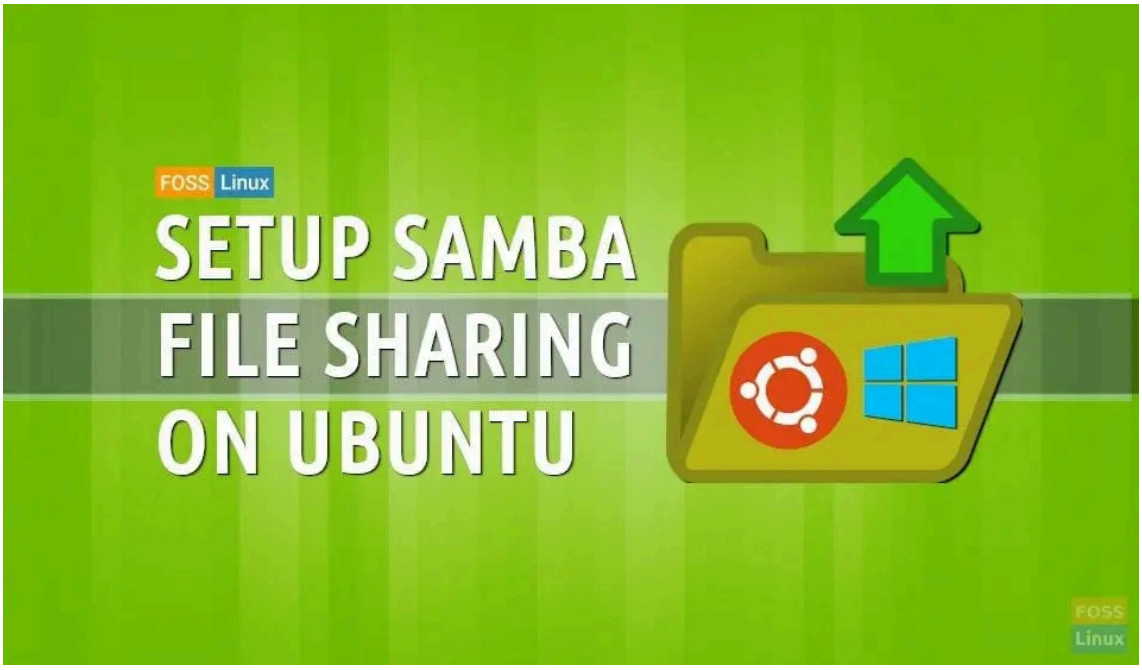
How to setup Samba File Sharing Server on Ubuntu

By Hend Adel • **Published:** March 9, 2019 • **Updated:** December 22, 2019



Do you have multiple machines running several operating systems? Then you may face issues while transferring files to and fro between those machines. It is a not a great feeling to waste your time troubleshooting file transfer issues.

Hence, we suggest to create a folder and then share it with all the systems connected to the local network. In this tutorial, we walk you through the process of setting up a folder in your local network for being able to share its content across Windows and Linux systems. Its only one-time installation with few little configurations and your files should be ready to share across your different machines.

We shall use a popular tool **Samba**.

Setting up Samba Server to share files across Linux, Windows, and Mac OS X systems

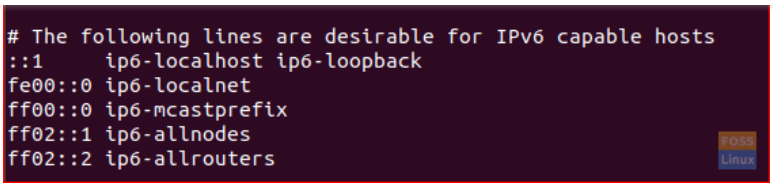
Samba is a opensource tool that can help you to share the files and printer across cross platforms including Linux, Windows, and Mac over a network.

This tutorial guides you on how to install and configure Samba, to enable file sharing between Ubuntu and Windows. However, first we need to prepare our environment as follows:

Step 1 – Setting up Ubuntu and Windows Hosts

On Ubuntu, put your Ubuntu IP and hostname in the /etc/hosts file. Also, add a record for the Windows IP and hostname.

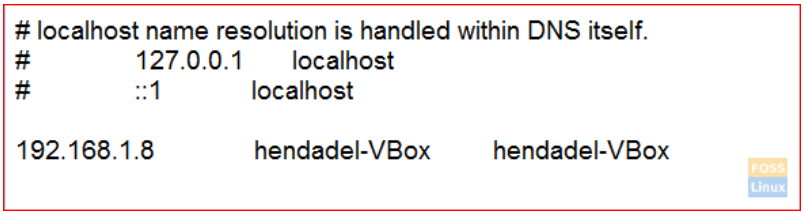
```
sudo vi /etc/hosts
```



Ubuntu Hosts File

On Windows, put your machine IP and hostname. Also, add a record for your Ubuntu IP and hostname.

```
notepad C:\\Windows\System32\drivers\etc\hosts
```

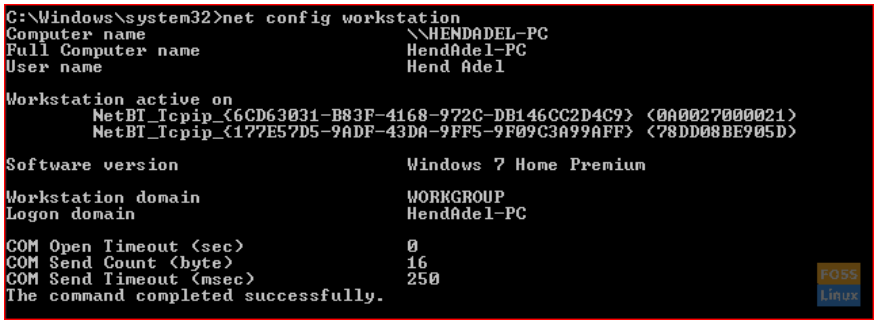


Windows Hosts File

Step 2 – Configure domains

Both machines must be in the same domain, check the default Windows workstation domain using the next command.

```
net config workstation
```



Windows Current Domain

As you can see from the previous screenshot, the Windows domain is WORKGROUP.

Step 3 – Enable File Sharing on Windows

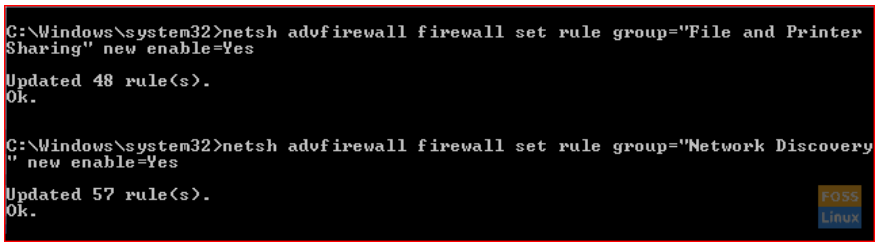
Enable File Sharing on Windows, open cmd with administrator privileges and run the next two commands.

Also Read

- What's New in Ubuntu 20.04 LTS "Focal Fossa"

```
netsh advfirewall firewall set rule group="File and Printer Sharing" new enable=Yes
netsh advfirewall firewall set rule group="Network Discovery" new enable=Yes
```

The output should be like below:



Enable File-sharing and Network Discovery

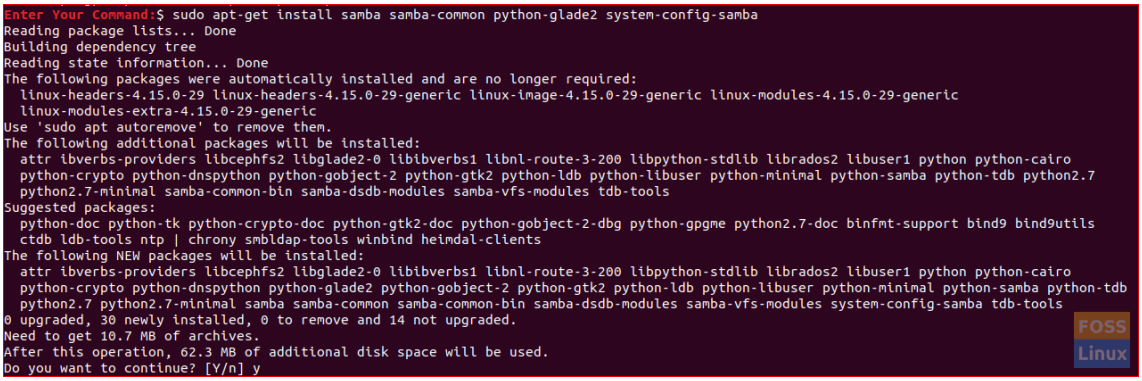
Step 4 – Install Samba on Ubuntu

Ensure that your Ubuntu updated.

```
sudo apt-get update
sudo apt-get upgrade
```

Run next command to install Samba on Ubuntu.

```
sudo apt-get install samba samba-common python-glade2 system-config-samba
```

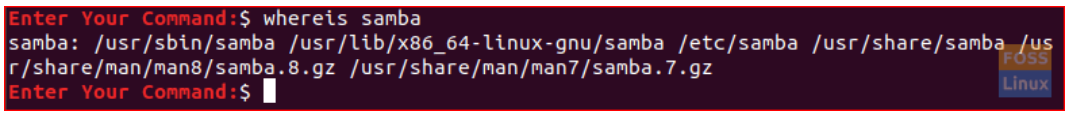


Install Samba

Check if the Samba installation was successful.

```
whereis samba
```

The output should like below:



Verify Samba Installation

Step 5 – Setup Public Shared Folder on Ubuntu

Create a public directory on Ubuntu for sharing.

```
sudo mkdir -p /home/hendadel/sambashare
```

Set the directory permissions so that anyone can read/write to it.

```
Enter Your Command:$ sudo mkdir -p /home/hendadel/sambashare/
Enter Your Command:$ sudo chmod -R 0775 /home/hendadel/sambashare/
Enter Your Command:$ sudo chown -R nobody:nogroup /home/hendadel/sambashare/
```

Create a Shared Directory

Step 6 – Copy and setup Config file

Copy Samba default configuration file to be a backup file in case any error happens in the future.

```
sudo cp /etc/samba/smb.conf /etc/samba/smb.conf.backup
```

Edit Samba configuration file

```
sudo vi /etc/samba/smb.conf
```

Add the next lines to Samba configuration file:

Also Read

- Installing and setting up Plex Media Server on Ubuntu
- How to install (and uninstall) XFCE on Ubuntu
- How to install Tor Browser in Ubuntu

```
[global]
workgroup = WORKGROUP
server string = Samba Server %v
netbios name = hendadel-VBox
security = user

[SambaShare]
Comment = Samba Shared Directory
path = /home/hendadel/sambashare
writable = yes
guest ok = yes
read only = no
force user = nobody
```

```
        workgroup = WORKGROUP
        netbios name = hendadel-VBox
        security = user
[SambaShare]
        comment = Samba Shared Directory
        path = /home/hendadel/sambashare
        browsable =yes
        writable = yes
        guest ok = yes
        read only = no
        force user = nobody
```

Edit Samba Config File

Check the Samba configuration file using the next command.

```
testparm
```

The output should be like this:

```
[global]
        dns proxy = No
        security = USER
        server string = %h server (Samba, Ubuntu)
        idmap config * : backend = tdb


[SambaShare]
        comment = Samba Shared Directory
        force user = nobody
        guest ok = Yes
        path = /home/hendadel/sambashare
        read only = No


[printers]
        browseable = No
        comment = All Printers
        create mask = 0700
        path = /var/spool/samba
        printable = Yes


[print$]
        comment = Printer Drivers
        path = /var/lib/samba/printers
```

Samba Configuration File Check

Step 7 – Restart Samba Service.

```
sudo service smbd restart
```

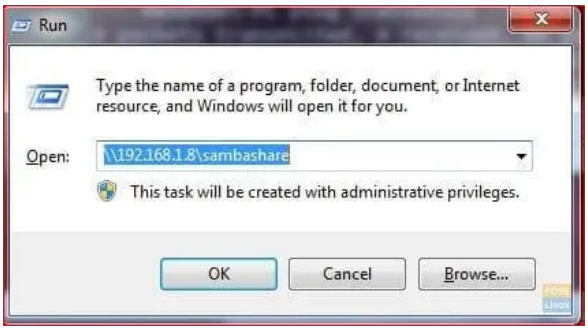
```
Enter Your Command:$ sudo service smbd restart
Enter Your Command:$
```

Restart Samba Services

Step 8 – Access Samba Share on Windows

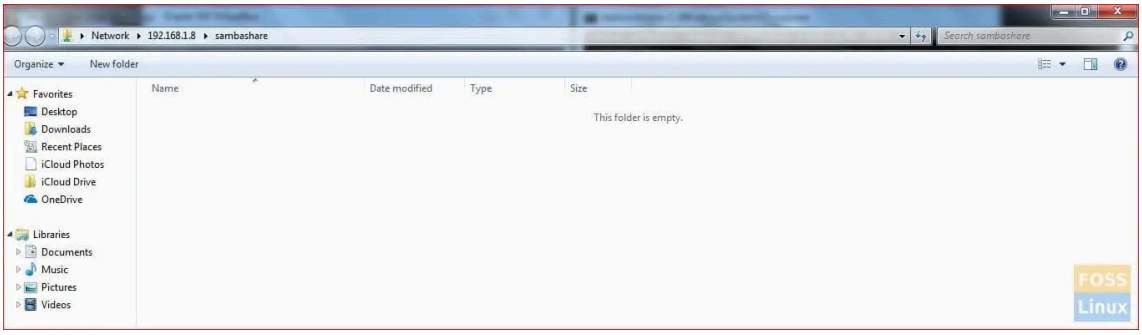
Now from your Windows machine, open run and use the following command to open Ubuntu shared folder.

```
\\192.168.1.8\sambashare
```



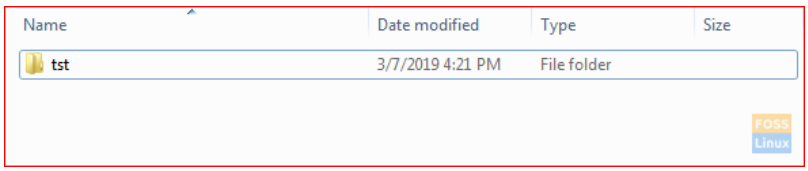
Open Shared From Run

The shared folder should like this:



You can now create folders or files inside the shared directory from your Windows machine and check if they created in Ubuntu too.

First, create a test folder from Windows:



Create Test Folder

Check the created folder from Ubuntu:

```
Enter Your Command:$ ls -l /home/hendadel/sambashare/
total 4
drwxr-xr-x 2 nobody nogroup 4096 Mar  7 16:21 tst
Enter Your Command:$
```

Check Created Folder

Step 9 – Set Private Shared Directory

Previously, we had a public folder for all network members. What if you need to share a folder with some specific users, or in other words users who have username and password only can access the shared directory.

First, we need to create a group, add users and members to this group and only members of this group should have access to the shared directory.

Create a group:

Also Read

- How to install and use Oh My Zsh on Ubuntu
- Unpacking and installing .tar.xz and .tar.gz files on Ubuntu
- Things to do after installing Ubuntu Desktop

```
sudo addgroup smbgroup
```

```
Enter Your Command:$ sudo addgroup smbgroup
Adding group `smbgroup' (GID 1001) ...
Done.
```

Create a Group

Add your Ubuntu user to the smbgroup.

```
sudo usermod -aG smbgroup hendadel
```

Give a password for the samba user.

```
sudo smbpasswd -a hendadel
```

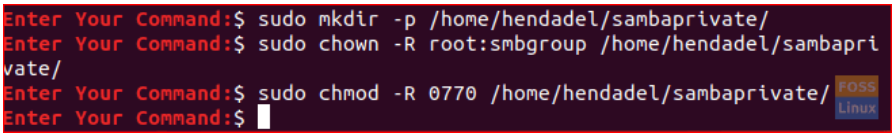
```
Enter Your Command:$ sudo usermod -aG smbgroup hendadel
Enter Your Command:$ sudo smbpasswd -a hendadel
New SMB password:
Retype new SMB password:
Enter Your Command:$
```

Add user to group

Now, create a directory to share in private.

Set permissions to the previous directory, so that only root and members of smbgroup access the shared directory.

```
sudo chown -R root:smbgroup /home/hendadel/sambaprivate/
sudo chmod -R 0770 /home/hendadel/sambaprivate/
```



Change Permissions

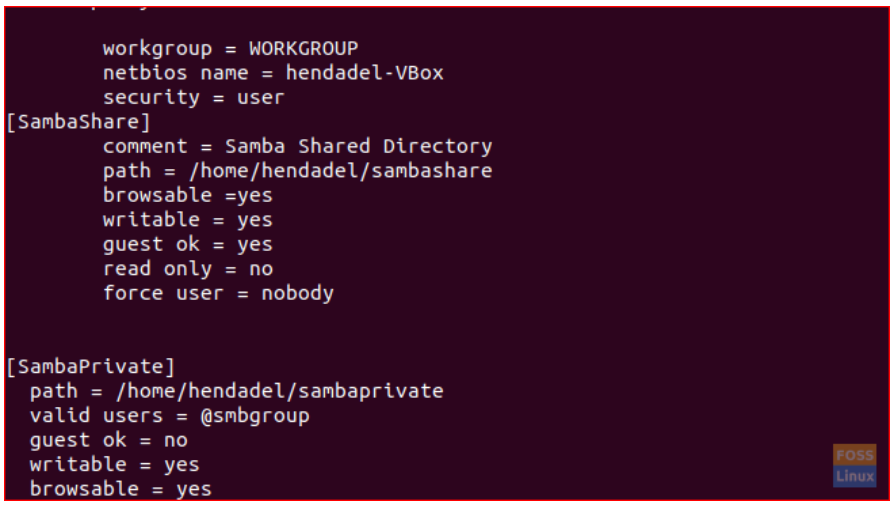
Edit Samba configuration file to add the new created directory.

```
sudo vi /etc/samba/smb.conf
```

Add the below:

```
[SambaPrivate]
path = /home/hendadel/sambaprivate
valid users = @smbgroup
guest ok = no
writable = yes
browsable = yes
```

The configuration file should be as follows:



Edit Samba Config File

Restart Samba service.

```
sudo service smbd restart
```

Check the Samba configuration file:

```
testparm
```

```
rlimit_max: increasing rlimit_max (1024) to minimum Windows limit (16384
)
Processing section "[SambaShare]"
Processing section "[SambaPrivate]"
Global parameter log file found in service section!
Global parameter max log size found in service section!
WARNING: The "syslog" option is deprecated
Global parameter syslog found in service section!
Global parameter panic action found in service section!
Global parameter server role found in service section!
Global parameter passdb backend found in service section!
Global parameter obey pam restrictions found in service section!
Global parameter unix password sync found in service section!
Global parameter passwd program found in service section!
Global parameter passwd chat found in service section!
Global parameter pam password change found in service section!
Global parameter map to guest found in service section!
Global parameter usershare allow guests found in service section!
Processing section "[printers]"
Processing section "[print$]"
Loaded services file OK.
```

Restart Service and Check Configurations

Check the two created folders from Windows machine.

Also Read

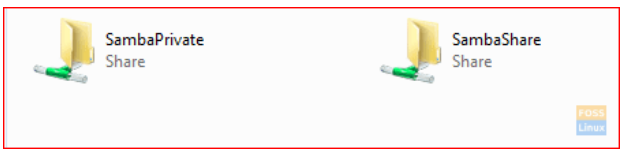
- Install NVIDIA Drivers on Ubuntu (command-line and GUI ways)
- Top 10 features in Ubuntu 22.10, and how to upgrade
- How to fix the “Read-Only File System” error on Ubuntu

```
\\192.168.1.8\sambashare
```

Windows should ask you for username and password like the below screenshot.

Enter Username and Password

After entering your credentials, you should see the shared directories as below.



Check Shared Folders

Finally, I hope you enjoyed this tutorial. Moreover, for any further questions, leave us a comment, and we will be glad to help you.

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5 COMMENTS

DANIEL REPLY

July 27, 2019 - 4:03 PM

Hey, when I try to access the private file from windows it says I do not have permission.
I created a user in smbgroup
and followed all the steps

SYNGIUN REPLY

February 29, 2020 - 3:46 PM

Great guide. Could you include a sample smb.service template?
Would be great since many distros are using systemd.
If am completely misinformed, please correct me and tell me how to get this running automatically at boot.
Currently running Debian Buster on a Raspberry Pi 4B.

KEN OLSON REPLY

April 27, 2020 - 6:41 PM

Total newbie here.
I am installing Ubuntu Server for the sole purpose of sharing files. I have been following everything well until:
“sudo apt-get install samba samba-common python-glade2 system-config-samba”
I am getting the message “E: unable to locate package python-glade2” and “E: unable to locate package system-config-samba”. whereis samba results in “samba:”
Do I need a different apt repository? Or what?
Thanks,
Ken

KEN OLSON REPLY

Python2 support
————————
Samba 4.11 will not have any runtime support for Python 2.
If you are building Samba using the '–disable-python' option
(i.e. you're excluding all the run-time Python support), then this
will continue to work on a system that supports either python2 or
python3.
To build Samba with python2 you *must* set the 'PYTHON' environment
variable for both the 'configure' and 'make' steps, i.e.
'PYTHON=python2 ./configure'
'PYTHON=python2 make'
This will override the python3 default.
Except for this specific build-time use of python2, Samba now requires
Python 3.4 as a minimum.
Can I simply substitute 3.4 for the 2 in the argument?

GRUNE REPLY

April 27, 2020 - 10:22 PM

how to adapt this tutorial to include a remote file server?

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