

# Sharing Files between Ubuntu and Windows Systems with Samba

What is Samba service?

Samba is a Linux- and Unix-compatible open-source software package. It mostly functions as a native program for interfacing with Windows clients. SAMBA uses the Common Internet File System to do this (CIFS). The installation and setup of Samba proxy on Linux Mint 20 are covered in this article.

Step 1: Install samba

```
File Edit View Search Terminal Help
root@UBUNTU:~#
root@UBUNTU:~#
root@UBUNTU:~# sudo apt update
Get:1 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Hit:2 http://in.archive.ubuntu.com/ubuntu bionic InRelease
Get:3 http://in.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:4 http://security.ubuntu.com/ubuntu bionic-security/main amd64 DEP-11 Metadata [76.8 kB]
Get:5 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 DEP-11 Metadata [62.5 kB]
Get:6 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 DEP-11 Metadata [2,464 B]
Get:7 http://in.archive.ubuntu.com/ubuntu bionic-backports InRelease [83.3 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 DEP-11 Metadata [297 kB]
```

```
root@UBUNTU:~# sudo apt install samba -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
samba is already the newest version (2:4.7.6+dfsg~ubuntu-0ubuntu2.29).
```

Verify the installation:

```
root@UBUNTU:~# whereis samba
samba: /usr/sbin/samba /usr/lib/x86_64-linux-gnu/samba /etc/samba /usr/share/samba /usr/share/man/man8/samba.8.gz /usr/share/man/man7/samba.7.gz
root@UBUNTU:~# samba -V
Version 4.7.6-Ubuntu
root@UBUNTU:~#
```

Check the status:

```
total 16
drwxr-xr-x  2 mariya    mariya    4096 Aug  7 16:03 mariya
drwxr-xr-x 15 jacquilm  jacquilm 4096 Aug  7 17:28 jacquilm
drwxrwxrwx+ 2 root      nogroup  4096 Aug  7 17:44 sharing
drwxr-xr-x  2 root      root      4096 Aug  7 17:52 share
root@UBUNTU:/home# systemctl status smbd
● smbd.service - Samba SMB Daemon
   Loaded: loaded (/lib/systemd/system/smbd.service; enabled; vendor preset: en
   Active: active (running) since Mon 2023-08-07 16:44:55 IST; 1h 20min ago
     Docs: man:smbd(8)
           man:samba(7)
           man:smb.conf(5)
    Main PID: 774 (smbd)
   Status: "smbd: ready to serve connections..."
     Tasks: 7 (limit: 2326)
    CGroup: /system.slice/smbd.service
            └─ 774 /usr/sbin/smbd --foreground --no-process-group
              826 /usr/sbin/smbd --foreground --no-process-group
              828 /usr/sbin/smbd --foreground --no-process-group
              834 /usr/sbin/smbd --foreground --no-process-group
```

Create Directory:

```
root@UBUNTU:/home/share# ls
root@UBUNTU:/home/share# mkdir -p /home/sharing
root@UBUNTU:/home/share# cd
root@UBUNTU:~# cd /home/sharing
root@UBUNTU:/home/sharing# cd .
root@UBUNTU:/home/sharing# cd ..
root@UBUNTU:/home# ls
jacquilm  mariya  share  sharing
root@UBUNTU:/home# ls -ltr
total 16
drwxr-xr-x  2 mariya    mariya    4096 Aug  7 16:03 mariya
drwxr-xr-x 15 jacquilm  jacquilm 4096 Aug  7 17:28 jacquilm
drwxrwxrwx+ 2 root      nogroup  4096 Aug  7 17:44 sharing
drwxr-xr-x  2 root      root      4096 Aug  7 17:52 share
root@UBUNTU:/home#
```

smb.conf(samba config)

```
drwxr-xr-x  2 root      root      4096 Aug  7 17:52 share
root@UBUNTU:/home# sudo vim /etc/samba/smb.conf
```

```
[global]

## Browsing/Identification ###

# Change this to the workgroup/NT-domain name your Samba server will part of
workgroup = WORKGROUP

# server string is the equivalent of the NT Description field
server string = samba_server (Samba, Ubuntu)
```

#### #### Networking ####

```
# The specific set of interfaces / networks to bind to
# This can be either the interface name or an IP address/netmask;
# interface names are normally preferred
interfaces = lo enp0s3
# Only bind to the named interfaces and/or networks; you must use the
# 'interfaces' option above to use this.
# It is recommended that you enable this feature if your Samba machine is
# not protected by a firewall or is a firewall itself. However, this
# option cannot handle dynamic or non-broadcast interfaces correctly.
bind interfaces only = yes
```

#### #### Debugging/Accounting ####

```
# This tells Samba to use a separate log file for each machine that connects
log file = /var/log/samba/log.%m

# Cap the size of the individual log files (in KiB).
max log size = 1000

# We want Samba to only log to /var/log/samba/log.{smbd,nmbd}.
# Append syslog@1 if you want important messages to be sent to syslog too.

logging = file

# Do something sensible when Samba crashes: mail the admin a backtrace
panic action = /usr/share/samba/panic-action %d
```

#### ##### Authentication #####

```
# Server role. Defines in which mode Samba will operate. Possible
# values are "standalone server", "member server", "classic primary
# domain controller", "classic backup domain controller", "active
# directory domain controller".
#
# Most people will want "standalone server" or "member server".
# Running as "active directory domain controller" will require first
# running "samba-tool domain provision" to wipe databases and create a
# new domain.
server role = standalone server
```

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# new domain.
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```

```

obey pam restrictions = yes
# This boolean parameter controls whether Samba attempts to sync the Unix
# password with the SMB password when the encrypted SMB password in the
# passwd is changed.
    unix password sync = yes
# For Unix password sync to work on a Debian GNU/Linux system, the following
# parameters must be set (thanks to Ian Kahan <kahan@informatik.tu-muenchen.de> for
# sending the correct chat script for the passwd program in Debian Sarge).
    passwd program = /usr/bin/passwd %u
    passwd chat = *Enter\snew\s*\spassword:* %n\n *Retype\snew\s*\spassword:* %n\n *p
assword\supdated\ssuccessfully* .
# This boolean controls whether PAM will be used for password changes
# when requested by an SMB client instead of the program listed in
# 'passwd program'. The default is 'no'.
    pam password change = yes
# This option controls how unsuccessful authentication attempts are mapped
# to anonymous connections
    map to guest = bad user

# Allow users who've been granted usershare privileges to create
# public shares, not just authenticated ones
    usershare allow guests = yes

```

4. To grant read, write, and execute permissions to the *sharing* directory, run `setfacl`:

```
sudo setfacl -R -m "u:new_user:rwX" /home/sharing
```

## Configure Samba Share Directory Settings

```

# 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

[sharing]
comment = Samba share directory
path = /home/sharing
read only = no
writable = yes
browsable = yes
guest ok = no

```

```

root@UBUNTU:~#
root@UBUNTU:~# vim /etc/samba/smb.conf
root@UBUNTU:~# testparm
Load smb config files from /etc/samba/smb.conf
rlimit_max: increasing rlimit_max (1024) to minimum Windows limit (16384)
Processing section "[printers]"
Processing section "[print$]"
Processing section "[sharing]"
Loaded services file OK.
Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions

```

Run Testparm :

```

root@UBUNTU:~#
root@UBUNTU:~# vim /etc/samba/smb.conf
root@UBUNTU:~# testparm
Load smb config files from /etc/samba/smb.conf
rlimit_max: increasing rlimit_max (1024) to minimum Windows limit (16384)
Processing section "[printers]"
Processing section "[print$]"
Processing section "[sharing]"
Loaded services file OK.
Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions

```

```

# Global parameters
[global]
    bind interfaces only = Yes
    dns proxy = No
    interfaces = lo enp0s3
    log file = /var/log/samba/log.%m
    logging = file
    map to guest = Bad User
    max log size = 1000
    obey pam restrictions = Yes
    pam password change = Yes
    panic action = /usr/share/samba/panic-action %d
    passwd chat = *Enter\snew\s*\spassword:* %n\n *Retype\snew\s*\spassword
:* %n\n *password\supdated\ssuccessfully* .
    passwd program = /usr/bin/passwd %u
    server role = standalone server
    server string = samba_server (Samba, Ubuntu)
    unix password sync = Yes
    usershare allow guests = Yes
    idmap config * : backend = tdb

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

```

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

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

[sharing]
    comment = Samba share directory
    path = /home/sharing
    read only = No
    valid users = @jacquilm @mariyap
root@UBUNTU:~#
```

Restart:

Sudo systemctl restart smbd

To ensure the Linux firewall allows Samba traffic, run:

```
root@UBUNTU:~#
root@UBUNTU:~# sudo ufw allow samba
Skipping adding existing rule
Skipping adding existing rule (v6)
```

To connect to the shared directory via GUI, access the default file manager and choose the Other Locations option:

File Machine View Input Help

Activities Files ▾ Mon 18:08

Other Locations

Recent  
Home  
Desktop  
Documents  
Downloads  
Music  
Pictures  
Videos  
Trash  
sharing ...  
+ Other Locations

Searching locations only

**On This Computer**

Computer 17.5 GB / 26.3 GB available /

**Networks**

sharing on 192.168.1.52  
UBUNTU  
Windows Network

Connect to Server smb://192.168.1.52/sharing/ ? ▾ Connect

File Machine View Input Help





