smb / samba

Samba Setup on Linux (Home Server)

A practical guide to installing and configuring Samba for a home network, covering a shared folder setup suitable for a home wiki or general file server.

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1. Install Samba

```
sudo apt update && sudo apt install samba samba-common-bin -y
```

Verify it's running:

```
sudo systemctl status smbd nmbd
```

Both should be active. If not:

```
sudo systemctl enable smbd nmbd --now
```

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2. Create the Share Directory

```
sudo mkdir -p /srv/samba/wiki
sudo chown -R conor:conor /srv/samba/wiki
sudo chmod 755 /srv/samba/wiki
```

Adjust owner to your actual Linux username.

3. Configure Samba

Back up the default config first:

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

Edit the config:

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

Global section — replace or update:

```
[global]
   workgroup = WORKGROUP
   server string = Home Server
   server role = standalone server
   log file = /var/log/samba/log.%m
   max log size = 1000
   logging = file
   panic action = /usr/share/samba/panic-action %d

   # Security
   security = user
   map to guest = never
   encrypt passwords = yes

   # Performance
   socket options = TCP_NODELAY IPTOS_LOWDELAY
   read raw = yes
   write raw = yes
   use sendfile = yes
```

Share definition — add to the bottom:

```
[wiki]
   comment = Home Wiki
   path = /srv/samba/wiki
   browseable = yes
   read only = no
   valid users = conor
   create mask = 0664
   directory mask = 0775
   force group = conor
```

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4. Create Samba User

Samba uses its own password store separate from Linux system passwords. The Linux user must already exist.

```
sudo smbpasswd -a conor
```

You'll be prompted to set a Samba-specific password. Enable the user:

```
sudo smbpasswd -e conor
```

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5. Validate Config and Restart

Test the config for syntax errors:

```
testparm
```

If clean:

```
sudo systemctl restart smbd nmbd
```

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6. Firewall

If UFW is active:

```
sudo ufw allow samba
```

This opens ports 137, 138 (UDP) and 139, 445 (TCP).

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7. Connect From Clients

Linux (Files / Nautilus):

```
smb://SERVER_IP/wiki
```

Or mount via CLI:

```
sudo mount -t cifs //SERVER_IP/wiki /mnt/wiki -o username=conor,password=yourpass,uid=1000,gid=1000
```

Permanent via `/etc/fstab`:

```
//SERVER_IP/wiki  /mnt/wiki  cifs  credentials=/home/conor/.smbcredentials,uid=1000,gid=1000,_netdev,x-systemd.automount  0  0
```

`/home/conor/.smbcredentials`:

```
username=conor
password=yourpass
```

```
chmod 600 /home/conor/.smbcredentials
```

macOS:

Finder → Go → Connect to Server → `smb://SERVER_IP/wiki`

Windows:

`\\SERVER_IP\wiki` in Explorer address bar, or map as a network drive.

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8. Tailscale Consideration

Since you're on Tailscale, use the Tailscale IP (`100.x.x.x`) instead of the LAN IP for consistent access across all your machines regardless of which network you're on. This also avoids exposing Samba to the public internet — Samba should **never** be exposed publicly, it has a long CVE history (EternalBlue, etc.).

Bind Samba only to your LAN + Tailscale interfaces to be safe:

```
[global]
   interfaces = lo tailscale0 eth0
   bind interfaces only = yes
```

Replace `eth0` with your actual LAN interface (`ip a` to check).

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9. Verify the Share is Visible

From the server itself:

```
smbclient -L localhost -U conor
```

From another machine:

```
smbclient -L //SERVER_IP -U conor
```

You should see `wiki` listed under shares.

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10. Troubleshooting

Symptom	Likely cause	Fix
"Permission denied" on connect	Wrong Samba password or user not enabled	`smbpasswd -e username`
Share not visible	`browseable = no` or firewall	Check config + `ufw status`
Can connect but can't write	Directory permissions	`chmod 775 /srv/samba/wiki`
Works on LAN, not Tailscale	Interfaces binding	Add `tailscale0` to `interfaces`

Symptom	Likely cause	Fix
`testparm` errors	Config syntax	Read the output carefully, it's specific

Notes

- Samba passwords and Linux system passwords are **independent** — changing one doesn't change the other.
- For a multi-user setup, create a dedicated group (e.g., `sambashare`) and use `valid users = @sambashare` in the share definition.
- If you're running this on the same machine as your wiki app (e.g., WikiJS, Obsidian vault server), Samba is a good way to access the underlying vault files directly from other machines for editing.

Revision #1
Created 6 June 2026 21:51:23 by Conor
Updated 6 June 2026 21:52:02 by Conor