

# Guide: Setting Up Samba on Ubuntu for Windows Access

## Prerequisites

- **Ubuntu Server** with sudo access.
- **Windows Client** to access the shared folder.
- Basic knowledge of Linux commands.

## Step 1: Install and Configure Samba on Ubuntu

### Update and Install Samba:

```
sudo apt update
sudo apt install samba -y
```

**Create a Shared Directory:** Choose or create a directory to share. Here, we'll use `/home/ubuntu/shared_data`:

```
sudo mkdir -p /home/ubuntu/shared_data
```

**Set Directory Permissions:** To allow Samba to access this directory, give read, write, and execute permissions to the `ubuntu` user:

```
sudo chown -R ubuntu:ubuntu /home/ubuntu/shared_data
sudo chmod -R 755 /home/ubuntu/shared_data
```

**Edit Samba Configuration:** Open the Samba configuration file:

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

Add the following at the end of the file:

```
[shared_data]
path = /home/ubuntu/shared_data
available = yes
valid users = ubuntu
read only = no
browsable = yes
public = yes
writable = yes
force user = ubuntu
```

### Save and Exit:

- Press **CTRL + O**, press Enter to save.
- Press **CTRL + X** to exit.

**Create a Samba User:** Add the Linux user to Samba and set a password:

```
sudo smbpasswd -a ubuntu
```

**Restart Samba Service:** To apply changes:

```
sudo systemctl restart smbd
```

## Step 2: Set Permissions on the Shared Directory

Make sure that files in the directory are readable by the Samba service:

**Set Permissions for Files:**

```
sudo chmod -R 755 /home/ubuntu/shared_data  
sudo chmod -R o+r /home/ubuntu/shared_data/*
```

## Step 3: Access the Shared Folder from Windows

### 1. Check Windows Firewall and Network Discovery

- Enable Network Discovery:
- Go to Control Panel > Network and Sharing Center > Advanced sharing settings.
- Ensure Network Discovery is enabled.
- Allow File Sharing in Windows Firewall:
- Open Windows Defender Firewall.
- Click on Allow an app or feature through Windows Defender Firewall.
- Make sure File and Printer Sharing is checked for the network you're connected to.

### 2. Map the Network Drive in Windows:

- Open **File Explorer**.
- Right-click on **This PC** and select **Map network drive**.

### 3. Enter Path and Credentials:

- **Folder:** Enter the path in the format `\\<Ubuntu_IP_Address>\shared_data` (replace `<Ubuntu_IP_Address>` with your actual Ubuntu server IP).
- OR

```
net use Z: \\172.31.34.36\shared_data /user:your_username <your_password>
```

- Check **Connect using different credentials**.

- Click **Finish**.
- 4. **Authenticate:**
  - Enter the Samba username and password you set earlier (**ubuntu** and its password).
  - Check **Remember my credentials** and click **OK**.
- 5. **Access the Drive:**
  - Your shared folder should now be accessible as a network drive in Windows.