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## Share your Raspberry Pi's files and folders across a network

You can share your Raspberry Pi's files and folders across a network using a piece of software called Samba, a Linux implementation of the Server Message Block protocol. You'll need to install this software:

```
$ sudo apt-get install samba samba-common-bin
```

Samba contains the SMB protocol, support for the Windows naming service (WINS), and support for joining Windows workgroups. A workgroup is a group of computers on a local network that can access each other's folders. Samba-common-bin contains a tool that you'll need to register users with Samba. Once these packages have finished installing, you need to edit the Samba configuration file:

```
$ sudo leafpad /etc/samba/smb.conf &
```

Find the entries for workgroup and wins support, and set them up as follows:

```
workgroup = your_workgroup_name  
wins support = yes
```

The name of the workgroup can be anything you want, as long as it only contains alphabetical characters, and it matches the name of the workgroup that you want to join.

You also need to add the following section of code to smb.conf:

```
[pihome]
comment= Pi Home
path=/home/pi
browseable=Yes
writeable=Yes
only guest=no
create mask=0777
directory mask=0777
public=no
```

Scroll down smb.conf until you see a section called Share Definitions, and add this code there. The path should point to the drive or folder that you want to share. I've set 'only guest' and 'public' to 'no' so that Samba prompts for a password when I visit the folder that I've shared. This means that when I'm using a Windows PC, I can login to the shared folders on my Pi, and I'll have the same read/write permissions that user pi has.

Now type this command in a terminal, and enter pi's password twice:

```
$ smbpasswd -a pi
```

If you have a PC or laptop connected to your workgroup, you should be able to see your Raspberry Pi in Windows Explorer under Network.

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## Comments

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Raspberry Web Server

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Dean D • a year ago



Hi, I cant make this work. I followed all the instructions but I still can't see my raspberry pi in windows explorer. What is the name of the process (samba server)? also does this start automatically when you boot raspi?

Thanks in advance

10 ^ | v • Reply • Share ›



**PyPlate** Mod → Dean D • 10 months ago

Samba start automaitcally. See the comment below on how to restart it. Also note that with the latest release of Raspbian, in smb.conf I had to set the name of the workgroup to WORKGROUP for it to work reliably.

^ | v • Reply • Share ›



**Jiří Kačírek** • 9 months ago

If you have problem to see RPi in Networks here is my solution:

- 1) You must be connected to the same router as RPi
- 2) Click on "Network and Sharing center"
- 3) Near the SSID (name of router u r connected) u can see type of network: "Home", "Work", "Public"
- 4) You must select "Work", then you get allow "WORKGROU" and u can see the RPi in WinExplorer (depend if you select "WORKGROU" in tutorial "your\_workgroup\_name" line)

George

5 ^ | v • Reply • Share ›



**LokizFenrir** → Jiří Kačírek • 13 days ago

see what you mean, but "WORKGROU" is a domain and can be changed at any time albeit cause minor problems sometimes, "WORK", "HOME" & "PUBLIC" is a windows network security feature called windows network location. Which does little more than add certain restrictions. Home - least restricted. Work - semi restricted, Public most restricted.

I have been running my personal network as "HOME" on my own domain, and also had to change it to "WORKGROU" for xbian, planning to tinker with the code as it is unstable and not reliable to hardcode that.

1 ^ | v • Reply • Share ›



**MrPunkassfuck** → Jiří Kačírek • 2 months ago

Selecting WORK as network fixed it for me, been troubleshooting for a day. THANKS A TON, Jiri.

^ | v • Reply • Share ›



**Dubyah** • a year ago

I tried this but it seems that I get a permission denied message every time. If I use the default "homes" share I can see my user's home directory without typing in a password (which I don't want) but I can't seem to ever get the authentication to work.

5 ^ | v • Reply • Share ›



**PyPlate** Mod → Dubyah • a year ago

Make sure that public and only guest settings are both set to 'no'. Also try setting browseable to 'no'. Did you run the smbpasswd command?

5 ^ | v • Reply • Share ›



**Stigern** → PyPlate • a year ago

I did all this, but I get access denied. This is how my home config looks like:

```
[pihome]
comment= Pi Home
path=/home/pi
browseable=ves
```



```
create mask = 0777
directory mask = 0777
public = no
read only = no
force user = root
```

Thank you ALL for the assistance.

1 ^ | v • Reply • Share ›



**Guest** → Kenneth Huebner • a month ago

This fixed my problem: I was able to read the mapped folder, but not write to it. Now it works, thanks.

^ | v • Reply • Share ›



**sanjay** • 6 months ago

hey when i type...sudo nano / etc / samba / smb.conf  
im getting empty folder shall i type the above code there.... thanks

1 ^ | v • Reply • Share ›



**Rick Gutleber** → sanjay • 15 days ago

Don't put spaces in the filename:

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

1 ^ | v • Reply • Share ›



**PyPlate** Mod → sanjay • 5 months ago

The file shouldn't be empty. It should have comments and default settings. Check that samba is installed and that you're editing the right file.

^ | v • Reply • Share ›



**Arizona Sailor** • 10 months ago

I can't get this to work to save my life. I added/modified all the lines in smb.conf as described. Restarted Samba, rebooted etc. The Pi still does not show on the Windows network. I can Ping it's address via the command prompt in Windows and it responds just fine. I can ping any of my Windows network workstations from the RPi and all of them respond fine.

I tried the WORKGROUP name as well as my real network name but no luck. I don't understand why I cannot see the RPi when I run a network map in Windows or click on the Computer > Network icon. Since I am a total newbie to Raspbian/Linux perhaps I am expecting to see something that I am not going to see such as the RPi appearing on my network map.

I am stumped.

1 ^ | v • Reply • Share ›



**Etienne Doucet** • 23 days ago

I had a authentication problem with samba but i solved it

I did this yesterday and i'm not currently on my RASPBERRY PI so I may have made some mistake but that about how i solved it

(ON THE RASPBERRY PI WITH Raspbian's Graphical UI)

Right click on the folder you want to share

Properties

Click on the tab PERMISSION

Write and modify (in 3 field)

1 ^ | v • Reply • Share ›



**Paul D** • 10 months ago



Thank you, this helped me a lot

1 ^ | v • Reply • Share ›



**Michael Palladino** • 17 days ago

Thanks for the writeup - worked like a charm.

Just wondering if there's anything I can do (settings possibly) that would allow this home server to better stream video I'd like to share. With the current setup, the video and audio are not in sync and it makes viewing very difficult.

^ | v • Reply • Share ›



**PyPlate** Mod → Michael Palladino • 17 days ago

Are you using wifi or ethernet? If you're using wifi, I'd try switching to an ethernet connection instead.

^ | v • Reply • Share ›



**Graeme** • 10 months ago

I'm having the same issues as Dubyah and Stigern. I can browse and read /pi but cannot gain access to /pihome, even using WORKGROUP

Thanks for the tutorial, Im sure there's an easy fix to be found!

^ | v • Reply • Share ›



**Hossein M** → Graeme • 10 months ago

add this under [pihome]:

force user = root

1 ^ | v • Reply • Share ›



**Graeme** → Hossein M • 10 months ago

Thanks, I am working with the following settings, I am able to access Rpi read/write, however, I am not being prompted for a password. Some of the settings may be redundant so I'd love some feedback. Thanks again.

```
[global]
workgroup = WORKGROUP
server string = %h server
wins support = yes
dns proxy = no
security = user
username map = /etc/samba/smbuser
guest ok = no
browseable = no
```

```
[Rpi]
comment = Main user share
path = /
browseable = yes
read only = no
only guest = no
writeable = yes
create mask = 0777
directory mask = 0777
force user = root
```

1 ^ | v • Reply • Share ›



**PyPlate** Mod → Graeme • 10 months ago

Try setting browseable = no

^ | v • Reply • Share ›



**Graeme** → PyPlate • 10 months ago

This makes he folder not visible

1 ^ | v • Reply • Share ›



**Hossein M** • 10 months ago

Hi, thanks for great tutorial.

After rebooting Rpi couldn't access to shared folders, how can i run Samba on boot?

^ | v • Reply • Share ›



**PyPlate** Mod → Hossein M • 10 months ago

The Samba daemon is automatically managed by Linux, so you don't need to start it manually. You can restart it with this command:

```
sudo /etc/init.d/samba restart
```

With the latest version of Raspbian, I found that I had to use the workgroup name WORKGROUP for it to work reliably.

2 ^ | v • Reply • Share ›



**Anoniem** → PyPlate • 8 months ago

Problem solved

^ | v • Reply • Share ›



**Hossein M** → PyPlate • 10 months ago

Thanks, Problem solved.

^ | v • Reply • Share ›



**Wei Ang** • a year ago

Hi, I can't make this work also. For the command smbpasswd -a pi, we need to type it on where? Raspberry pi terminal or pc terminal?

^ | v • Reply • Share ›



**PyPlate** Mod → Wei Ang • 10 months ago

You need to run that command in a terminal on your Pi. Due to updates to Samba made since this article was written, you need to use sudo.

1 ^ | v • Reply • Share ›



**Andrew Davison** • a year ago

Thanks, works a treat.

^ | v • Reply • Share ›



**Erika velasquez Martinez** • a year ago

does this make it possible to transfer windows files to the pi?

^ | v • Reply • Share ›



**PyPlate** Mod → Erika velasquez Martinez • a year ago

Yes, you can browse your Pi's folders on your PC or laptop, and copy files from your PC to your Pi.

^ | v • Reply • Share ›



**Seamus Import** • a year ago

Hi, When I try to run leafpad to edit the smb.conf file i get the message " Cannot open display" what am I doing wrong?

^ | v • Reply • Share ›



**PyPlate** Mod → Seamus Import · a year ago

Have you booted into the desktop? If not, use nano instead of leafpad.

1 ^ | v · Reply · Share ›



**Seamus Import** → PyPlate · a year ago

Thanks for that. Yes I was not in the desktop! I am very much a beginner in Linux and Pi talk!

^ | v · Reply · Share ›

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