

Using Samba File Sharing in MX Linux

Introduction

Samba aka SMB is used to offer shares and to connect to shares on Linux, Windows Vista/ 7/8/10/11 and other Network (NAS) devices. Due to recent security updates Samba will not connect to older Windows versions.

Summary of steps:

- Create the share(s) on Linux or Windows.
- Set the Linux UserID(s) SMB password.
- In Windows enable 'Network Discovery' and 'File Sharing'.
- Use one of these connection methods:
 - Connect to a SMB (Windows) file share (PC, NAS or Router) with a MX Linux PC.
 - Connect to a MX Linux/NAS share with a Windows PC.

1.0 Firewalls **may** prevent connection

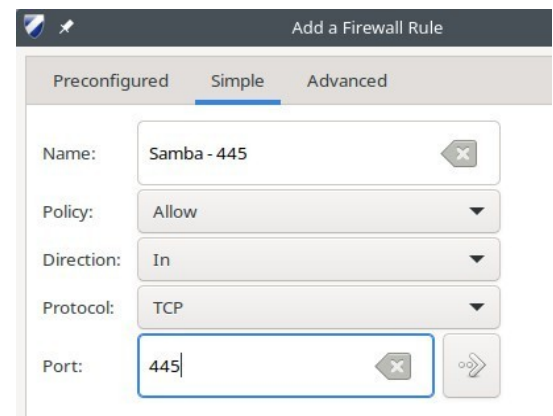
Starting with MX Linux 23, the 'Uncomplicated Firewall' aka UFW is **enabled** and set to **Ignore ALL Incoming connections**. This Firewall will prevent Samba shares from working correctly. Shares may wait a very long time to connect and never do so, or give an error message. Some of these error messages are not very clear. Examples: 'Access Denied' or 'Timeout connecting to...' are typical error messages. Empty folder also occur.

The 'Firewall Configuration' is a GUI app (gufw) used for the configuration of the 'Uncomplicated Firewall', aka UFW. This makes it a simple to configure the firewall. This GUI app (gufw) is installed by default in Xfce & Fluxbox. KDE users should install, via MX Package Installer the package named 'gufw'.

Adding a Simple firewall exception rule (example – Samba)

Samba uses just port 445 with the TCP protocol for the latest versions of Windows. To configure a 'Simple' exception rule for Samba:

- Run the 'Firewall Configuration' app.
- Click the 'Rules' button and then +.
 - **Click the 'Simple' tab.**
 - In 'Name:' type 'Samba – 445'.
- In the 'Protocol:': click down and select 'TCP'.
- In 'Port:' type '445'.
- Click the 'Add' button and then 'Close'.



WARNING: There are many other guides that show more ports being opened for older versions of Samba. Opening *these additional port ranges can result in multiple severe Malware afflictions.*

2.0 Creating MX Linux file shares

The smb.conf file is NOT edited by the 'MX Samba Config' app and Thunar shares will NOT be managed by this app.

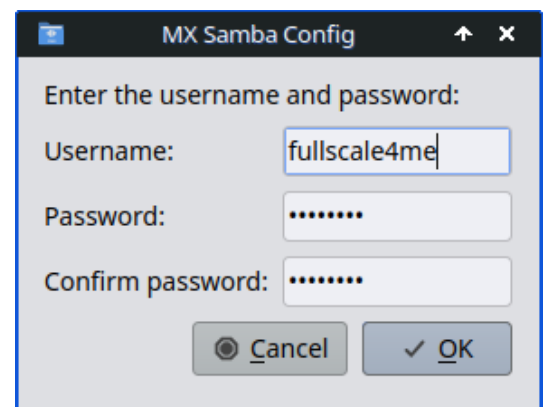
2.1 Use of the 'MX Samba Config'

The user that owns the share folder **MUST** have a Samba password set for remote connections to the shares to succeed. Open the 'MX Samba Config' app.

2.2 Setting the user's Samba password

- Click the 'Uusers' tab.
- Click 'Add'.
- Fill in the 'Username:', 'Password:', and 'Confirm password:'.

Figure: setting a user's Samba password



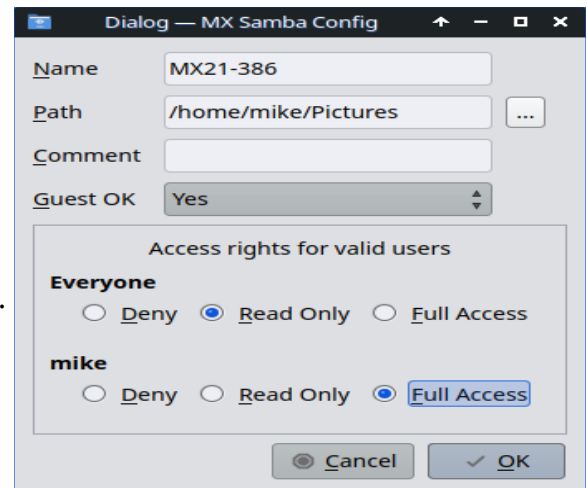
2.3 Creating file shares with the MX Samba Config tool

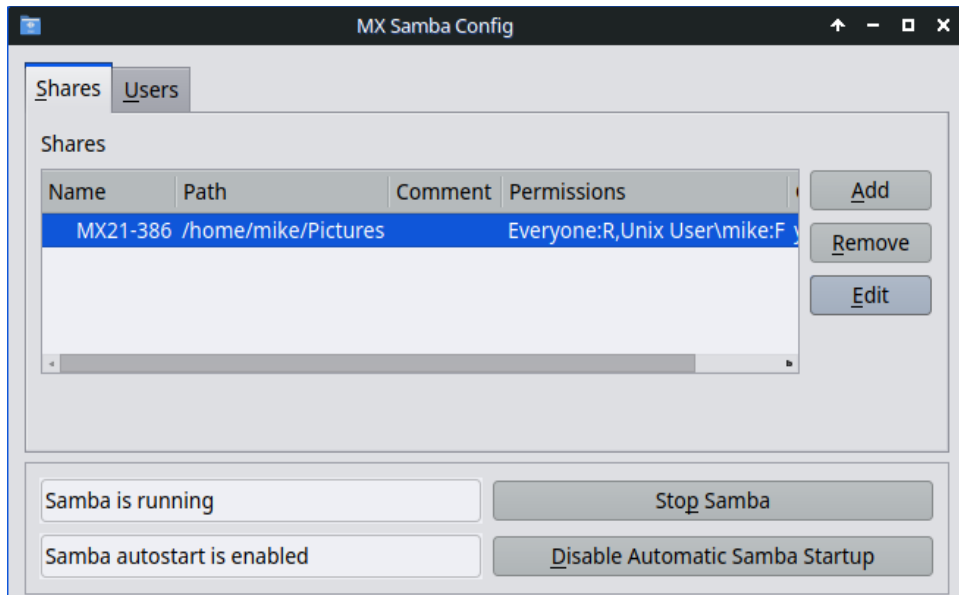
To share a folder the Samba service must have been installed and is currently running. MX Linux has Samba preinstalled. More on verifying in section 6.2 of this document.

The app 'MX Samba config' is used to setup file shares.

To create a share:

- Click the 'Add' button. This window will pop up.
- The Name is used as the share name to connect to.
- Use the '...' button at right of Path to select the share folder.
- Set permissions.
- Click 'OK'.



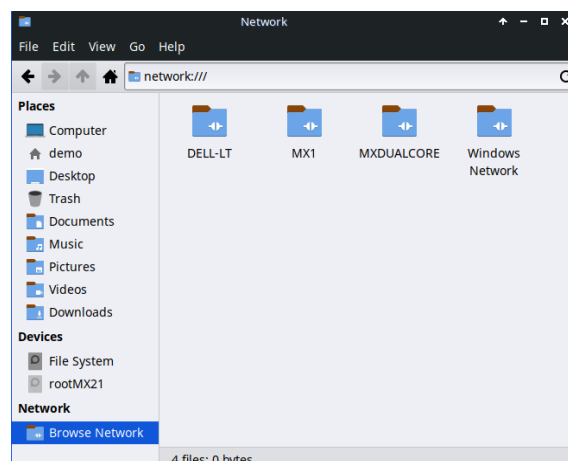


2.4 Verifying MX Linux shares

File Managers in MX Linux can connect to Samba shared folders on Linux computers, Windows, and network devices.

Click in the left sidebar 'Browse Network' to see a list of PCs and devices that have SMB File Sharing enabled. Example at right.

Note that there is a folder 'Windows Network.'



It is always empty. This is normal.

3.0 Creating a File Share on Windows

Windows File Explorer is used to create Samba file shares on Windows PCs.

- Right click on the folder to be shared (Windows 11 'show more options') select 'Properties'.
- Select the 'Sharing' tab and click the 'Share...' button.
- Fill in name and if needed choose users. Click on 'Add'.
- Click 'Share', 'Done' and 'Close'.

4.0 Connecting to Samba File Shares from MX Linux

A Network File Share could be something located on a multitude of devices. Example: a USB outlet on your router, another Linux PC, a Windows PC, a Network Appliance aka NAS and many more.

4.1 General – to view and connect:

Non Windows and modern network devices:

- In the left pane click on '**Browse Network**' to show the various PCs and network devices.
- Click on displayed PCs and devices to see the available shares.
- Click on the share to see its files.

Depending on the share setup you may be asked for an ID and password.

Once connected and authenticated a shortcut for the share will be created in the 'Network' section in the Thunar File Manager sidebar.

Share hosted on Windows or network devices:

How to connect to a share with a smb URL is explained below. Option 1 is preferred.

1. Connect by adding the default domain of .local to the hostname in the form of:

`smb://hostname.local/sharename`

example where **hostname** – diningroom and **sharename** – Downloads

`smb://diningroom.local/downloads`

2. Connect to Samba shares using IP addresses using the form of:

`smb://IP_Address/sharename`

example where **IP_Address** – 192.168.1.106 **sharename** – Downloads

`smb://192.168.1.106/Downloads/`

NOTE: If both devices are NOT running some form of Zeroconf (mDNS) it may be necessary to use IP addresses for connections (above).¹

example where **IP_Address** – 192.168.1.106 **sharename** – Downloads

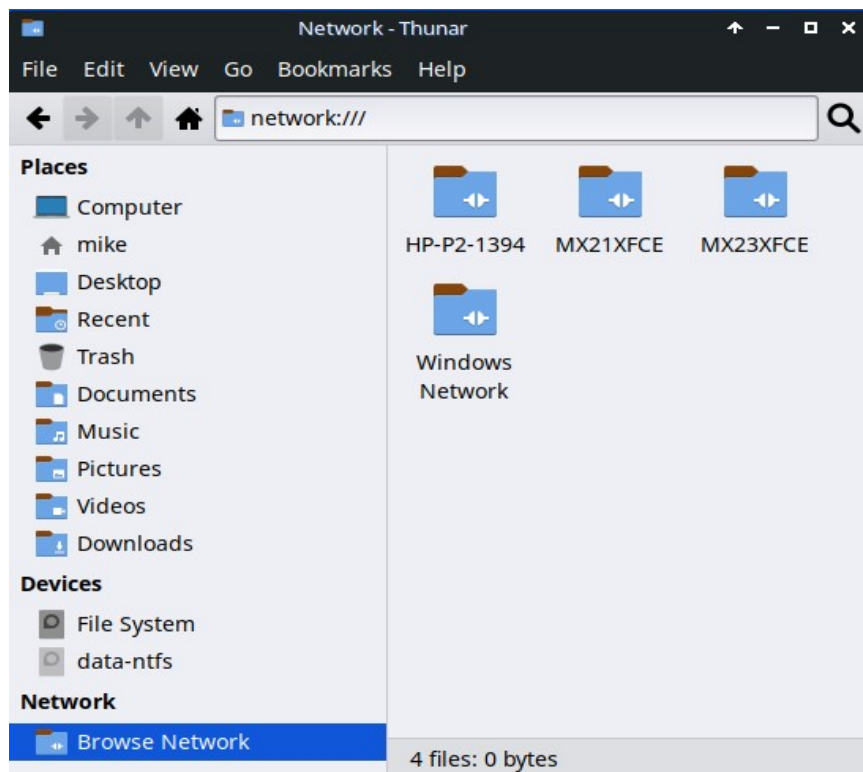
`smb://192.168.1.106/Downloads/`

MX Linux and most recent Linux distros have mDNS implemented via Avahi and Windows from 2018 onward.

To Connect:

- Click on '**Browse Network**' in the left pane.
- In the top bar clear out 'network:///'
- Type the smb URL.
- Press Enter. A login box MAY appear.
- Type in the 'Username' & 'Password' (share owner) and click 'OK'.

4.2 Using Thunar File Manager



Note: there is a folder 'Windows Network' but it is always empty. This is normal.

¹ See <http://www.zeroconf.org/>

Bookmarking of Samba shares in Thunar

Share connections can be remembered by creating a Bookmark link in Thunar. Do this at the time of your initial connection to a SMB share. Once created these Bookmarks will always appear in the Thunar sidebar in the 'Places' section between the 'Trash' icon and 'Devices' section.

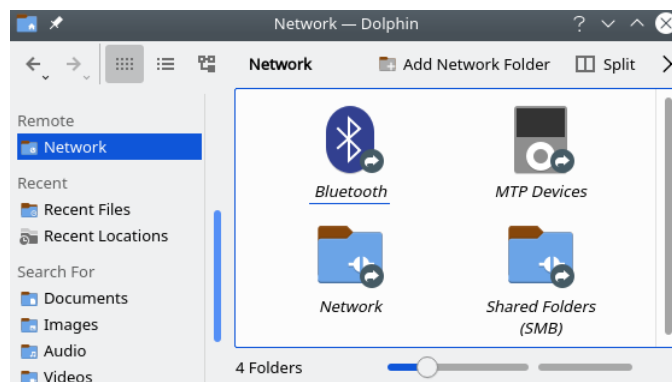
To add a Bookmark:

- Left click on the share to select it.
- Right click and choose 'Send To'.
- Then choose 'Side Pane (Add Bookmark).'

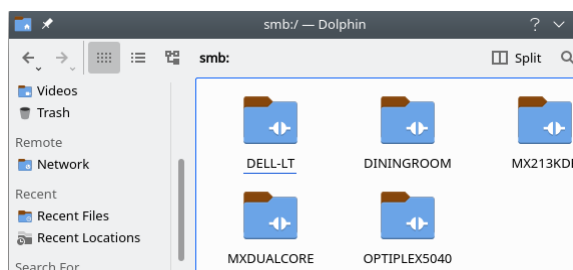
The right-click option 'rename shortcut' can be used to give the Bookmark a friendlier name. Bookmarks are held in an extensionless file named 'bookmarks' in the `home/.config/gtk-3.0/` folder.

4.3 Using Dolphin File Manager

Open Dolphin and on the lower left side click 'Network'.

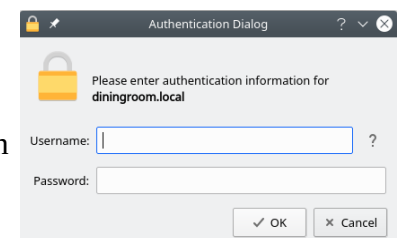


Click on 'Shared Folders (SMB)'. A 'Network – Dolphin' browse listing appears.

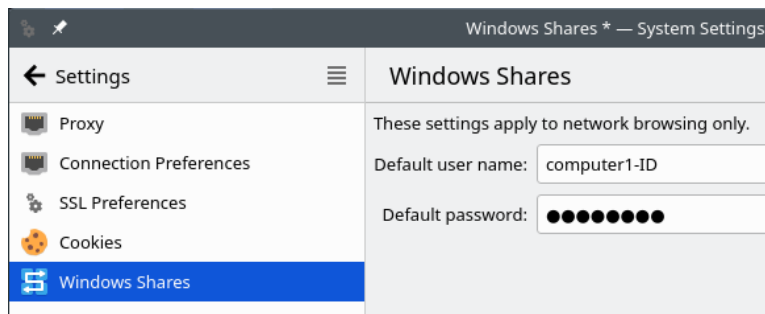


Clicking a folder selects a network device. Click to view the share(s) presented. This gives an immediate 'Authentication Dialog' box. Example at right.

Enter the share's 'Username:' and 'Password:'. Click '✓ OK'. You are then shown the available shares and are able to view their contents.



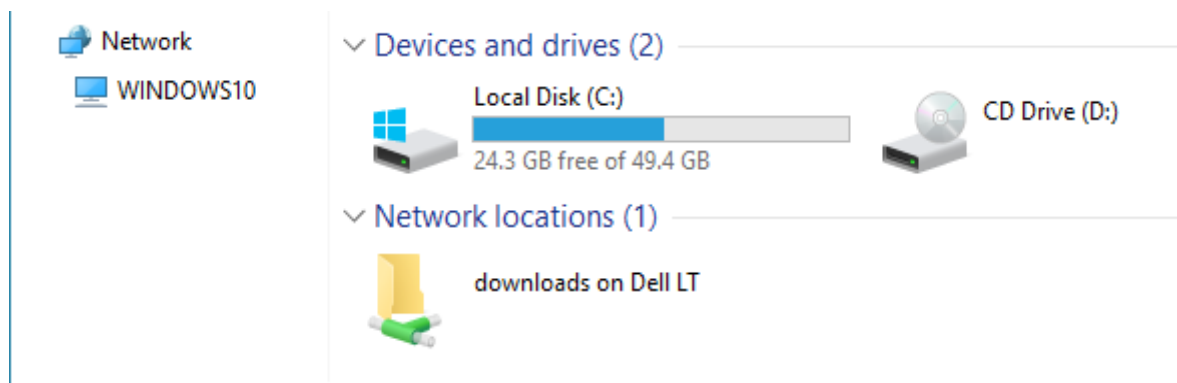
KDE eases connecting to shares by eliminating the login popup step. You fill in a 'Default user name:' and 'Default password:' in Settings --> Network ---> Settings ---> Windows Shares as below.



5.0 Connecting to MX Linux shares on a Windows PC

The very first time you click on 'Network' in 'Windows File Manager' you will be prompted to turn on both 'Network Discovery' and 'File Sharing'. **Please do so!**

At the lower left is the 'Network' section. It shows a Linux share 'downloads' from a PC named 'Dell LT'.



5.1 How to make a clickable share in Windows File Explorer

Windows can also connect to most Samba shares using the share host PC's hostname, IE:

\\pc_name.local (a **.local** added to PC hostname).

To connect:

- Open Windows File Explorer.
- In the lower left sidebar right click on 'This PC'.
- On Windows 11 – in the resulting menu left click 'Show more options'.
- Left click 'Add a network location' then click 'OK'.

A 'Welcome to the Add Network Location Wizard' will pop up. Click 'Next'.

- Click on 'Choose a custom network location' then Click 'Next'.

- Fill in an 'Internet or network address' with the syntax of: \\pc_name.local\sharename
- Click 'Next' on the wizard. An 'Enter network credentials' login screen appears.
- Type in the share 'User ID' and 'Password', then click 'Log in' (Windows 11 – 'OK').
- Type a friendly name for the share and click 'Finish' on the wizard.

6.0 Some tips and general notes

Samba does NOT need to be installed on MX Linux as it is preinstalled. Not so for many other distros.

- **Thunar** connects to network shares in the form of smb://windows10/sharename even if the Windows share display name has capitalized letters within it.
- **Thunar** Xfce may present 3 slashes after smb:/// where 2 only are needed. Remove one / before manually typing shares in the address bar.
- **Dolphin** (KDE) For faster connection you may want to configure: System Settings → Network → Settings → Windows Shares, with your Windows/share ID & Password.
- In smb.conf [global] 'map to guest = bad user' will cause failure if 'guest' is disallowed on shares by 'guest ok = no' – also 'usershare allow guests = yes'.

Common share setup fail points

Below are the most common issues brought up on the MX Linux (Support) Forum.

- 1) Do **NOT** modify the file /etc/samba/smb.conf in any way. Use MX Samba Config.²
- 2) Do **NOT** use spaces in Samba share file paths. Use – or _ instead.
- 3) All network devices should be on the same network IP subnet.
- 4) The shared folder *should* be in the sharing user's users /home folder.³
- 5) If a shared folder is outside /home it **MUST** be 'owned' by the user and the sambashare group.
- 6) Leave the Unix directory permissions alone. The +x IS needed from the root to share folders.
- 7) The share name can **NOT** be the same as any user name, group name or the workgroup name.
- 8) Workgroup name **MUST** be 15 characters or less.
- 9) Share names that are longer than 12 characters may not be accessible to some older clients.

6.1 How-To Verify that the Samba service is running

When you installed MX Linux an option was to enable the Samba service (SaMBa Server for MS Networking). You may need to be enable it if you had unchecked this during installation.

² Yes, there are a lot of guides saying to do so. MX Linux made the MX Samba Config tool to make it easier.

³ For any user accessing with the same UserID and (SMB) password.

- From the Start menu in the MX Tools folder run ---> 'MX Samba Config'.
- Verify 'Samba is running' as visible in the lower left.
- Also verify that Automatic Samba Startup (autostart) is 'enabled'.
- If it says 'disabled' click 'Enable Automatic Samba Startup' in lower right.

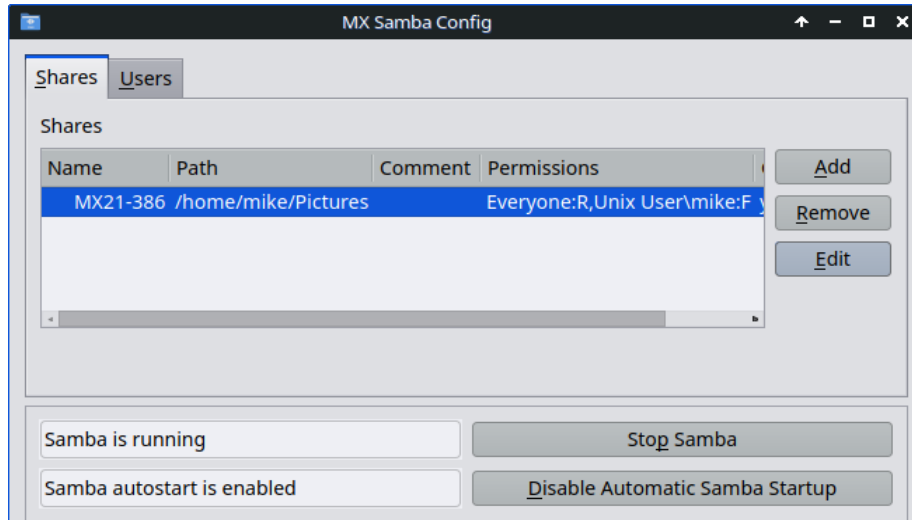


Figure: above shows a share, 'MX21-386' has been configured.

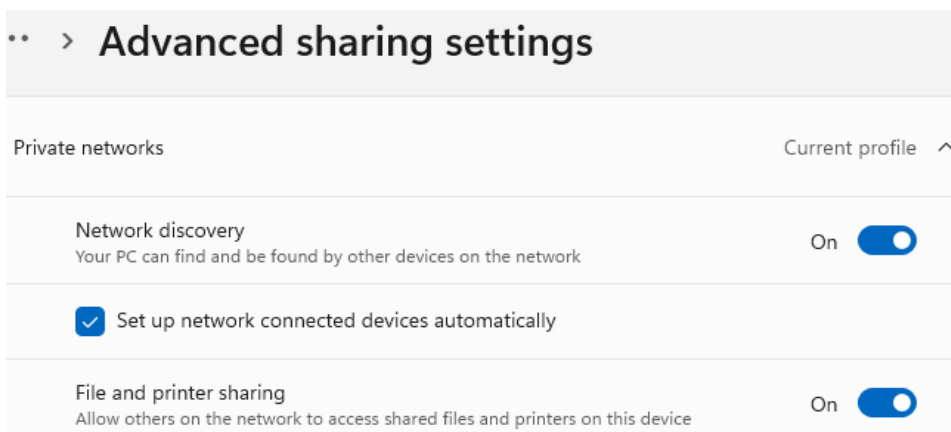
6.2 Network Discovery and File Sharing

These are NOT turned on by default during Windows installation. At first access to the Network area in File Manager a pop-up offering to enable these appears. If the pop-up was dismissed it will NOT reappear and enabling these MUST be done MANUALLY.

Manually enabling Network Discovery & File Sharing – Windows 11

From the Start menu click the Gear icon or 'Settings'. At the upper left in the search box type: 'Manage Advanced Sharing Settings'. Click the result bubble and then below will appear:

Turn **BOTH** 'Network Discovery' **AND** 'File and Printer sharing' ON (blue).



Manually enabling Network Discovery & File Sharing Windows 7, 8, & 10

1. Click on the Start menu and then click Settings.
2. Click on Network and Internet.
3. Scroll down, and click on 'Network and Sharing Center'.
4. On the left click on 'Change advanced sharing settings'.
5. In the Private (current profile) turn on Network Discovery.
6. Turn on File Sharing and click 'Save changes'.

6.3 Password Protected Sharing on Windows

In Windows this is 'on' by default. The shared file folder owner login ID must NOT have a blank password. A PIN is NOT the same! If your Windows PC opens with no password aka autologin you have two choices:

One – Make a new Windows User Account for sharing with a password.

Two – turn off Password Protected Sharing in All Networks.

Please direct ALL support requests to the MX Linux Forum -- <https://forum.mxlinux.org>

Created: November 2022

Updated: February 23, 2025