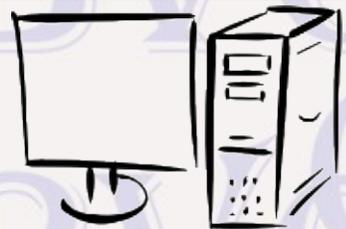


Bits & Bytes

Arkansas' Premier Computer Club



April 2025

The Bella Vista Computer Club - John Ruehle Center

Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: <http://BVComputerClub.org>

Email: BVCCeditor@bvcomputerclub.org

MEETINGS

Board Meeting: April 14, 2pm, in John Ruehle Training Center, Highlands Crossing Center.

General Meeting: April 14, 3pm. Program: "PDF Tools ", with Joel Ewing

We will meet in-person in **John Ruehle Training Center**, Highlands Crossing Center, lower level, 1801 Forest Hills Blvd, Bella Vista, or you may attend the meeting on-line via Zoom. Zoom access information is published on our website.

Visitors or Guests are welcome.

Consider attending by Zoom if you are unable to attend in-person.

HELP CLINICS

April 5, 9am - noon at John Ruehle center

April 16, 9am - noon at John Ruehle center

Members may request Remote Help on our website at <https://bvcomputerclub.org> at menu path Member Benefits ► Remote Help .

MEMBERSHIP

Single membership is \$30; \$15 for each additional family member in the same household.

Join on our website at <https://bvcomputerclub.org> at menu path Get Involved ► Join/Renew, by mailing an application (from the web site) with check, or complete an application and pay in person at any meeting.

CLASSES

(At BVCC Training Center)

Tuesday, April 1, 9am-11am, "Storage Solutions", with Pete Opland.

Tuesday, April 15, 9am-11am, "Why, When and How to Backup Your C Drive", with Pete Opland.

Advance sign up required for each listed class: For reservations: email to edu@bvcomputerclub.org, or sign up at the General Meeting. Classes are free to Computer Club members.

Check the monthly calendar and announcements for any last minute schedule changes at <https://bvcomputerclub.org> .

NEW OR RETURNING BVCC MEMBERS

We are pleased to welcome the following new members or members returning as BVCC members after an absence:

Jan Reeves

Teresa Mercier

Jeff Mercier

Cliff Shelder

Rex Waller

Bill Magyar

Sandy Bethe

Beverly Phillips

Terri Fontenet

LENOVO LAPTOP RAFFLE

One of BVCC's most important fundraisers during the year is a raffle of a computer. This year the offering will be a refurbished Lenovo Ideapad 5, 15.6" laptop, including a laptop case and wireless mouse.



The raffle drawing will be held at the BVCC April 14 General Meeting. Tickets are available for a donation of \$10 at the BVCC General Meetings up until the time of the drawing, or by calling or texting 479-966-9357. You do not have to be a BVCC member or present at the meeting to win.

The specifications of the laptop are as follows:

- Name: **IdeaPad 5 - 15ITL05** MTM: 82FG000RUS, S/N: PF20M4DS
- Processor: 11th Gen **Intel Core i5-1135G7, 2.40 GHz**, PassMark Single/Multi BM: 2667/9690
- **Display: 15.6"** FHD (1920x1080), w Camera
- RAM: **8 GiB** (not upgradable)
- Operating System: **Windows 11 Pro**
- Storage Drive: **512 GB NVME SSD**
- 2 USB-A 3.2 Gen 1 ports, 1 USB-C 3.2 Gen 1 port
- SD Card reader
- HDMI 1.4b

- Headphone/mic port
- 802.11AX WiFi & Bluetooth 5.1
- Installed software: **Microsoft Office 365** (not a subscription), Chrome, Firefox, Thunderbird, VLC Media Play, LibreOffice, and Zoom

SHARING FILES AMONG WINDOWS SYSTEMS ON YOUR HOME LAN

By Joel Ewing, President, Bella Vista Computer Club
Bits & Bytes, April 2025
<https://bvcomputerclub.org>
president (at) bvcomputerclub.org



The simplest and least technical way to share files between two different computers in your home is to write the files on a USB memory stick or some other transportable media on one computer and then connect that media to the other computer to copy or work with the files ; but that requires you to physically move between the computers.

If you have a cloud storage service on the Internet that is defined to both computers, you can store shared files on that cloud storage and access those files from multiple computers. This makes you dependent upon the Internet for access, and you must entrust a 3rd-party with the care of your files. You will have to deal with limits on the total size of files in your cloud storage and longer times to access the files, which can be significant for uploading large files -- an Internet Service Provider's upload speed is typically much less than their more widely-advertised download speed. My high-speed Internet upload speed is only around 50 Mbps, which with overhead in the file transfer protocol means less than 6.25 MB/sec, making a 100 MB file take more than 16 seconds to upload to a cloud Internet service, Contrast that with typical effective transfer rates of 115 MB/sec over a 1Gbps home network or LAN (Local Area Network).

It's faster if you can utilize the speed of your home network to move files directly from one computer to another on your LAN, or perhaps just read and work remotely with the file stored on another home computer and not even make a permanent local copy of the file.

Windows File Sharing

If you have a large number of files totaling a significant amount of space that you want to be accessible to all devices on your LAN all the time, you may want to look at setting up a dedicated computer as a File Server for your home. For many users that may be a greater level of complexity than they need.

Simple Windows File Sharing, which utilizes Server Message Block (SMB) protocol, may be sufficient for some users. Microsoft Windows by default supports File Sharing using SMB protocol to serve files to and receive files from other Windows systems. There is also free Linux support for SMB protocol using the **samba** software packages which easily supports Linux Read/Write access to Windows File Sharing files on a Windows system using the Linux equivalent of File Manager. Using the same SMB protocol to make files belonging to a Linux user available to Windows systems is also possible, but less attractive because it requires some research to manually set up configuration files, start a samba server service, and open firewall ports to make it work. SMB

could even be used to share files between two Linux systems, but there are much easier methods to use when both systems run Linux.

With all current Windows systems, the SMB protocol now uses only TCP port 445 for communication. Any router by default blocks incoming Internet traffic on port 445, limiting SMB file sharing to your LAN. While it would be possible to configure a router to forward port 445 traffic to a computer on your internal LAN to allow file sharing to the Internet, this would be inadvisable and dangerous, as it would expose that computer to unauthorized access, malware injection, and ransomware attacks. Obviously, your WiFi should also be protected by a password to prevent outsiders from gaining access to your LAN and potentially accessing your shared file directories.

Enabling Windows 10 or 11 To Share Directories Via SMB

First of all, file [and printer] sharing should only be enabled on a network that you trust, which Windows calls a "**Private**" network. A network which Windows calls "**Public**" is a network that is un-trusted, that can be accessed by devices beyond your control. These terms can be confusing until you realize they describe the network, not whether your computer should be private or open to the public.

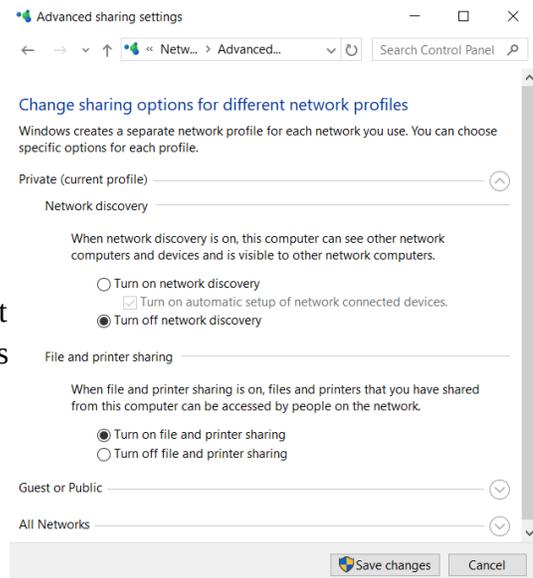
Your home LAN network and WiFi, assuming WiFi access is restricted and encrypted by a password, would normally be regarded as a Private and trusted network. If your mobile device is connecting to a WiFi network for the first time, you should be asked to whether this is a Public or Private network, and if it is a WiFi network in a public place you should specify "Public" for un-trusted. If you mis-categorized your home LAN connection as Public and need to change it, go to "Settings", "Network & internet", under "Network status" click on "Properties", and under "Network profile", click on "Private"

Starting with Windows 10, guest access (access without a username and password) to SMB on Windows was disabled by default and this is the only safe choice. You must now have the credentials for a valid Windows login on the remote computer from which files are shared in order to login for SMB shared file access. If you don't want to expose your normal login credentials on that machine for SMB use, one possibility would be to define a new user/password on the target system just for SMB logins, put folders under that user for all files you want to share, and share read/write authority to those folders to your usual login user on that machine so that user can view and change files in the shared folders.

It used to be the case that you had to explicitly share those folders that you wanted to be visible from other computers. With Windows 10 and 11, it appears if you say any folder under any user should be shared, that Windows actually enables "sharing" for the \Users folder, effectively granting access to all folders and files that are associated with the user account used for the SMB login.

To share Windows directories on your LAN, each machine with an instance of Windows needs a distinct device name. If a default name was assigned when the system was installed, it will contain some characters that appear random and is probably unique, like DESKTOP-TA4FG20. You can check what is assigned by right-click on the Windows Start icon, select "System", and check the "Device name" under "Device specifications". You can rename the system name using the "Rename this PC" to assign a shorter and more useful name, but be sure it is unique from any other computer on your LAN. To effect a name change, the Windows system must be restarted.

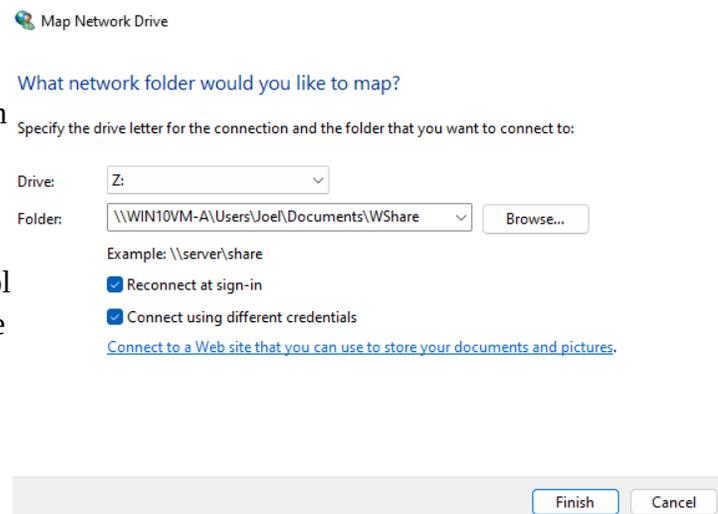
To enable file sharing, you must go to "Control Panel", "Network and Sharing Center", select "Advanced sharing settings", and verify that for Private Networks, and Private Networks only, that you have checked "Turn on file and printer sharing". There is also an option to "Turn on network discovery" and "Turn on automatic setup of network connected devices", but I would recommend turning this "off": it is not required to make File Sharing work, has been known in the past to be an avenue for attack, and is a slow way to locate machines on your LAN that only works for machines on the same LAN sub net.



From File Manager, from "Network" in the navigation frame you may be able to see what other computers on your LAN have sharing enabled, but only if your computer and the other computers all have "Network discovery" turned on and are on the same sub net. Even then it may take 15 seconds to locate the other computers. Even if all that works it is still unlikely that you could select one of the computers from the navigation screen and see anything useful because this route doesn't give you an opportunity to do a correct login to the other system.

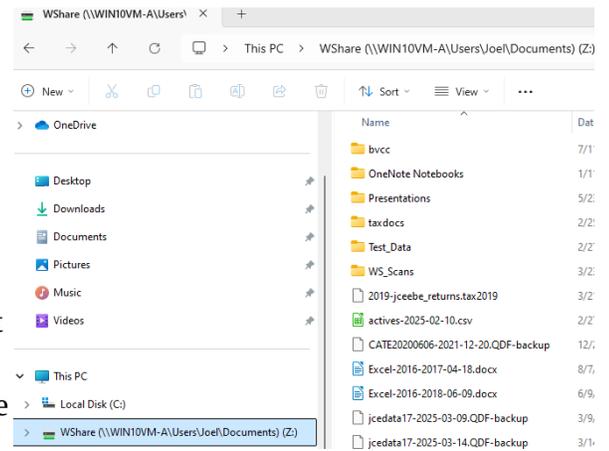
The only real advantage of having "Network discovery" turned on everywhere is that you don't have to know the actual LAN IP address of the computer to see its shared files. But if the target computer is regularly used, its IP address tends to stay constant. If you want it to always stay constant, there are ways to configure your router to insure it always receives the same IP address. Determining the IP address currently assigned to a Windows computer is simple. Just open a Command window (search for command and click on the Command App), enter the command "**ipconfig**", and write down the IPv4 Address (four numbers separated by periods, such as 192.168.0.198), and type "**exit**" to terminate the command window

The only method that consistently works with shared files is to map a remote shared folder to a letter drive on the current PC. Select "This PC" in the navigation frame of the File Manager, then for Windows 10 click on "Map network drive" in the top tool bar and "Map network drive", or for Windows 11 click on the "..." (more) in the top tool bar and "Map Network Drive". You then fill in the remote folder address. How do you find this? Use File Manager on the remote machine, select the shared directory, right-click, select Properties, select the "Sharing" tab, and write down the "Network Path" value, in this case it was



"\\WIN10VM-A\Users\Joel\Documents\WShare", where the "WIN10VM-A" is the computer name I manually assigned to that system.

You generally will need to check the "Connect using different credentials" so you can specify a login that is valid on the remote machine (this must be the actual username & password, not a PIN code). If you want to always connect to that same remote shared folder after a reboot, check the "Reconnect at sign-in" as well. Then click "Finish" and supply the username and password on the remote system to connect. If it can find the named machine, fine. If not, you might have to replace the computer name with its current IP address, which in this case would make the remote folder "\\192.168.124.198\Users\Joel\Documents\WShare". Looking at the displayed files on my new Z: drive, I see it actually took the final "WShare" as a name for my Z: disk and connected to the Documents folder. Apparently it only mounts the highest level folders associated with the user on the remote computer.



Once you have a remote folder connected at a local drive letter, you simply use File Manager and applications to access files on that drive as if they were local files.

Upon a reboot of the machine, if you checked "Reconnect at sign on" when mapping the drive, it will automatically reconnect without requesting a repeat of the sign on credentials. If you don't want the mapping to persist, don't check the "Reconnect..." box. If you later want to break the connection, right-click on the shared disk and select "Disconnect". That will disassociate the shared remote folder from the system and it won't reconnect again until another Map Network Drive is done.