Note: This discussion is based on the latest version of macOS Sonoma, 14.3.1. Some illustrations may differ when using other versions of macOS. Most illustrations are from screenshots on my iMac or MacBook Pro. Credit for Other Images: See the credits at the end of this presentation.

Brief Review of Part 1

If you have a file (or files) on one Mac that want to copy another Mac, there are multiple ways to do this. Key factors include the size of the file and the location of the two Macs. Several relatively easy options were discussed at the January 21, 2024, meeting. Some of these also apply to other Apple devices (iPhone or iPad).

1. Email. For a single file (or just a few of them), it might be easiest to attach the file to an email message to yourself.

Most email providers limit the attachment size. For example, Apple's iCloud service has a limit of 20 MB while Gmail limits you to 25 MB. Since large attachments can take up a lot of space in your email account, you risk running out of space. So, email is best used for moving small files or sharing them with others.

2. Messages App. Similar to email, for relatively small files, adding a file in an iMessage (**Blue** bubble) encrypted conversation in Messages works well. You can also use Messages with your iPhone or iPad. (**Green** bubbles use the unencrypted SMS/MMS protocol. SMS stands for S̲hort M̲essage S̲ervice (text only) while MMS is M̲ultimedia M̲essaging S̲ervice to send pictures, audio, phone contacts, and video files.)

Files in Messages should be smaller than 100 MB. Also, they consume iCloud and local storage space unless you delete them.

3. AirDrop. You can conveniently copy a file to another Mac if the two devices are relatively close together by using **AirDrop** (which depends on both **Bluetooth** and **Wi-Fi** being turned on in the **System Settings** app on both Macs). There's no need for any network or iCloud. Also, AirDrop doesn't have any file size limits. However, Bluetooth and Wi-Fi can be relatively slow protocols, so AirDrop isn't necessarily the fastest approach.

Because Bluetooth is a short-distance data transmission technology, your Macs and other Apple devices should be relatively close together (say, not more than 30 feet or so). So, it's probably best for the two Macs to be in the same room or at least in close proximity. With Bluetooth and Wi-Fi enabled on both Macs, they will appear as separate icons in their respective AirDrop windows.

There are two ways to transfer a file:

U̲se AirDrop in a Finder Window Sidebar. This method requires the use of two Finder windows on the "sending" Mac.

- First, on the "sending" Mac, open a Finder window. Then in that widow select **AirDrop** in the window's sidebar. Call this the "AirDrop" window.

  If the AirDrop icon isn't present in the sidebar, enable it in **Finder > Settings > Sidebar**.

- Next, also on the "sending" Mac, open a second Finder window containing the file(s) to be sent. Then drag the it/them from this window to the AirDrop window and drop it on the icon of the other Mac. A brief message ("Sending") will appear on the "sending" Mac's icon in the AirDrop window.

- When the transfer is complete, the other Mac will signal with a brief confirmation tone.

Use the Share Option. This method uses the Share option available for files in the Finder and is really convenient.

- Right-Click (Control-Click) the file(s) in a Finder window, and choose **Share...** from the resulting pop-up menu.

- Another pop-up window will appear next to the file(s) with various sharing options to choose from. Select **AirDrop**, and then select the desired Mac or other Apple Device.

- Once that AirDrop is selected for the file(s), an AirDrop window appears. Select the device to receive the file(s) by tapping its icon.

- The received file(s) will appear in the **Downloads** folder on the other Mac.

4. Use an External Device/Drive. Another easy way to transfer or back up files from one Mac to another is to use an external USB drive (flash drive, hard drive, SSD, or even by burning to a CD or DVD). Use the drive's USB cable or connector to plug the drive to one of your Mac's USB ports. Make sure that the drive is properly formatted. Choose **Mac OS Extended (Journaled)** as the format.

- To copy files from the "sending device/drive" to your Mac, connect the USB external drive to the other Mac (the "sending" Mac) where the files reside. Locate the file(s) that you want to copy, and drag them to the USB device. Then eject the external USB drive from the "sending Mac."

- Transfer the file(s) to your Mac ("receiving Mac") by first plugging in the USB device. Then click on the USB device icon, and drag the file to the desktop or desired folder in the Finder.

More Ways to Transfer Files

5. File Sharing. If you need to *regularly* copy files between two or more Macs on the same network—say between a desktop and a laptop—this is best done with network file sharing. Note, however, this method does require some setup to use. It involves specific configuring, adding aliases or sidebar items for quick access, etc. Once that you've set up File Sharing, it's easy and fast to use.

Note: There are a lot of options for File Sharing, and this discussion only covers the basics.
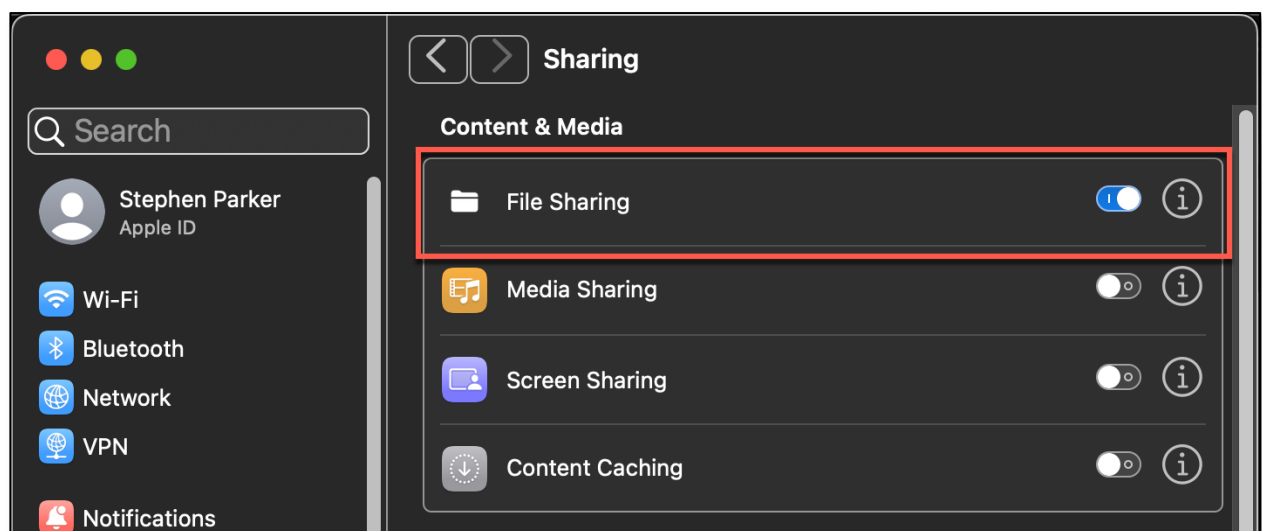
Here are the setup steps:

- First, one Mac must be set as the **File Server**. Do this by going to **System Settings > General > Sharing > File Sharing**. (See the images on the next page.)
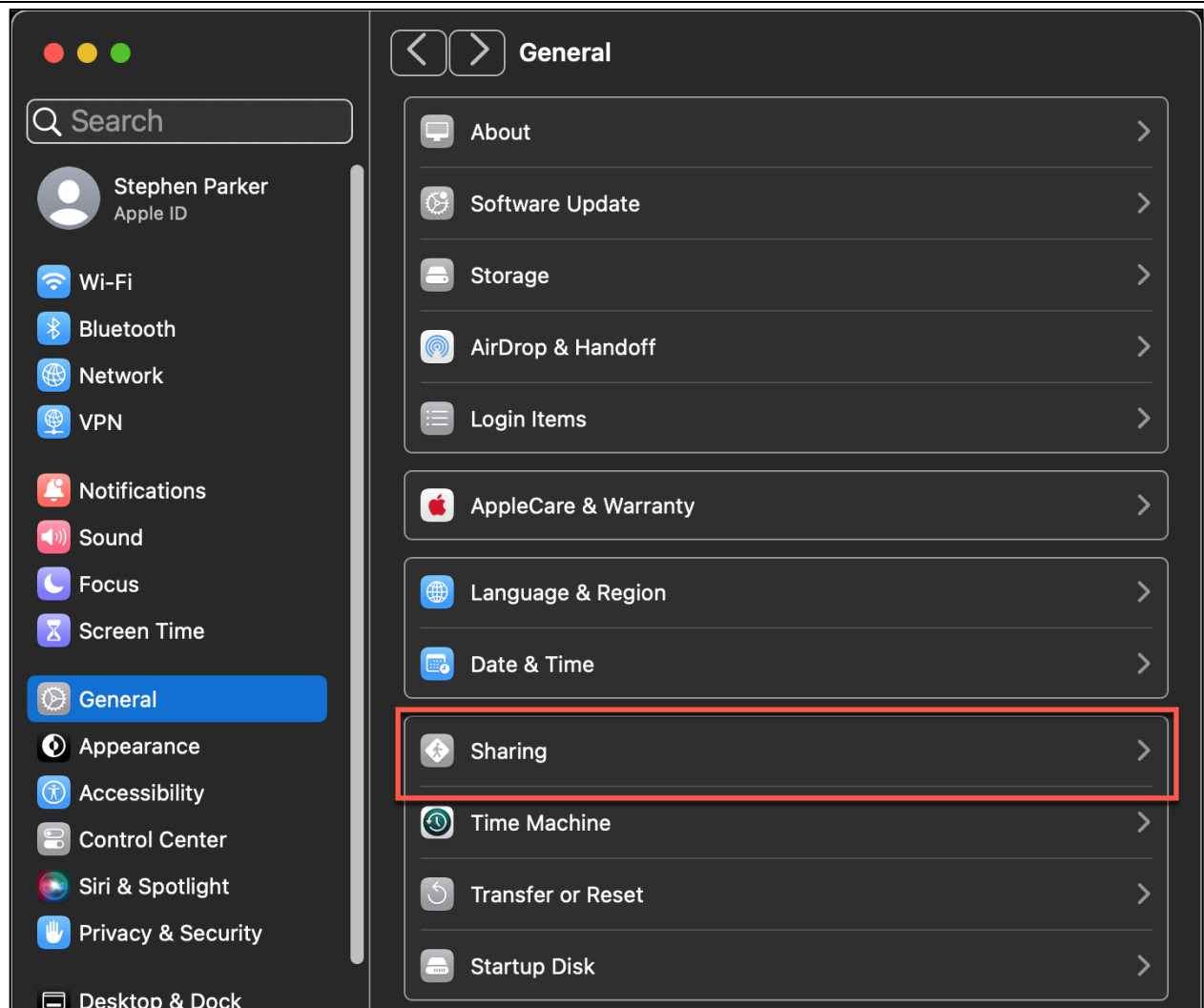
Settings > General > Sharing

**Settings > General > Sharing > File Sharing**

- Then click the info icon ⓘ to:
  - o Add **Shared Folders** (click the **+** button),
  - o Designate **Users** (click the **+** button) and
  - o Set **Access Privileges** (Read Only or Read & Write).
  - o If you want, click the button to turn on "Allow full disk access for all users."
  - o Each user with an account on your Mac has a Public folder (mine, for example, holds my Dropbox folder), and this folder is shared automatically.
  - o To prevent a folder from being shared, select it in the **Shared Folders** list, then click the **−** button.
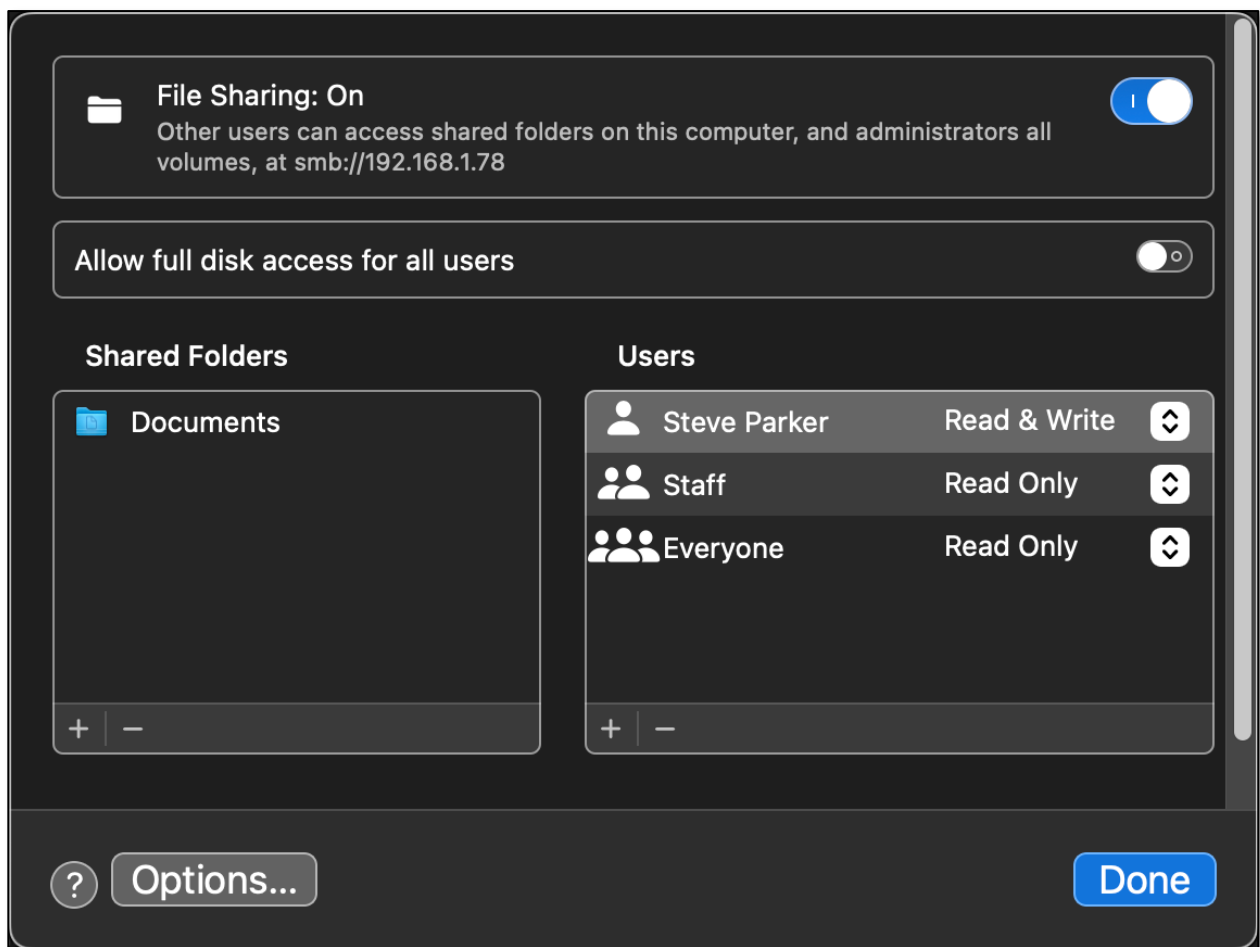
**File Sharing Setup (Shared Folders, Users & User Privileges)**

- o Right-Click (Control-Click) the name of the shared folder to reveal several options in the pop-up menu:
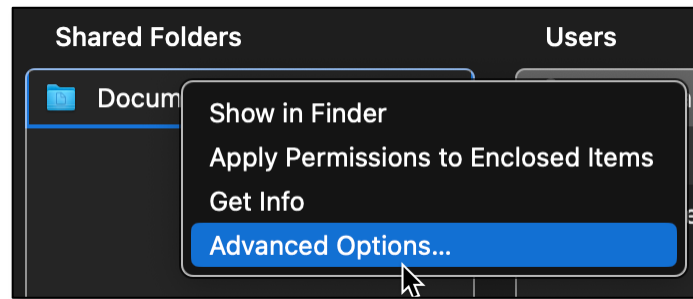
Shared Folder Options

- o Choose **Advanced Options…** to show them in another pop-up menu. Then turn on any of the following options: (1) Allow guest users, (2) Only allow SMB encrypted connections, (3) Share as a Time Machine backup destination, and (4) Limit backups to [*size*] GB.
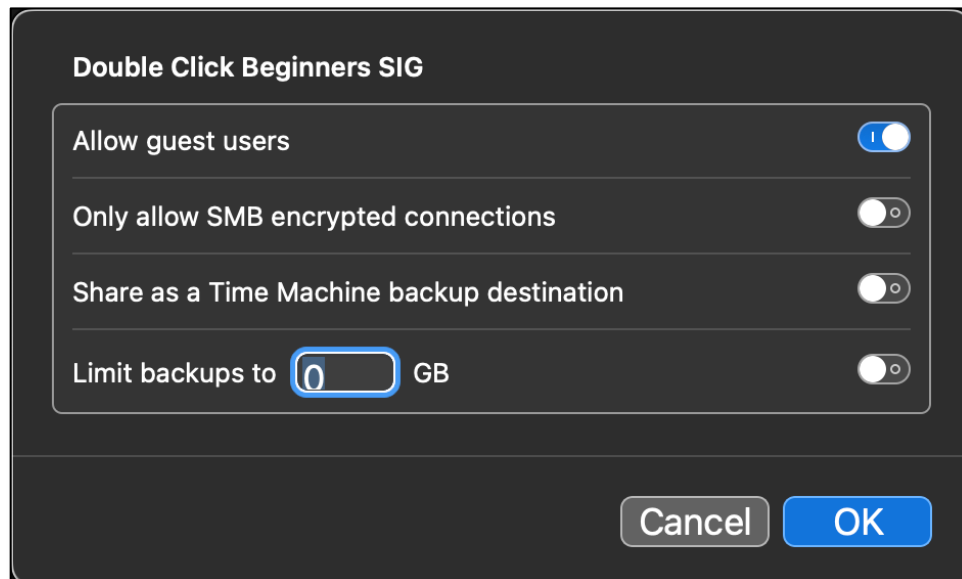

Advanced Options Selections

- o By default, any user set up on your Mac in **Users & Groups** settings can connect to your Mac over the network. Any user on your Mac with an administrator account can also access all the contents on your Mac.

- To connect another Mac on the network to the server Mac, in the Finder on the other Mac, choose **Go > Network** (keyboard shortcut: **Shift+Command+K**)**,** and click the **Connect As** button to log in if necessary.

You may have noticed in the File Sharing window that there was an **Options** button. Clicking Options will bring up an SMB and Windows File Sharing window. While it's doubtful that many of us will need these options, it's helpful to be aware of them.

(See the image on the next page.)
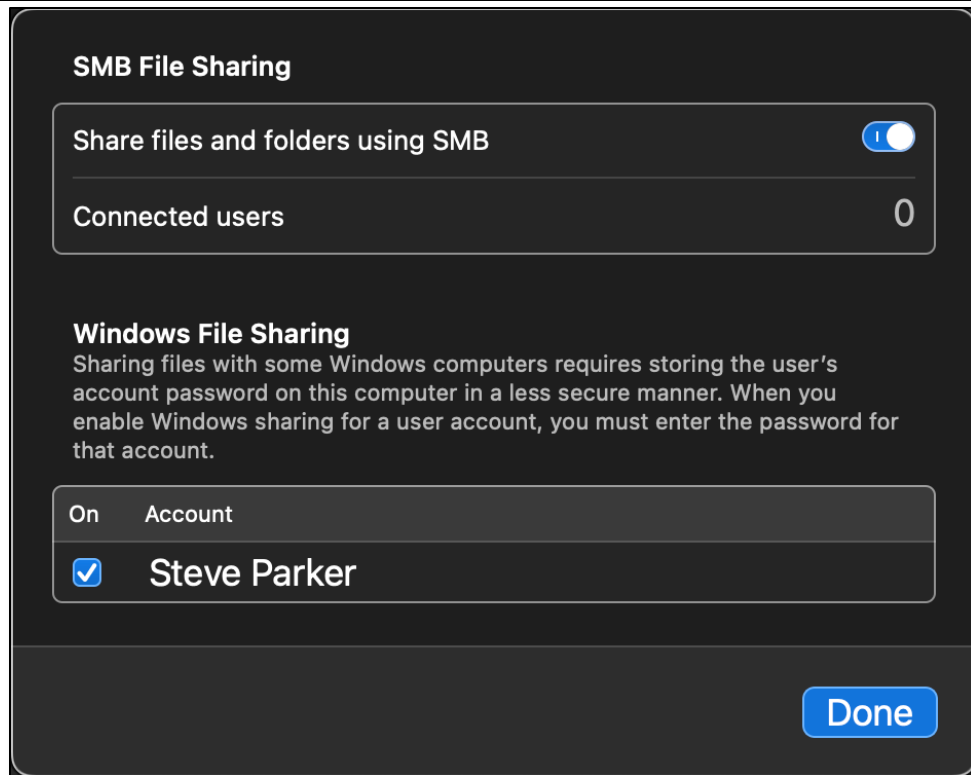
SMB & Windows File Sharing

6. Network Server or NAS Device. Most of us won't have a need for this method because our networks are likely small, so this discussion is brief.

Simply put, if you need to copy files between multiple Macs on a network, you may find it helpful to set up one of them as a dedicated server or NAS (network-attached storage) device for file sharing.

7. Target Disk Mode. If you have a need to move really large (multi-gigabyte) files between two Macs, the fastest option is to use **Target Disk Mode** over a Thunderbolt connection (sometimes also known as a **Thunderbolt Bridge**).

If so equipped, Target Disk Mode can also be used with USB ports, but file transfers will be slower. However, if running macOS 11 or later, you *must* use a Thunderbolt connection.
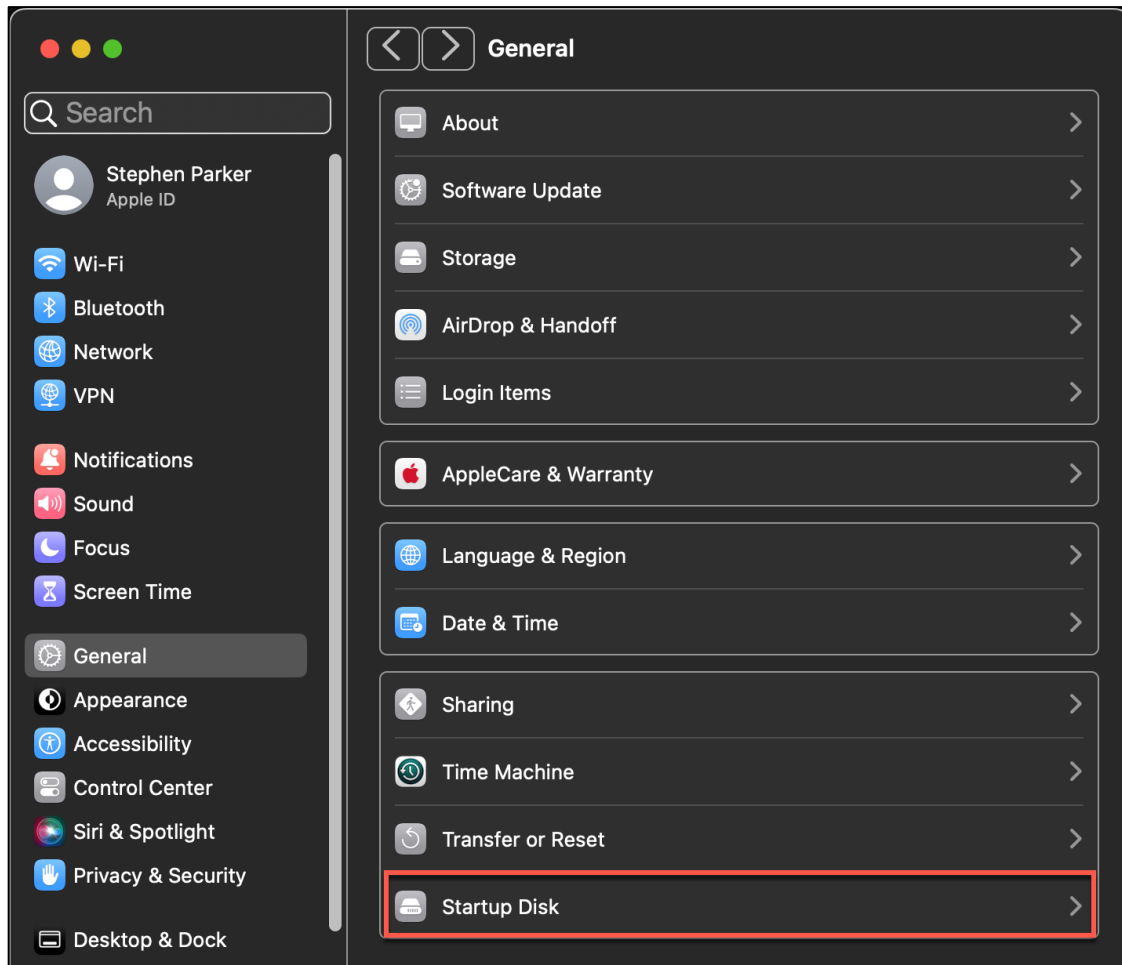
When one Mac is in Target Disk Mode, it appears in the Finder of the Mac to which it's connected as an external drive. Then you can drag files to and from this "external drive" Mac.

Multiple Ways to Move Files from One Mac to Another, Part 2

The setup for Target Disk Mode is different for Intel-based Macs vs. Macs with Apple silicon (M1, M2 or M3 processor).

<u>Intel Mac</u>. Follow these steps:

- Connect the two computers with a Thunderbolt cable.
- On the Mac you want to use as the external disk in Target Disk Mode, do one of the following:
  - If the Mac is Off, start it up while pressing and holding the **T** key.
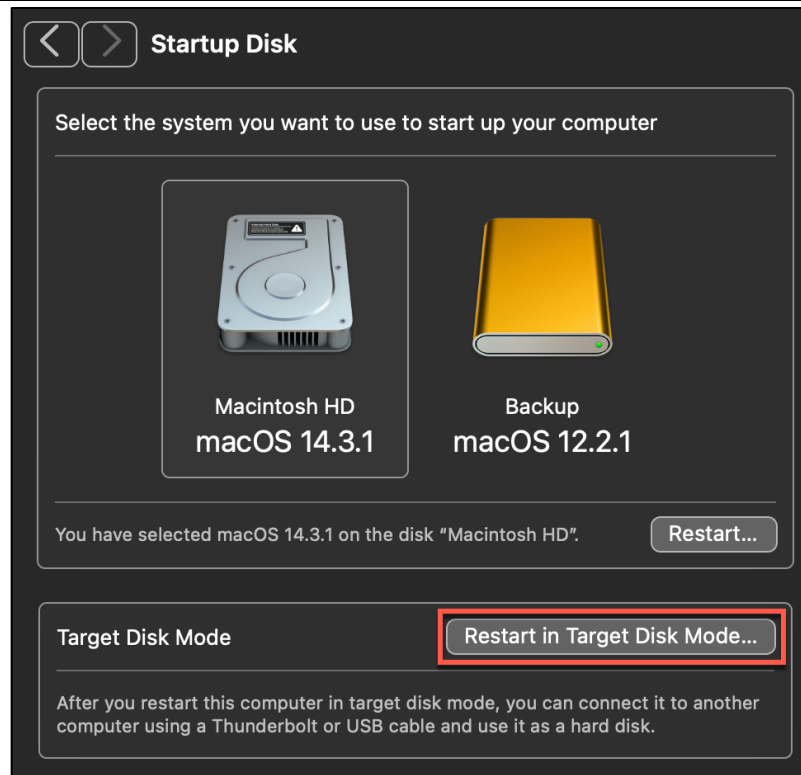 - If the Mac is On, go to **System Settings > General > Startup Disk**.

System Settings > General > Startup Disk

  - Then in the pop-up window, select a disk if necessary, and then click **Restart in Target Disk Mode**.
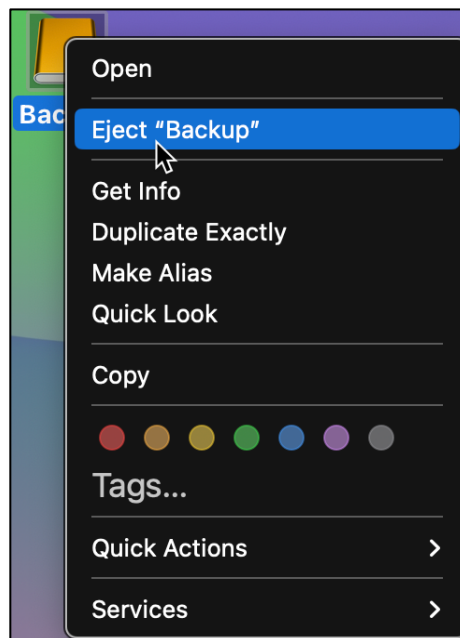
(See the image on the next page.)

Restart in Target Disk Mode

- When the Mac being used as an external drive has restarted, it will appear as a disk icon on the desktop of the other Mac. Now you can now drag files from one Mac to the other.

When you're finished, eject the external drive Mac by dragging its icon to the Trash. As you drag, the Trash icon changes to an Eject icon. Alternatively, you can click on the external drive Mac's icon and then select **Eject** from the pop-up menu:

Eject Disk Pop-up Menu

Apple Silicon Mac. Since I don't have an Apple Silicon Mac, this method is taken from an Apple Support article. The process is a little more involved:

- Connect the two computers with a Thunderbolt cable.

- On the Mac with Apple silicon—call it the "Server Mac"—choose **Apple menu > Shut Down**.

- Press and hold the **Power** button until "Loading startup options" appears.

- Click **Options**, then click **Continue**.

- Select a startup disk, then click **Next**. You may be requested to enter the password for an administrator account. Then your Server Mac will open in **Recovery** mode.

- Choose **Utilities > Share Disk**.

- Select the disk or volume that you want to share, then click **Start Sharing**.

- On the other Mac, open a Finder window, choose **Go > Network and click the Connect As** button (or use the keyboard shortcut: **Shift+Command+K**). Depending on how your Mac is configured, Network may already be in the Sidebar (below Locations).

- In the **Network** window, double-click the Apple Silicon Mac that has the shared disk or volume, click **Connect As**, select **Guest** in the **Connect As** window, then click **Connect**.

- Move or copy your desired files.

- After you're finished transferring files, click **Stop Sharing** on the Mac with Apple Silicon that you shared as an external disk.

8. Cloud Storage Service. There are numerous "Cloud" storage services that you can use: **iCloud Drive**, **Box**, **Dropbox**, **Google Drive**, etc. Any of them can work well and are convenient for moving files between Macs. Depending on your setup, you may need to adjust file sharing permissions.

You should probably keep the file size under a few hundred megabytes due to storage service limitations and file transfer times.

9. Migration Assistant. Have a new Mac? Then you'll probably want to transfer files from your old Mac to your new one. To do this, you can use Apple's **Migration Assistant** to copy all of your documents, apps, user accounts, and settings to your old to your new Mac.

There's a lot to discuss about using Migration Assistant, so I'll save this for the March Double Click meeting.

Summary

As noted in last month's presentation, there are multiple ways to move a file (or files) on one Mac to another Mac, and which one that you find best depends on your circumstances. Last month, we discussed four relatively easy ones: Email, Messages, AirDrop, and using an External Drive. This month's discussion was about using File Sharing, a Network Server or NAS Device, Target Disk Mode, and a Cloud Storage Service.

Next Presentation

Next month in Part 3, we'll look at using Apple's Migration Assistant.

Have a favorite Mac Tip or utility? Please feel free to pass it along, and I'll see if I can work it into a future presentation.

If you have any suggestions for presentation topics, including macOS utilities, please contact me at slp4668@gmail.com.

–Steve Parker

Credits:

Nine Ways of Moving Data from One Mac to Another (https://www.mbsdirect.com/mbs-blog/article-nine-ways-of-moving-data-from-one-mac-to-another), 12-01-2023

9 Ways of Moving Data from One Mac to Another (https://mactech-solutions.com/9-ways-of-moving-data-from-one-mac-to-another/), 12-21-2023

9 Ways of Moving Data from One Mac to Another (https://www.mcservices.com/nine-ways-of-moving-data-from-one-mac-to-another), 12-2023

How to transfer data to your new Mac from your old Mac (https://www.imore.com/how-to-transfer-old-mac-data-new-mac), 12-30-2022

Starting Over? How to Transfer Data to a New Mac With Migration Assistant (https://www.pcmag.com/how-to/transfer-data-from-old-to-new-mac-with-apple-migration-assistant)

How to Transfer Data From Your Old Mac to a New Mac (https://www.macrumors.com/how-to/transfer-data-old-mac-to-new-mac/), 12-03-2021

Transfer files between two Mac computers using target disk mode (https://support.apple.com/guide/mac-help/transfer-files-mac-computers-target-disk-mode-mchlp1443/mac)

How to Transfer Files Between Two Macs (https://www.wikihow.com/Transfer-Files-Between-Two-Macs), 08-13-2022

Transfer files between a Mac with Apple silicon and another Mac (https://support.apple.com/guide/mac-help/transfer-files-a-mac-apple-silicon-mchlb37e8ca7/14.0/mac/14.0), 12-31-2023