"Secure Your Data": One Drive, Google Drive, and Your Own Backup Drive.

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WHO?

- **Anyone who stores <u>information</u> on their computer or other device**
    - **who would have a problem losing it**

    (In other words, most people who use a computer or other similar device!)

WHY?

- **Computer hard drives fail**
  - **tomorrow or in a year or someday**

- **Laptops/tablets get stolen**

- **Bad people find ways to get into your computer**
- **delete/damage/encrypt your data**

WHY?

- **People accidentally delete files that are important to them**

- **Natural disasters destroy your entire computer contents (*and maybe your whole house*!)**

- **Some service technicians are careless (*not us*!)**

What?

- **If you haven't done so already, develop a solid backup plan for your data and EXECUTE IT RIGHT AWAY.**

- **If you don't have the skills to do it, get some help.**

- **If you have already implemented a backup strategy, verify that it is enough and that it is actually saving your data somewhere.**

What?

- **Figure out how much significant data you have:**

  - **Text – relatively very small file sizes**
  - **Music – bigger**
  - **Pictures – bigger (and getting bigger with ease of snapping pictures that have higher and higher resolution)**
  - **Videos - biggest**

What?

- **Figure out which folders are significant for you to back up:**

Documents	**Favorites**
Music	**Email folders for PC-based Email program**
Pictures	**People/Contacts**
Videos	**Other Original files not in any of these categories**

Where?

- **Locally on a storage device that is big enough to store your data regularly**
  - Large flash drive (e.g., 64GB or larger)
  - External hard drive (e.g., WD, Seagate, Toshiba)
  - DVD's (a bit cumbersome as DVD usage fades)

- **On an internet server somewhere (i.e., "The Cloud")**

- **On a second computer**

   (Or any combination of these)

When?

- **Depends on**
  - **the importance of the data <u>to you</u>**
  - **how often you create/modify your files**
  - **the allowable features of the backup program you're using**

- **Possibilities:**
  - **Whenever a file is created/modified**
  - **Once a day, week, etc.**

How? – the biggest question of all!

- **Countless ways to do it – we'll look at four common ones for people using Win 7, 8, 10**

  - **Local (offline) storage device:**
    - **File History – feature of Win 8 and 10**
    - **"Windows 7 Backup Program" – Win 7 & 10**

  - **Online Cloud storage examples:**
    - **OneDrive (Microsoft)**
    - **Google**

Advantages of Online Cloud Storage

- You can synchronize files between the Cloud and a local folder.

- You can access files from multiple devices.

- Your backed-up files offer ransomware protection, allowing you to recover previous saved versions from the cloud.

Advantages of Online Cloud Storage

- **You can share files, photos, and entire folders with friends and family.**

- **Your files are safe from home fires, etc. – Data is generally stored in duplicate at two locations distant from each other**

- **You don't have to worry about having backup drive plugged in at assigned time.**

Disadvantages of Online Cloud Storage

- **A bit more technical to set up and manage**

- **Privacy concerns for your personal data**

- **Usually an ongoing expense rather than a one-time set up cost
(but free if you don't have a lot to back up)**

- **Sending data online to the Cloud is slower than writing to external device – possibly impactful on computer performance**

Advantages of Local Storage Device

- **You can store large amounts of data**
- **Your backup data isn't visible/accessible to hackers**
- **Good reliability during times of Internet connectivity problems**
- **Full control over the backup storage media and the security of the data on it**

Disadvantages of Local Storage Device

- **Does not offer good protection against theft, fire, flood, earthquakes and other natural disasters**

- **When source is damaged by any of these circumstances - good chance backup will also be damaged**

Disadvantages of Local Storage Device

- **Backup software may not be reliable or be available long-term when you need to do a restore**

- **Depending on importance of data, may need extra copy of backup at alternate location**

File-syncing apps vs Online backup services

- **OneDrive and Google One – considered good file-syncing apps**
  - They're good for seeing your data on all your devices plus they serve as a simple backup

- **IDrive and Acronis True Image – considered very good online backup services**
  - provide robust tools for restoring your files in case of data loss – generally can't see files on all your devices (difficult to actually SEE your data in their backup)

Windows Settings > Update&Security >Backup

Backup

Back up using File History
Back up your files to another drive and restore them if the originals are lost, damaged, or deleted.

Automatically back up my files

On ← **FILE HISTORY**

More options

Looking for an older backup?
If you created a backup using the Windows 7 Backup and Restore tool, it'll still work in Windows 10.

Go to Backup and Restore (Windows 7)

File History

⌂ Backup options

Overview
Size of backup: 0 bytes

Total space on Seagate Backup Plus Drive (F:) (F:): Disconnected

Backing up your data...

Back up now

Back up my files

Every hour (default) ⌄

Keep my backups

Forever (default) ⌄

Windows Settings > Update&Security >Backup>File History

It selects lots of folders you might want to back up. You might want to delete some of them and also add others you might want to back up.

As long as your backup drive is connected, it will run on your schedule. Otherwise, it will "catch up" when you plug it in again.

Back up these folders

+ Add a folder

Saved Games
C:\Users\rwron

Links
C:\Users\rwron

Downloads
C:\Users\rwron

Favorites
C:\Users\rwron

Contacts
C:\Users\rwron

OneDrive
C:\Users\rwron

Desktop
C:\Users\rwron

3D Objects
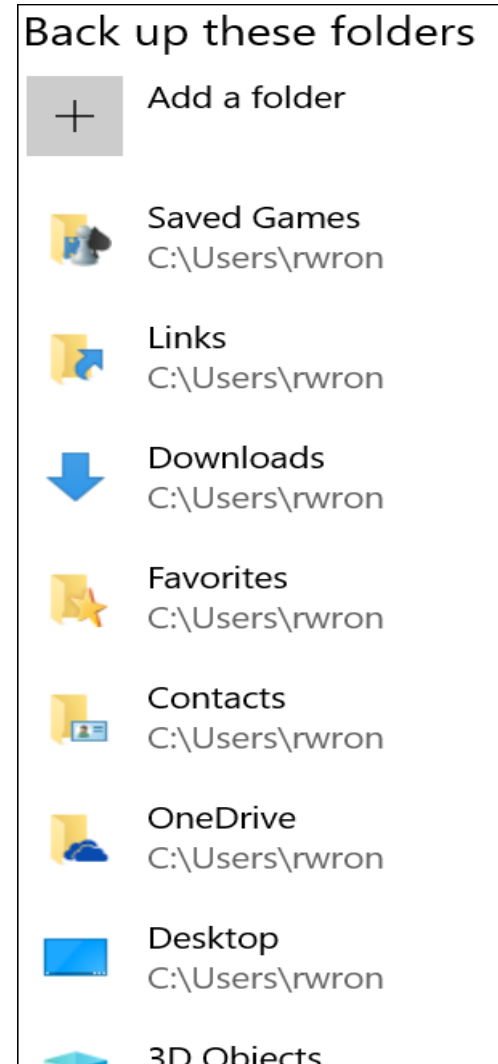
Etc.
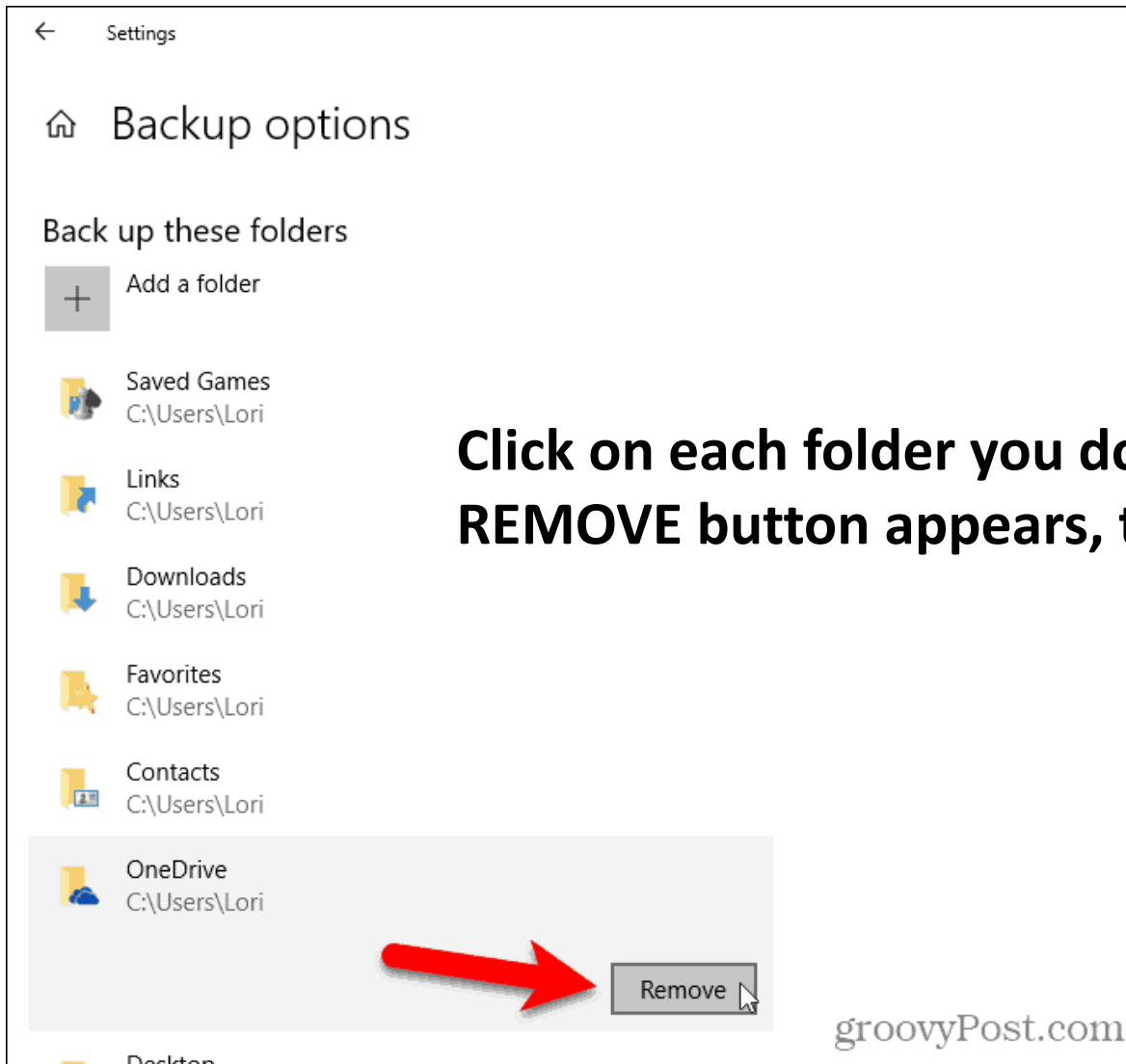
File History

Click on each folder you don't want - REMOVE button appears, then click it

File History

⌂ Backup options

Overview
Size of backup: 0 bytes

Total space on Seagate Backup Plus Drive (F:) (F:): Disconnected

Backing up your data...

Back up now

After you've selected what to back up, click "Back up now" and it should say this.

Back up my files

Every hour (default) ⌄

First time, it copies all your selected folders. After that, it copies only the changes.

Keep my backups

Forever (default) ⌄

Recovering File History Versions

- **You can use File Explorer to restore a previous version of a file:**

    - **Open up File Explorer and select the file you want to restore a version of.**

    - **Then, click "History"**

- **This requires that your backup device be connected to your PC.**

Recovering File History Versions
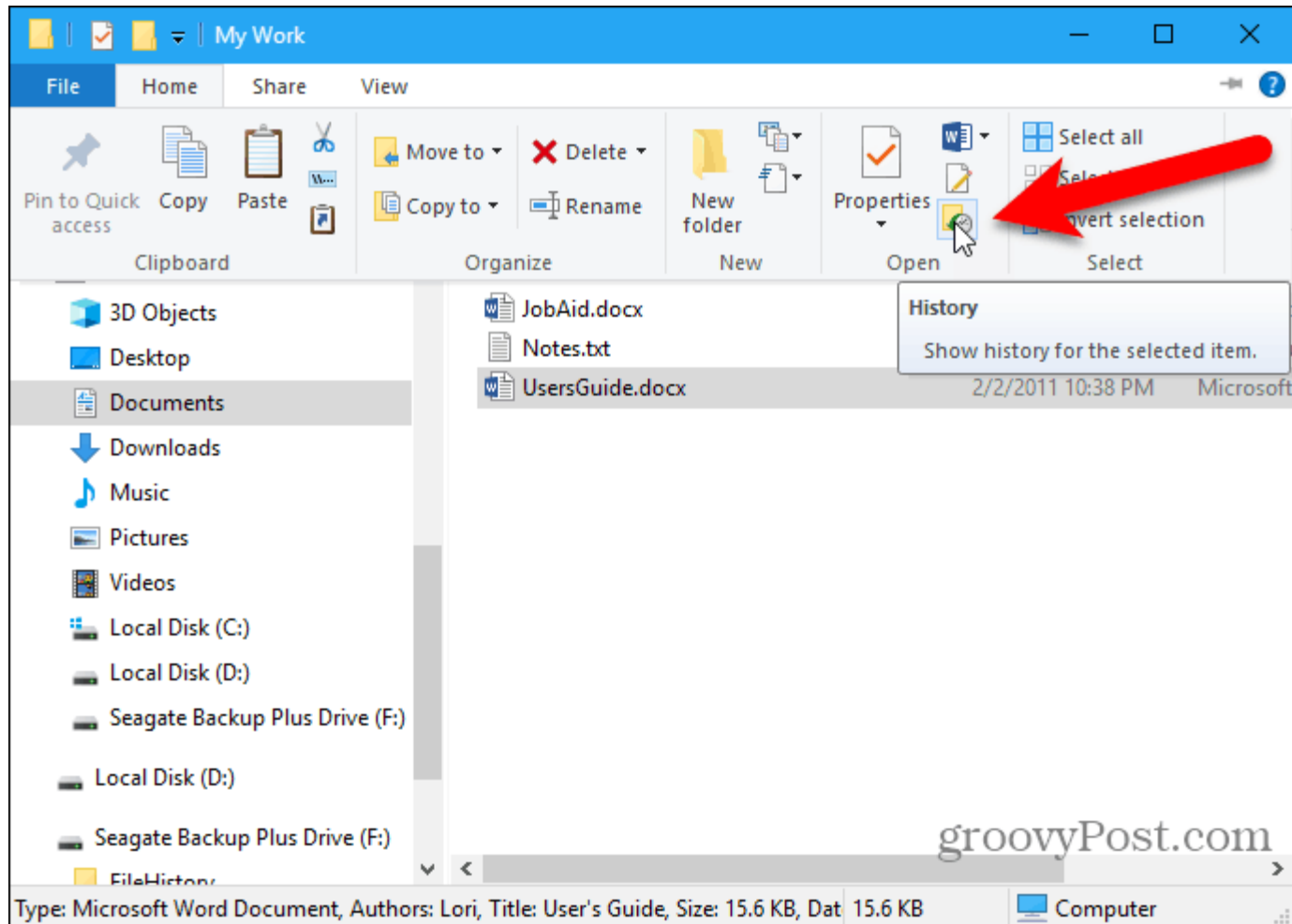
Good Tutorial on File History

- https://www.groovypost.com/howto/configure-windows-10-file-history/

"Backup and Restore (Windows 7)"

Backup

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Automatically back up my files

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Backup and Restore (Windows 7)

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Backup and Restore (Windows 7)

Don't really need Image copy with Win 10

Backup and Restore (Windows 7)
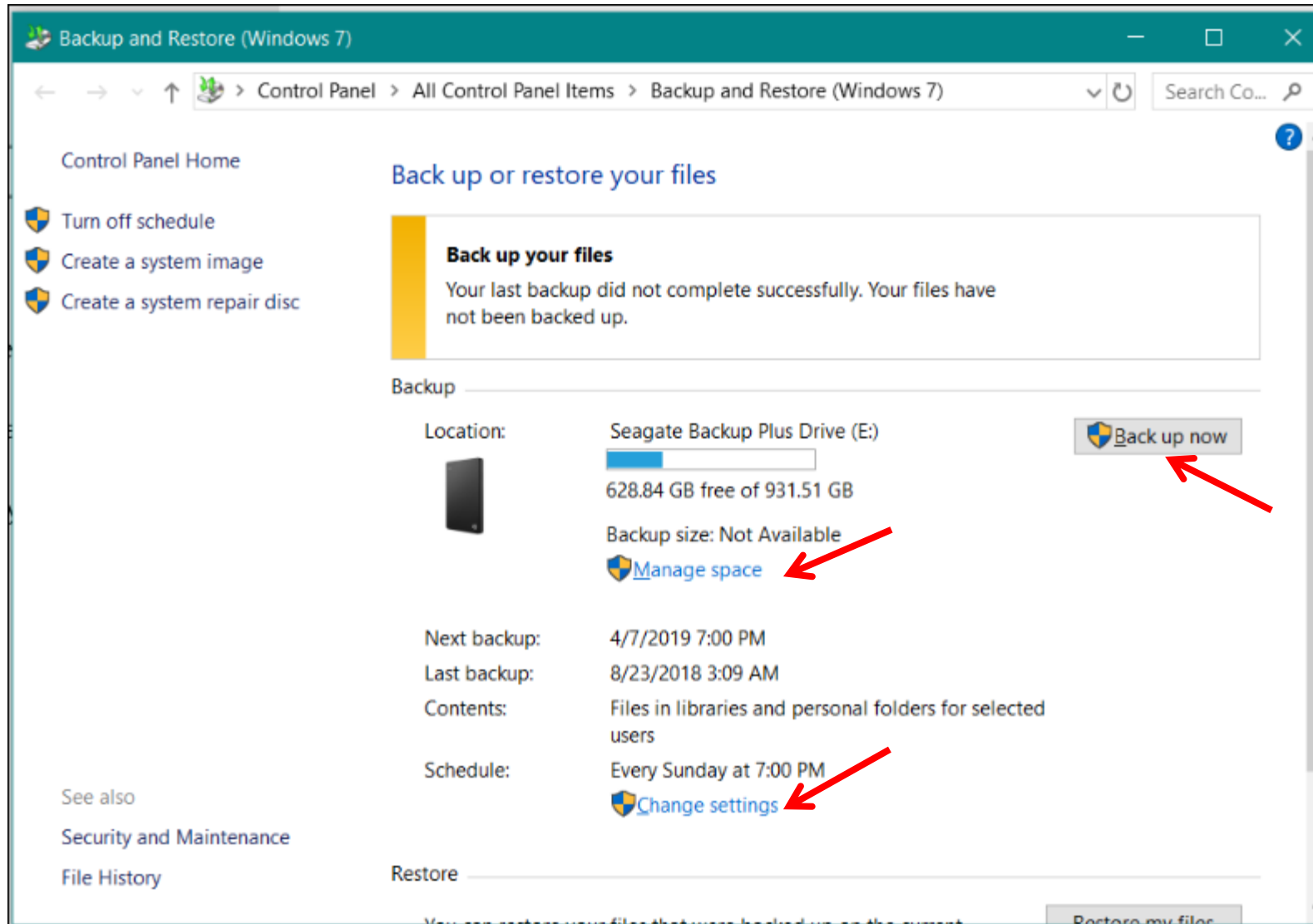
What is OneDrive?

- **OneDrive is a service tied to a Microsoft account.**
- **Includes a free tier that offers 5GB of file storage.**
- **You can upgrade storage to 50GB for $1.99/mo**
  - **(but if you need more than this, the best deal is an Office 365 subscription, which includes 1000GB (1TB) of storage for up to five users)**

What is OneDrive?

- **The default location for managing your synced files is a folder called "OneDrive"**
  - **automatically set up by Microsoft in File Explorer**

File Explorer/OneDrive connection

The Documents folder is the only folder I set up for OneDrive to sync on this PC. You can add others.

Microsoft put this here as the default location. This folder really is on your hard drive, but is also the "pass thru" for your data that it is syncing with the Cloud.
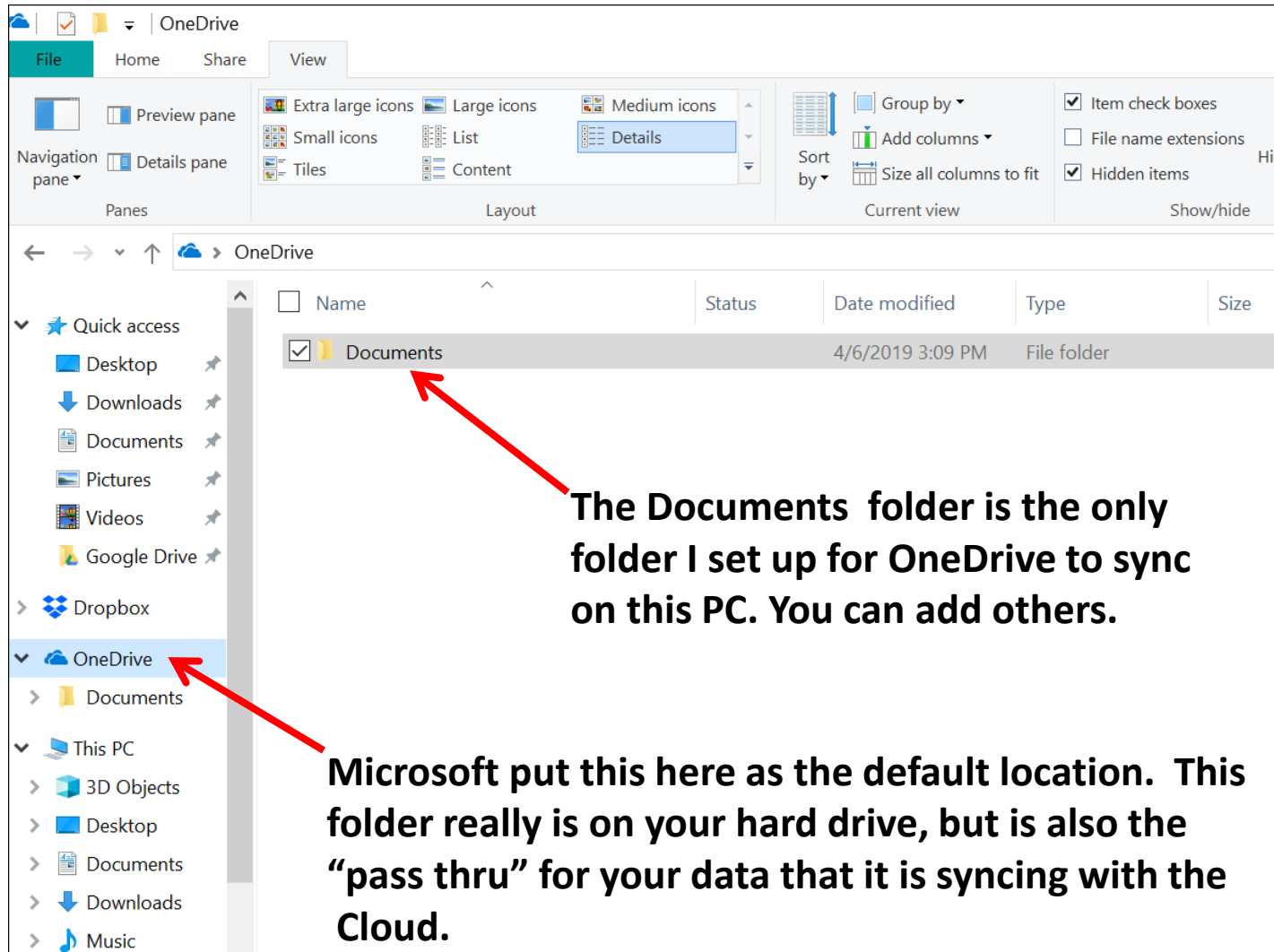
How to set up OneDrive

- **Two ways to set up files that will be synced with OneDrive**

  1. **Move folders from your hard drive to the OneDrive folder in File Explorer or create new files in that folder or**

  2. **Right-click on the Cloud icon on the Taskbar and then click Settings > Accounts**

OneDrive settings

Settings are accessed by right-clicking the Cloud icon on the Taskbar and selecting the Account tab.
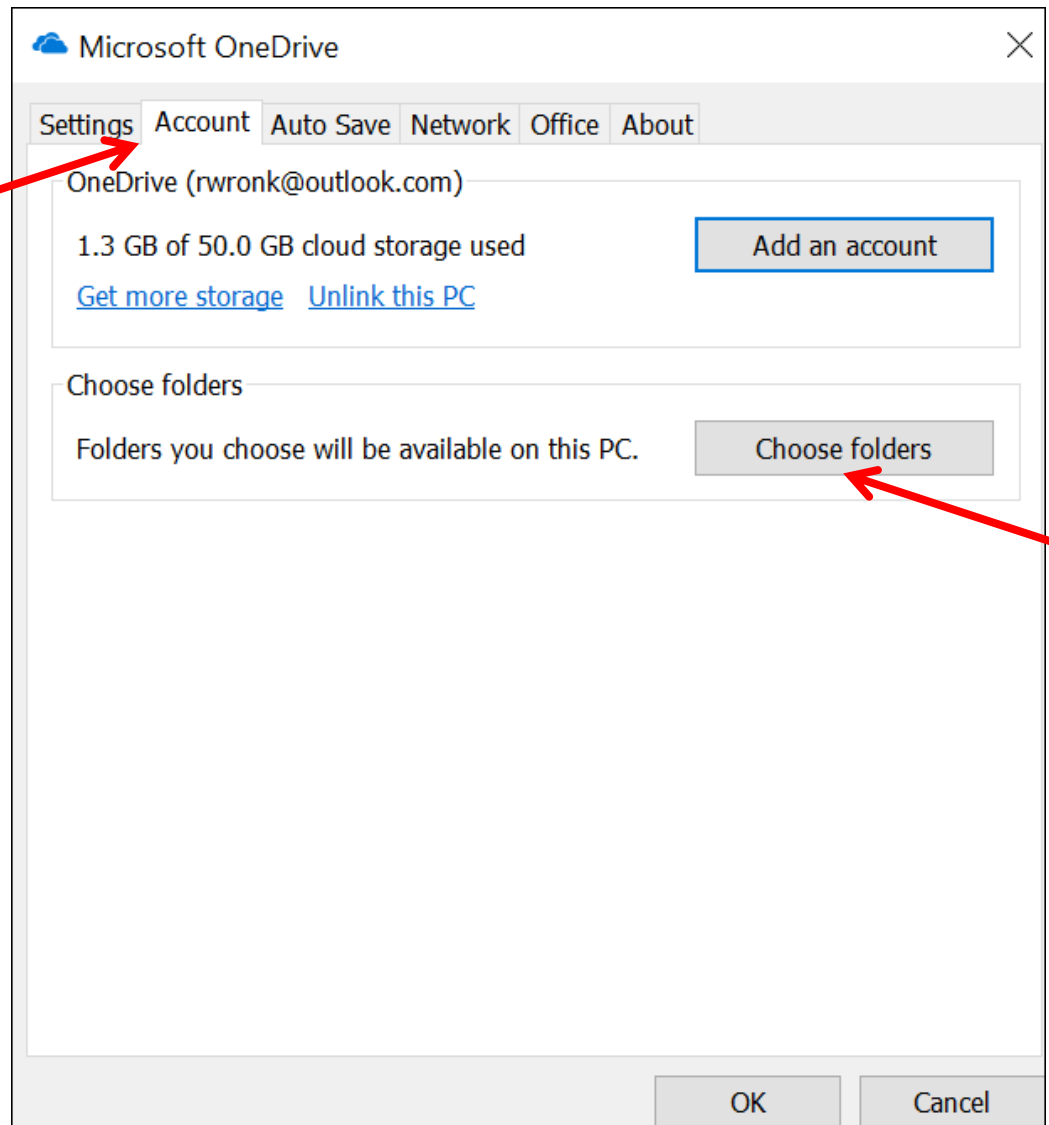
Then What?

- Once you've moved your files to File Explorer or selected their folders in Settings, the files will automatically be available online in the OneDrive (give them time to upload).

- You can view/update them in File Explorer OneDrive folder or by going to the Onedrive.com webpage and logging in with your Microsoft account.

Plan Ahead!

- **You get only 5GB of space for free on OneDrive.**

- **That is only about enough for your Documents, if you have quite a few photos and/or music!**

(I just <u>assumed</u> my Documents and Music would fit and OneDrive got "stuck" trying to upload all my music without having enough space.)

Plan Ahead!

– **Figure out how big your key folders are (e.g. Docs, Photos, Music, Videos) and how much growth you expect.**

– **Decide how much you are willing to pay for OneDrive per year.**

– **You may decide (like I did) that I only want my Documents in OneDrive and I'll back up the rest using another tool.**

Files on Demand

- **New feature with Win 10 1809**
- **You can choose which you'd rather have**
  - **Ability to have a physical copy of your synced files in the OneDrive folder on you PC or**
  - **Save space on your hard drive and just have OneDrive download them when you click on them.**
- **Most new computers have plenty of HD space, so first method might be fine.**

Files on Demand
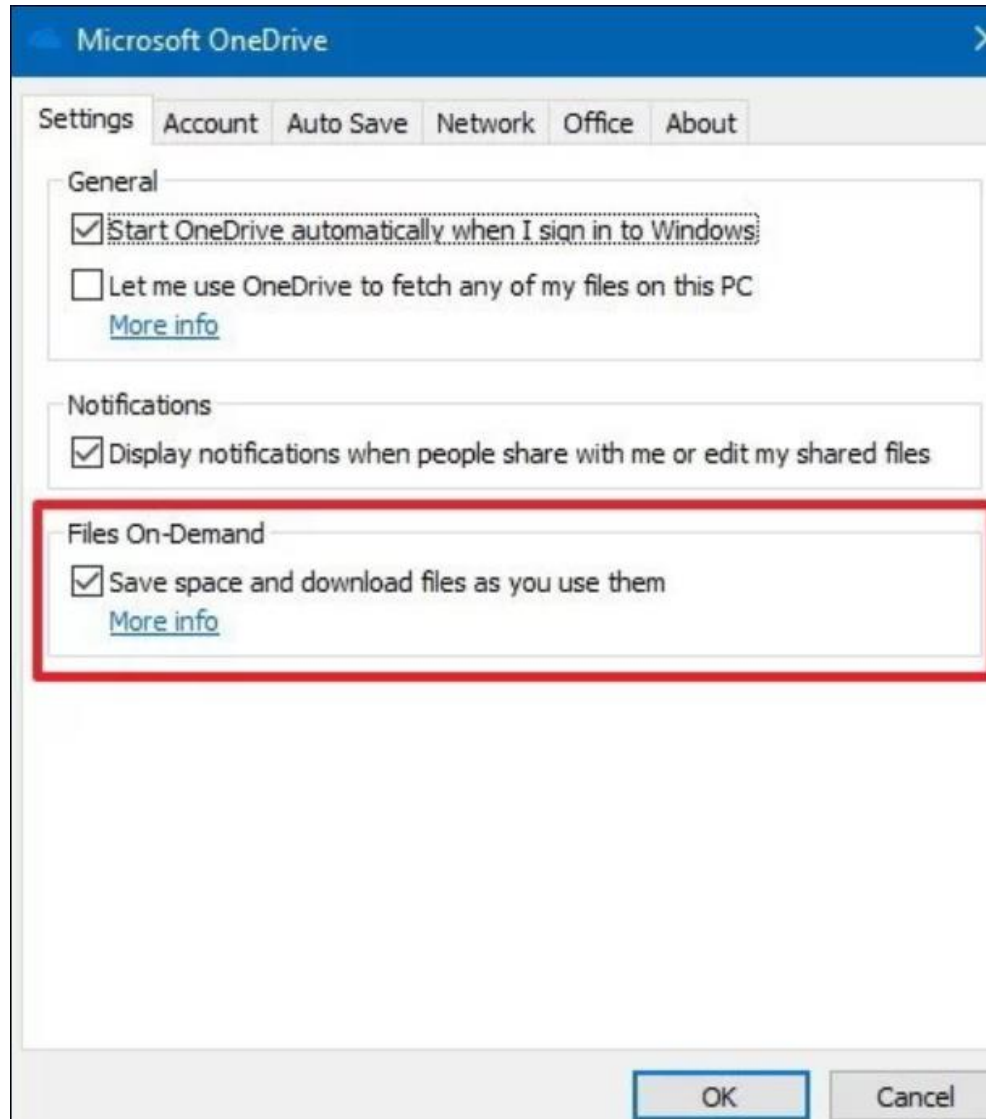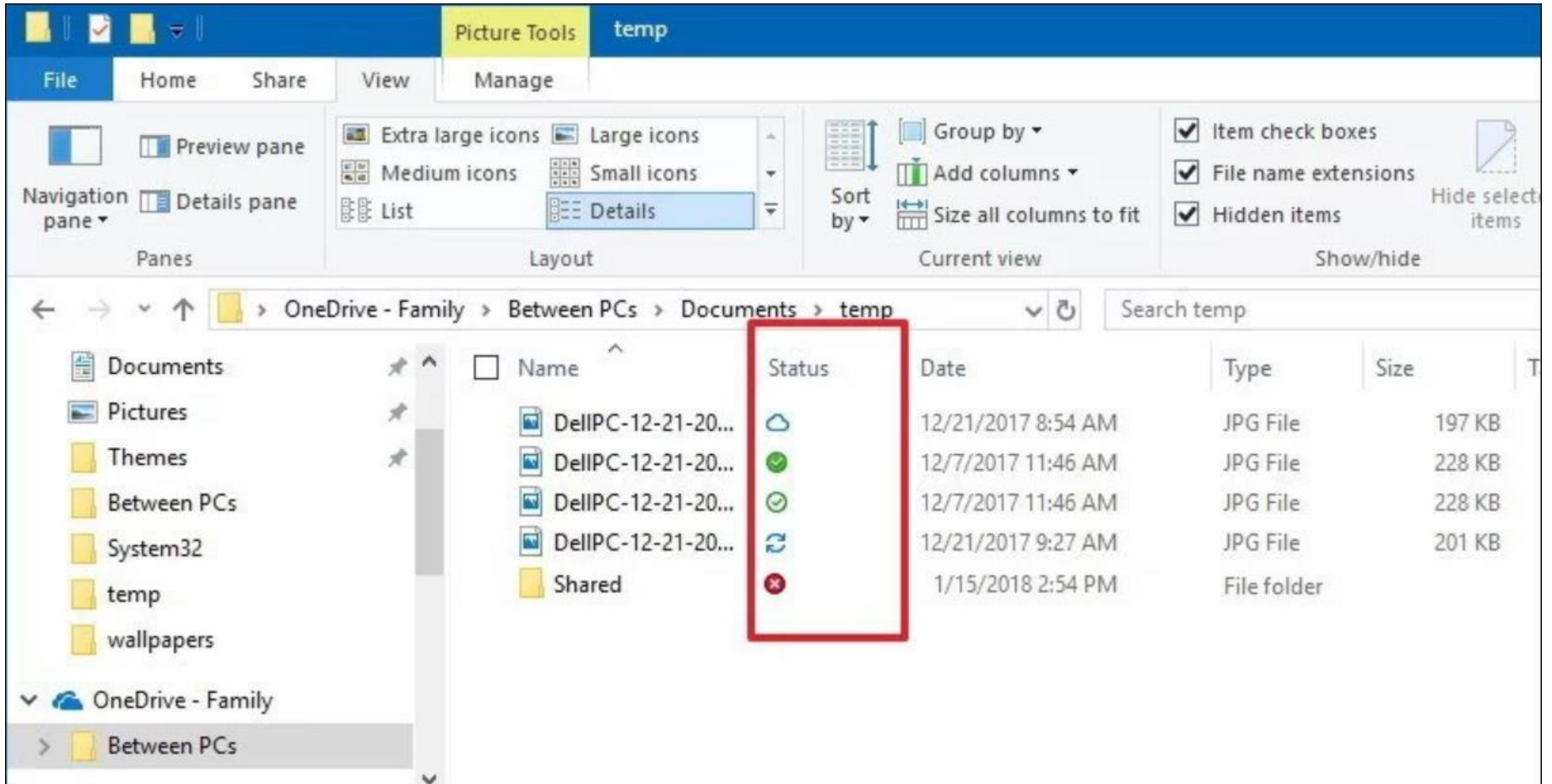
File Sharing

- **OneDrive provides the ability to share your files with your friends and family (like Dropbox, etc)**

https://www.windowscentral.com/how-get-started-onedrive-windows-10#share_files_onedrive

OneDrive Provides Status Icons

OneDrive Provides Status Icons

This website provides a full description of OneDrive setup and usage, including info about all the status icons.

https://www.windowscentral.com/how-get-started-onedrive-windows-10#sync_status_onedrive

One icon type is on each file in OneDrive folder, second type is on the Cloud icon on your Taskbar.

OneDrive is available everywhere

- **OneDrive app - available on your phone for viewing and backup.**

What is Google Drive?

- **Google Drive is a service tied to a Google account.**

- **Includes a free tier that offers 15GB of file storage.**

- **Unlimited free backup for photos as long as you agree for them to be stored at a (currently) maximum resolution of 16MP.**

Google Drive being rebranded Google One

- **New Pricing for Google One**
  - starts at 100GB for $1.99/mo.,
  - 200GB for $2.99, and
  - 2TB for $9.99 per month.

- **Existing Google Drive plans include 1TB for $9.99 -- those plans will be upgraded to 2TB at no extra cost.**

What is Google Drive?

There's a catch

– **15GB limit includes not only your Google Drive, but also your Gmail account (messages and attachments) and photos/videos in Google Photos stored using their "Original" size.**

Google Docs, Sheets and Slides files that you create online do not count towards the storage limit.

File Explorer/Google Drive connection

The Photos folder is the only folder I set up for Google Drive to sync with this PC

Google put this here when I installed Backup and Sync. This Quick-Access folder really is on your hard drive, but is also the "pass thru" for your data that it is syncing with the cloud.
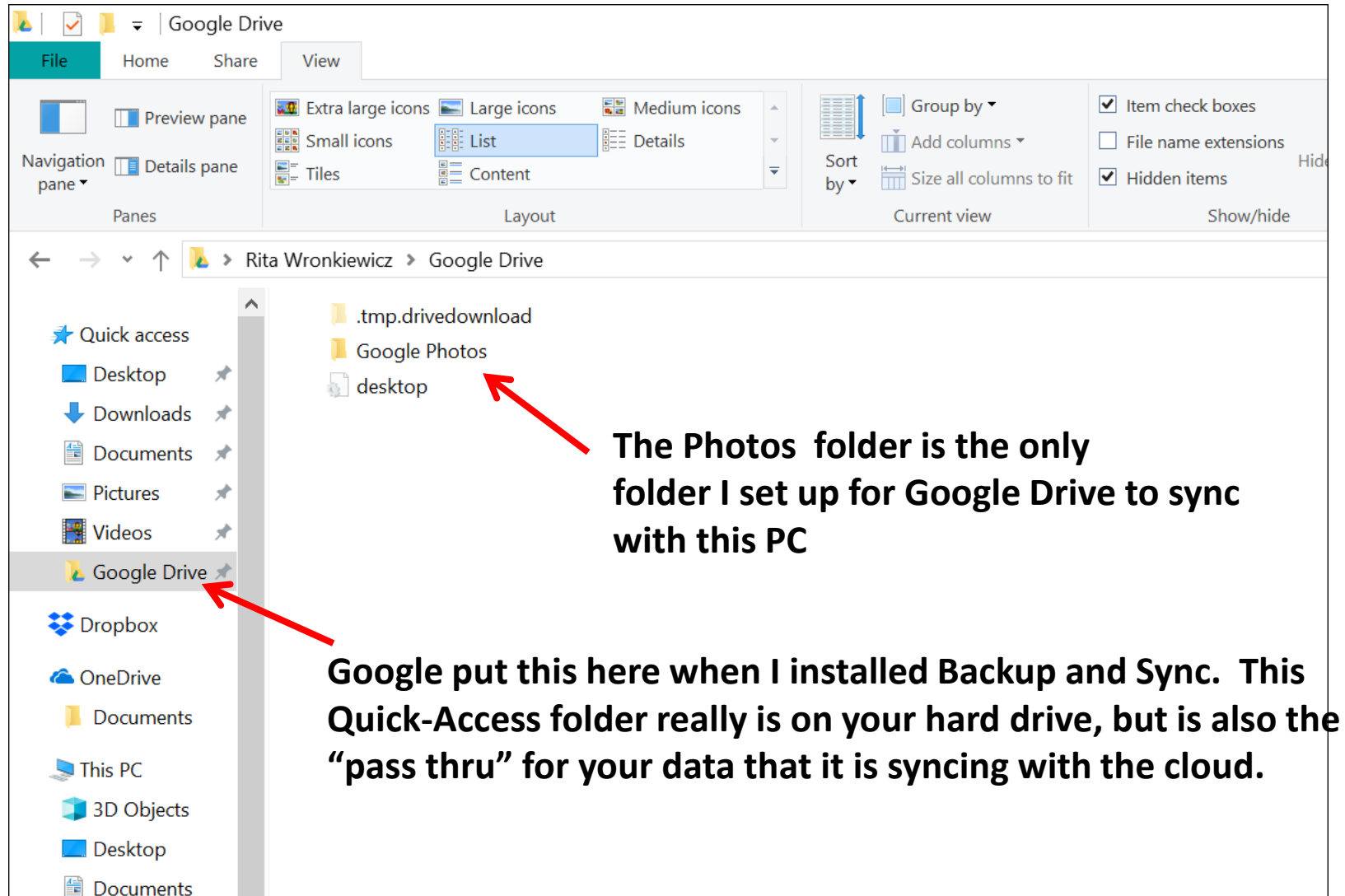
Backup and Sync from Google

- **To start viewing Google Drive files on your PC, you must go to drive.google.com and hit download button for "Backup and Sync"**

- **As part of this download, it will ask for your setup preferences.**

Backup and Sync from Google

- **After this, you will see Google Drive in File Explorer and it will be downloading the folders you specified – and keep them in sync.**

- **During the sync, you will see a status Cloud icon on the right Taskbar.**

- **This icon is your permanent way to view OneDrive status on your PC and to open up its settings to make changes.**

Download "Backup and Sync from Google"

Download "Backup and Sync from Google"

Download "Backup and Sync from Google"

Google Drive on the web

- **You access your Drive data via
  drive.google.com**

- **Files can be added/modified/deleted by using File Explorer or by going to this website.**

Google Drive
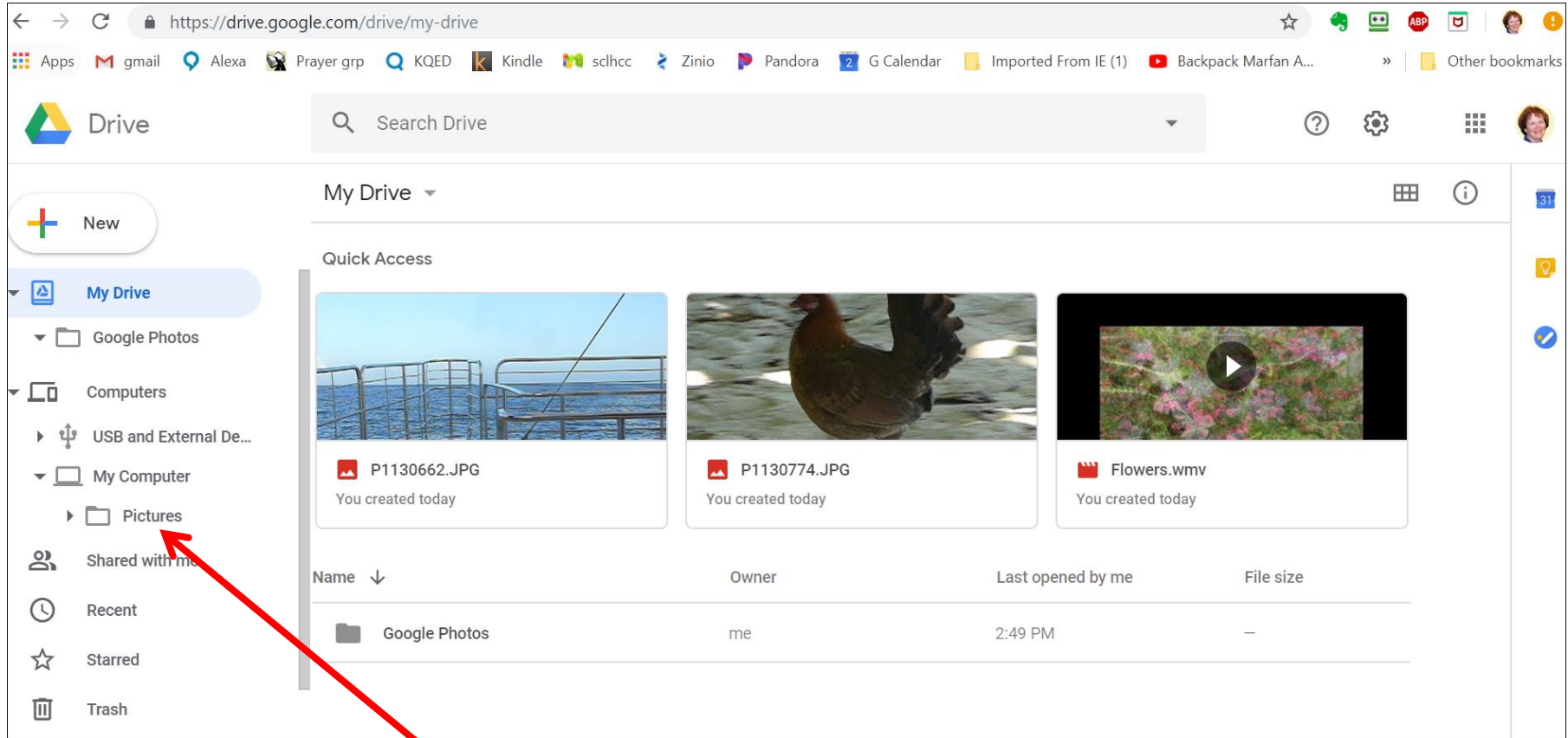
"My Computer" shows files synced with your PC.

Google Drive file sharing

- **Files can be shared with others, but does not have the capability to password-protect the sharing.**

https://support.google.com/drive/answer/2494822?hl=en&co=GENIE.Platform=Desktop

Google Drive on your phone

- **Google Drive app - available on your phone for viewing and backup.**

- **When you delete a file on your phone, it is removed from Google Drive.**

The Last Step: Verify

- **If backing up to an external hard drive,**
  - **Plug in your backup device and open File Explorer.**
  - **Double-click it and look for your backup file**

The Last Step: Verify

- If you ran File History, there should be a file with that name.
  - Right-click it first and then select "Open"
  - When it asks, grant permission
  - Double click into the folder layers to confirm file dates that are recent.
  - Another check: Open up File History in Settings and it will indicate when the most recent backup was taken.

The Last Step: Verify

- **If you ran Windows 7 Backup Program , there should be a folder name similar to "Desktop-XXXXX".**
    - **Right-click it and select "Open"**
    - **When it asks for permission, say Yes.**
    - **This type creates a "backup set" composed of many files created on the same day, each containing part of your backup.**
    - **Double-click into all the folder layers until you get a backup set like this, with a recent date.**
    - **If it's not there, open up the backup program in Settings to see when the most recent backup was taken – or if it stopped running.**

The Last Step: Verify

- For OneDrive, check for your data by logging into Onedrive.com.

- For Google Drive, check in Drive.google.com.