

LARGE FILE TRANSFER TECHNIQUES

A Learn in 30 presentation

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For PATACS+OPCUG

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Why might you be interested?

- You may need to transfer one gigantic file, such as a video file.
- You may need to transfer a group of files such as photos or short videos that collectively add up to a huge number of bytes.
- It may be convenient for you, or your recipients, to make that group into a single zip file, meaning one attachment or upload instead of many.
- The cloud-based method is useful for copying files to or between your various portable devices, if you do not have a NAS attached to your network.

Agenda

- Storage measures defined
- Ways to make file copies available to others
- What does Large File mean?
- The Web site method (WeTransfer.com)
- The Cloud Storage method (Google Drive)

Measurements defined

Original measurements (1980s)

- $1024 = 2^{10}$
- Kilobytes: 1 Kilobyte = 1,024 bytes
- Megabytes: 1 Megabyte = 1,024 Kilobytes = 1,048,576 bytes
- Gigabytes: 1 Gigabyte = 1,024 Megabytes = 1,073,741,824 bytes
- Terabytes: 1 Terabyte = 1,024 Megabytes = 1,099,511,627,776 bytes

The bottom of a 2021 Seagate BarraCuda Hard Drive box

- Emphasis added by me

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When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes.

Ways to deliver file copies to others

- Disks or diskettes
- Portable USB drives (flash drives a.k.a. thumb drives, hard drives, Solid State Drives)
- Email attachments
- Cloud storage
- Web based transfer to specific email addresses

Email attachment size limits

- Varies by the email service provider
- iCloud email: **20 MB**
- Google email, Yahoo email: **25 MB**
- AOL.com/Verizon.net email: **20 MB**

Capacity limits of physical media

Physical distribution methods:

- Flash drives: growing steadily, now **128 GB** size is less than \$10
- Solid State Drives and Portable hard drives: **4 TB** also growing

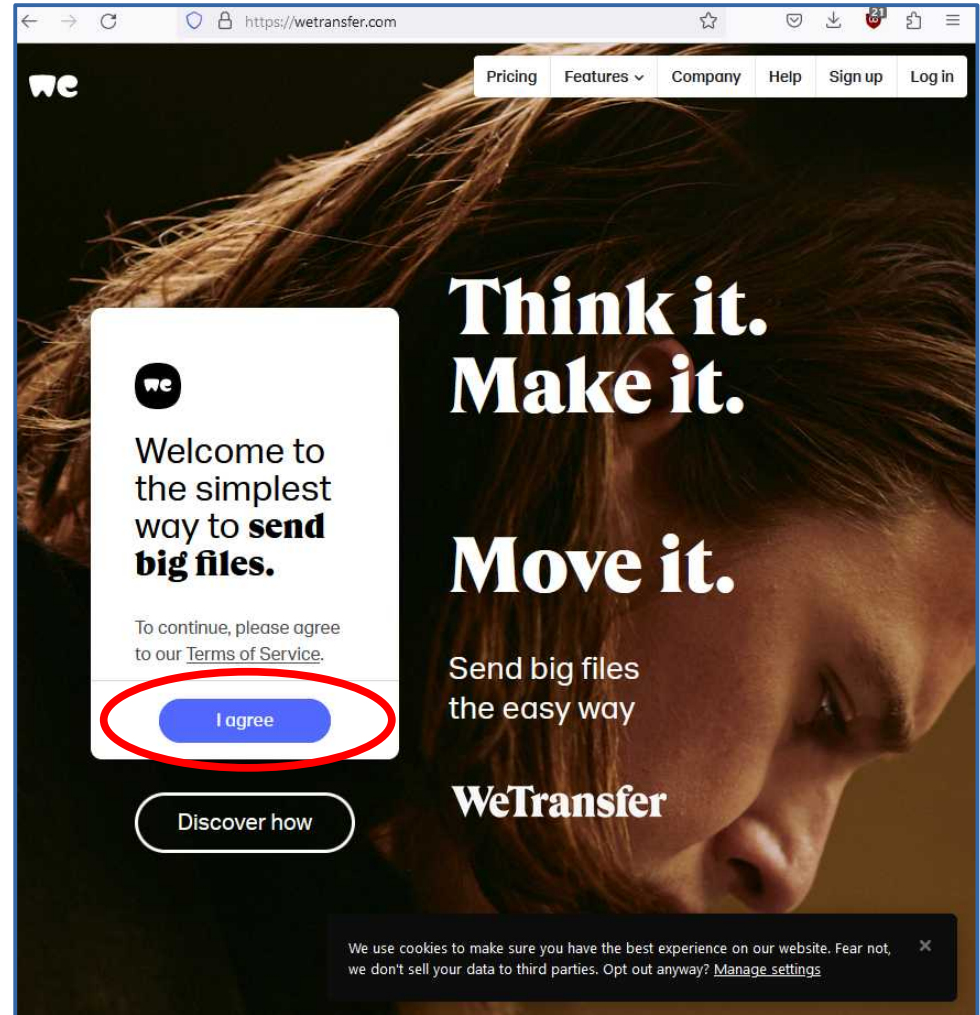
Files sizes keep growing too

- Audio files of modest duration can reach 100+ megabytes in size, especially for audiophiles
- Full High Definition (FHD) Video files of 15 minute duration can reach 1 gigabyte in size
- Example: the PATACS+OPCUG pre-meeting announcements video, 15:02 in length, is about 1 billion bytes
- 4K resolution video files of 15 minute duration can reach 8 gigabytes in size
- None of these large media files can be transferred using any of the email attachment methods

A Web-based file transfer service

- **WeTransfer.com** is a free service that will transfer files to each of any number of email addresses you specify.
- To get started, click the **I agree** button

Scan this QR code
to go to the web site



The screenshot shows the WeTransfer.com homepage. At the top, there is a navigation bar with links for Pricing, Features, Company, Help, Sign up, and Log in. The main content area features a large background image of a woman's face. On the left, a white card contains the WeTransfer logo, a welcome message, and a blue "I agree" button circled in red. To the right of the card, the text "Think it. Make it. Move it." is displayed in large, bold, white font. Below this, it says "Send big files the easy way" and "WeTransfer". At the bottom, there is a "Discover how" button and a cookie consent banner.

we

Pricing Features Company Help Sign up Log in

Think it.
Make it.
Move it.

Welcome to the simplest way to **send big files.**

To continue, please agree to our [Terms of Service.](#)

I agree

Discover how

Send big files the easy way

WeTransfer

We use cookies to make sure you have the best experience on our website. Fear not, we don't sell your data to third parties. Opt out anyway? [Manage settings](#)

WeTransfer.com Upload dialog

When you click **I agree**, this upload dialog appears.

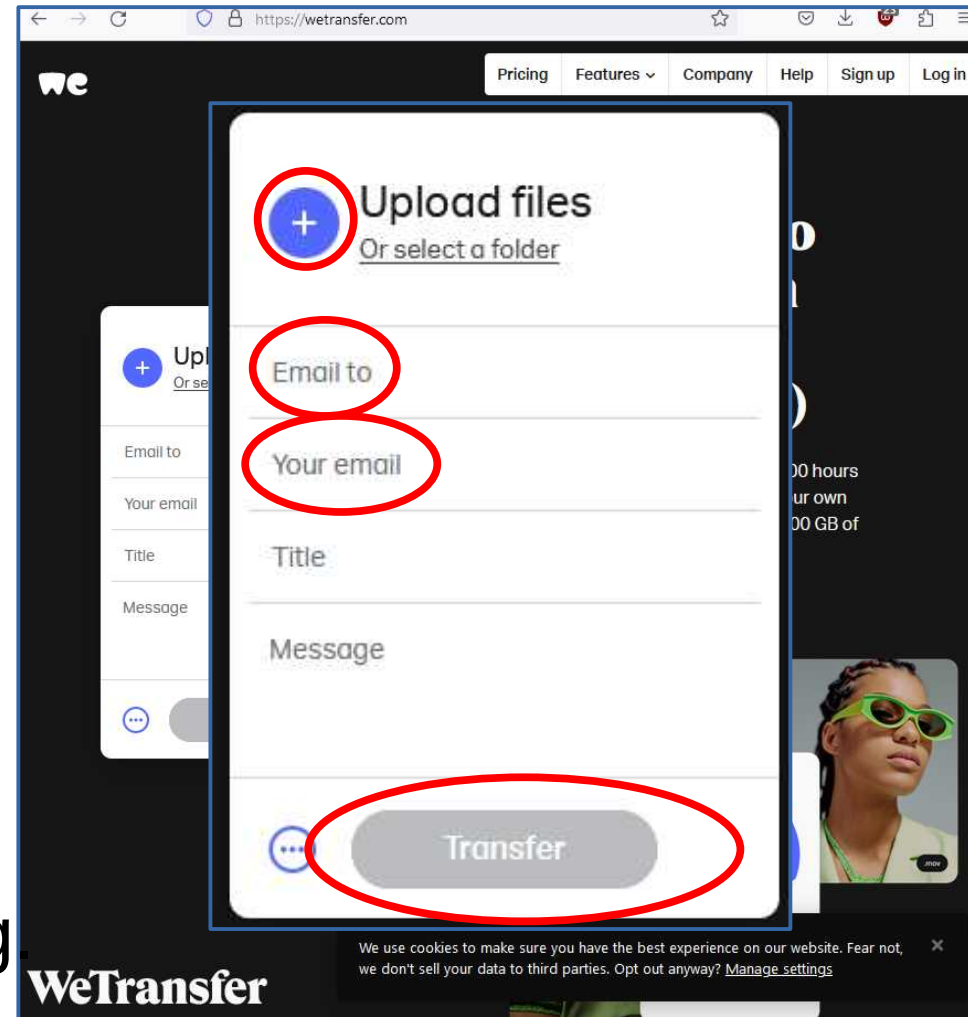
Click on the **blue +** to choose files to be uploaded.

Click on **Email to** to specify recipient email addresses.

Click on **Your email** to specify your own email address.

You can add an optional **Title** and **Message**.

Click **Transfer** to begin uploading



WeTransfer.com in a nutshell

- The service sends email to each recipient, including the Title and Message you provided, and downloading instructions.
- The service sends an email to you, confirming your upload and your recipient email list.
- Each time a recipient downloads the uploaded file(s), the service send you a confirmation of the download.
- File size limit: **2 gigabytes**
- Download time limit: **7 days**
- You may send a number of files, if the sum total of the file sizes is less than 2 GB.

WeTransfer.com pricing

Free

Send files once in a while

- ✓ Send up to 2 GB
- ✓ No need to verify transfers

US\$ 0

no money, no problem

Create account

Pro

Send really big files regularly

- ✓ Send and receive up to 200 GB
- ✓ 1 TB storage per person
- ✓ 1 portal, unlimited reviews

US\$ 10 /month

per person, billed yearly

Sign up

Premium

Share work with no limits

- ✓ No size limit on transfers
- ✓ Unlimited storage
- ✓ Unlimited portals and reviews

US\$

19 /month

per person, billed yearly

Sign up

Cloud-based storage services

- Google accounts can use **Google Drive** (drive.google.com) (15 GB storage limit per account)
- Microsoft accounts can use **OneDrive** (5 GB limit per free account; 1 TB limit per paid MS 365 account)
- iPhone users, iPad users, and Mac users can use **iCloud.com** (20 GB limit)
- All can be accessed via Web browsers
- This is not even close to a complete list

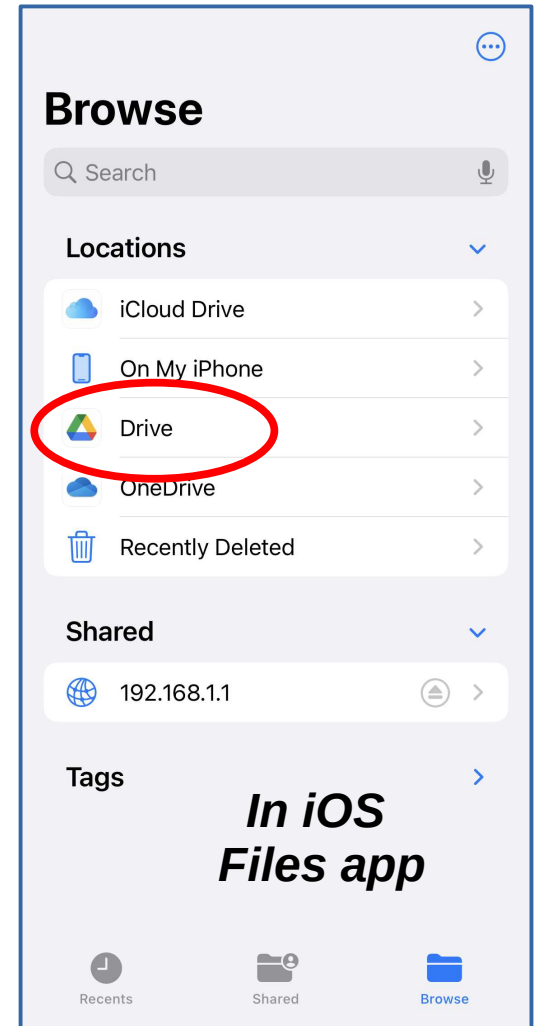
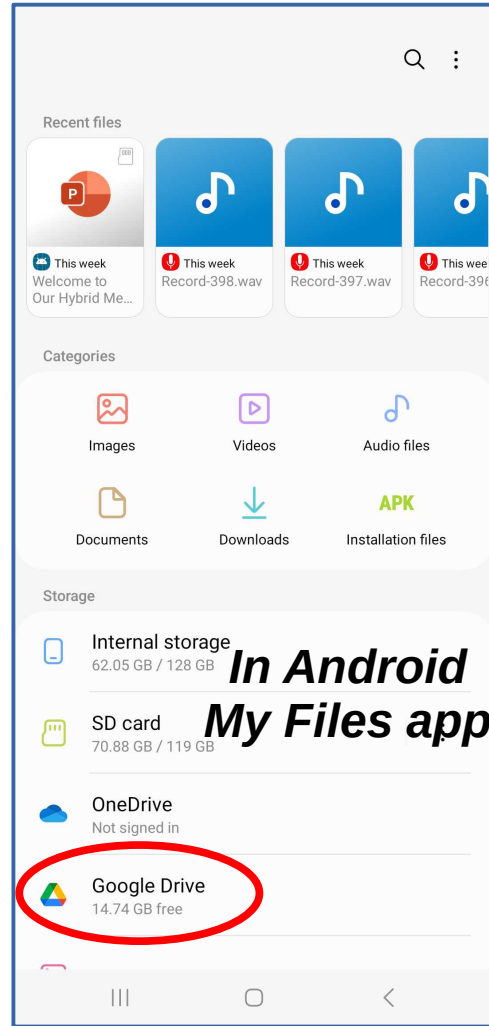
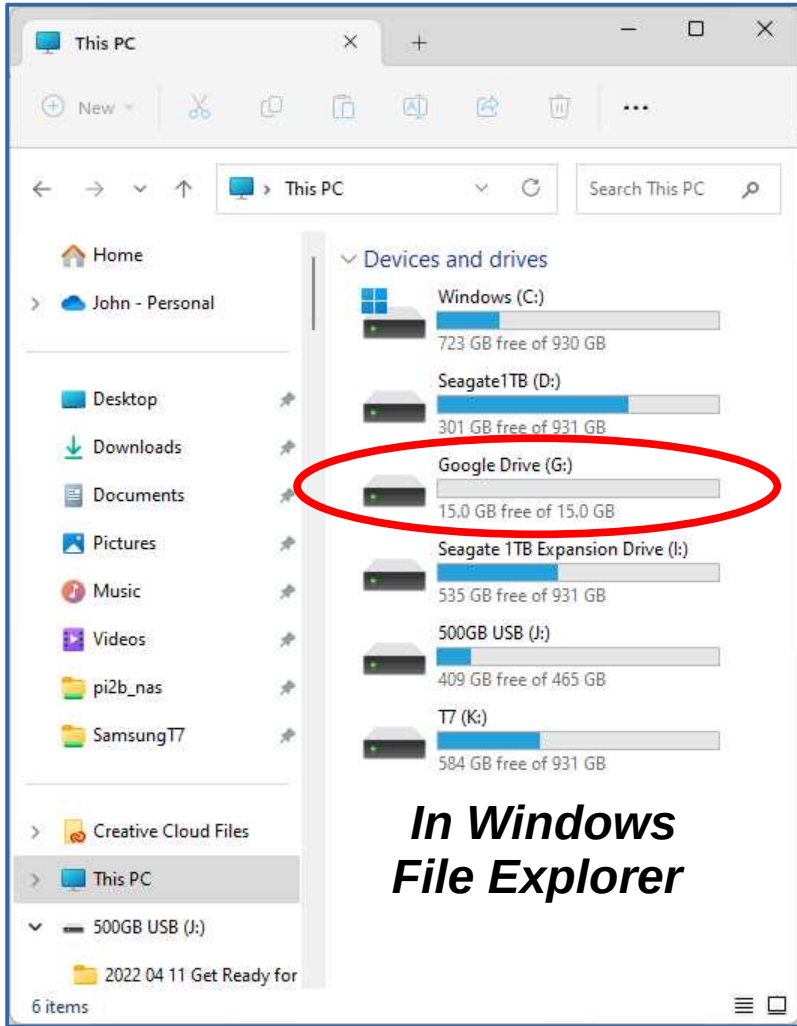
Features of cloud-based services

- No storage time limits
- Each file in a cloud-based service is assigned a **View URL**
- Make each file available to others through either one of two widely used methods:
 - Specify email address of recipient (service sends email to that email address)
 - To allow the public to download a file, change its **file permissions**; you still have to send each file URL to the intended recipients

Many Popular Cloud Storage services may be integrated

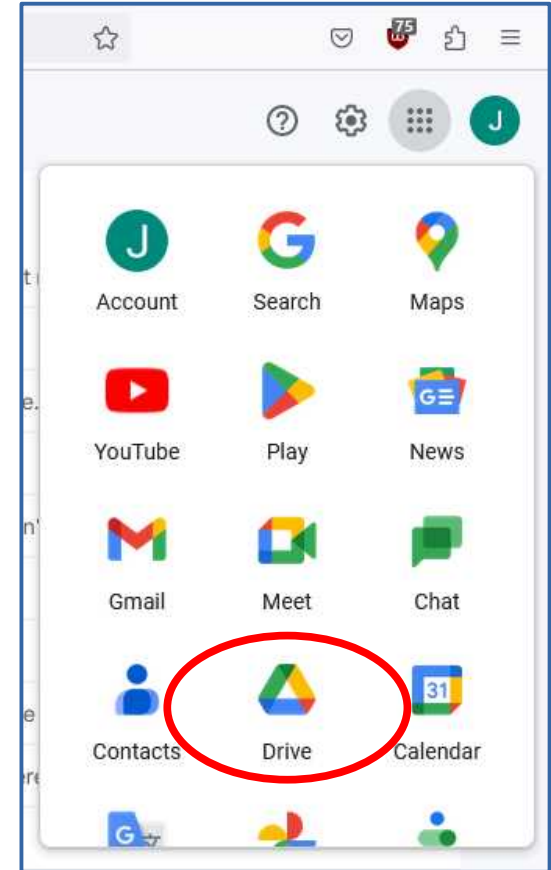
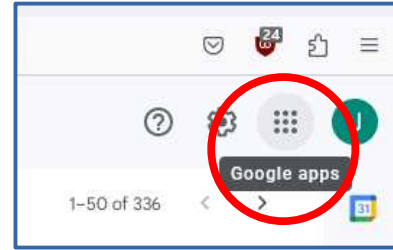
- **Integrated** means accessible through a familiar file browser app such as Windows File Explorer, Apple iOS Files app, or Android My Files app.
- Examples of popular cloud storage services:
 - OneDrive, Gdrive, iCloud
 - Adobe Creative Cloud, DropBox, Box

Gdrive integrations



Google Drive on the Web

- Use a web browser to log into your Gmail account.
- In the upper right corner, click the **Google Apps icon**.
- A list of Google Apps drops down (see illustration); click **Drive**.
- Your Gmail emails list is replaced by a list of files you have placed on Google Drive, if any.
- Drag&drop any file from Windows File Explorer to Google Drive.



Google Drive: allow others to download a file

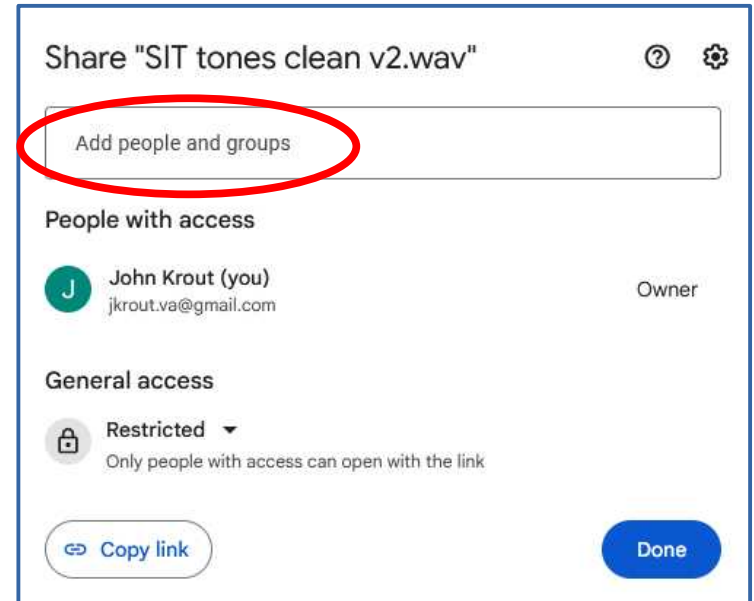
- Two ways to do it:
 - 1. Provide email addresses of file recipients to Google Drive. Google sends the recipients an email including the file's **View URL**.
 - 2. Obtain the file's **Download URL** and send that to the file recipients.
- Google provides you only the View URL, but also provides a separate Web page that will convert that View URL to a **Download URL**.

How to share a Gdrive file

- Select the file to be shared; its row list is highlighted.



- Some action icons appear at the right.
- Click the Share icon, leftmost in the icon list (head and shoulders with a +).
- The default RESTRICTED sharing option is displayed in a popup.
- To use **Method 1**, specify recipient email addresses in the entry field.



GDrive Method 1 limitations

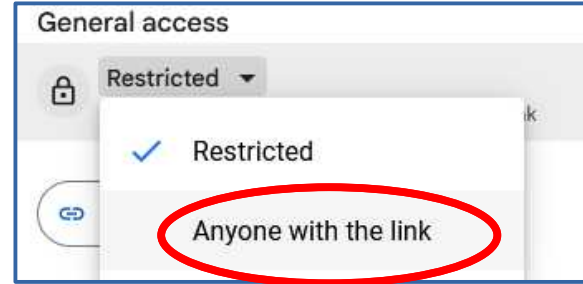
- GDrive intentionally limits your recipients to **Google account holders** (email addresses in the gmail.com domain).
- You can specify each recipient using any email domain (yahoo.com, icloud.com, verizon.net, hotmail.com, etc), but Google sends *only* to gmail.com addresses.
- **GDrive will NOT show you an error message** when you tell GDrive to send to a non-Gmail address.
- Paul Howard, Bill Walsh and I found this out by experiment when we tried using it in January 2021.
- This is why I prefer Method 2.

How to share a Gdrive file

- To use **Method 2**, click the triangle by the word Restricted.

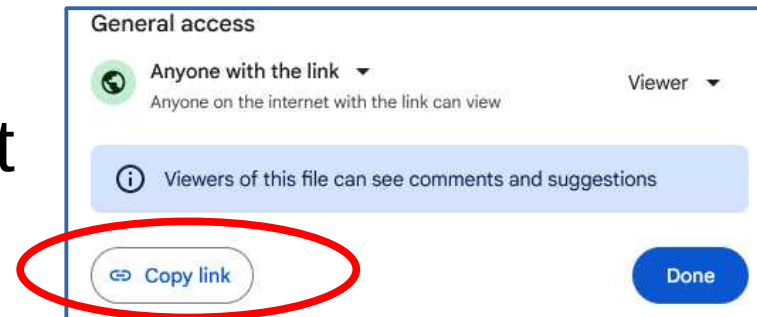
- A drop-down menu appears.

- In the menu, select **Anyone with the Link**.



- The **Anyone with the Link** option allows you to send a **View File URL** manually to any email address. This option also allows those who receive the URL to send it to others.

- How to get that View File URL: click the Copy Link button. That appears when you select Anyone with the link.



How to create a Download File URL

- Google provides a separate Direct Link Generator web page in which you can provide the View File URL as input, and generate a Download File URL as output.
- After you click the Copy Link button, it is easy to Paste the copied info into the conversion page input field.
- Here is the URL for that Direct Link Generator web page:

<https://sites.google.com/site/gdocs2direct>



The Generator web page

Google Drive Direct Link Generator

1.
Paste
the
View
File
URL
here

About

This tool allows you to generate a direct download link to files you have stored in Google Drive. A direct link will immediately start downloading the file, rather than opening a preview of the file in Google Drive.

Enter your sharing URL: (Scroll down for instructions)

2. Click this button.

Create Direct Link

Output link:

3.
Download
URL
appears
here.
Select it
and Copy
it.

...ability in Google Drive is set
...". If it's set to "Restricted"
...re logged in to Google and
...ss to the file will be able to
...ich probably isn't what you
...aded files, not documents
created in Google Docs/Sheets/Slides.

Instructions on the Generator page

- These instructions provide the first clear explanation I have found for the Restricted Method 1 limitation to Gmail addresses.
- GDrive confirms the specified recipient's ID by requiring the recipient to log into their Gmail account **before** allowing access to the file via the View File URL.
- Nonetheless, GDrive should not permit you to provide a non-Gmail address for a Method 1 recipient. It should provide a clear objection when you do that.

Notes

- Make sure your file's visibility in Google Drive is set to "Anyone with the link". If it's set to "Restricted" then only people who are logged in to Google and have been granted access to the file will be able to open the direct link (which probably isn't what you want).
- This only works for uploaded files, not documents created in Google Docs/Sheets/Slides.

GDrive in a nutshell

- At most 15 GB file size.
- Can be less if you have other files stored on the same Gdrive; the limit is a storage limit, not a file size limit.
- You can send multiple files in a Zip file; simply put all the files in a Zip-compressed file (without a password). Copy that folder to GDrive.

Connecting your file browser(s) to Gdrive

First step: Install the Google Drive app

- The first step in Windows, Android and iOS is to **download and install the free Google Drive app**
- Run the app and log in using your Gmail account name and password

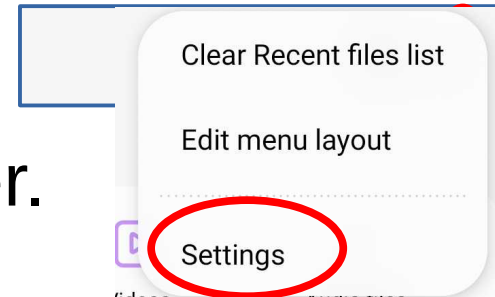
Windows File Explorer

- Open a web browser to:
<https://www.google.com/drive/download/>
- Download and install the Google Drive for Windows app.
- Start the Google Drive app, and log in using your GMail account name and password.
- Gdrive for your Gmail account is added to File Explorer automatically, under My PC.
- You do not have to run the Google Drive app after that. File Explorer retains the login info for accessing Google Drive and browsing files there.



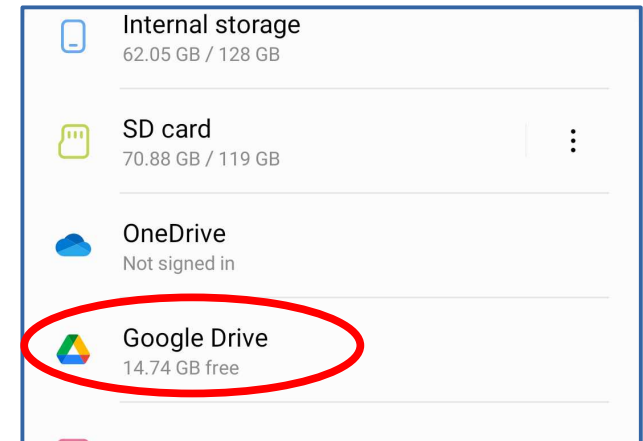
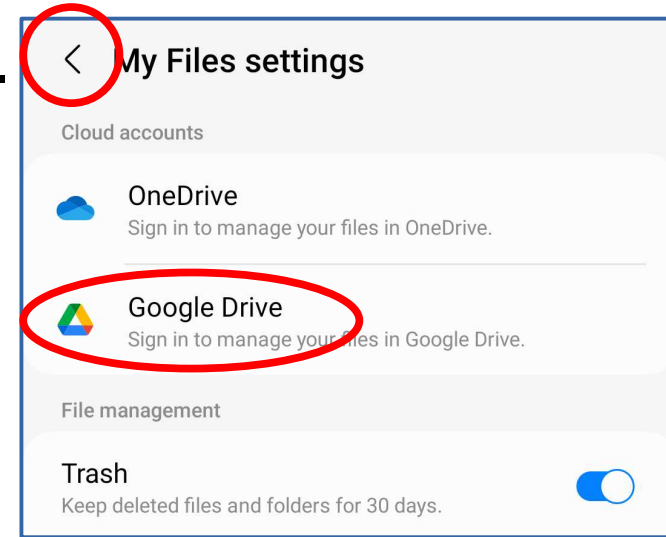
Android My Files app

- Google Drive app may be in the Google folder. The app is downloadable for free in the Play store.
- The My Files app may be in the Samsung folder, if you have a Samsung phone or tablet.
- Samsung My Files app is a free download on the Play Store for all Android devices.
- After logging into Google Drive app with your Gmail account name and ID, start **My Files**. Tap the ellipsis button in the upper right corner.
- A menu appears. Select **Settings**.



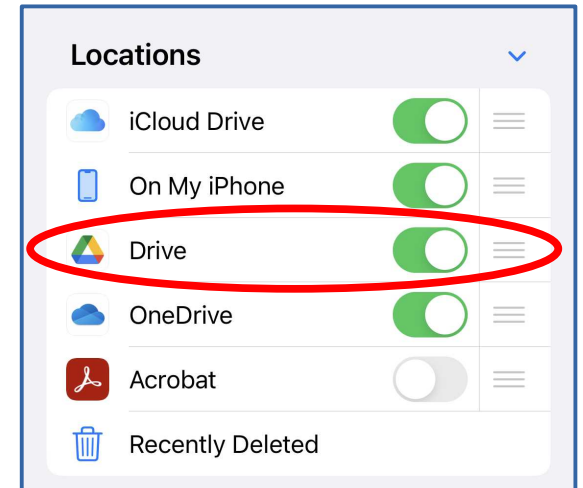
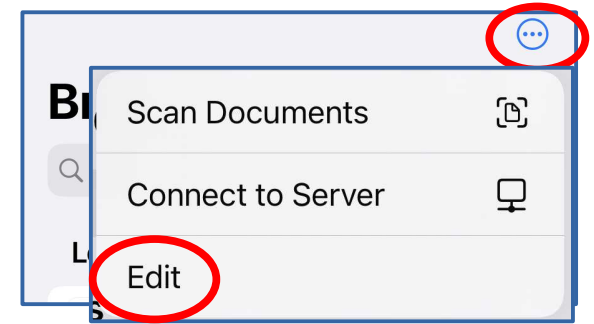
Android My Files app

- The My Files **Settings** screen appears.
- In the page, tap **Google Drive**.
- You will be prompted to select a Google account and to log into that account.
- At the top left corner, tap the **left arrow** to return to the main My Files screen.
- On that screen, the Google Drive link is **active**. Tap to browse files.



Apple's iOS 16.x Files app

- After installing the free Google Drive app and logging into that app, open the iOS Files app.
- In the upper right corner, tap the **ellipsis button**; a menu appears.
- In the menu, select **Edit**.
- Several switches appear. Tap the **Drive switch** to turn it on.
- In the upper right corner, tap **Done**.
- Drive is added to the Locations list. Tap Drive to browse Gdrive files.



The End