

CLOUD STORAGE SERVICES

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SUMMARY

You can use free cloud storage to protect yourself from losing data files and to synchronize data files between a server farm and your computers, cell phones, and tablets.

TOPICS

- (Cloud) **Storage** Versus **Backup** Versus **Synchronization**
- Cloud Storage Services In General
- Apps for Cloud Storage Services
- The "OneDrive" App in "Windows 10" Should Probably Be Uninstalled
- Some Cloud Storage Services With Free Storage
- Security Risks of Cloud Storage Services

TOPICS (continued)

- Creating An Account At a Cloud Storage Service
- Two Ways to Upload and Download Data Files and Photo Files
- Services Provided By A Cloud Storage Service

TOPICS (continued)

- Files Stored Up In the Cloud Versus Files Stored On a Local Hard Drive
- Bandwidth and File Size Limitations
- Outages of File Storage Services
- Report Cards To Compare Cloud Storage Services

(CLOUD)
STORAGE
VERSUS
BACKUP
VERSUS
SYNCHRONIZATION

STORAGE VERSUS BACKUP VERSUS SYNCHRONIZATION

- Use of these terms is imprecise
- The quotes on the next two slides are taken from

<https://www.comparitech.com/online-backup/the-difference-between-cloud-backup-cloud-storage-and-synchronization/> :

STORAGE VERSUS BACKUP VERSUS SYNCHRONIZATION (continued)

- "Cloud storage" is
<Start of quote:>
like having an external hard drive
online that's accessible anywhere. ...
Users typically store things in the cloud
manually. That is, they choose when
and what files to upload on the cloud
on a one-off basis.
<End of quote>

STORAGE VERSUS BACKUP VERSUS SYNCHRONIZATION (continued)

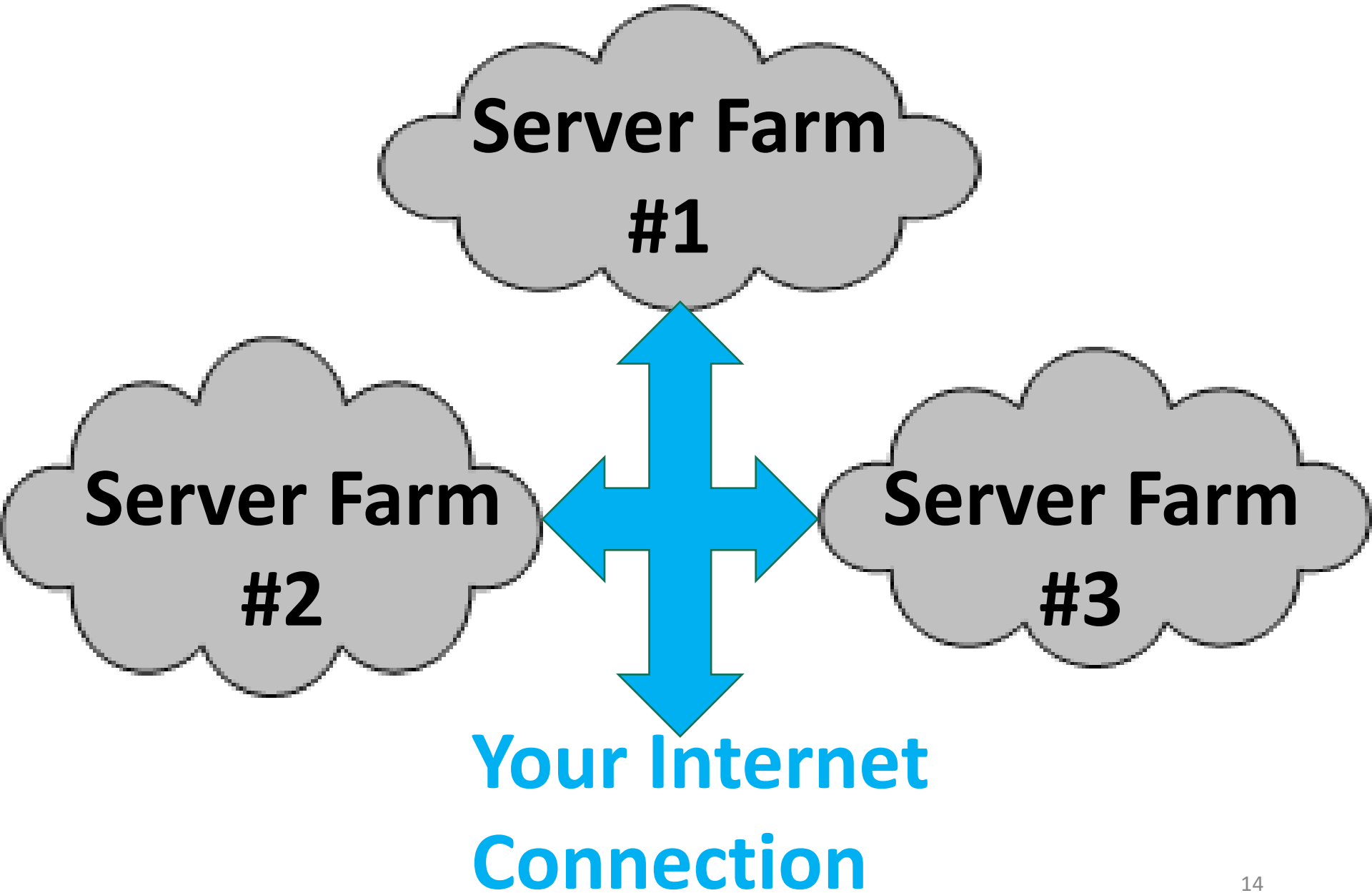
- "Cloud backup" is
<Start of quote:>
Cloud backup differs in that it's usually automated. Depending on the service, it can happen continuously or on a set schedule, often hourly or daily. When a file is created or modified, the newest version is uploaded and stored on the cloud.
<End of quote>

STORAGE VERSUS BACKUP VERSUS SYNCHRONIZATION (continued)

- The term "Cloud synchronization".. is used in any or all of three different ways:
 1. Storage of files in the cloud for collaboration between multiple people
 2. Storage of files in the cloud for making sure that they are exactly the same in multiple devices
 3. Storage of files in the cloud to make sure that they are the same as the files in a specific folder(s) in your computer

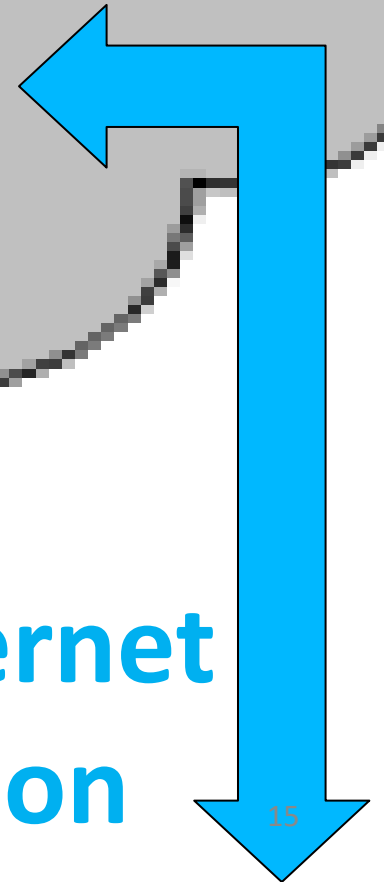
CLOUD STORAGE SERVICES IN GENERAL

A set of interconnected server farms provided by the cloud storage service connects to the Internet which connects to your computer:



**Interconnected Server
Farms Operated by a
Web-based Cloud
Storage Service**

**Your Internet
Connection**

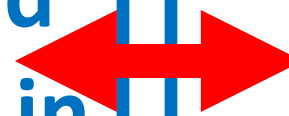
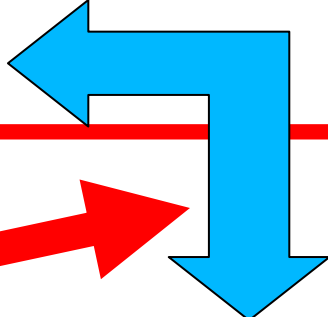


Computer to Access A Cloud Storage Service

Web Browser
(= "Web app")
to access the cloud storage service

(Optional) Special Folder Provided by the App and special icon in Notification Area

(Optional) App Provided by the Cloud Storage Service or a Third-party Software Developer



**Your Wi-Fi wireless Internet Connection
or Your Cell Phone's Data Plan**

**Cell Phone or Tablet to Access
a Cloud Storage Service**



**Web Browser app
("Safari" in iPhone
or "Chrome
browser" in
Android phone)
to access the cloud
storage service**

**(Optional) App
Provided by the
Cloud Storage
Service or a
Third-party
Software
Developer**

APPS FOR CLOUD STORAGE SERVICES

- You can use as many cloud storage services as you like.
Most computer users use more than one cloud storage service because none of the cloud storage services provide very much online storage space for a free account.

APPS FOR CLOUD STORAGE SERVICES (continued)

- However, you should not use more than one of the apps that are provided by the cloud storage services that you use in a Windows.. or macOS computer:

APPS FOR CLOUD STORAGE SERVICES

(continued)

- The apps that are provided by the various cloud storage services are optional:

They cause a noticeable slow-down for your "Windows.." or "macOS" computer.

If you do not want to incur this slowing down of your computer, use a Web browser to access all of your cloud storage services instead of there apps.

APPS FOR CLOUD STORAGE SERVICES (continued)

- In a cell phone or tablet, it is okay to put in the apps for more than one cloud storage service:
In a cell phone or tablet, it is hard to use a cloud storage service if you do not install either the app that is provided by a cloud storage service or a third party app for connecting to a cloud storage service.

APPS FOR CLOUD STORAGE SERVICES

(continued)

- In a "Windows.." or "macOS" computer, only install the app for one cloud storage service since the apps for the various cloud storage services will massively slow down your computer, if you put in more than one app.

APPS FOR CLOUD STORAGE SERVICES (continued)

- Even if you put in only one single app for a single cloud storage service into a computer, you will notice a slow-down in a "Windows.." or "macOS" computer

APPS FOR CLOUD STORAGE SERVICES (continued)

- If you install a cloud storage service's app into your computer and the slow-down is not acceptable to you, remove by app by using "Revo Uninstaller Portable" as described at http://aztcs.org/meeting_notes/winhardsig/uninstaller/RevoUninstallerPortable.pdf

THE "ONEDRIVE" APP IN "WINDOWS 10" SHOULD PROBABLY BE UNINSTALLED








- The "Windows 10" operating system is extremely aggressive about trying to get you to use its bundled "OneDrive" app







Like all cloud storage apps in computers, this app uses lots of RAM and CPU cycles and the "OneDrive" app is optional and you can use your "OneDrive" cloud storage account from any Web browser.

Task Manager

File Options View

Processes Performance App history Startup Users Details Services

Name	Stat...	1% CPU	9% Memory
 Desktop Window Manager		0%	197.7 MB
>  Service Host: SysMain		0%	102.1 MB
>  Antimalware Service Executable		0%	81.9 MB
 Windows Explorer		0%	40.4 MB
Microsoft OneDrive (32 bit)		0%	37.2 MB
>  Task Manager		0%	20.6 MB
>  Windows Shell Experience Host		0%	17.2 MB
>  Start		0%	16.3 MB

ne	Stat...	CPU	Memory
 Desktop Window Manager		0%	197.7 MB
 Service Host: SysMain		0%	102.1 MB
 Antimalware Service Executable		0%	81.9 MB
 Windows Explorer		0%	40.4 MB
Microsoft OneDrive (32 bit)		0%	37.2 MB
 Task Manager		0%	20.6 MB
 Windows Shell Experience Host		0%	17.2 MB

THE "ONEDRIVE" APP IN "WINDOWS 10" SHOULD PROBABLY BE UNINSTALLED (continued)

- To do a clean removal of Microsoft's "OneDrive" app, you can use "Revo Uninstaller Portable" as described at http://aztcs.org/meeting_notes/winhardsig/uninstaller/RevoUninstallerPortable.pdf

SOME CLOUD STORAGE SERVICES WITH FREE STORAGE

- **"Google Drive"**: 15 Gigabytes shared between "Google Drive", "Gmail", and "Google Photos"
- **Microsoft's "OneDrive"**: 5 Gigabytes
- **"Dropbox"**: 2 Gigabytes
- **Apple's "iCloud"**: 5 Gigabyte for users of MacOS computers or iOS devices
- **"box.com"**: 5 Gigabytes if you go to <https://www.box.com/pricing/individual>

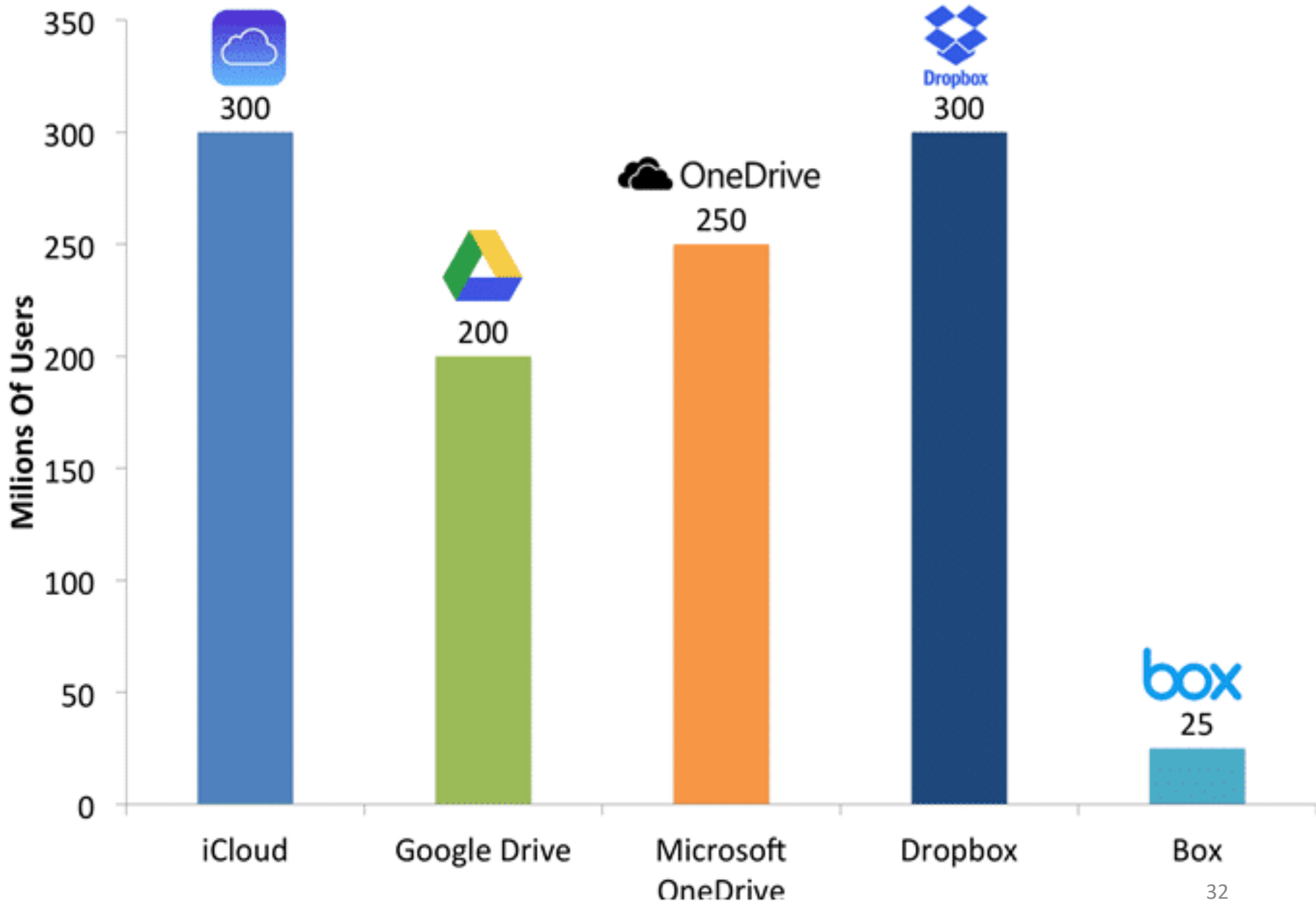
SOME CLOUD STORAGE SERVICES WITH FREE STORAGE (continued)

- **sync.com**: 5 Gigabytes of "zero knowledge" cloud storage

SOME CLOUD STORAGE SERVICES WITH FREE STORAGE (continued)

- According to <https://www.softwaretestinghelp.com/cloud-storage-providers/>

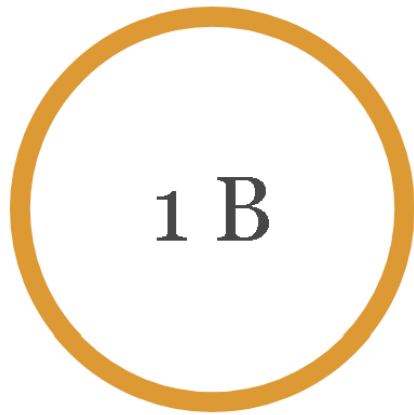
Number Of Users Per Cloud Storage Service



SOME CLOUD STORAGE SERVICES WITH FREE STORAGE (continued)

- According to <https://www.goodcloudstorage.net/cloud-research/google-drive-vs-dropbox-vs-onedrive/#users>

Number of Users [GDrive v Dropbox v Onedrive]



Google Drive ¹



Dropbox ²



Onedrive ³

*B=billion

SECURITY RISKS OF CLOUD STORAGE SERVICES

SECURITY RISKS OF CLOUD STORAGE SERVICES

- For each data file or digital photo that you store at a cloud storage service, you have to ask yourself if you accept the risk that an employee or contractor that works for the cloud service might copy or view the data file or digital photo

SECURITY RISKS OF STORAGE SERVICE SERVICES (continued)

- If an employee or contractor that works for the a cloud service provider viewed or copied your data or photo files, it would be a violation of the employee policies and contractual agreements of the management of the cloud storage service but being in violation of policies and contractual agreements does not prevent such activities (i.e. Eric Snowden and Chelsea Manning).

SECURITY RISKS OF STORAGE SERVICE SERVICES (continued)

- You have three options to protect yourself from the above-mentioned risks:

Option 1: Do not store files that contain "personally important" information at a cloud storage service

Option 2:

Encrypt the file yourself (such as putting a password on a Microsoft "Word" or "Excel" file)

SECURITY RISKS OF STORAGE SERVICE SERVICES (continued)

- Option 3:
Use a cloud storage service that uses "Zero Knowledge" encryption
For more details about "zero knowledge" and the security risks of cloud storage services that do not have "zero knowledge", see <https://www.cloudwards.net/what-exactly-is-zero-knowledge-in-the-cloud-and-how-does-it-work/>

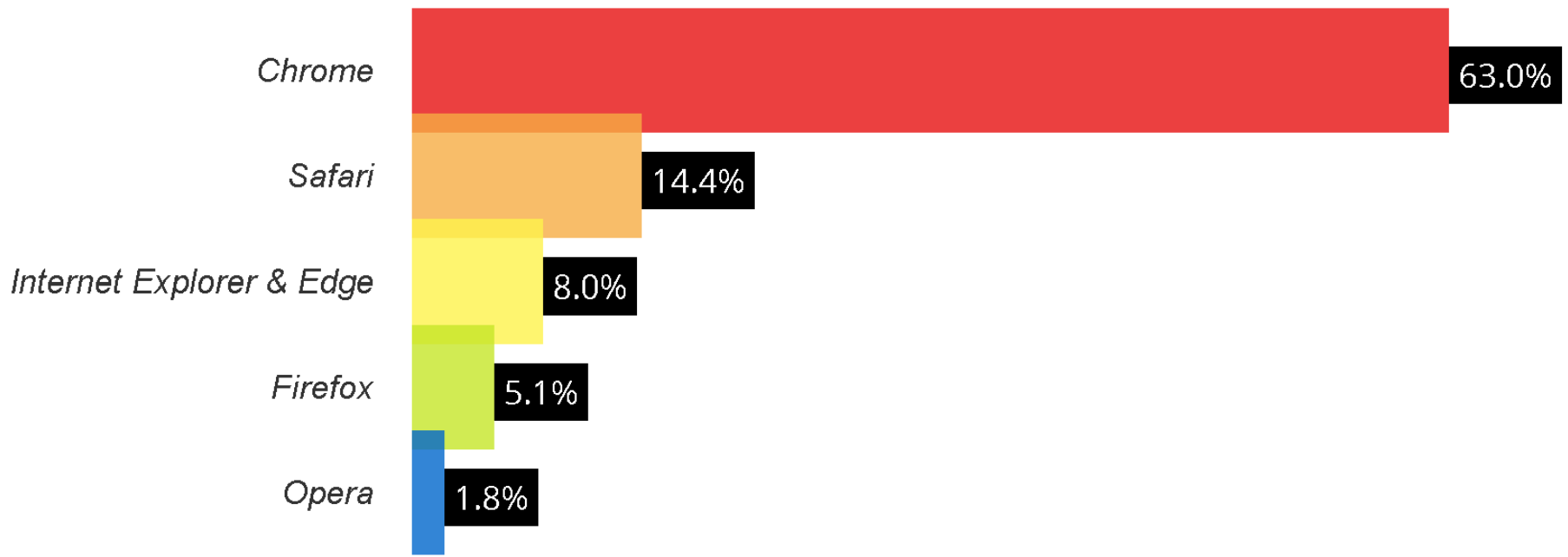
SECURITY RISKS OF STORAGE SERVICE SERVICES (continued)

- (Option 3 continued:
"Sync.com" offers 5 Gigabytes for free: They are "zero knowledge" meaning that end-to-end encryption is employed and the employees and contractors of "Sync.com" cannot access or reset the user's passwords. The employees and contractors of "Sync.com" cannot copy or view the user's stored files.

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE

- Which Web browser app should you use?

The more popular Web browsers will be easier to use for creating a cloud storage account:



CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- Reference for previous slide:
<https://www.w3counter.com/globalstats.php>

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE

- You probably already have a cloud storage account, if you use any of Google's services such as Gmail or if you have an account at one of of Microsoft's services such as "outlook.com" or "live.com", "msn.com", "hotmail.com", "xbox.com", or "Skype"

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- If you have an account at any of the following free "Google" services, you can use the same username and password to get into your existing account at "Google Drive":



Account



Search



My Business



News



Gmail



Contacts



Maps



YouTube



Play



Drive



Calendar



Translate



Photos



Shopping

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- If you have an account at any of the Microsoft's services, you can use the same username and password to get into your existing account at Microsoft's "onedrive.com"
- When you use a Web browser go to onedrive.com you end up at onedrive.live.com



Calendar



People



Sway



Skype



Photos



OneDrive



Tasks



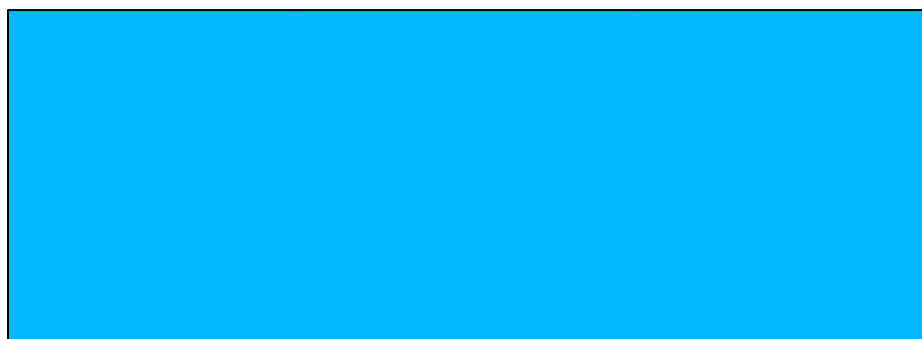
Bing



Flow



Forms



CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- If you are signing up for a cloud storage account at a Web site and it asks you for a credit card number or a PayPal log in or a checking account number, then you are signing up for a paid, not-free account:
If this happens, quickly close out the Web browser, usually by clicking on the "x" button in the upper-right corner of the browser window.

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- Use a Web browser to go to google.com
or
drive.google.com
- Use a Web browser to go to live.com
or
onedrive.com

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- Use a Web browser to go to dropbox.com/basic
- Use a Web browser to go to apple.com to get an "Apple ID".
Then use a Web browser to go to "icloud.com"

CREATING AN ACCOUNT AT A CLOUD STORAGE SERVICE (continued)

- Use a Web browser to go to <https://account.box.com/signup/n/personal#a7vgp>
(instead of going to box.com)
- Use a Web browser to go to <https://www.sync.com/free-cloud-storage/>
(instead of going to sync.com)

TWO WAYS TO UPLOAD AND DOWNLOAD DATA FILES AND PHOTO FILES TO A CLOUD STORAGE SERVICE

- **Method 1:**
Use a Web browser to access the Web site of the cloud storage service
- **Method 2:**
Use an app that is provided by the cloud storage service or a third-party software developer

SERVICES PROVIDED BY A CLOUD STORAGE SERVICE

- Storage of data files, photo files, and folders that contain them.
All cloud storage services can perform this very basic function.

SERVICES PROVIDED BY A CLOUD STORAGE SERVICE (continued)

- The rest of the services that are listed differ between the various cloud storage services:

SERVICES PROVIDED BY A CLOUD STORAGE SERVICE (continued)

- Converting document files and photo files to different formats on demand as a "Software as a Service" Web-based service that does not require any apps on your local computer, tablet, or cell phone

SERVICES PROVIDED BY A CLOUD STORAGE SERVICE (continued)

- Viewing and editing of data files and digital photos that are stored at the cloud storage service as a "Software as a Service" Web-based service that does not require any apps on your local computer, tablet, or cell phone

SERVICES PROVIDED BY A CLOUD STORAGE SERVICE (continued)

- Synchronization of files or digital photos between one or more computers, cell phones, or tablets AND the cloud storage service:
Synchronization is useful if you need to access or edit a data file or photo on more than one device. However, when a data file get infected by malware on one device, the same gets infected in all devices.

SERVICES PROVIDED BY A CLOUD STORAGE SERVICE (continued)

- Share a stored folder or file as a link so that others can download or view the stored file or folder:
 - Share a file or folder as a password protected link so that you have to give the password to those whom you want to download or view the stored file or folder
 - Share a file or folder as a link that is not password-protected

BANDWIDTH AND FILE SIZE LIMITATIONS

- Different cloud storage services have different maximum file size and bandwidth limitations with their paid accounts having larger file size and bandwidth limitations.

See

https://en.wikipedia.org/wiki/Comparison_of_file_hosting_services

BANDWIDTH AND FILE SIZE LIMITATIONS (continued)

- Bandwidth limitations refer to the maximum bytes that you can upload plus download from your local computer, tablet, and cell phone in a given calendar month
- See https://en.wikipedia.org/wiki/Comparison_of_file_hosting_services

OUTAGES OF CLOUD STORAGE SERVICES

- The outages of the more well-known cloud storage services have not exceeded 5 hours per year during the past 5 years

OUTAGES OF CLOUD STORAGE SERVICES (continued)

- The smaller, less-well-known "boutique" cloud storage services that some professional photographers use have occasionally gone bankrupt without warning, leaving photographers without any way to retrieve their online photos and files

OUTAGES OF CLOUD STORAGE SERVICES (continued)

- To reduce the possibility of a massive failure at any single cloud storage service, business continuity experts recommend:

Store data and photo files both locally on media and/or hard drives

AND

store data and photo files at more than one cloud storage service

OUTAGES OF CLOUD STORAGE SERVICES (continued)

- According to <https://www.quest.com/community/quest/microsoft-platform-management/b/microsoft-platform-management-blog/posts/the-top-5-benefits-of-using-onedrive> :

OneDrive is *always* on.

Rest assured that users can always access content stored on OneDrive. In fact, Microsoft has been providing at least a 99.97% up-time since 2015.

2015	2016				2017		
99.98%	99.98%	99.98%	99.99%	99.99%	99.99%	99.97%	99.98%
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3

2017

99.99%

99.97%

99.98%

Q1

Q2

Q3

OUTAGES OF CLOUD STORAGE SERVICES (continued)

- $100 - 99.98 = 0.02$ percent downtime per year
- $(.02/100) \times 365 \times 24 = 1.752$ hours per year

OUTAGES OF CLOUD STORAGE SERVICES (continued)

- Some of Google's availability numbers are available at <https://cloud.google.com/storage/docs/storage-classes>

REPORT CARD FOR COMPARING CLOUD STORAGE SERVICES:

"<Name of Cloud Storage Service>"

AMOUNT OF FREE STORAGE?	? GB
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	?
NO KNOWN DATA SECURITY COMPROMISES?	?
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	?
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	?

"GOOGLE DRIVE" CLOUD STORAGE

- Use "Google Drive" to get 15 GB of free cloud storage. This 15 GB allotment of space must be shared between "Google Drive", Gmail, and uncompressed photo files stored at "Google Photos"
- The optional "app" from Google for "Google Drive" is called "Backup and Sync from Google". This name is show in the "Start Menu" of "Windows.."

REPORT CARD FOR "GOOGLE DRIVE"

AMOUNT OF FREE STORAGE?	~ 15 GB
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	Yes
NO KNOWN DATA SECURITY COMPROMISES?	Yes
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	Yes
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	No

"BOX" CLOUD STORAGE

- Use "Box" to get 10 GB of free cloud storage
- "Box" gives you more user-configurable options and apps than any of the other cloud storage services (in this presentation).
- "Box" is a cloud storage pioneer which has a stellar history of secure storage of sensitive data files for the medical and legal professions.

REPORT CARD FOR "BOX"

AMOUNT OF FREE STORAGE?	10 GB
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	Yes
NO KNOWN DATA SECURITY COMPROMISES?	Yes
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	Yes
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	No

"DROPBOX" CLOUD STORAGE SERVICE

- Use Dropbox because they have the fastest uploads and downloads but be aware that they only give you 2 GB of online cloud storage

"DROPBOX" CLOUD STORAGE SERVICE (continued)

- Historically, "Dropbox" is the least secure and least safe of the popular cloud storage services:

See

[https://en.wikipedia.org/wiki/Criticism of Dropbox](https://en.wikipedia.org/wiki/Criticism_of_Dropbox)

REPORT CARD FOR "DROPBOX"

AMOUNT OF FREE STORAGE?	2 GB
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	Yes
NO KNOWN DATA SECURITY COMPROMISES?	No
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	Yes
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	No

"ONEDRIVE" CLOUD STORAGE SERVICE

- Use Microsoft's "OneDrive" to get 5 GB of free cloud storage
- The optional app for "OneDrive" is bundled in with "Windows 10"
- Despite's Microsoft's claims to the contrary, the use of the bundled "OneDrive" app is optional and you can use any Web browser to access a "OneDrive" cloud storage account

REPORT CARD FOR "ONEDRIVE"

AMOUNT OF FREE STORAGE?	5 GB
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	Yes
NO KNOWN DATA SECURITY COMPROMISES?	Yes
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	Yes
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	No

"iCLOUD" CLOUD STORAGE

- Use Apple's "iCloud" to get 5 Gigabytes of free storage by following the following procedure at

REPORT CARD FOR "iCLOUD"

AMOUNT OF FREE STORAGE?	5 GB for MacOS & iOS users
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	No, from a Web browser Yes, from the "iCloud Drive" folder created in Apple's "iCloud" app for Windows.. computers
NO KNOWN DATA SECURITY COMPROMISES?	Yes
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	Yes, for Apple office suite formats (*.pages, *.keynote, *.formula) Viewing only for Adobe .PDF files Viewing only for digital photo files
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	No

"SYNC.COM" CLOUD STORAGE SERVICE

- Use "sync.com" to get 5 GB of free cloud storage. they have "zero knowledge" so that their employees and contractors cannot get your password nor can they view or steal your data files and digital photos.

REPORT CARD FOR "SYNC.COM"

AMOUNT OF FREE STORAGE?	5 GB
RELIABLE UPLOAD AND DOWNLOAD OF ENTIRE FOLDERS CONTAINING DATA FILES?	Yes
NO KNOWN DATA SECURITY COMPROMISES?	Yes
ONLINE CREATION, VIEWING, AND EDITING OF DOCUMENT FILES AND PHOTOS?	No
"ZERO KNOWLEDGE" OF YOUR PASSWORD OR YOUR STORED DATA FILES	Yes

"SYNC.COM" CLOUD STORAGE SERVICE (continued)

- However be aware that "zero knowledge" encryption technology massively slows down uploads and downloads and makes many of the other features such as file viewing and editing unavailable when you log into your account at the Web site of the cloud storage service.

"SYNC.COM" CLOUD STORAGE SERVICE (continued)

- Your trade-off is between super security, which "sync.com" offers and the lesser security in return for the convenient features that the are offered by the cloud storage services that do not have "zero knowledge" implemented

FILES STORED UP IN THE CLOUD VERSUS FILES STORED IN A LOCAL HARD DRIVE

- When you use a Web browser to access a cloud storage service, you are viewing the files that you have stored at the cloud storage service

FILES STORED UP IN THE CLOUD VERSUS FILES STORED IN A LOCAL HARD DRIVE (continued)

- When you use "File Explorer" or any other "file manager" to look at your data files, you are usually looking at files that are stored on a local hard drive or a local hard-drive like device, EXCEPT when you install a app for a cloud storage service, you will have a special folder(s) that can represent what you have stored up in the cloud.



Recycle Bin



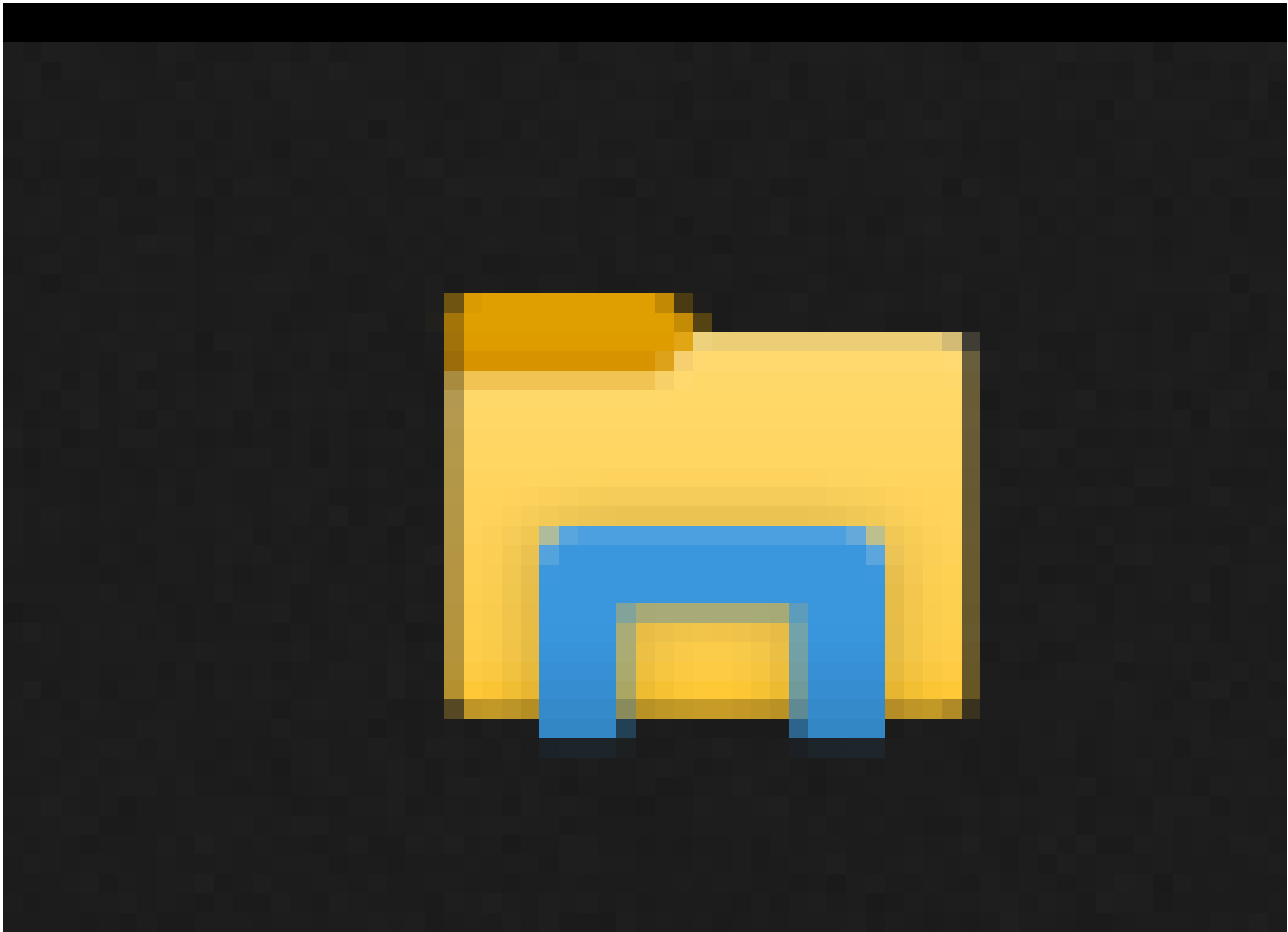
Google
Chrome

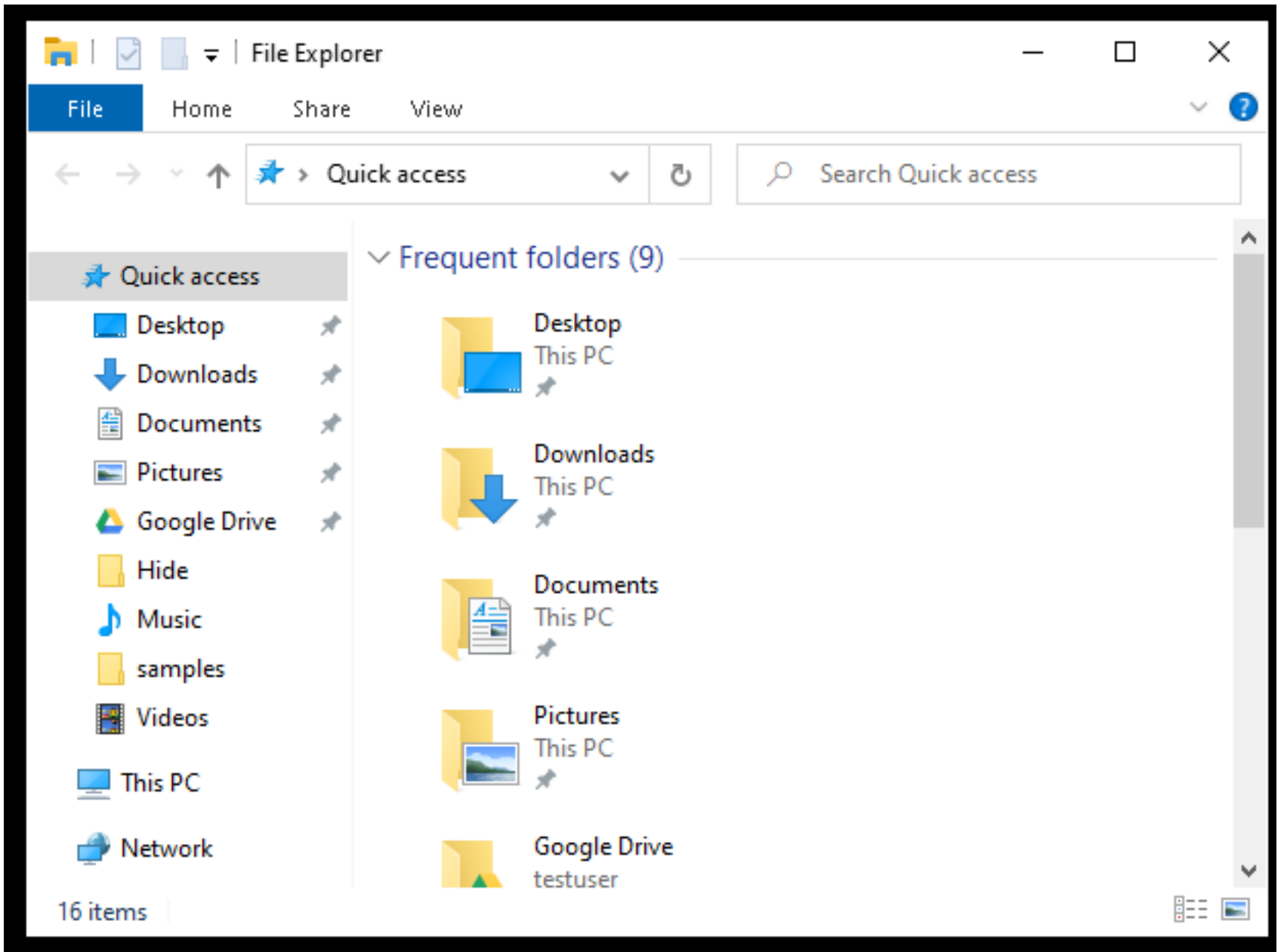



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1/2/2020











Quick access

 Desktop 

 Downloads 

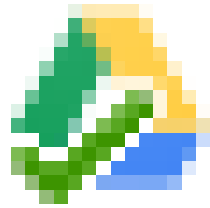
 Documents 

 Pictures 

 Google Drive 

 Hide





Google Drive

File Explorer window showing a Google Drive folder. The window title is "Google Drive". The address bar shows the path "testuser > Google Drive". The left sidebar shows "Quick access" with "Google Drive" selected. The main pane displays a list of files and folders with columns for Name, Date modified, and Type.

Name	Date modified	Type
_to Becky from Liz	7/9/2019 11:46 PM	File folder
RevoUninstaller_Portable	7/8/2019 3:04 PM	File folder
2019-07-15.docx	7/15/2019 10:22 PM	Office Open XML Do...
desktop.ini	1/2/2020 3:08 PM	Configuration settings
Untitled document.gdoc	7/15/2019 10:27 PM	Google document
Untitled spreadsheet.gsheet	7/15/2019 10:28 PM	Google spreadsheet

ser > Google Drive



Name

Date modified



_to Becky from Liz

7/9/2019 11:46 PM



RevoUninstaller_Portable

7/8/2019 3:04 PM



2019-07-15.docx

7/15/2019 10:22 PM



desktop.ini

1/2/2020 3:08 PM



Untitled document.gdoc

7/15/2019 10:27 PM



Untitled spreadsheet.gsheet

7/15/2019 10:28 PM

FILES STORED UP IN THE CLOUD VERSUS FILES STORED IN A LOCAL HARD DRIVE

- The "special folders" that are created by the optional app of a cloud storage service may or may not contain actual copies of your data files or digital photos on a local hard drive of your computer:

FILES STORED UP IN THE CLOUD VERSUS FILES STORED IN A LOCAL HARD DRIVE (continued)

- For the "Google" "Backup and Sync" app, the "Google Drive" folder will contain local copies of the same exact files that are stored up at the "Google Drive" cloud

GRANULARITY OF CONTROL IS THE "ONEDRIVE" APP'S KEY FEATURE

- If you log into "Windows 10" with a Microsoft account and you get the bundled OneDrive app working, then you have superior control over how each file or folder that you store in "OneDrive" behaves:
Online only, download when needed, synchronized between the server farm and your computer's hard drive, etc.

GRANULARITY OF CONTROL IS ONEDRIVE'S KEY FEATURE (continued)

- <http://techgenix.com/onedrive-features/>
- <https://www.zdnet.com/article/onedrive-tips-and-tricks-how-to-master-microsofts-free-cloud-storage/>
- <https://pureinfotech.com/disable-onedrive-sync-status-icon-file-explorer-windows-10/>



File Resides in the Cloud Only



File Resides in the Cloud and Temporarily on the PC



File Resides in the Cloud and Permanently on the PC



File is Syncing



File Sync has an Error "HELP!"

OneDrive































File Home Share View

← → ↕ ↑ OneDrive

Name	Status	Date modified	Type
4Becky	✓ R	12/15/2019 7:16 PM	File folder
2014-08-30 Pictures	☁	12/15/2019 7:18 PM	File folder
2019-05-30 aztcs.org Native Backup	☁	12/15/2019 7:38 PM	File folder
2019-06-16 Photos to Becky re MMO	☁	12/15/2019 8:08 PM	File folder
Attachments	☁	12/15/2019 7:16 PM	File folder
Desktop	✓	12/15/2019 8:02 PM	File folder
Documents	☁	12/15/2019 7:18 PM	File folder
samples	✓	12/15/2019 7:38 PM	File folder
20190719_203010476_iOS	✓	7/19/2019 1:30 PM	PNG File
20190719_204400060_iOS	✓	7/19/2019 1:44 PM	PNG File
20190719_234154373_iOS	✓	7/19/2019 4:41 PM	PNG File
20190719_234319092_iOS	✓	7/19/2019 4:43 PM	PNG File
Circle	✓ R	6/17/2017 4:41 PM	GIF File
Personal Vault	✓	12/16/2019 7:29 PM	Shortcut

Quick access

- Desktop
- Downloads
- Documents
- 2014-08-30 Pictu
- Music
- Videos
- OneDrive
- This PC
- Network

Name	Status	Date modified	Type
 4Becky	 	12/15/2019 7:16 PM	File folder
 2014-08-30 Pictures		12/15/2019 7:18 PM	File folder
 2019-05-30 aztcs.org Native Backup		12/15/2019 7:38 PM	File folder
 2019-06-16 Photos to Becky re MMO		12/15/2019 8:08 PM	File folder
 Attachments		12/15/2019 7:16 PM	File folder
 Desktop		12/15/2019 8:02 PM	File folder
 Documents		12/15/2019 7:18 PM	File folder
 samples		12/15/2019 7:38 PM	File folder
 20190719_203010476_iOS		7/19/2019 1:30 PM	PNG File
 20190719_204400060_iOS		7/19/2019 1:44 PM	PNG File
 20190719_234154373_iOS		7/19/2019 4:41 PM	PNG File
 20190719_234319092_iOS		7/19/2019 4:43 PM	PNG File
 Circle	 	6/17/2017 4:41 PM	GIF File
 Personal Vault		12/16/2019 7:29 PM	Shortcut



20190719_234319092_iOS



Circle



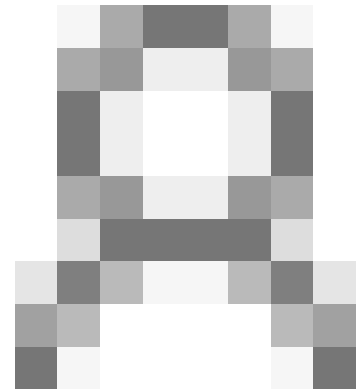
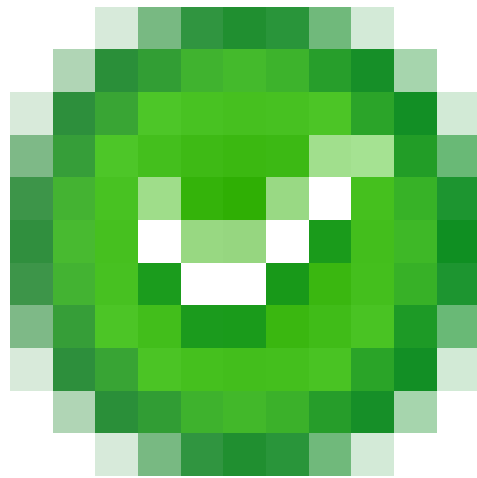
Personal Vault





Circle





-
the person icon is your indication that the file or folder

has been **shared**.