

Dropbox and Its Kin

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Cloud Storage

- With the advent of high-speed Internet connectivity to many homes and businesses, cloud computing and storage has become quite popular.
- Cloud Storage
- *The Cloud* is a term often used to describe the computing and storage resources located at datacenters anywhere in the world, accessible via the Internet.
 - Wikipedia describes cloud computing as “*a model for enabling ubiquitous, convenient, on-demand access to a shared pool of computing resources.*”
- In this session, we will discuss one of the most popular of the cloud storage solutions, *Dropbox*.
 - We will spend most of our time on Dropbox, but will compare it to some other popular solutions.
 - There are many more cloud storage solutions than we will see today.

Why Cloud Storage?

- Have you ever been at a café, hotel, or friend’s home and wanted to access your files on your portable device, only to discover the file is sitting on your home or work computer, which is not accessible at the moment?
- This is the problem the Cloud is meant to solve!
 - Plus, should you crash your computer, your files are safe in the Cloud.

Dropbox: the Basics

- Dropbox is a product line that provides both free and paid cloud storage services.
 - One can start by visiting <http://dropbox.com> and setting up an account.
 - New accounts include 2GB of storage for no cost.
 - Point of reference: the average iPhone 6s photo occupies about 3.15MB; you can store about 650 such photos in 2GB.
- In addition the 2GB every free account receives, one can earn additional free space:
 - Referring friends
 - Completing the “Getting Started” guide
 - Connect your Facebook and Twitter accounts to Dropbox, and follow Dropbox on Twitter
 - Upload your photos to Dropbox using their *Carousel* program.
 - Link Dropbox with your Mailbox account.
- If this still is not enough space to meet your needs, you can purchase space:
 - *Dropbox Pro* (\$9.99/mo or \$99/year + tax) provides you with 1TB (that is, about 1,000GB) of space.
 - *Dropbox Business* (\$15/mo for up to 5 users) provides “unlimited” space, and many other features, such as *remote wipe*.

Accessing Your Dropbox Files

- One way to access your Dropbox files is by signing in to your account at <http://dropbox.com> in your favorite browser.
 - You then can upload new files/folders to Dropbox by clicking on the *upload* link or by dragging-and-dropping onto the Dropbox browser window.
 - You also can right-click on the files/folders already on Dropbox to copy, move, rename, delete, etc.

- An advantage to using Dropbox through a browser is the ability to sit down at any computer or mobile device and access your files.
 - The disadvantage is that the interface is a little clumsier, and *auto file synchronization* does not take place. (More on the latter in a bit.)
- There also are *Dropbox client programs* you can download and install on Windows and Mac computers.
 - These client programs create a Dropbox folder on your computer.
 - You now will access the Dropbox folder and contents as you would any other folder on your computer.

Dropbox Sync

- By default, the Dropbox client keeps the folder on your computer *synchronized automatically* with the files in the Cloud.
 - This means that if you have the client running on two different computers, and you add, change, or delete a file on one computer, the same change will occur on the other computer.
- However, you can choose to use *selective sync*.
 - This means that you can turn off auto sync for selected subfolders of the Dropbox folder.
 - Why would you do this?
 - It saves upload/download time.
 - It saves upload/download bandwidth (especially if you have data usage caps imposed by your Internet service provider).
- To use selective sync on a subfolder: Click on *the Dropbox tray icon > the gear (settings) > Preferences > Account > Selective Sync*, and then uncheck the subfolders you no longer wish to sync.
 - **NOTE!** Dropbox will delete these subfolders from its local folder, but they still are available from the Cloud.

Dropbox on Mobile Devices

- There also are Dropbox clients you can download and install for iOS (iPad and iPhone) and Android.
 - Generally, these do not automatically sync files to keep Internet usage down.
 - However, you can manually upload/download specific files to/from the Cloud.
- One exception to manual upload/download on Dropbox mobile are photos taken by the device.
 - By default, photos are uploaded automatically to Dropbox.
 - However, this feature can be disabled by the user.
 - Why disable?
 - Extra data bandwidth used.
 - Extra battery life used.

Public and Shared Files/Folders

- By default, files and folders on Dropbox are private.
 - That is, only someone with your username and password can access the files.
- However, Dropbox provides a *Shared* subfolder that permits you to share files with others.
 - And, you manually can set any file/folder to be shared.
- To share a file/folder using the browser:
 - Hover your mouse over the file you want to share; select the *Share* link that appears to the right.
 - If the item to be shared is a file, you will be given a link to the file you can share with others (as a read-only file).
 - If the item to be shared is a folder, you will be given the choice of a link (as described above) or to permit others to “collaborate” (i.e., modify the folder contents).

- To share a file/folder using the Windows/Mac client:
 - Right-click on the file you want to share.
 - If the item to be shared is a file, select *Share Dropbox Link*, and a link that you can share with others will be copied to your clipboard.
 - If the item to be shared is a folder, click on *Share this Folder* and you will be given the choice of a link (as described above) or to permit others to “collaborate” (i.e., modify the folder contents).
 - Public and Shared Files/Folders
- To share files on the iOS Dropbox client:
 - Select the file you want to share.
 - Tap the *Share* icon toward the upper-right, and select *Copy Link*; a link will be copied to your clipboard for sharing.
- To share folders on the iOS Dropbox client:
 - Select the folder you want to share.
 - Tap the *Share* icon toward the upper-left, and select either *Send Link* or *Invite people to Collaborate*.
 - Public and Shared Files/Folders
- To share files on the Android Dropbox client:
 - Select the file you want to share.
 - Tap the *Share* icon toward the top, and select *Send a link to this file*; you will be asked how to send the link; select a technique to send the link.
- To share folders on the Android Dropbox client:
 - Select the folder you want to share.
 - Tap the *Share* icon toward the top, and select either *Send a link to this folder* or *Invite people to collaborate*.

Some Dropbox Alternatives

- Google Drive
 - If you have a free Google account, you already have access to Google Drive.
 - You are provided with 15GB for free.
 - If that is not enough, there are 100GB (\$1.99/mo) and 1TB (\$9.99/mo) plans.
 - In your browser, visit <http://drive.google.com>. (Works best with Chrome, in my opinion.)
 - Drag-and-drop files onto the browser window to upload.
 - Right-click and select *Download*.
 - Items can be edited in the browser.
 - There are client programs/apps for Windows, Mac, iOS, and Android.
- iCloud
 - If you have a free Apple account, you already have access to iCloud.
 - You are provided with 5GB for free.
 - If that is not enough, there are 50GB (\$0.99/mo), 200GB (\$2.99) and 1TB (\$9.99/mo) plans.
 - In your browser, visit <http://icloud.com>. There are many categories, including *iCloud Drive*.
 - Drag-and-drop files onto the browser window to upload, or select the *Upload* icon.
 - Choose the *Download* icon to download items.
 - Items can be edited in the browser.
 - There are client programs/apps for Windows, Mac, iOS, and Android.

- OneDrive
 - If you have a free Microsoft Live account, you already have access to OneDrive.
 - You are provided with 15GB for free.
 - If that is not enough, there are 100GB (\$1.99/mo), 200GB (\$3.99) and 1TB (\$6.99/mo) plans.
 - The 1TB plan includes *Office 365*.
 - In your browser, visit <http://onedrive.com>.
 - Drag-and-drop files onto the browser window to upload, or select the *Upload* icon.
 - Right-click on an item and select *Download* to download it.
 - Items can be edited in the browser.
 - There are client programs/apps for Windows, Mac, iOS, and Android.

Can I Use All of Them?

- Yes!
 - With just the four products we have discussed, you can get
 $2\text{GB} + 15\text{GB} + 5\text{GB} + 15\text{GB} = 37\text{GB}$
free!
 - This is similar to maintaining multiple hard drives or multiple flash drives.

Other Considerations

- Does the storage provider *data mine* my files for marketing purposes?
- If the storage provider goes out of business, what happens to my data?
- What is the security record of the storage provider?