Cloud Computing

What is it?

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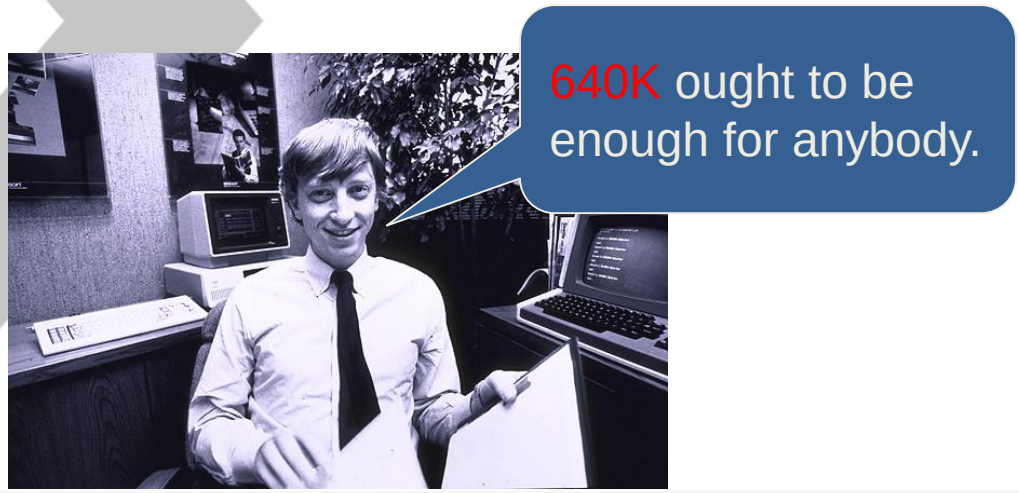
Source : Montana State Library Archive

Source: http://www.free-pictures-photos.com/

How much data?

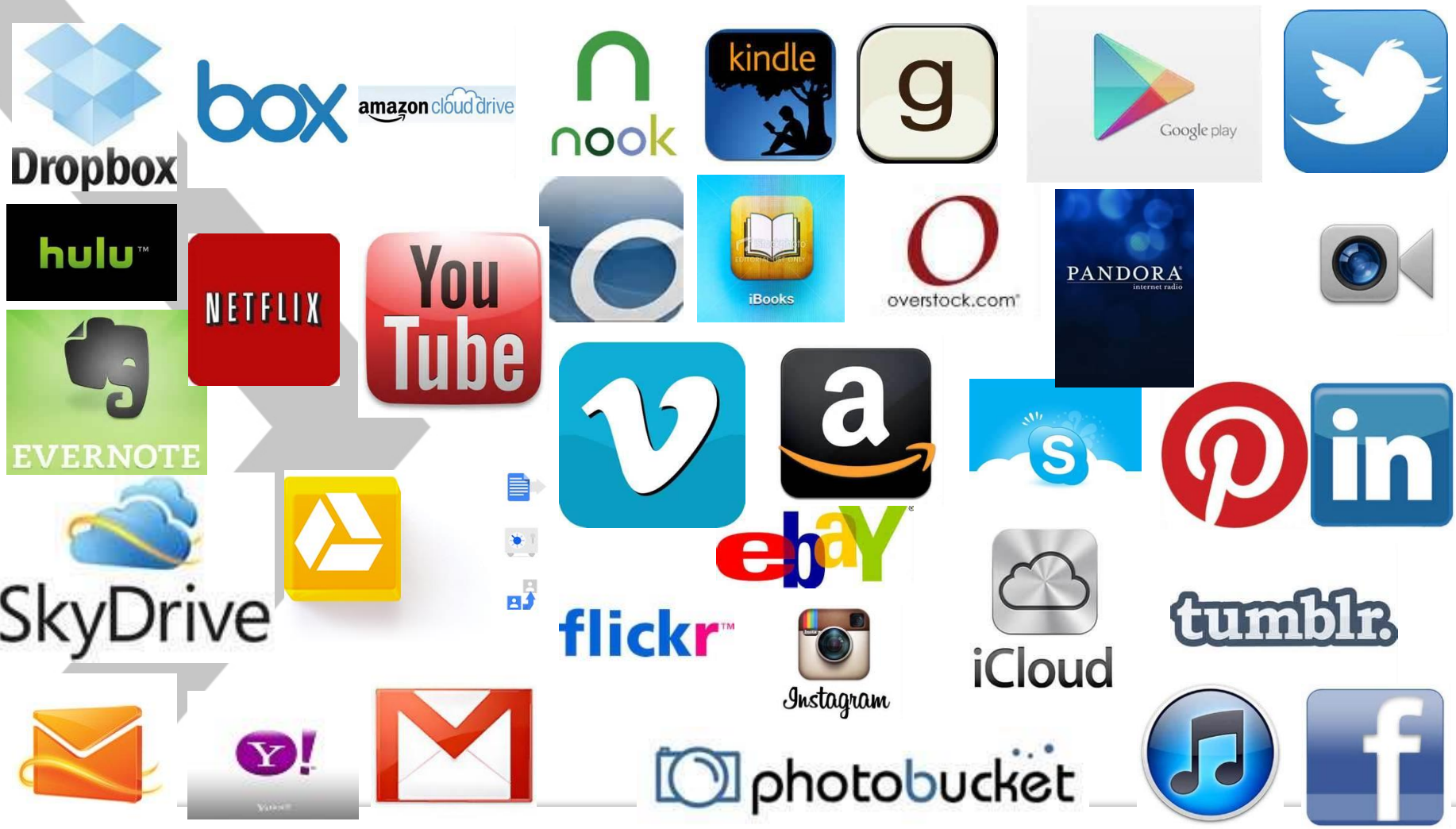
- Wayback Machine has 2 PB + 20 TB/month (2006)
- Google processes 20 PB a day (2008)
- “all words ever spoken by human beings” ~ 5 EB
- NOAA has ~1 PB climate data (2007)
- CERN’s LHC will generate 15 PB a year (2008)



The Average Cloud user

- Connects to the cloud via the Internet
  - Does computing tasks, or
  - Runs applications, or
  - Stores Data

Do you Use the Cloud?



type of service

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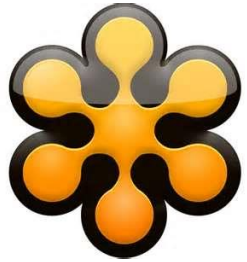
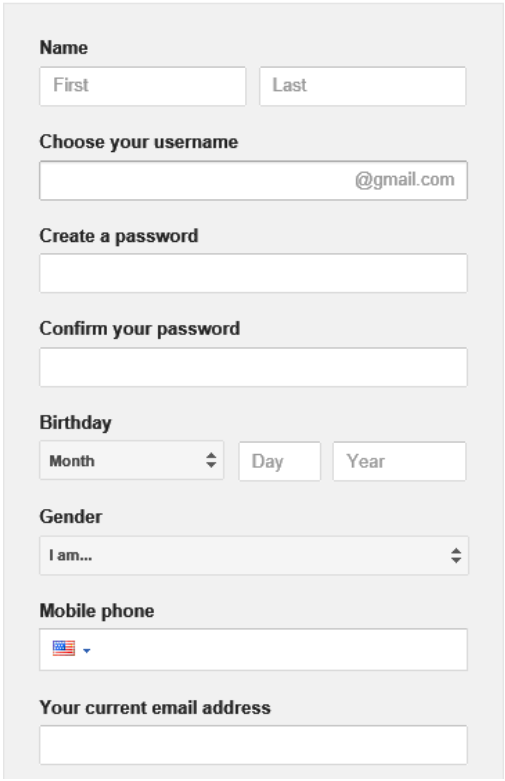
Software as a Service (SaaS) is a software distribution model in which **applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.**

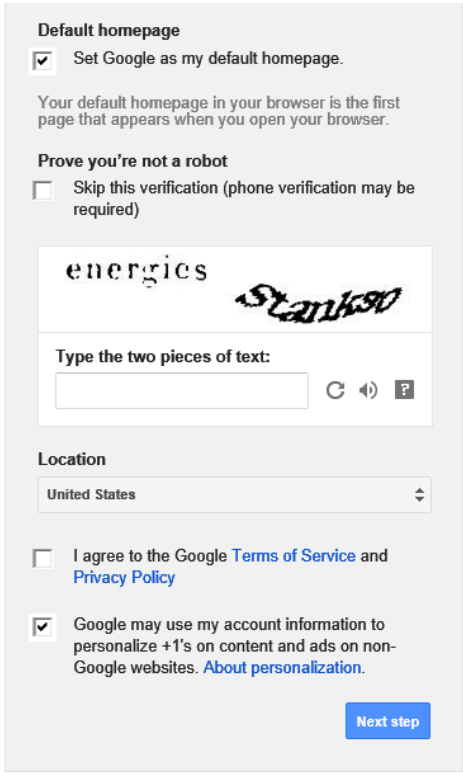
http://searchcloudcomputing.techtarget.com/definition/Software-as-a-Service



The Cloud Requires

- An Internet connection
- An account - Created with a user name and a password
- Agree to Terms





So what is the cloud?

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Computing and software resources that are delivered on demand, as service.

(2013, January) A Walk in the Clouds. *Cloud Computing, CDW-G Reference Guide.,* 3-5.

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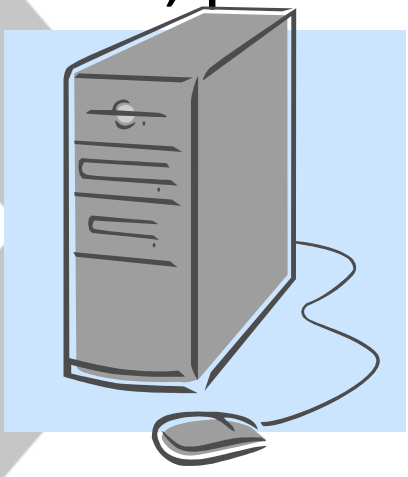
The Back Story

From ground to cloud

Computer Storage

- Computers have internal or hard drive storage(C: Drive)
- CPU has a drive for storing programs, documents, pictures, videos, presentations, etc…



Standard Computer Tower or Central Processing Unit (CPU)

Inside the Computer

Internal Storage

- Content is stored on THAT computer
- To use content must return to THAT computer
- Cannot access this content from another device or computer

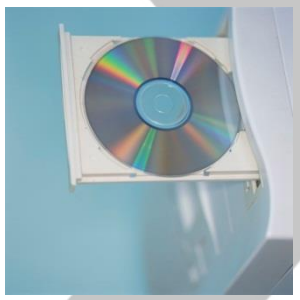
Programs

- Purchase programs
- Load to the computer
- Each computer would need the program loaded and stored on the internal drive

External Storage

- Allows your content to become mobile
- Save to the storage device
- Take device to any compatible computer
- Open and use content

CD/DVD



Thumb Drive

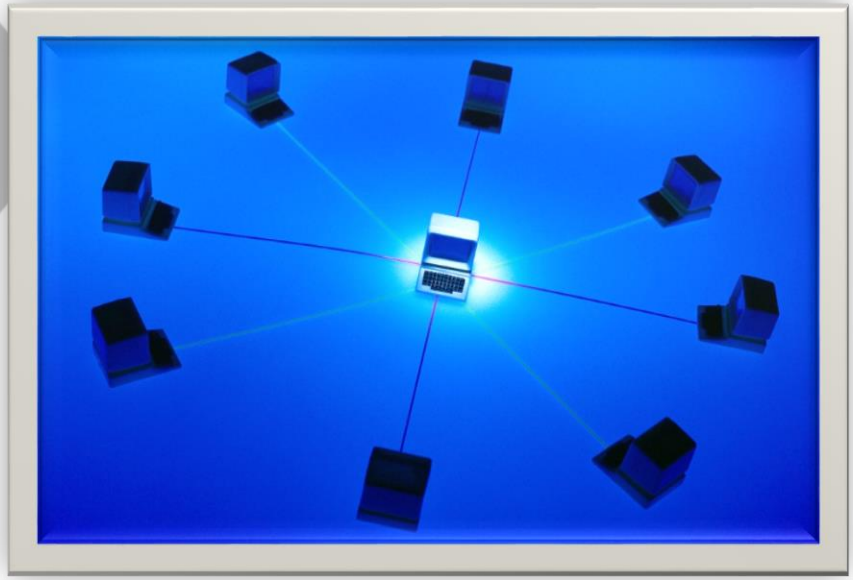
External Hard Drive

SD Card

Micro SD Card

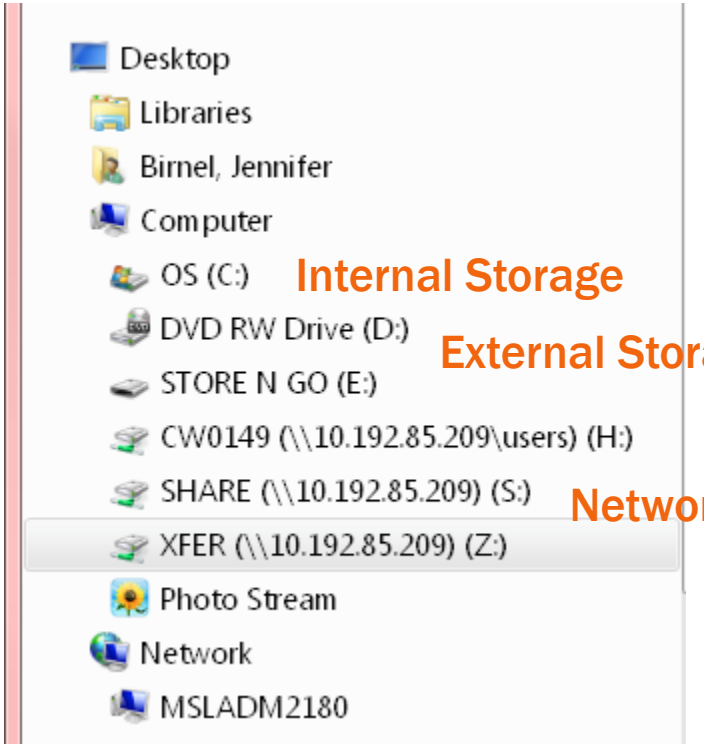
Networked Storage

- Multiple work stations talk to one unit that stores information and data.
- Data is not saved to the C: drive, but to a network drive
- Can retrieve the data stored to the network from any of the connected workstations.



Saving documents

- When you do a “save as” on your computer, you choose where to save the material.



Cloud Storage

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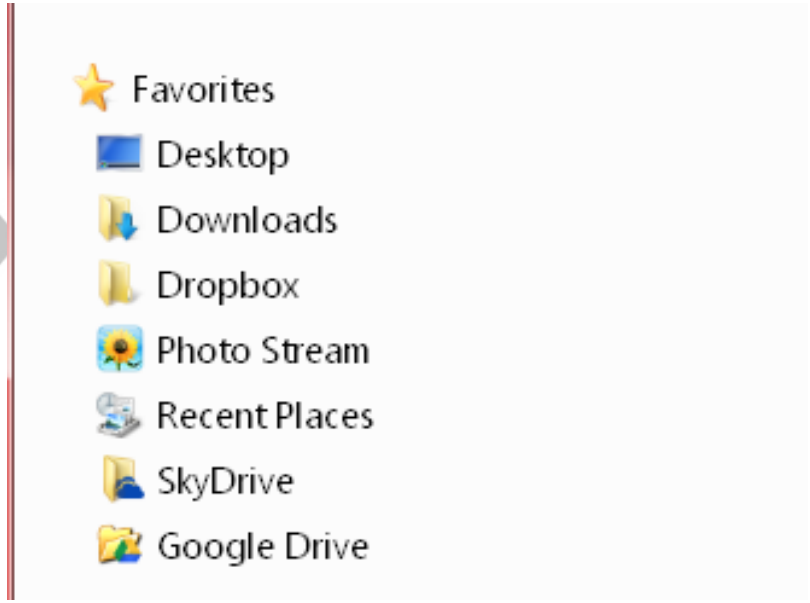
- Create an Account – User name and password
- Content lives with the account in the cloud
- Log onto any computer with Wi-Fi to find your content

Downloads for storage

- Download a cloud based app to a computer **you own**
- The app lives on your Computer
- Save files to the app
- When connected to the Internet it will sync with the cloud
- The Cloud can be accessed from any Internet connection

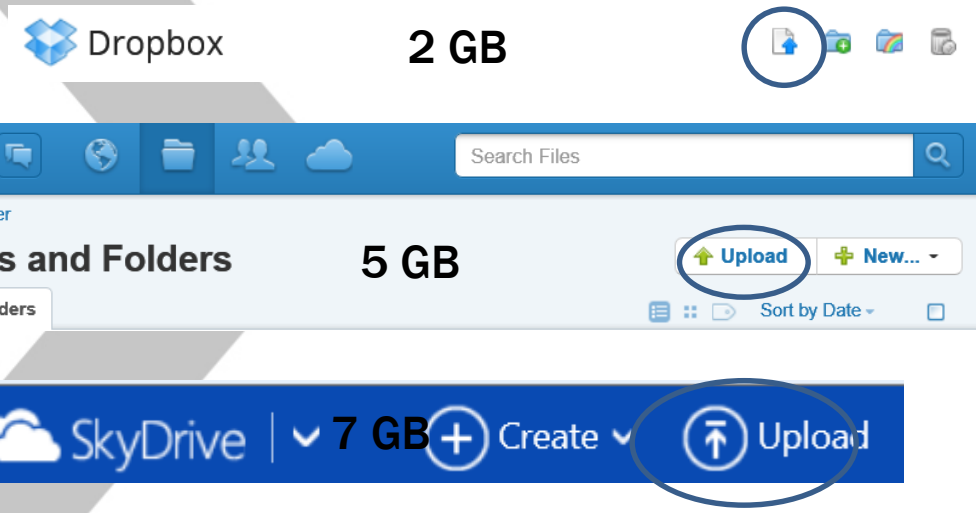
Save file as

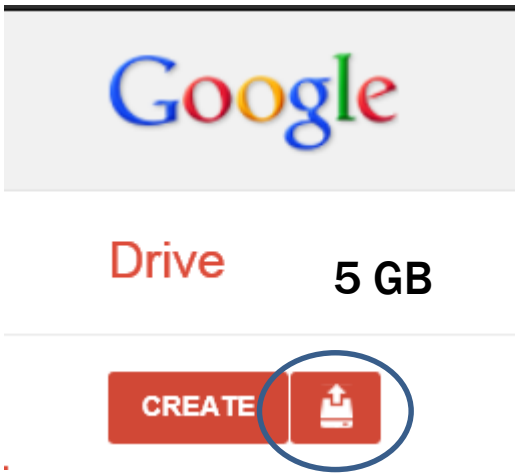
- Do “save as” to save a file to your computer and the cloud
- The syncing folders makes data retrieval easier
- Box and DropBox require this download to work



Upload Documents

- Log-in to the online storage account
- Click upload a file
- Find the file on hard drive, network, or external storage
- Upload to cloud storage



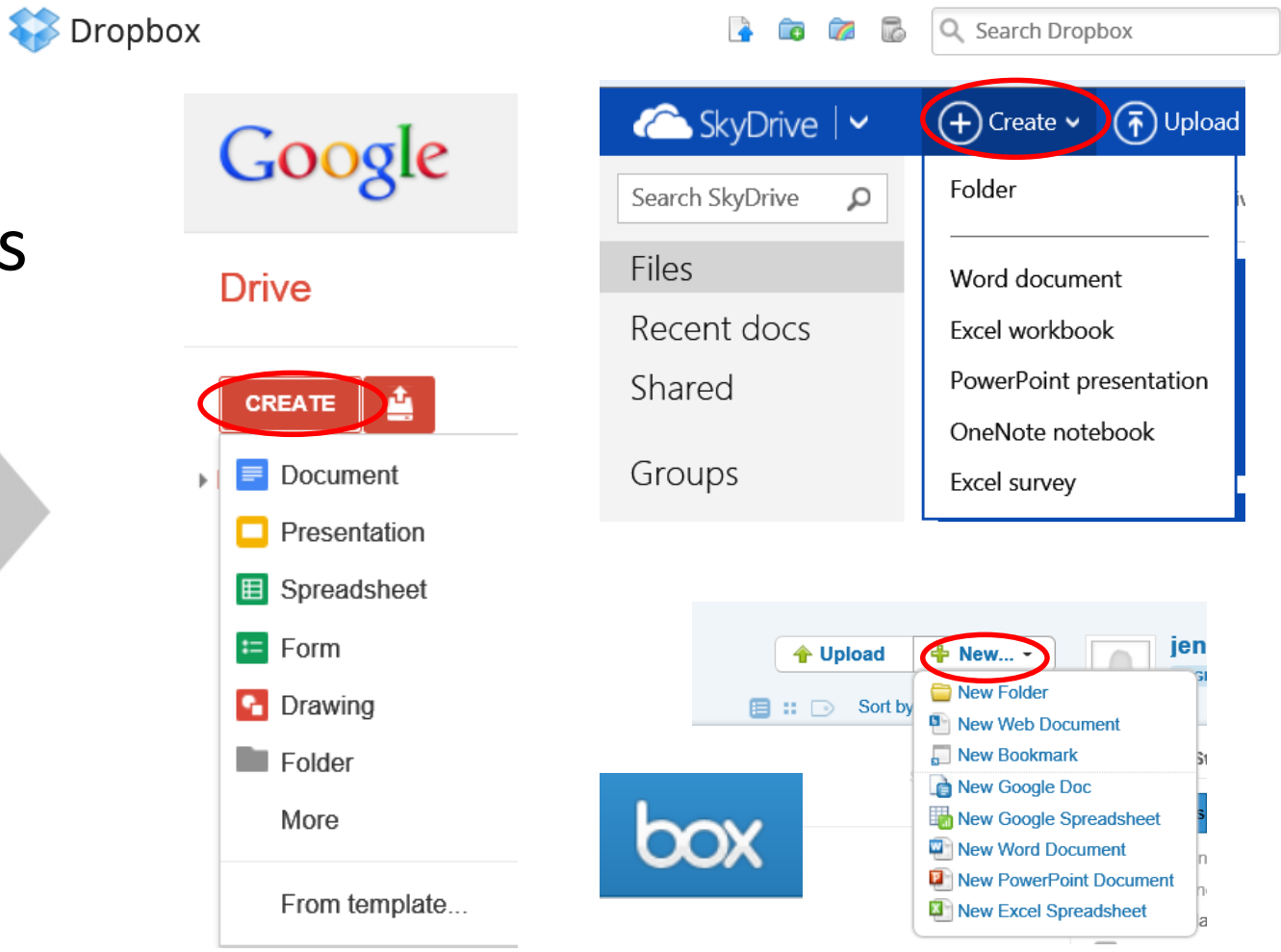


More than Storage

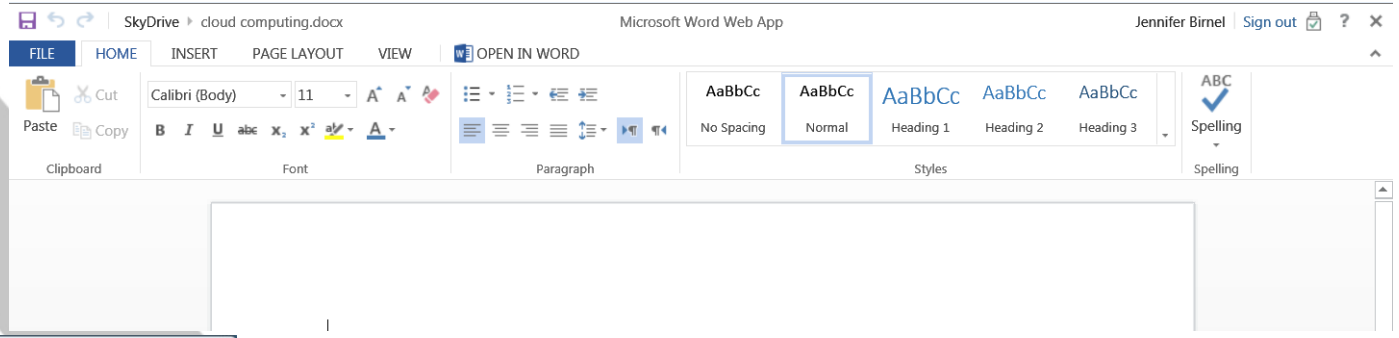
Software and applications

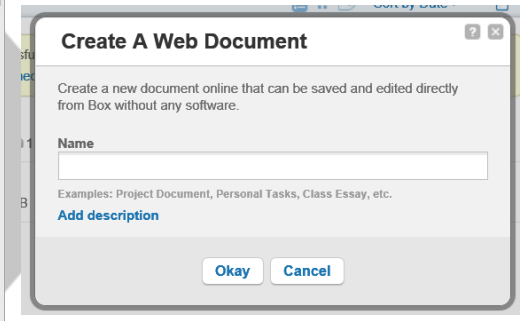
Document Creation

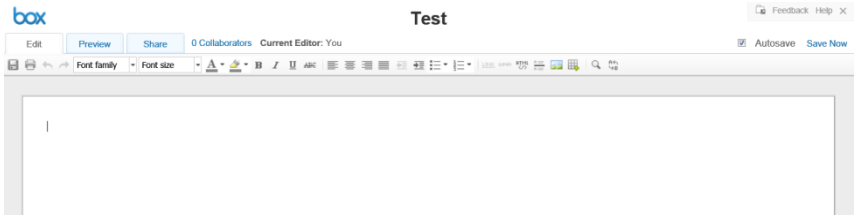
- Google Docs
- SkyDrive
- Box



Download required?





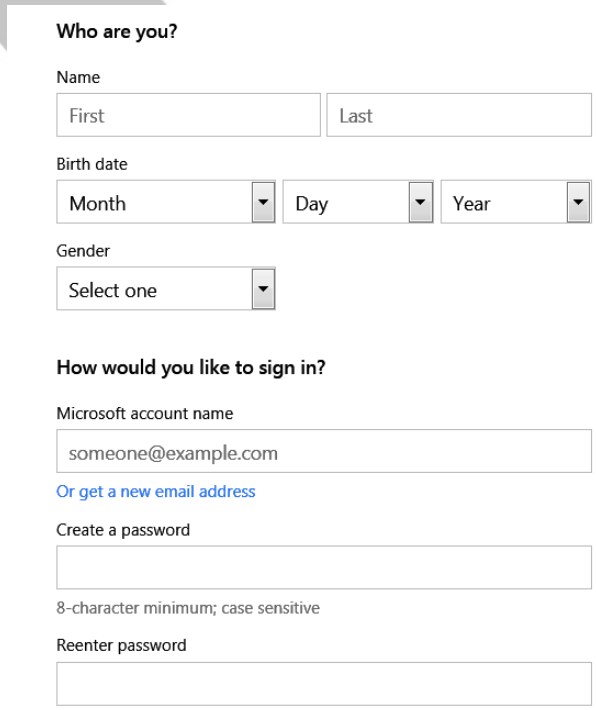


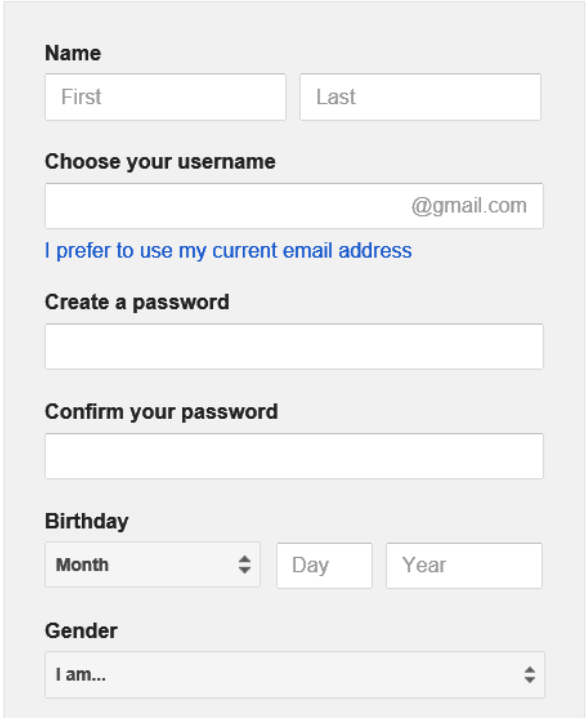
Internet is required

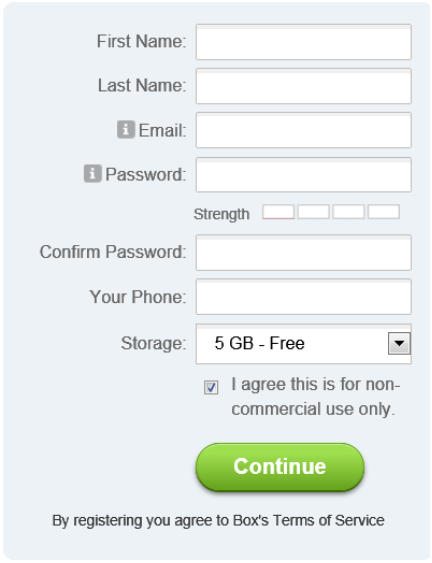
- Creation is happening in the cloud
- Saving is going to the cloud
- To retrieve files, must return to the cloud

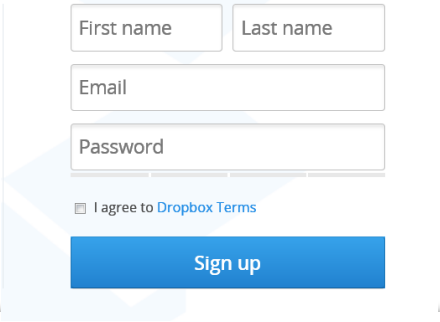
Implications

- What are we comfortable with patrons using?







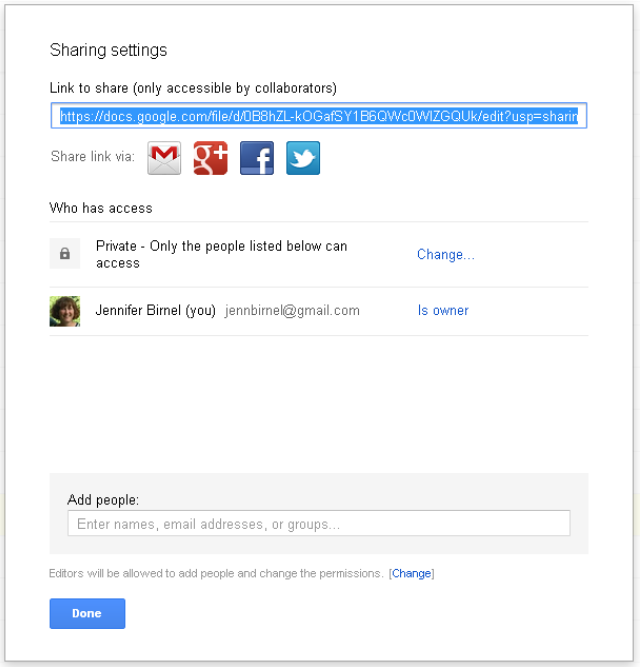


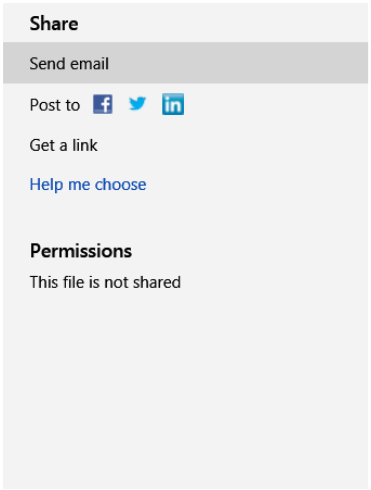
Internet capable Devices

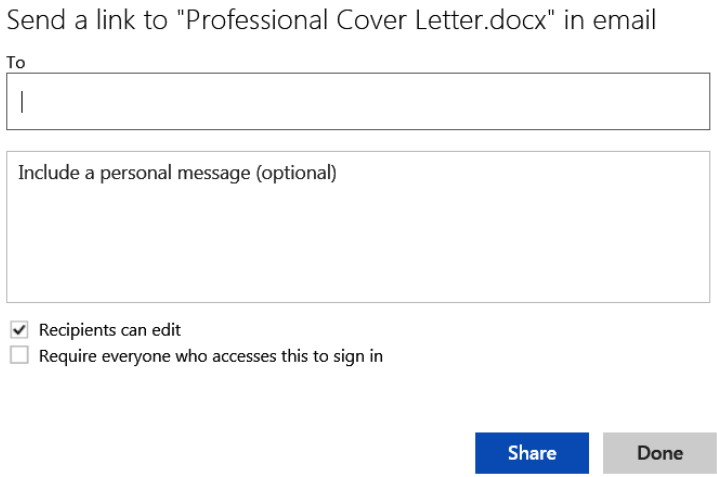
Benefits

- Saving Large Files
- Multiple file types – Photos, videos, presentations, docs
- Back-up of stored files
- File Sharing
- Access from devices
- Nothing to forget (thumb drive, cd)
- Project collaboration

File Sharing







Other Software services

- Photo editing software
- Online banking apps
- Social media apps
- Communication

Library Specific Services

- WorldCat
- MSC
- Ebsco
- Discover It

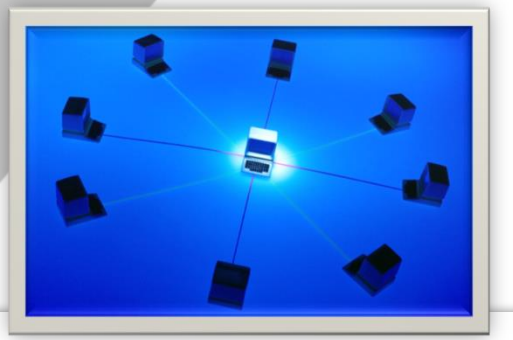
Other Cloud Services

types of service

- Platform as a Service (PaaS) is a way to rent hardware, operating systems, storage and network capacity over the Internet. **The service delivery model allows the customer to rent virtualized servers and associated services for running existing applications or developing and testing new ones.** http://searchcloudcomputing.techtarget.com/definition/Platform-as-a-Service-PaaS

types of service

- Infrastructure as a Service (IaaS) is a provision model in which an organization outsources the **equipment used to support operations, including storage, hardware, servers and networking components.** The service provider owns the equipment and is responsible for housing, running and maintaining it. The client typically pays on a per-use basis. http://searchcloudcomputing.techtarget.com/definition/Infrastructure-as-a-Service-IaaS



Why the Cloud?

advantages

- Can be less expensive compared to buying software and hardware
- Can be used from any computer or device with an Internet connection
- The device does not need as large of an internal storage system
- Compatible with most computers and operating systems
- Updates occur across the service

Disadvantages

- Security Issues
- Terms of Service
- Privacy Policies