# BVCC General Meeting

June 12, 2017

#### **Cloud Storage**

Joel Ewing
See http://bvcompclub.org

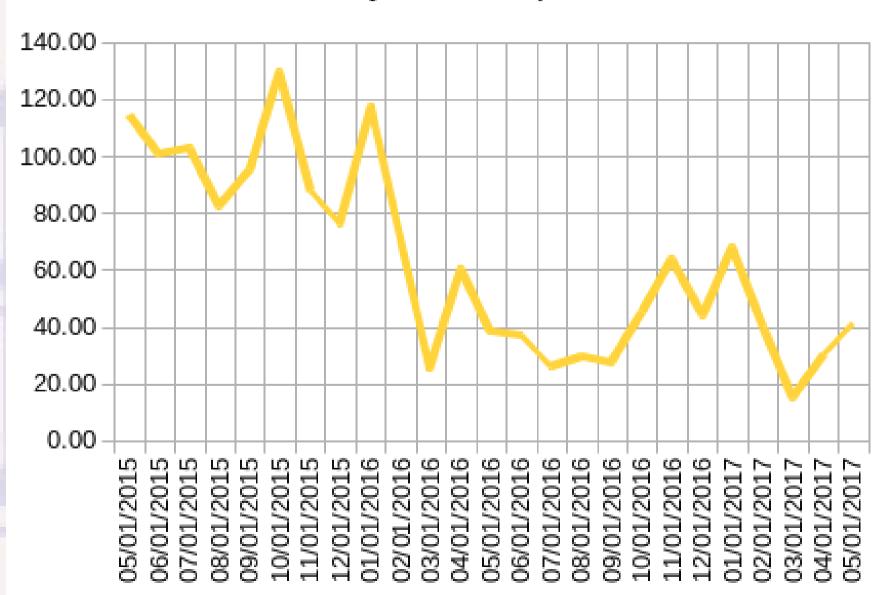
for Bits&Bytes Newsletter, meeting information, Help Sessions & class information

# BVCC Recycle Center Hours May 2017

- Jack McClellan 7.0
- Ken Nelson 7.0
- Ann Schaefer 23.8
- Bob Shewmake 3.0

#### **BVCC Recycle Center Hours**

#### AARP Recycle Hours per Month



#### WannaCry[pt] Malware

- Bad enough to be reported by national news encrypted user files, demanded ransom
- Over 200,000 affected systems Mother's Day weekend
- Most affected Windows XP
- Risks of connecting out-of-maintenance XP to Internet
- Many people still have XP systems connected to Internet
- Serious enough that MS made XP patch available

#### WannaCry Exposure

- Did not require any action by user to spread
- Used printer/file sharing ports to infect systems that were visible from Internet – direct connection to ISP modem w/o firewall. One infected system could infect all other vulnerable systems on same local network.
- Patch for MS17-010 for XP SP3 (KB4012598) –
   be sure to have backups before install

#### Cloud Storage

- Cloud computing shared pool of resources available over Internet – remote data storage is one example
- Data is maintained, managed, backed up remotely and made available to users over a network
  - Concept has been in use since 1960's when ARPANET (predecessor of the Internet) was created
  - Leaving email on an email server rather than downloading to a local device one example
- Many free storage services with limits from 2 − 15 GB

#### Cloud Storage – Advantages

- Someone else handles data backup/recovery/security issues – they may do a better job
- Your data is available at multiple locations on multiple devices – can be used to move data to another device
- Getting additional storage a matter of cost, someone else deals with hardware issues
- A way to put copies of data off site to protect against loss of irreplaceable data (financial & family records, etc.)
- Data sharing with others

#### Cloud Storage – Disadvantages

- Someone else handles data backup/recovery/security issues You still need a 2<sup>nd</sup> copy of valuable data somewhere other than a single cloud storage service.
- Data is is outside your physical control cases where that may be legally unacceptable
- Loss of connectivity to Internet may make data temporarily inaccessible

## ... – Disadvantages (cont)

- Speed of access constrained by network speed
  - Max Cox Internet down/up 67.5/4.5 GB/hr expect less
  - Local hard drive can attain 180 300 GB/hr can store large amounts of data almost 100 times faster
  - Cloud storage works best for many smaller files that rarely change
  - Cloud storage impractical for large drive image backups for full system recovery
- Long-term costs once your reach a tier where storage is no longer free, you have to continue paying just to keep data. If object is just long-term archival of unchanging data, removable hard drives or memory sticks stored at multiple locations may be a cheaper solution

## ... – Disadvantages (cont)

- Security Cloud storage service hosts make a much more tempting and obvious target for hackers because compromising their service could expose data from many users, not just your data.
  - Service-supplied auto-encryption by user-specific keys of stored files protects against access by someone who lacks your login credentials or lacks access to the keys, but if your login credentials are stolen or if someone compromises your storage service and steals their keys, all files are exposed.
    - Check out two-factor login authentication on Dropbox
  - May want to apply your own encryption to especially sensitive files or folders before storing in dropbox folder – see BoxCryptor, Cryptomator for Windows, encfs for Linux

#### Cloud Storage Services

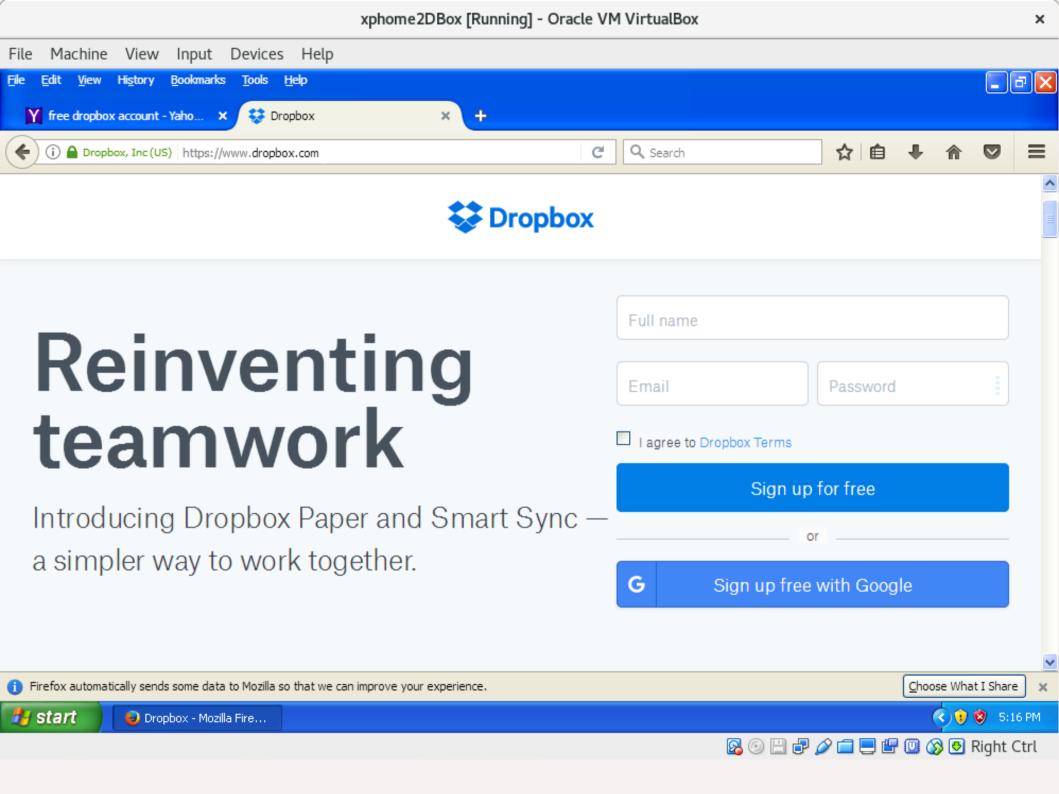
- Dropbox 2GB free, 1TB \$99/yr
- Apple iCloud 5 GB "free", 1TB \$120/yr
- Google Drive 15 GB free, 1TB \$120/yr
- MS OneDrive 5 GB free, 1 TB \$84/yr w O365
- Others
- SFTP (if you have access to an SFTP server)

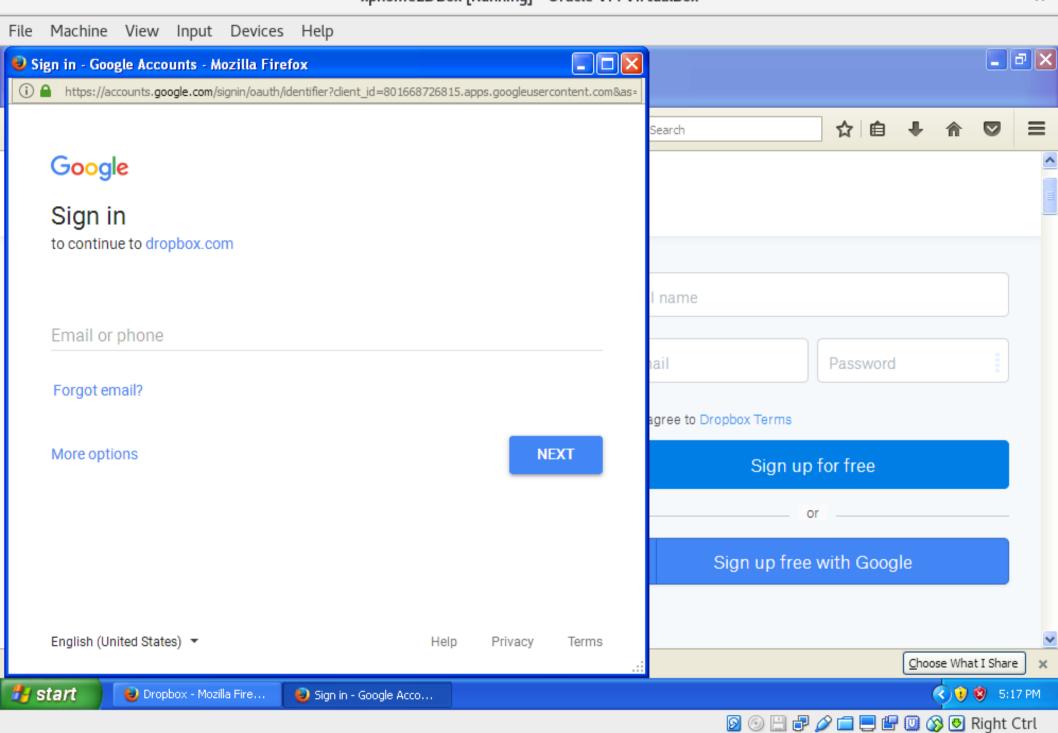
#### Dropbox

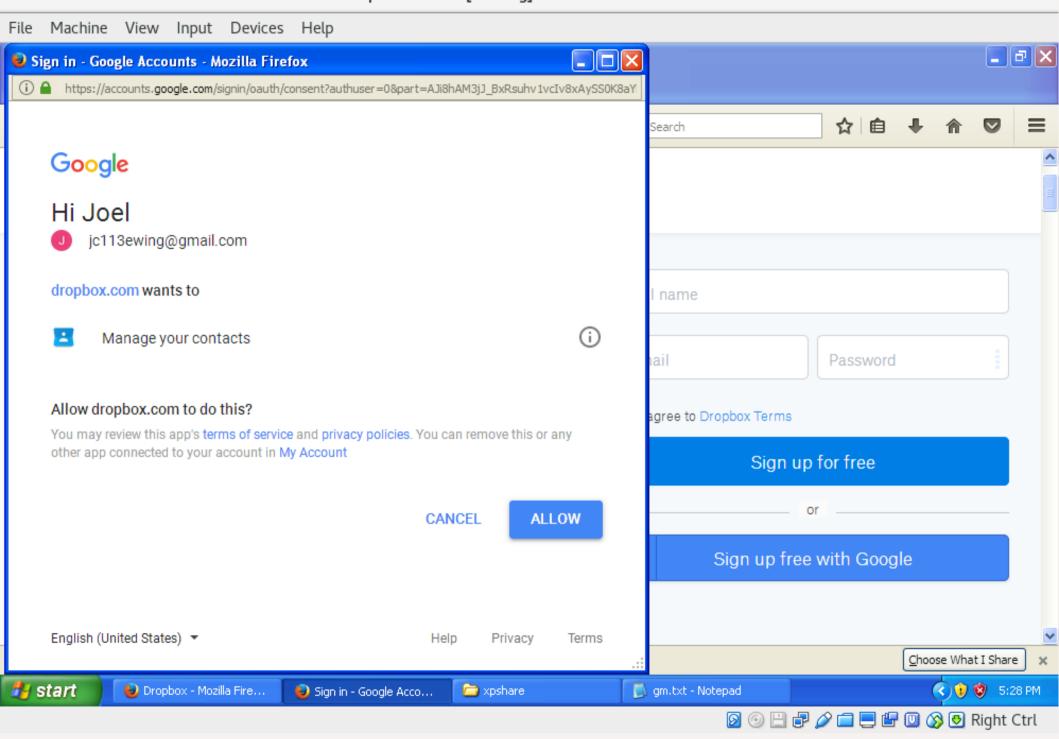
- Simple to use, 2GB free for personal use
- Free apps available for almost all operating systems and mobile devices: Windows (>=Vista), Linux, MAC, iPhone, iPad, android
- Dropbox files appear as a folder whose contents can be manipulated much like other folders.
- Saved file is uploaded to Dropbox (on iPhone & iPad Dropbox app must be running for upload to occur), all devices using same Dropbox account see the file.
- Folders may be shared with other Dropbox users, files by sharing link
- Local copies of files accessible even without Internet

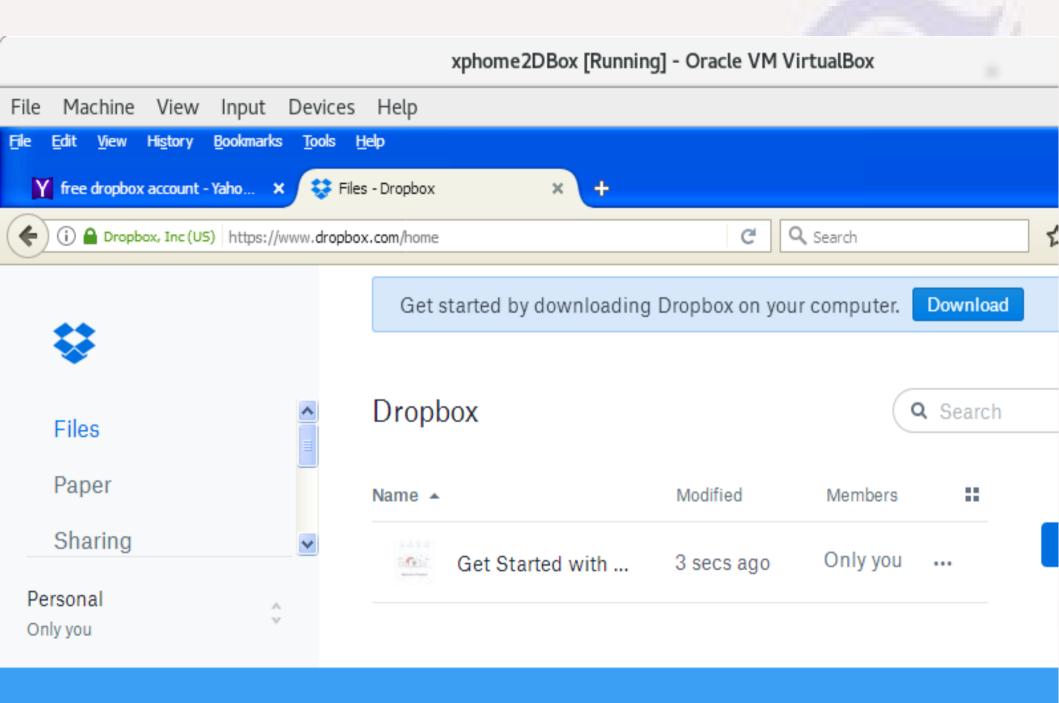
#### Creating a DropBox Account

- Tied to email address one account per address
- Can be done at http://www.dropbox.com
- Can probably be done via iPhone/iPad Dropbox app (free)
- Installing desktop software requires Windows
   Vista or higher. Also requires a higher level of IE
   than comes with Windows 7, but current levels of
   Firefox and Chrome also work.

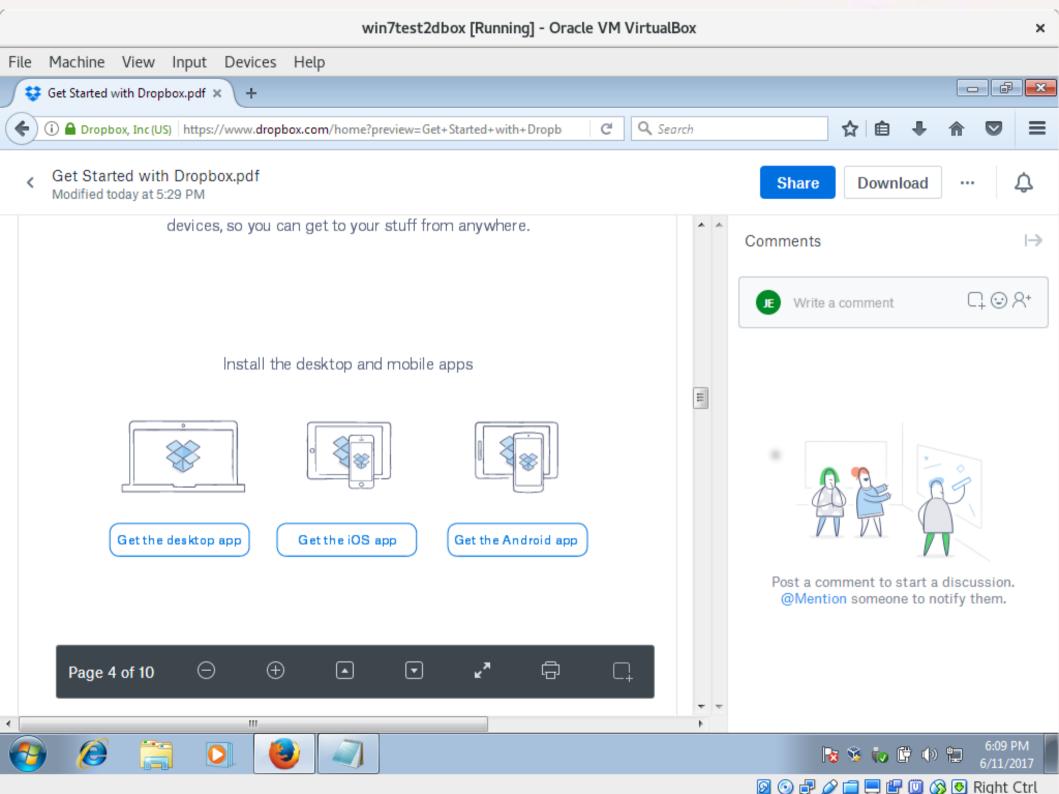








Work on files together with shared folders



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