

Backups

A Brief Overview

Introduction

- This presentation can't be a comprehensive one given the time we have
- I'll attempt to present some reasons to backup, types of backup, and fill in a bit on some details.
- We are talking about the Mac here. iTunes and iCloud backups are available for IOS devices

Types of Backup

- Temporal: Easily recover previous versions of files
- Recovery: Restore your Mac in case of loss of hard drive, or if you lose your Mac due to hardware failures or physical loss.
- Archival: Save content for the indefinite future
- On-site backup: local to your location
- Offsite backup: outside your location, in case of fire, flood, theft, etc

Why Backup?

- Ads will talk about businesses going bankrupt due to the lack of adequate backups.
- You may naively assume that as a personal user, you have no need to backup. However it not a question of if you need a backup, but when. Hardware fails...
 - Family photos, your music, documents etc.
 - What about that Brokerage tax statement from three years ago the IRS is auditing you on now!
 - Bank statements
 - The utility company says you didn't pay, but you have proof in the online billing statement confirmation.

Temporal Backup

- We are talking about earlier versions of files you created.
- They decide the third version of the church function document is what they like; you are on the sixth revision.
- You make the updated changes to last years presentation and save over rather than save as. You now don't have the old version
- Time Machine was introduced in OS X 10.5

Temporal Backup (cont'd)

- Prosoft Engineering makes Data Backup of Mac that includes versioning. Costs money. However Time Machine is free and comes with your OS X
 - You will need an external drive. USB, Firewire, Thunderbolt
 - Apple's time capsule is a wireless solution as is airport extreme's USB port with an external drive
 - Saves hourly for 24 hours, daily for a month, and weekly after that.
 - If you run out of space the oldest backups start getting deleted.
- <http://www.imore.com/how-set-and-restore-time-machine-backup>

Temporal Backup (cont'd)

- Time machine not working? There are lots of reasons, not just one
- <https://support.apple.com/en-us/HT204157> may help.
- Hardware issues: I had issues with drive I put in a cheap USB enclosure. The cheap enclosure could have been the issue. Users have been reporting some self powered drives on laptops pull too much power. They might get by with a second or two for a small file transfer, but the laptop shuts power off after several seconds to avoid damage to the laptop. Then the time machine backup fails.

Recovery Backup

- Time machine can do recovery; however it is not a bootable backup. You have to go through the recovery process.
- Many recovery type backups will let you immediately boot to to your backup drive and carry on as if nothing happened. Repair or replace your internal drive as time permits. Restart and hold option key down and select the backup drive.
- There are several programs out there:
 - Superduper
 - Carbon Copy Cloner
 - BackupList+

Recovery Backup(cont'd)

- You can schedule automated backups as you choose, say every day at 2:00 AM
- You have a choice of full or incremental backup.
 - Full erases the backup and then proceeds to back up all of your internal drive.
 - Incremental backup only backs up the files that have changed since the last backup. Saves time. The newly updated files replace the original files.

Archival Backup

- Archival backup is when you to keep some major project you did around backed up permanently, or keep your computer legacy around for future generations.
- The idea here is create a permanent backup.
- There are a lot of issues here, especially if you are talking long term, 5, 15, 100, 10, 000 years..
- You are fighting both storage reliability and changing technology.

Archival Backup(cont'd)

- Floppy drives were once a solution, but they don't hold much and are not long term stable
- Zip drives were not all that reliable and are not around as new hardware.
- Mechanical Hard drives can get stuck if not used for a long time. I read some disturbing comments about SSD (solid state drive) if left unpowered for a long time
- There are so called archival DVD's that claim 300 year life. So you can take the receipt to the store and claim a refund?

Archival Backup(cont'd)

- Allison Sheridan talked about TSOlife back in one of her Nov 2015 podcasts. Create a permanent online legacy. Still questions....
- If you can continue to backup and have heirs to pick up the archiving then this may work.
- Your offsite backups may work. Will someone continue to pay for the backup, or download the contents before terminating it?

Offsite and Online Backup

- Offsite backup is needed in addition to on site backup. If a fire or theft happens, you could lose you computer and the backups.
- A third external drive that is kept offsite, or even two or three DVD data discs of the most critical backups will help
- There is a way that you don't have to move physical things in and out of your home. Online backups.

Offsite and Online Backup (cont'd)

- iCloud is Apples solution to this.
- There are many third party solutions:
 - Carbonite (Leo Laporte Show Advertiser)
 - Crashplan
 - iBackup
 - Mozy
 - BackBlaze
 - Spider oak (They don't have the key to your contents)

Offsite and Online Backup (cont'd)

- These online services often will cost money. iCloud is \$0.99/month for 50 GB, \$2.99 for 200 GB, and \$9.99 for 1 TB. First 5 GB is free
- You may have to pick and choose what to backup. Very large file uploads could take nearly forever on a slow internet connection, or get you throttled or cutoff on a fast one.
- I personally have notes and contacts sync'd and therefore backed up on iCloud.
- I'll hand it over to Glen to talk more about iCloud

Conclusion

- You need to backup!
- Be sure you get a working backup solution. More than one.
- Preferably have a temporal solution (time machine), a recovery backup, and an off site backup either hardware/media or online.