Cloud Storage

Your files, everywhere

What is Cloud Storage?

"Cloud storage is a model of networked online storage where data is stored in virtualized pools of storage which are generally hosted by third parties "[1]

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[1]Wikipedia : http://en.wikipedia.org/wiki/Cloud_storage

amazon cloud drive

Why use Cloud Storage?

- Share with others
- Available anywhere
  (*home, work, school, browser, mobile*)
- Collaboration
- Offsite storage / Backup
- Extensible

CARBONITE™

Sometimes backups are not sufficient, if still on-site.

How does it work?

1. A service provider provides and manages storage space
2. Provides a means to access files over Internet possibly using:
   - standard protocols (e.g. FTP)
   - a web browser
   - a service provider application
   - 3rd party application

Some Service Providers

Most service providers provide

- Access via supplied App or Browser
- Access from multiple devices
- Ability to share files or folders
- Web interface may enable copying, moving, uploading and downloading files through the browser
- Online storage or files may be accessible from cloud, mobile or local apps

Dropbox

What are some Limitations?

- Requires a Network Connection
  - Security issues associated with Internet plays here
- Someone else in control of cloud service
  Service Provider could ...
  - be closed down without notice (e.g. MegaUpload)
  - stop offering product anymore (e.g. MobileMe)
  - start charging money for service
  - provide access to your files to agencies and lawyers (e.g. complying if Gov. asks)
- Client software compatibility
- Free space limitations

Google Drive

Common Types of Cloud Storage

Synchronized folder

Files are stored locally. When a change is
detected those updated files are passed up to the
service provider to update location. Changes online will
pass down to the local folder.

Online Locker

The online storage space is the only location for files
and some application or browser grants access to files.
Often cloud applications make use of this storage.

Synchronized Folders

Synchronized folders keep a copy on your local machine while an installed service tracks changes and updates all locations when a change is made automatically.

- Files are accessible locally, even when offline
- Network only necessary when updating/synchronizing
- Creates local and remote copies (effectively a backup)
- Multiple machines can synchronize with the account
- After initially set up, user does not have to do anything to synchronize locations

iCloud

Storage Comparison
(Operating System Vendors)

Services come free with certain operating systems, optionally available to other systems.

Service Provider	Free Space	Est cost per YEAR each GB	Vendor's Special Features	Platforms
Google Drive	5 GB	$0.60 (for 100GB,) space shared w/G+ Photos	Google Docs integration Integration w/Gmail attachments	Android, Chrome OS, Windows, OS X, iOS
iCloud	5 GB	$2.00 (for 50GB)	Integrates with iTunes Online	OS X, iOS, Windows
SkyDrive	7GB	$0.50 (for 100GB)	Microsoft Office integration Integration w/Hotmail attachments	Windows, OS X, Android, iOS, W8P
Ubuntu One	5 GB	$1.50 (in 20GB block) Music Streaming: $2.00	Select folders to sync Ubuntu One Music store & streaming	Ubuntu Linux, Windows, OS X, Android, iOS

Storage Comparison
(some Independent Vendors, very incomplete list)

Service Provider	Free Space	Est cost per YEAR each GB	Features	Platforms
amazon cloud drive	5 GB	$1.00 (for 100GB) unlimited purchased music	Includes Cloud Player for MP3s	Windows
box	5GB	$4.80 (for 50GB)	Edit files in Google Docs (w/o Gmail account) Comment files/folders	Windows
Dropbox	2GB (up to 18GB by referral)	$0.99 (for 100GB)	Sync-over-LAN	Windows, OS X, Linux, Android, iOS, W8P
SPIDEROAK	2 GB	$2.00 (for 50GB)	Encryption before upload	Windows, OS X, Linux, Android, iOS
SugarSync	5GB	Business: $2.99(for 100G)	Music streaming, Sync selected folders	Windows, OS X, iOS, Android, BlackBerry, Windows Mobile

Service-specific Features

Sync-over-LAN	Sync files over local network instead of downloading from cloud.	Dropbox
Selective Sync	Specify folders to sync to that machine	SkyDrive, Ubuntu One, SugarSync, Google Drive
Sharing by file manager	Choose to share files or folders in file manager, browser not required	SkyDrive, Google Drive, Ubuntu One
Select folders to Sync	Not limited to service-specified folder, can sync any existing folder	SugarSync, Ubuntu One
Encrypt locally	Encrypt locally before uploading to cloud service, user keeps keys	Wuala, SpiderOak
Mountable / Mappable	Mount or Map to cloud storage without having to sync	SkyDrive
File versions & rollback	Ability to rollback files either a certain number of saves or by time frame	SkyDrive, Google Drive, SpiderOak, Dropbox, SugarSync, Box
Open in cloud apps	Stored files can be opened in cloud apps, including Music and Picture albums	SkyDrive, Google Drive, Box, Ubuntu One, Dropbox
Commenting	Comment or description added to files or folders online	Box

Extensions & 3rd Party Add-Ons

- **Cloud Save**[1] allows easy saving files to multiple cloud storage sites through Chrome

- **SecretSync**[2] encrypts files before placing them in Dropbox folder to be synchronized online

[1.] https://chrome.google.com/webstore/detail/dlbemabjbfhjcccahjioenmkgimjbbkd

[2.] http://getsecretsync.appspot.com/download/lifehacker/

SkyDrive.

Online Backup Services provide

- Automatic backups
- Encrypted storage
- Restorable
- Large storage space
- Phone support
- Business plans also available

SPIDEROAK

Online Backup Pricing

Service Provider	Cost	Vendor's Special Features	Platforms
CARBONITE	unlimited space: $59/year for 1 computer	Access files remotely External Hard Drive Backup Courier Recovery Service Mirror Image Backup Deleted files available for 30 days	Windows, Mac Mobile Access
CRASHPLAN	$32.99/yr for 1 (10GB) unlimited space: Free (local to local only) $59.99/yr for 1computer $149.99/yr for 2-8 (family)	Can backup locally (free) and online(paid) Can backup attached drives Deleted files available forever (unless told not to) `Seed Service`, send HD to start online backup Can split Backup (work & personal) Can backup open files	Windows, Mac, Linux & Solaris Mobile Access
mozy	$65.89/yr (50GB) $109.89/yr (125GB) +$24/yr each new computer	Mozy Stash is File Sync Cloud Storage Versions kept for 30 days Incremental backups	Windows, Mac Mobile Access

Mobile Devices
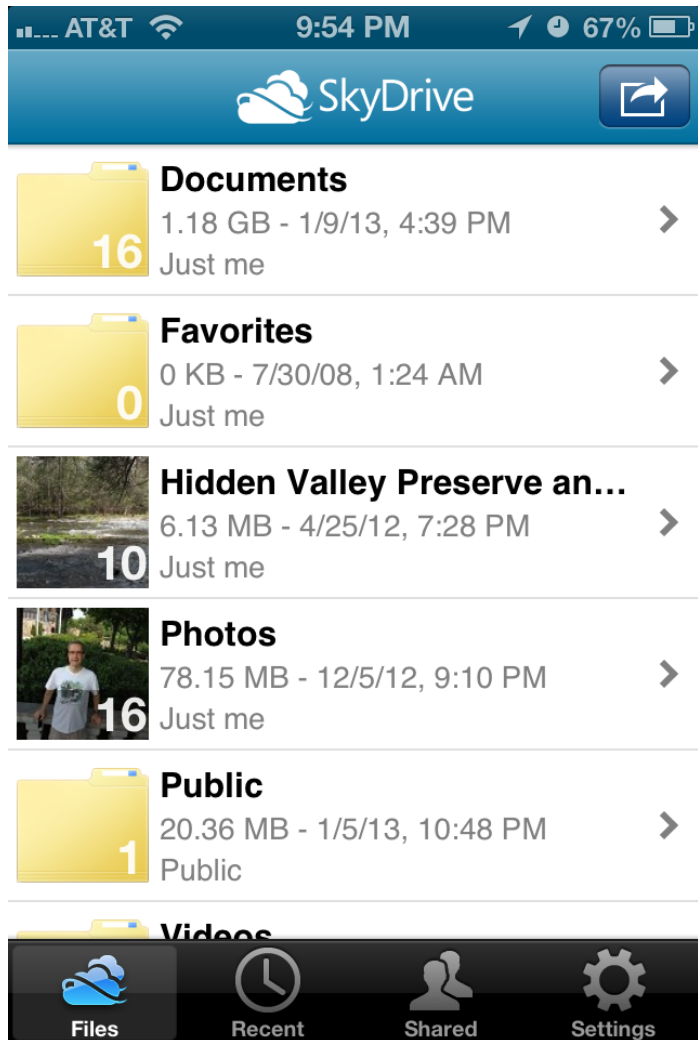
Mobile devices list files stored in the Cloud but does not actually download the files until requested.

Demo

Some Alternative Solutions

- ## OwnCloud
  ownCloud gives you universal access to your files through a web interface or WebDAV. It also provides a platform to easily view & sync your contacts, calendars and bookmarks across all your devices and enables

  basic editing right on the web.

- ## iFolder
  Once you have installed iFolder, you simply save your files locally-as you have always done-and iFolder automatically updates the files on a network server and delivers them to the other machines you use.

- ## FreeFileSync
  FreeFileSync is a folder comparison and synchronization tool providing highly optimized performance and usability without a needlessly complex user interface.

ubuntu one

Links and Reference

Definition:

http://en.wikipedia.org/wiki/Cloud_storage

Cloud Service Providers:

File Synchronization
- Google Drive : https://drive.google.com
- iCloud : https://www.apple.com/icloud/
- SkyDrive : https://www.skydrive.com
- Ubuntu One : https://one.ubuntu.com
- Amazon Cloud Drive : http://www.amazon.com/clouddrive/
- Box : https://www.box.com
- Dropbox : https://www.dropbox.com
- SpiderOak : https://www.spideroak.com
- Wuala :https://www.wuala.com/
- 4Shared : https://www.4shared.com/
- CloudMe : https://www.cloudme.com/en

Extensions and 3rd party
- SecretSync : http://getsecretsync.appspot.com/download/lifehacker/
- Cloud Save (Chrome extension) : https://chrome.google.com/webstore/detail/dlbemabjbfhjcccahjioenmkgimjbbkd

Backups
- Carbonite :https://www.carbonite.com
- CrashPlan : https://www.crashplan.com
- Mozy : http://www.mozy.com

Alternatives
- OwnCloud : http://owncloud.org/
- iFolder : http://ifolder.com/ifolder
- FreeFileSync : http://sourceforge.net/projects/freefilesync/

The end.

Thank You

(questions?)