

# Backups and file storage options for research groups

ChemIT sharing their recommendations and best-practices for backups and group file storage. May be of particular value to research groups.

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## ChemIT-recommended services

	Costs	Resource links	Notes and considerations
<b>EZ-Backup</b> Central backup services	As of 10/2013: Per computer: \$5.50/mo (First 18 GB, compressed) See link for additional rates	<a href="http://www.it.cornell.edu/services/ezbackup/fees/">http://www.it.cornell.edu/services/ezbackup/fees/</a>	<ul style="list-style-type: none"><li>• Default setting is to backup full computer, including the OS, which makes for a larger backup and thus potentially more expensive.</li><li>• But the most cost-effective method will require carefully and accurately focusing backup on just user's unique docs, not full OS.</li><li>• There is an archive service available.</li><li>• A cost-effective solution for even larger amounts of data on one system.</li><li>• Very robust backup services, well-proven over the years.</li><li>• Includes Off-Site copy of backups at Weill Medical center.</li></ul>
<b>SFS</b> Central (CIT) file storage services	As of 10/2013: Per group: \$9/mo for 150GB \$30/mo for 500GB \$60/mo for 1TB (1TB increments, at \$60/TB/mo.)	<a href="http://www.it.cornell.edu/services/sharedfile/fees.cfm">http://www.it.cornell.edu/services/sharedfile/fees.cfm</a>	<ul style="list-style-type: none"><li>• Service backs up all files stored on SFS via EZ-Backup at no additional cost.</li><li>• Versioning (access to prior versions and deleted files) is optional, and requires a portion of the allocated space (~20%).</li><li>• Default is all folders and documents are shared by group.</li><li>• ChemIT can set up private folders for each member.</li><li>• CIFS are Windows and Mac-friendly. (NFS option also available.)</li><li>• Accessible from off-campus via VPN.</li><li>• NetID-based - so no additional usernames and password are needed.</li><li>• If you need more than 1-2 TB of storage, other solutions may be more cost-effective. Contact ChemIT for more details.</li></ul>
<b>CAC file storage</b> Another central (CAC) file storage services	As of 10/2013: Regular or DB files: \$500.00 /TB/year or \$0.50/GB/year (which averages to \$41.67 /TB/mo) Archival: \$100.00/TB/year or \$0.10/GB/year (which averages to \$8.33/TB /mo)	[ <a href="http://www.cac.cornell.edu/services/storage.aspx">http://www.cac.cornell.edu/services/storage.aspx</a> ][ <a href="http://www.cac.cornell.edu/services/rates/">http://www.cac.cornell.edu/services/rates/</a> ]	<ul style="list-style-type: none"><li>• Unknown to ChemIT.</li></ul>
<b>Box.com</b> Central cloud storage	Free to CU members, up to 10GB (More data storage available. Contact ChemIT for details.)	<a href="http://www.it.cornell.edu/services/box/about.cfm">http://www.it.cornell.edu/services/box/about.cfm</a>	<ul style="list-style-type: none"><li>• Good for working files. Good for sharing, including to your own, with other computers. Limited space.</li><li>• Individual file size limit is 2GB.</li><li>• <a href="#">Limits on file names and path lengths</a>.</li><li>• Cornell-contracted and approved for University data. Use and rights governed differently than with your group's private DropBox.com accounts, for example.</li><li>• More space is available to individuals; contact ChemIT to put in this request to CIT, please.</li><li>• Has capacity for shared folders and documents, if sharing is desired.</li><li>• Service stores prior versions of files, and in most cases also deleted files.</li><li>• Consider backing up files in case account <a href="#">gets hacked or of a bad internal actor</a>.</li><li>• NetID-based - so no additional usernames and password are needed.</li></ul>

## Other file storage-related info

Research Data Management Service Group (RDMSG) has a "[Storage, backup and recovery](#)" page on Cornell-specific options.

## Other backup-related info

### Hard drives fail

It's not a question of if a hard drive will fail. Only a question of when. Thus, make sure your unique data is not on just one hard drive.

- Backups is a term which applies to restoring current or very recent data.
- Archiving is a term focusing more on restoring prior versions of data or older data.

## Synchronizing is not a panacea

Synchronizing, especially without access to prior versions, can confer very limited data protection since undesired changes get sync'ed. What can happen to a [hacked DropBox.com account demonstrate this danger](#).

## Ideas to back up Box.com (or DropBox.com) files

- Please refer to our page geared towards [backing up private cloud accounts](#) for current ideas from ChemIT.