

Appendix L.3 Project Archiving & Backup

Once you've transferred the files and verified the file integrity. You should backup the data to multiple places. To ensure that the data is accessible in case of emergency it is highly recommended that you follow the 3-2-1 Backup Strategy.

3-2-1 Backup Strategy

- 3 Copies of the Data
- 2 Different Media Types (HDD, Tape, ...)
- 1 Off-site Copy

Within the LCC Lab, I always keep a copy on the Server, a copy on a Backup Drive, and a copy on AWS Glacier Long-term Tape storage.

To ensure that the data is stored efficiently, I always like to keep a project folder(s) in a gzipped-Tarball.

Tar (Tape Archive Format)

Tar is a software program that combines files into a single archive. It was originally developed to backup and store information to tape-based backup systems and is present on Unix/Linux based systems.

Today, Tar has become a standard for combining files and directories. An alternative that is common to see is ZIP files.

Common options

Options	Description
-c	Create an Archive
-x	Extract an Archive
-v	Print verbose information
-z	Create Tar file using gzip compression
-t	List all files in the tar archive file
-u	Archives file and adds it to existing file
-r	Updates a file or directory located inside a tar archive

Archiving

Archiving files/folders to a single gzipped tarball file can be performed by using the `zcvf` options. Providing the output name `[archive file].tar.gz`. You can provide multiple files or a directory to add archive.

Usage: `tar zcvf [archive file].tar.gz [files/directories]`

Example: `tar zcvf test.tar.gz test_directory`

Extracting

To extract a gzipped-tarball, you should use the options `zxvf` . Note: if the tar archive is not gzipped, you can simply use the `xvf` .

Usage: `tar zxvf [archive file].tar.gz`

Example: `tar zxvf test.tar.gz`

This will extract all the files and folders in the Tarball to the current directory you are working in.

Listing Archive Files

To list the files in the tarball archive

Usage: `tar tvf [archive file].tar.gz`

Example: `tar tvf test.tar.gz`