

File Archiving and Compression

- File archive can be done using '**tar**' command and '**c**' option.

syntax: `tar -cvf <archive-filename> <list-of-files>`

example: `tar -cvf sample.tar files/` # creates a .tar file called sample.tar which includes files inside files directory. Option 'v' is used to display the content at the prompt.

'v' option is used to display the archived files on the prompt. Optional option.

- To list files included in an archive file. Monitoring an archive file. '-t' option is used.

syntax: `tar -tf <archived-file>`

example: `tar -tf copy.tar` # display all archived files in copy.tar file.

- To add files into an existing 'tar' file. '-r' option is used.

syntax: `tar -rvf <current-archive-file> <new-file-to-be-added>`

example: `tar -rvf copy.tar file_new.txt` # file_new.txt file will be added to the copy.tar archive file.

- How to update an archive file with a new version of the files. '-u' option is used.

syntax: `tar -uvf <archive-file> <files>`

example: `tar -uvf copy.tar file_new.txt`

- If you think that a file is a tar archive, but you are not sure, use the '**file**' command.

`file copy.tar`

- To extract an archive file. '-x' option is used.

syntax: `tar -xvf <archive-file>`

example: `tar -xvf copy.tar` # extracts the files to the current directory.

- To extract the .tar file to a directory. '-C' option can be used.

syntax: `tar -xvf <archive-file> -C <destination-directory>/` # use -C option before specifying the destination directory.

- Extracting a single file from the archive file. Filename must be known.

syntax: `tar xvf <archive-file> <filename-to-be-extract>`

example: `tar -xvf copy.tar file_new.txt` # extracts only the file_new.txt file.

- The use of '**tar**' command will not compress the files, if compression is needed it must be done separately or at the time of archiving with the use of different commands.
- The gzip or bzip2 command utilities can be used for compression of tar files.
- Use of gzip to compress .tar files.

syntax: `gzip <archive-filename>`

example: `gzip copy.tar` # This will create copy.tar.gz file.

❖ the above command replaces copy.tar file with copy.tar.gz.

- Use of bzip2 command to compress archived files.

syntax: `bzip2 <archive-file>`

example: `bzip2 copy.tar` # creates a file named copy.tar.bz2

- As an alternative to using the gzip & bzip2 utilities from the command line, you can include the **-z (gzip)** or **-j (bzip2)** option while creating the

archive with tar. This will immediately compress the archive while it is created.

syntax: `tar -czf <compress-filename> <files-to-be-compressed>`

example: `tar -czf result.tar.gz file_new.txt`

Option	Use
c	Creates an archive.
v	Shows verbose output while tar is working.
t	Shows the contents of an archive.
z	Compresses/decompresses the archive while creating it, by using gzip.
j	Compresses/ decompresses the archive by using bzip2.
x	Extracts an archive.
u	Updates an archive; only newer files will be written to the archive.
C	Changes the working directory before performing the command.
r	Appends files to an archive.