**Archive : -** It is the process of collecting and storing a group of files and directories into one place .

**Compression : -** Compression is the act of shrinking the size of file , which is quite useful in sending large files over the internet .

Benefits –

1 . going to use less storage .

2. Take less time to transfer from one location to another .

**Tar : -** It is a command line tool , “ tar” stands for tape archive .

The tar command used to rip (pull) a collection of files & directories into highly compressed archive files commonly called tarball or tar , gzip , xz , bzip2 in linux .

**Tar Options : -**

c - create a archive file

x – extract a archive file

v – show the progress of archive file

f – file name of archive file

t – view content of archive file

j – filter archive through bzip2

z – filter archive through gzip

J – filter archive through xz

**Q – How to create a file with a particular or specific size ?**

Ans : - By using fallocate command .

Ex : - fallocate –l3m file.txt // create a file.txt with 3MB

**Q – How to list files with file size ?**

**Ans : -** ls –lh or du –sh

**Q – How to do archive & compression using tar command ?**

Ans – Syntax - # tar –cvf

Ex: - tar –cvf file.tar file1.txt file2.txt file3.txt

**Q – How to list the files available in archive format ?**

Ans – Syntax - # tar -tvf

Ex : tar -tvf file.tar

**Q – If files got deleted how to extract from archive format ?**

Ans – Syntax - # tar -xvf

Ex : tar -xvf file.tar file2.txt

( when we not mentioned any file name it will extract whole things from file.tar )

🡺 **gzip archive and compression command –**

**Syntax –** tar -cvzf <filename.tar.gz> < filename to be done archive & compression >

Ex : - tar -cvzf file.tar.gz file1.txt file2.txt file3.txt

Or

tar -cvzf file.tar.gz file.tar

🡺 **bzip2 archive and compression command –**

**Syntax –** tar -cvjf <filename.tar.bz2> < filename to be done archive & compression >

Ex : - tar -cvjf file.tar.bz2 file1.txt file2.txt file3.txt

Or

tar -cvjf file.tar.bz2 file.tar

🡺 **xz archive and compression command –**

**Syntax –** tar -cvJf <filename.tar.xz > < filename to be done archive & compression >

Ex : - tar -cvJf file.tar.xz file1.txt file2.txt file3.txt

Or

tar -cvJf file.tar.xz file.tar

**.tar << .gzip << .xz << .bzip2**

**Note :-** Extention is not mandatory

**Q – How to extract the compression files to a dedicated location ?**

Ans – Syntax - # tar –xvf <compressed file name> -C

Ex : - tar –xvf file.tar.xz –C /tmp/

**Another method of Compression and extract --**

🡺 **gzip archive and compression command –**

**Syntax –** gzip < archive filename >

Ex : - gzip f.tar

**Extract –**

**Syntax –** gunzip < compressed filename >

Ex :- gunzip f.tar.gz

🡺 **bzip2 archive and compression command –**

**Syntax –** bzip2 < archive filename >

Ex : - bzip2 f.tar

**Extract –**

**Syntax –** bunzip2 < compressed filename >

Ex :- bunzip2 f.tar.bz2

🡺 **xz archive and compression command –**

**Syntax –** xz < archive filename >

Ex : - xz f.tar

**Extract –**

**Syntax –** unxz < compressed filename >

Ex :- unxz f.tar.xz