FILE COMPRESSION

Users never have enough disk space, so compression comes in handy.

Following can be used to compress files

a. gzip - gunzip
b. bzip2 – bunzip2
c. zip - unzip
d. tar

gzip :

The gzip command can make files take up less space. You can get the original back with gunzip.

1. Compressing Files
   a. gzip filename
2. Compress multiple files
   a. gzip file1 file2 file3 file4
3. Keep the original file
   a. gzip -k filename
4. Verbose output
   a. gzip -v filename
5. Compress all files in a directory
   a. gzip -r directory
6. Decompressing Files
   a. gzip -d filename.gz
   b. gunzip filename.gz
7. Decompress multiple files
   a. gzip -d file1.gz file2.gz file3.gz
   b. gunzip file1.gz file2.gz file3.gz

8. Decompress all files in a directory
    a. gzip -dr directory
    b. gunzip directory
9. Keep the compressed file
    a. gzip -dk filename.gz
    b. gunzip -k filename.gz
10. List the Compressed File Contents
    a. gzip -l filename
    b. gzip -lv filename

bzip2 :

Files can also be compressed with bzip2 which takes a little more time than gzip, but compresses better. Files can be uncompressed again with bunzip2.

1. Compressing Files
    a. bzip2 fielname
2. Compress multiple files
    a. bzip2 fielname1 filename2 filename3
3. Keep the original file
    a. bzip2 -k filename
4. Verbose output
    a. bzip2 -v filename
5. Decompressing Files
    a. bzip2 -d filename.bz2
    b. bunzip2 filename.bz2
6. Decompress multiple files
    a. bzip2 -d file1.bz2 file2.bz2 file3.bz2
    b. bunzip2 file1.bz2 file2.bz2 file3.bz2

7. Keep the compressed file
    a. bzip2 -dk filename.bz2
    b. bunzip2 -k filename.bz2

zip:

1. Create a ZIP Archive
    a. touch file{1..5}.txt
    b. zip files file1.txt file2.txt file3.txt file4.txt file5.txt
2. List ZIP File Contents
    a. zip -sf files.zip
3. Add Specific File Types to ZIP Archive
    a. zip files *.txt
4. Add a Directory to ZIP Archive
    a. zip -r files.zip <directory>
5. Delete Files From ZIP Archive
    a. zip -sf <archive file>
    b. zip -d <archive file> <files for deletion>
        i. zip -d files.zip file5.txt
6. Create a file with predefined memory of 1G and zip it.
    a. fallocate -l 1G testfile
    b. zip test.zip testfile
    c. ls -lh
7. Unzip zip files
    a. unzip test.zip

tar:

1. Create a tar Archive File in Linux
    a. tar -cvf filename.tar file/directory
        i. tar -cvf etc-backup-14-09-12.tar /etc

        c – Creates a new .tar archive file.

        v – Verbosely show the .tar file progress.

        f – File name type of the archive file.

2. Create tar.gz Archive File in Linux (Note: tar.gz and tgz both are similar).
    a. tar -cvfz filename.tar.gz file/directory
        i. tar - cvfz etc-backup-14-09-12.tar.gz /etc
        ii. tar -cvfz backup.tar.gz . (. represents the current directory)

        z - gzip

3. Create tar.bz2 Archive File in Linux (Note: tar.bz2 and tbz is similar to tb2).
    a. tar -cvfj filename.tar.bz2 file/directory
        i. tar -cvfj etc-backup.tar.bz2 /etc
        ii. tar -cvfj backup.tar.bz2 . (. represents the current directory)

        j – bzip2

4. Untar tar Archive File in Linux (tar,tar.gz,tar.bz2)
    a. Untar files in Current Directory
        i. tar -xvf etc-backup.tar
    b. Untar files in specified Directory
        i. tar -xvf etc-backup.tar -C /mnt

5. Untar Single file from tar File in Linux
    a. Single file
        i. tar -xvf tarfilename file1
        ii. tar -xvf etc-backup.tar passwd
6. Untar Multiple files /directory from tar, tar.gz, and tar.bz2 File
    a. tar -xvf tarfilename file1 file2 dir
    b. tar -xvf etc-backup.tar "passwd" "group"
7. List Content of tar Archive File in Linux
    a. tar -tvf backup.tar
8. Add Files or Directories to tar Archive File in Linux
    a. tar -rvf backup.tar file1 file2
9. Remove File and Directory from Tar Archive
    a. tar --delete -f backup.tar.gz file1.txt
    b. tar --delete -f backup.tar.gz '/home/tecmint/uploads'