

1. Tar Archive

- a. Create a tar archive file of your home directory – `tar -cvf backup.tar .`

```
-rw-r--r--. 1 siddharrth siddharrth 334684160 Nov  7 11:14 backup.tar
```

- b. Create a tar archive file – `tar -cvf etcbbackup.tar /etc` (become root)

```
-rw-r--r--. 1 root root 27033600 Nov  7 18:48 etcbbackup.tar
```

- c. Move the etcbbackup.tar to another directory root/Backups

```
[root@linux ~]# mv etcbbackup.tar /root/backups/
[root@linux ~]# ll
total 4
-rw-----. 1 root root 822 Sep 30 12:55 anaconda-ks.cfg
drwxr-xr-x. 2 root root 27 Nov  7 18:50 backups
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Desktop
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Documents
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Downloads
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Music
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Pictures
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Public
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Templates
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Videos
[root@linux ~]# cd backups/
[root@linux backups]# ll
total 26400
-rw-r--r--. 1 root root 27033600 Nov  7 18:49 etcbbackup.tar
```

- d. Create tar.gz file – `tar -zcvf etcbbackup.tar.gz /etc`

```
/etc/vsftpd/
/etc/vsftpd/ftpusers
/etc/vsftpd/user_list
/etc/vsftpd/vsftpd.conf
/etc/vsftpd/vsftpd_conf_migrate.sh
[root@linux ~]# ll
total 5452
-rw-----. 1 root root 822 Sep 30 12:55 anaconda-ks.cfg
drwxr-xr-x. 2 root root 27 Nov  7 18:53 backups
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Desktop
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Documents
drwxr-xr-x. 2 root root  6 Sep 30 16:14 Downloads
-rw-r--r--. 1 root root 5576135 Nov  7 18:53 etcbbackup.tar.gz
```

- e. Move the gz file to root/Backups

```
[root@linux ~]# mv etcbbackup.tar.gz /root/backups/
[root@linux ~]# ls -l backups/
total 31848
-rw-r--r--. 1 root root 27033600 Nov  7 18:49 etcbbackup.tar
-rw-r--r--. 1 root root 5576135 Nov  7 18:53 etcbbackup.tar.gz
[root@linux ~]#
```

- f. Create a tar.gz archive file of your home directory

```

/home/siddharrth/vsftpd-3.0.3-49.el9.x86_64.rpm
/home/siddharrth/httpd-2.4.57-6.el9.x86_64.rpm
/home/siddharrth/backup.tar
/home/siddharrth/etcbbackup.tar
[root@linux ~]# ll
total 66336
-rw-----. 1 root root      822 Sep 30 12:55 anaconda-ks.cfg
drwxr-xr-x. 2 root root       51 Nov  7 18:54 backups
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Desktop
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Documents
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Downloads
-rw-r--r--. 1 root root 67922635 Nov  7 18:56 homebackup.tar.gz

```

- g. Create tar.bz2 archive file – `tar -jcvf etcbbackup.tar.bz2 /etc`

```

-rw-r--r--. 1 root root 4599251 Nov  7 18:58 etcbbackup.tar.bz2

```

- h. Move the bz file to root/Backups and compare the archive files using `ls -lh`

```

[root@linux ~]# mv etcbbackup.tar.bz2 /root/backups/
[root@linux ~]# ls -lh backups/
total 36340
-rw-r--r--. 1 root root 27033600 Nov  7 18:49 etcbbackup.tar
-rw-r--r--. 1 root root 4599251 Nov  7 18:58 etcbbackup.tar.bz2
-rw-r--r--. 1 root root 5576135 Nov  7 18:53 etcbbackup.tar.gz

```

- i. Create tar.bz2 file of your home directory

```

-rw-r--r--. 1 root root 62912727 Nov  7 19:02 homebackup.tar.bz2

```

- j. Untar files in the present directory

- i. `tar -xvf backup.tar`

```

drwxr-xr-x. 2 root root       76 Nov  7 18:59 backups
-rw-r--r--. 1 root root 171786240 Nov  7 19:04 backup.tar
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Desktop

```

- k. Untar files in specified directory

- i. `Tar -xvf backup.tar -C /tmp/backup` (create dir tmp/backup under your home directory)

```

[root@linux ~]# tar -xvf backup.tar -C tmp/backup/
./
./.bash_logout
./.bash_profile
./.bashrc
./.cshrc
./.tcshrc
./anaconda-ks.cfg
./.cache/
./.cache/mesa_shader_cache/
./cache/mesa_shader_cache/index

```

```
[root@linux ~]# ls -l tmp/backup/
total 127776
-rw-----. 1 root root      822 Sep 30 12:55 anaconda-ks.cfg
drwxr-xr-x. 2 root root       76 Nov  7 18:59 backups
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Desktop
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Documents
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Downloads
-rw-r--r--. 1 root root 62912727 Nov  7 19:02 homebackup.tar.bz2
-rw-r--r--. 1 root root 67922635 Nov  7 18:56 homebackup.tar.gz
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Music
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Pictures
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Public
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Templates
drwxr-xr-x. 2 root root        6 Sep 30 16:14 Videos
```

- l. Create tar archive file of a directory CEO under your home directory named CEOBackup.tar

```
[siddharrth@linux ~]$ tar -cvf CEOBackup.tar CEO/
CEO/
CEO/VP_Product/
CEO/VP_Product/Product_lead1/
CEO/VP_Product/Product_lead2/
CEO/VP_Sales/
tar: CEO/VP_Sales/Sale_lead1: Cannot stat: Permission denied
CEO/VP_People/
CEO/VP_People/HR_Lead/
CEO/VP_People/HR_Lead/people
```

```
drwxr-xr-x. 6 Neymar Football      90 Oct  3 16:35 CEO
-rw-r--r--. 1 siddharrth siddharrth 10240 Nov  7 19:08 CEOBackup.tar
```

- m. List all files under CEOBackup.tar using tar -tvf CEOBackup.tar

```
[siddharrth@linux ~]$ tar -tvf CEOBackup.tar
drwxr-xr-x Neymar/Football  0 2024-10-03 16:35 CEO/
drwxr-xr-x Neymar/Football  0 2024-10-01 19:29 CEO/VP_Product/
d-w-rwxrwx Neymar/Football  0 2024-10-01 19:29 CEO/VP_Product/Product_lead1/
drwxr-xr-x Neymar/Football  0 2024-10-01 19:29 CEO/VP_Product/Product_lead2/
drwxr-xr-- Neymar/Football  0 2024-10-01 19:31 CEO/VP_Sales/
drwxr-xr-x Neymar/Football  0 2024-10-01 19:32 CEO/VP_People/
drwxr-xr-x Neymar/Football  0 2024-10-02 16:49 CEO/VP_People/HR_Lead/
-r--r--r-- Neymar/Football 32 2024-10-02 17:03 CEO/VP_People/HR_Lead/people
-rw-r--r-- Neymar/Football  0 2024-10-02 16:32 CEO/VP_People/HR_Lead/address
-rw-r--r-- Neymar/Football  0 2024-10-02 16:32 CEO/VP_People/HR_Lead/contact
drwxr-xr-x Neymar/Football  0 2024-10-01 19:34 CEO/VP_Engineering/
dr-xr-xrwx Neymar/Football  0 2024-10-01 19:33 CEO/VP_Engineering/Tech_Lead/
drwxr-xr-x Neymar/Football  0 2024-10-01 19:34 CEO/VP_Engineering/Tech_Lead1/
-rw-r--r-- Neymar/Football 18 2024-10-03 16:35 CEO/try
```

- n. Add more files and directories to CEOBackup.tar using

- i. tar -rvf CEOBackup.tar file1 file2 file3 / dir1 dir2

```
[siddharrth@linux ~]$ tar -rvf CEOBackup.tar file1 file2 file3 dir1/ dir2/
file1
file2
file3
dir1/
dir2/
```

- o. Untar single files / multiple files and dirs using

- i. tar -xvf CEOBackup.tar file1 file2 file3 /dir1 dir2

```
[siddharrth@linux ~]$ tar -xvf CEOBackup.tar file1 file2 file3 dir1/ dir2/
file1
file2
file3
dir1/
dir2/
```

p. Delete a file or directory from the tar archive using

i. `tar --delete -f CEOBackup.tar file1 /dir1`

```
[siddharrth@linux ~]$ tar --delete -f CEOBackup.tar file1 dir1/
[siddharrth@linux ~]$ tar -tvf CEOBackup.tar
drwxr-xr-x Neymar/Football 0 2024-10-03 16:35 CEO/
drwxr-xr-x Neymar/Football 0 2024-10-01 19:29 CEO/VP_Product/
d-w-rwxrwx Neymar/Football 0 2024-10-01 19:29 CEO/VP_Product/Product_lead1/
drwxr-xr-x Neymar/Football 0 2024-10-01 19:29 CEO/VP_Product/Product_lead2/
drwxr-xr-- Neymar/Football 0 2024-10-01 19:31 CEO/VP_Sales/
drwxr-xr-x Neymar/Football 0 2024-10-01 19:32 CEO/VP_People/
drwxr-xr-x Neymar/Football 0 2024-10-02 16:49 CEO/VP_People/HR_Lead/
-r--r--r-- Neymar/Football 32 2024-10-02 17:03 CEO/VP_People/HR_Lead/people
-rw-r--r-- Neymar/Football 0 2024-10-02 16:32 CEO/VP_People/HR_Lead/address
-rw-r--r-- Neymar/Football 0 2024-10-02 16:32 CEO/VP_People/HR_Lead/contact
drwxr-xr-x Neymar/Football 0 2024-10-01 19:34 CEO/VP_Engineering/
dr-xr-xrwx Neymar/Football 0 2024-10-01 19:33 CEO/VP_Engineering/Tech_Lead/
drwxr-xr-x Neymar/Football 0 2024-10-01 19:34 CEO/VP_Engineering/Tech_Lead1/
-rw-r--r-- Neymar/Football 18 2024-10-03 16:35 CEO/try
-rw-r--r-- siddharrth/siddharrth 0 2024-11-07 19:12 file2
-rw-r--r-- siddharrth/siddharrth 0 2024-11-07 19:12 file3
```

2. Gzip archive

a. Create a gzip archive of file(s)

i. `gzip filename`

```
[siddharrth@linux ~]$ gzip file1
-rw-r--r--. 1 siddharrth siddharrth 26 Nov 7 19:12 file1.gz
```

ii. `gzip filename1 filename2 filename3`

```
[siddharrth@linux ~]$ gzip file2 file3
-rw-r--r--. 1 siddharrth siddharrth 26 Nov 7 19:12 file2.gz
-rw-r--r--. 1 siddharrth siddharrth 26 Nov 7 19:12 file3.gz
```

b. Create a gzip file keeping the original file

i. `gzip -k filename`

```
[siddharrth@linux ~]$ gzip -k fileinfo
-rw-r--r--. 1 siddharrth siddharrth 1126 Oct 2 17:12 fileinfo
-rw-r--r--. 1 siddharrth siddharrth 260 Oct 2 17:12 fileinfo.gz
```

c. check out gzip -v filename cmd

```
[siddharrth@linux ~]$ gzip -v footballers
footballers: 0.0% -- replaced with footballers.gz
```

d. Create a gzip file for tar archive file CEOBackup.tar

- i. gzip CEOBackup.tar (this way you can archive the directory and then apply gzip for compression)

```
[siddharrth@linux ~]$ gzip CEOBackup.tar
```

```
-rw-r--r--. 1 siddharrth siddharrth 624 Nov 7 19:26 CEOBackup.tar.gz
```

- e. Create a gzip file for directory with subdirectories and files and observe

- i. gzip -r dirname

```
[siddharrth@linux ~]$ gzip -r dir1/
```

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- f. decompress gzip files

- i. gzip -d filename(s)

```
[siddharrth@linux ~]$ gzip -d file1.gz
```

```
-rw-r--r--. 1 siddharrth siddharrth 0 Nov 7 19:12 file1
```

- ii. gunzip filename(s)

```
[siddharrth@linux ~]$ gunzip file2.gz
```

```
-rw-r--r--. 1 siddharrth siddharrth 0 Nov 7 19:12 file2
```

- iii. gzip -dr dirname

```
[siddharrth@linux ~]$ gzip -dr dir2
```

- iv. gunzip -r dirname

```
[siddharrth@linux ~]$ gunzip -r dir2
```

- v. gzip -dk filename (keeping the compressed file)

```
[siddharrth@linux ~]$ gzip -dk file3.gz
```

```
-rw-r--r--. 1 siddharrth siddharrth 0 Nov 7 19:12 file3
```

```
-rw-r--r--. 1 siddharrth siddharrth 26 Nov 7 19:12 file3.gz
```

- g. list the contents of gzip file/dir

- i. gzip -l filename.gz

```
[siddharrth@linux ~]$ gzip -l fileinfo.gz
```

compressed	uncompressed	ratio	uncompressed_name
260	1126	79.3%	fileinfo

- ii. gzip -lr dirname

```
[siddharrth@linux ~]$ gzip -lr etcbbackup.tar
```

3. bzip2 archive

a. Create a bzip2 archive of file(s)

i. bzip2 filename

```
[siddharrth@linux ~]$ bzip2 file1
```

```
-rw-r--r--. 1 siddharrth siddharrth 14 Nov 7 19:12 file1.bz2
```

ii. bzip2 filename1 filename2 filename3

```
[siddharrth@linux ~]$ bzip2 file2 file3
```

```
-rw-r--r--. 1 siddharrth siddharrth 14 Nov 7 19:12 file2.bz2  
-rw-r--r--. 1 siddharrth siddharrth 14 Nov 7 19:12 file3.bz2
```

b. Create a bzip2 file keeping the original file

i. bzip2 -k filename

```
[siddharrth@linux ~]$ bzip2 -k fileinfo
```

```
-rw-r--r--. 1 siddharrth siddharrth 1126 Oct 2 17:12 fileinfo  
-rw-r--r--. 1 siddharrth siddharrth 301 Oct 2 17:12 fileinfo.bz2
```

c. check out bzip2 -v filename cmd

```
[siddharrth@linux ~]$ bzip2 -v try
```

```
try: 0.186:1, 43.000 bits/byte, -437.50% saved, 8 in, 43 out.
```

d. Create a bzip2 file for tar archive file CEOBackup.tar

i. bzip2 CEObackup.tar (this way you can archive the directory and then apply gzip for compression)

```
[siddharrth@linux ~]$ bzip2 backup.tar
```

```
-rw-r--r--. 1 siddharrth siddharrth 29106065 Nov 7 18:24 backup.tar.bz2
```

e. decompress bzip2 files

i. bzip2 -d filename(s)

```
-rw-r--r--. 1 siddharrth siddharrth 43 Oct 7 10:46 try.bz2
```

ii. bunzip2 filename(s)

```
[siddharrth@linux ~]$ bunzip2 try.bz2
```

```
-rw-r--r--. 1 siddharrth siddharrth 8 Oct 7 10:46 try
```

iii. bzip2 -dk filename (keeping the compressed file)

```
-rw-r--r--. 1 siddharrth siddharrth 8 Oct 7 10:46 try
```

```
-rw-r--r--. 1 siddharrth siddharrth 1126 Oct 2 17:12 fileinfo  
-rw-r--r--. 1 siddharrth siddharrth 301 Oct 2 17:12 fileinfo.bz2
```