

We are going to start by creating a directory and into it two files : `file1` and `file2`. The directory is in `/tmp`

```
jeremy@jeremy:/tmp$ mkdir test
jeremy@jeremy:/tmp$ ls
test
jeremy@jeremy:/tmp$ cd test/
jeremy@jeremy:/tmp/test$ touch file1
jeremy@jeremy:/tmp/test$ touch file2
jeremy@jeremy:/tmp/test$
```

Then we are creating some links with the commands :

```
ln -s file1 SL #Symbolic link
ln file2 HL #Hard Link
```

```
jeremy@jeremy:/tmp/test$ ls -al
total 8
drwxr-xr-x 2 jeremy jeremy 4096 Okt  7 22:06 .
drwxrwxrwt 3 root   root   4096 Okt  7 22:06 ..
-rw-r--r-- 1 jeremy jeremy    0 Okt  7 22:06 file1
-rw-r--r-- 1 jeremy jeremy    0 Okt  7 22:06 file2
jeremy@jeremy:/tmp/test$ ln -s file1 SL
jeremy@jeremy:/tmp/test$ ls -al
total 8
drwxr-xr-x 2 jeremy jeremy 4096 Okt  7 22:07 .
drwxrwxrwt 3 root   root   4096 Okt  7 22:07 ..
-rw-r--r-- 1 jeremy jeremy    0 Okt  7 22:06 file1
-rw-r--r-- 1 jeremy jeremy    0 Okt  7 22:06 file2
lrwxrwxrwx 1 jeremy jeremy    5 Okt  7 22:07 SL -> file1
jeremy@jeremy:/tmp/test$ ln file2 HL
jeremy@jeremy:/tmp/test$
```

Then we archive the folder in the `backup1`, then create a `restore` folder and *unarchive* the archive into it. Then we check the links.

```
sudo tar -czf /mnt/backup1/testLinks.tar.gz test/
sudo ls -al /mnt/backup1/testLinks.tar.gz
mkdir restore
cd restore/
tar -xf /mnt/backup1/testLinks.tar.gz
ls
cd test
ls -al
```

```

jeremy@jeremy:/tmp$ sudo tar -czf /mnt/backup1/testLinks.tar.gz test/
jeremy@jeremy:/tmp$ sudo ls -al /mnt/backup1/testLinks.tar.gz
-rw-r--r-- 1 jeremy jeremy 202 Okt  7 22:10 /mnt/backup1/testLinks.tar.gz
jeremy@jeremy:/tmp$ mkdir restore
jeremy@jeremy:/tmp$ cd restore/
jeremy@jeremy:/tmp/restore$ tar -xf /mnt/backup1/testLinks.tar.gz
jeremy@jeremy:/tmp/restore$ ls
test
jeremy@jeremy:/tmp/restore$ cd test
jeremy@jeremy:/tmp/restore/test$ ls -al
total 8
drwxr-xr-x 2 jeremy jeremy 4096 Okt  7 22:08 .
drwxr-xr-x 3 jeremy jeremy 4096 Okt  7 22:13 ..
-rw-r--r-- 1 jeremy jeremy   0 Okt  7 22:06 file1
-rw-r--r-- 2 jeremy jeremy   0 Okt  7 22:06 file2
-rw-r--r-- 2 jeremy jeremy   0 Okt  7 22:06 HL
lrwxrwxrwx 1 jeremy jeremy   5 Okt  7 22:07 SL -> file1
jeremy@jeremy:/tmp/restore/test$

```

We can then conclude that the links are saved via the `tar` command.

Using `zip`

We used the folder used prior to this to zip and unzip. The commands are as follows :

```

zip -r /mnt/backup1/testLinks.zip test/
cd restore/
unzip /mnt/backup1/testLinks.zip -d .
cd test/
ls
ls -la

```

```

jeremy@jeremy:/tmp$ zip -r /mnt/backup1/testLinks.zip test/
updating: test/ (stored 0%)
updating: test/cd.zip (stored 0%)
updating: test/SL (stored 0%)
updating: test/HL (stored 0%)
updating: test/file2 (stored 0%)
updating: test/file1 (stored 0%)
jeremy@jeremy:/tmp$ cd restore/
jeremy@jeremy:/tmp/restore$ unzip /mnt/backup1/testLinks.zip -d .
Archive:  /mnt/backup1/testLinks.zip
  creating: ./test/
  extracting: ./test/cd.zip
  extracting: ./test/SL
  extracting: ./test/HL
  extracting: ./test/file2
  extracting: ./test/file1
jeremy@jeremy:/tmp/restore$ cd test/
jeremy@jeremy:/tmp/restore/test$ ls
cd.zip  file1  file2  HL  SL
jeremy@jeremy:/tmp/restore/test$ ls -la
total 12
drwxr-xr-x 2 jeremy jeremy 4096 Okt  7 22:31 .
drwxr-xr-x 3 jeremy jeremy 4096 Okt  7 22:35 ..
-rw-r--r-- 1 jeremy jeremy  156 Okt  7 22:31 cd.zip
-rw-r--r-- 1 jeremy jeremy   0 Okt  7 22:06 file1
-rw-r--r-- 1 jeremy jeremy   0 Okt  7 22:06 file2
-rw-r--r-- 1 jeremy jeremy   0 Okt  7 22:06 HL
-rw-r--r-- 1 jeremy jeremy   0 Okt  7 22:06 SL
jeremy@jeremy:/tmp/restore/test$

```

We can see that the links are not kept with `zip`.