

1. Create a directory named **TestacDir** under your home directory with 755 permissions

```
[siddharrth@linux ~]$ mkdir TestacDir
[siddharrth@linux ~]$ chmod 755 TestacDir/
```

2. Create a file named **TestacFile** under your home directory.

```
[siddharrth@linux ~]$ touch TestacFile
```

3. Observe the **permissions** of dir and file created (ls -l /ls -ld)

```
drwxr-xr-x. 2 siddharrth siddharrth    6 Oct 21 21:47 TestacDir
-rw-r--r--. 1 siddharrth siddharrth    0 Oct 21 21:49 TestacFile
```

4. Use **getfacl** cmd to check the permissions of user and group.

```
[siddharrth@linux ~]$ getfacl TestacDir/
# file: TestacDir/
# owner: siddharrth
# group: siddharrth
user::rwx
group::r-x
other::r-x
```

5. Change the group of the file and **dir** to sports. (assuming you have a group named sports)

```
[root@linux siddharrth]# chgrp Marvel TestacDir/
[root@linux siddharrth]# chgrp Marvel TestacFile
```

```
drwxr-xr-x. 2 siddharrth Marvel        6 Oct 21 21:47 TestacDir
-rw-r--r--. 1 siddharrth Marvel        0 Oct 21 21:49 TestacFile
```

6. Add a user – Sachin to sports. (usermod -aG cmd)

```
[root@linux siddharrth]# usermod -aG Marvel sachin
```

7. Now use setfacl cmd on **TestacDir** to give permission -rwx (7) for user Sourav

- a. Use setfacl -m u:username:permission file/dirname

```
[root@linux siddharrth]# setfacl -m u:sourav:rwx TestacDir/
```

- b. Use setfacl --no-mask -m u:username:permission file/dirname (the grp permissions will not change)

```
[root@linux siddharrth]# setfacl --no-mask -m sourav:rwx TestacDir/
```

- c. Check the acl s using getfacl

```
[root@linux siddharrth]# getfacl -s TestacDir/
# file: TestacDir/
# owner: siddharrth
# group: Marvel
user::rwx
user:sourav:rwx
group::r-x
mask::rwx
other::r-x
```

- d. Observe a + sign .

```
drwxrwxr-x+ 2 siddharrth Marvel        6 Oct 21 21:47 TestacDir
```

- e. Setfacl on **TestacDir** for group -Football with permissions -rwx (7)

```
[root@linux siddharrth]# setfacl -m g:Football:7 TestacDir/
```

- f. Check the acl s using getfacl

```
[root@linux siddharrth]# getfacl -s TestacDir/
# file: TestacDir/
# owner: siddharrth
# group: Marvel
user::rwx
user:sourav:rwx
group::r-x
group:Football:rwx
mask::rwx
other::r-x
```

- g. Access the dir as Sourav and test the permissions before and after setting the acls.

```
[sourav@linux siddharrth]$ cd TestacDir/
[sourav@linux TestacDir]$ cd ..
[sourav@linux siddharrth]$ getfacl TestacDir/
# file: TestacDir/
# owner: siddharrth
# group: Marvel
user::rwx
user:sourav:rwx
group::r-x
group:Football:rwx
mask::rwx
other::r--
```

- h. Access the dir as any user in grp Football and test the permissions before and after setting the acls.

```
[Ronaldo@linux siddharrth]$ cd TestacDir/
```

8. Repeat 7. For file **TestacFile**.

```

[root@linux siddharrth]# setfacl -m u:sourav:7 TestaclFile
[root@linux siddharrth]# setfacl --no-mask -m sourav:7 TestaclFile
[root@linux siddharrth]# getfacl -s TestaclFile
# file: TestaclFile
# owner: siddharrth
# group: Marvel
user::rw-
user:sourav:rwx
group::r--
group:Football:rwx
mask::rwx
other::r--

[root@linux siddharrth]# ls -ltr TestaclFile
-rw-rwxr--+ 1 siddharrth Marvel 0 Oct 21 21:49 TestaclFile
[root@linux siddharrth]# setfacl -m g:Football:rwx TestaclFile
[root@linux siddharrth]# getfacl -s TestaclFile
# file: TestaclFile
# owner: siddharrth
# group: Marvel
user::rw-
user:sourav:rwx
group::r--
group:Football:rwx
mask::rwx
other::r--

[root@linux siddharrth]# su sourav
[sourav@linux siddharrth]$ cat TestaclFile
[sourav@linux siddharrth]$ getfacl TestaclFile
# file: TestaclFile
# owner: siddharrth
# group: Marvel
user::rw-
user:sourav:rwx
group::r--
group:Football:rwx
mask::rwx
other::r--

```

```

[Ronaldo@linux siddharrth]$ cat TestaclFile

```

9. Remove the acl s using setfacl -x u/g :user/grp file/dirname and chk with getfacl cmd

```

[root@linux siddharrth]# setfacl -x u:sourav TestaclDir/
[root@linux siddharrth]# getfacl TestaclDir/
# file: TestaclDir/
# owner: siddharrth
# group: Marvel
user::rwx
group::r-x
group:Football:rwx
mask::rwx
other::r--

```

```
drwxrwxr--+ 2 siddharrth Marvel
```

```
6 Oct 21 21:47
```

```
TestaclDir
```

10. Remove all acls using setfacl -b file/dirname

```
[root@linux siddharrth]# setfacl -b TestaclFile
```

```
[root@linux siddharrth]# getfacl TestaclFile
```

```
# file: TestaclFile
```

```
# owner: siddharrth
```

```
# group: Marvel
```

```
user::rw-
```

```
group::r--
```

```
other::r--
```

```
[root@linux siddharrth]# ls -ltr TestaclFile
```

```
-rw-r--r--. 1 siddharrth Marvel 0 Oct 21 21:49 TestaclFile
```