

Advanced/Special Permissions

-Snehal Deshmukh

Assignmet

1. create 2 user - user1_fac1 and user2_fac1
2. create a grp fac1_grp
3. fac1/fac1_file1.txt and fac1/fac1_file2.txt
4. this group should be given permission in a way that any user belongs to this group can edit the mentioned 2 files.

Make **directory** fac1 and **file** fac1_file1.txt and fac1_file2.txt.
Check permission for it :

```
snehal@ubuntu: /home/fac1
File Edit View Search Terminal Help
snehal@ubuntu:/home$ sudo mkdir fac1
[sudo] password for snehal:
snehal@ubuntu:/home$ cd fac1
snehal@ubuntu:/home/fac1$ sudo touch fac1_file1.txt fac1_file2.txt
snehal@ubuntu:/home/fac1$ ls-la
ls-la: command not found
snehal@ubuntu:/home/fac1$ ls -la
total 8
drwxr-xr-x 2 root root 4096 Feb 10 23:42 .
drwxr-xr-x 9 root root 4096 Feb 10 23:41 ..
-rw-r--r-- 1 root root    0 Feb 10 23:42 fac1_file1.txt
-rw-r--r-- 1 root root    0 Feb 10 23:42 fac1_file2.txt
snehal@ubuntu:/home/fac1$
```

- If we want to check details of files or directory we can use getfacl.

```
snehal@ubuntu: /home/fac1
File Edit View Search Terminal Help
snehal@ubuntu:/home$ getfacl fac1
# file: fac1
# owner: root
# group: root
user::rwx
group::r-x
other::r-x

snehal@ubuntu:/home$ cd fac1
snehal@ubuntu:/home/fac1$ getfacl fac1_file1.txt
# file: fac1_file1.txt
# owner: root
# group: root
user::rw-
group::r--
other::r--

snehal@ubuntu:/home/fac1$ getfacl fac1_file2.txt
# file: fac1_file2.txt
# owner: root
# group: root
user::rw-
group::r--
other::r--
```

- Create **fac1_grp**

```
snehal@ubuntu:/home/fac1$  
snehal@ubuntu:/home/fac1$ sudo groupadd fac1_grp
```

- Create 2 users: user1_fac1 and user2_fac1

```
snehal@ubuntu: /home
File Edit View Search Terminal Help
snehal@ubuntu:/home$ sudo adduser user1_fac1
Adding user `user1_fac1' ...
Adding new group `user1_fac1' (1001) ...
Adding new user `user1_fac1' (1001) with group `user1_fac1' ...
The home directory `/home/user1_fac1' already exists. Not copying from `/etc/skel'.
adduser: Warning: The home directory `/home/user1_fac1' does not belong to the user you are currently creating.
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for user1_fac1
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
snehal@ubuntu:/home$
```

```
File Edit View Search Terminal Help
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
snehal@ubuntu:/home$ sudo adduser user2_fac1_grp
Adding user `user2_fac1_grp' ...
Adding new group `user2_fac1_grp' (1007) ...
Adding new user `user2_fac1_grp' (1006) with group `user2_fac1_grp' ...
Creating home directory `/home/user2_fac1_grp' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for user2_fac1_grp
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
snehal@ubuntu:/home$ sudo cat /etc/group | grep user1_fac1
user1_fac1:x:1001:
user1_fac1_grp:x:1006:
snehal@ubuntu:/home$ sudo cat /etc/group | grep user2_fac1
user2_fac1:x:1005:
user2_fac1_grp:x:1007:
snehal@ubuntu:/home$
```

Primary group change of both users :

```
File Edit View Search Terminal Help
snehal@ubuntu:/home$ sudo chown :fac1_grp user1_fac1
[sudo] password for snehal:
snehal@ubuntu:/home$ sudo chown :fac1_grp user2_fac1
snehal@ubuntu:/home$ getfacl user1_fac1
# file: user1_fac1
# owner: user1_fac1
# group: fac1_grp
user::rwx
group::r-x
other::r-x

snehal@ubuntu:/home$ getfacl user2_fac1
# file: user2_fac1
# owner: user2_fac1
# group: fac1_grp
user::rwx
group::r-x
other::r-x
```



```
snehal@ubuntu: /home
File Edit View Search Terminal Help
snehal@ubuntu:/home$ ls -la
total 36
drwxr-xr-x  9 root      root      4096 Feb 11 06:24 .
drwxr-xr-x 24 root      root      4096 Feb  9 21:23 ..
drwxr-xr-x  3 demo      devops   4096 Feb  8 20:58 demo
drwxr-xr-x  3 root      root      4096 Jan 24 18:16 desh mukh
drwxrwxr-x  4 devops    devops   4096 Feb  7 08:53 devops
drwxr-xr-x  2 root      root      4096 Feb 10 23:42 facl
drwxr-xr-x 23 snehal    snehal   4096 Feb 11 06:18 snehal
-rw-r--r--  1 root      root        0 Jan 27 09:30 test.txt
drwxr-xr-x  2 user1_facl user1_facl 4096 Feb 11 06:24 user1_facl
drwxr-xr-x  2 user2_facl user2_facl 4096 Feb 10 22:50 user2_facl
snehal@ubuntu:/home$
```

- Add user1_fac1 and user2_fac1 in fac1_grp group

```
snehal@ubuntu:/home$ sudo adduser user1_fac1 fac1_grp
Adding user `user1_fac1' to group `fac1_grp' ...
Adding user user1_fac1 to group fac1_grp
Done.
snehal@ubuntu:/home$ sudo adduser user2_fac1 fac1_grp
Adding user `user2_fac1' to group `fac1_grp' ...
Adding user user2_fac1 to group fac1_grp
Done.
snehal@ubuntu:/home$
```

- Trying to **modify** the `fac1_file1.txt` then `user1_fac1` is **unable** to modify the file

[illegible]

- So we use **setfacl** command & **give access** to the user present in that group can access or modify the file

```
File Edit View Search Terminal Help
snehal@ubuntu:/home$ getfacl fac1
# file: fac1
# owner: root
# group: root
user::rwx
group::r-x
other::r-x

snehal@ubuntu:/home$ sudo setfacl -m g:fac1_grp:rwx fac1
snehal@ubuntu:/home$ getfacl fac1
# file: fac1
# owner: root
# group: root
user::rwx
group::r-x
group:fac1_grp:rwx
mask::rwx
other::r-x

snehal@ubuntu:/home$
```

```
snehal@ubuntu:~/code/home$  
snehal@ubuntu:~/home$ sudo setfacl -m g:facl_grp:rw facl/facl_file1.txt  
[sudo] password for snehal:  
snehal@ubuntu:~/home$ sudo setfacl -m g:facl_grp:rw facl/facl_file2.txt  
snehal@ubuntu:~/home$ getfacl facl/facl_file1.txt  
# file: facl/facl_file1.txt  
# owner: root  
# group: root  
user::rw-  
group::r--  
group:facl_grp:rw-  
mask::rw-  
other::r--  
  
snehal@ubuntu:~/home$
```

- Now we can **able to modify** it from user1_fac1:

```
user1_fac1@ubuntu:/home$ vi /home/fac1/fac1_file1.txt
user1_fac1@ubuntu:/home$ cat /home/fac1/fac1_file1.txt
hello!!
Finally i can edit this file!!
user1_fac1@ubuntu:/home$
```

From user2_fac1 :

```
File Edit View Search Terminal Help
user2_fac1@ubuntu:~$ vim /home/fac1/fac1_file1.txt
user2_fac1@ubuntu:~$ cat /home/fac1/fac1_file1.txt
hello!!
Finally i can edit this file!!

And also edit from user2_fac1!!
user2_fac1@ubuntu:~$ █
```