

File permissions in Linux

Project description

In this project my task was to examine existing permissions on the file system. I then had to determine if the permissions matched the authorization that should be given. If any permissions were incorrect, I would then need to modify them to the correct permissions for the given user or group.

Check file and directory details

```
researcher2@59dac5cef4d5:~$ pwd
/home/researcher2
researcher2@59dac5cef4d5:~$ ls
projects
researcher2@59dac5cef4d5:~$ cd projects
researcher2@59dac5cef4d5:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jul  2 00:08 .
drwxr-xr-x 3 researcher2 research_team 4096 Jul  2 00:34 ..
-rw--w---- 1 researcher2 research_team  46 Jul  2 00:08 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 Jul  2 00:08 drafts
-rw-rw-rw- 1 researcher2 research_team  46 Jul  2 00:08 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul  2 00:08 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul  2 00:08 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul  2 00:08 project_t.txt
researcher2@59dac5cef4d5:~/projects$
```

Describe the permissions string

Each of the letters in the permissions string are represented as follows:

D: Directory **W:** Write only

R: Read only **X:** execute only

Its listed in order of **USER**, **GROUPS** and **OTHER**

Change file permissions

```
researcher2@59dac5cef4d5:~/projects$ chmod u-r project_m.txt
researcher2@59dac5cef4d5:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jul  2 00:08 .
drwxr-xr-x 3 researcher2 research_team 4096 Jul  2 00:34 ..
-rw--w---- 1 researcher2 research_team  46 Jul  2 00:08 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 Jul  2 00:08 drafts
-rw-rw-rw- 1 researcher2 research_team  46 Jul  2 00:08 project_k.txt
--w-r----- 1 researcher2 research_team  46 Jul  2 00:08 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul  2 00:08 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul  2 00:08 project_t.txt
researcher2@59dac5cef4d5:~/projects$
```

Change file permissions on a hidden file

```
researcher2@59dac5cef4d5:~/projects$ chmod u+x .project_x.txt
researcher2@59dac5cef4d5:~/projects$ ls -al
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jul  2 00:08 .
drwxr-xr-x 3 researcher2 research_team 4096 Jul  2 00:34 ..
-rwx-w---- 1 researcher2 research_team  46 Jul  2 00:08 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 Jul  2 00:08 drafts
-rw-rw-rw- 1 researcher2 research_team  46 Jul  2 00:08 project_k.txt
--w-r----- 1 researcher2 research_team  46 Jul  2 00:08 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul  2 00:08 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul  2 00:08 project_t.txt
researcher2@59dac5cef4d5:~/projects$ █
```

Change directory permissions

```
researcher2@59dac5cef4d5:~/projects$ chmod u-x drafts
researcher2@59dac5cef4d5:~/projects$ ls -l
total 20
drw---x--- 2 researcher2 research_team 4096 Jul  2 00:08 drafts
```