

File permissions in Linux

Project description

This project used Linux commands to review and alter authorizations for various directories and files.

Check file and directory details

First, all the contents and permissions of the projects directory were examined via the `ls -l` and `ls -la` commands, with the 10-character string at the beginning of each entry indicating how the permissions on the file are set.

Change file and directory permissions

Permissions were then altered via the `chmod` command for various owner types. This included identifying hidden files (.project_x.txt) and changing permissions from read, and write (-rw) for the user owner type just to read (r--) and from write (-w-) for group owner type to read (r--) only. Directory permissions were also configured for the “drafts” directory to remove the execute permission from the group owner type via the command `chmod g=- drafts`.

Screenshot

```
researcher2@d1097fb68d4b:~$ pwd
/home/researcher2
researcher2@d1097fb68d4b:~$ ls
projects
researcher2@d1097fb68d4b:~$ cd projects
researcher2@d1097fb68d4b:~/projects$ ls -l
total 20
drwx--x--- 2 researcher2 research_team 4096 Jul 26 15:43 drafts
-rw-rw-rw- 1 researcher2 research_team  46 Jul 26 15:43 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul 26 15:43 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_t.txt
researcher2@d1097fb68d4b:~/projects$ ls -a
.  . .  .project_x.txt  drafts  project_k.txt  project_m.txt  project_r.txt  project_t.txt
researcher2@d1097fb68d4b:~/projects$ chmod o-w project_k.txt
researcher2@d1097fb68d4b:~/projects$ ls -l
total 20
drwx--x--- 2 researcher2 research_team 4096 Jul 26 15:43 drafts
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul 26 15:43 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_t.txt
researcher2@d1097fb68d4b:~/projects$ chmod g=- project_m.txt
researcher2@d1097fb68d4b:~/projects$ ls -l
total 20
drwx--x--- 2 researcher2 research_team 4096 Jul 26 15:43 drafts
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul 26 15:43 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_t.txt
researcher2@d1097fb68d4b:~/projects$ ls -a
.  . .  .project_x.txt  drafts  project_k.txt  project_m.txt  project_r.txt  project_t.txt
researcher2@d1097fb68d4b:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jul 26 15:43 .
drwxr-xr-x 3 researcher2 research_team 4096 Jul 26 16:24 ..
-rw--w---- 1 researcher2 research_team  46 Jul 26 15:43 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 Jul 26 15:43 drafts
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul 26 15:43 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_t.txt
researcher2@d1097fb68d4b:~/projects$ chmod u=r,g=r .project_x.txt
researcher2@d1097fb68d4b:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jul 26 15:43 .
drwxr-xr-x 3 researcher2 research_team 4096 Jul 26 16:24 ..
-r--r----- 1 researcher2 research_team  46 Jul 26 15:43 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 Jul 26 15:43 drafts
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul 26 15:43 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_t.txt
researcher2@d1097fb68d4b:~/projects$ chmod g=- drafts
researcher2@d1097fb68d4b:~/projects$ ls -l
total 20
drwx----- 2 researcher2 research_team 4096 Jul 26 15:43 drafts
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_k.txt
-rw-r----- 1 researcher2 research_team  46 Jul 26 15:43 project_m.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_r.txt
-rw-rw-r-- 1 researcher2 research_team  46 Jul 26 15:43 project_t.txt
researcher2@d1097fb68d4b:~/projects$
```