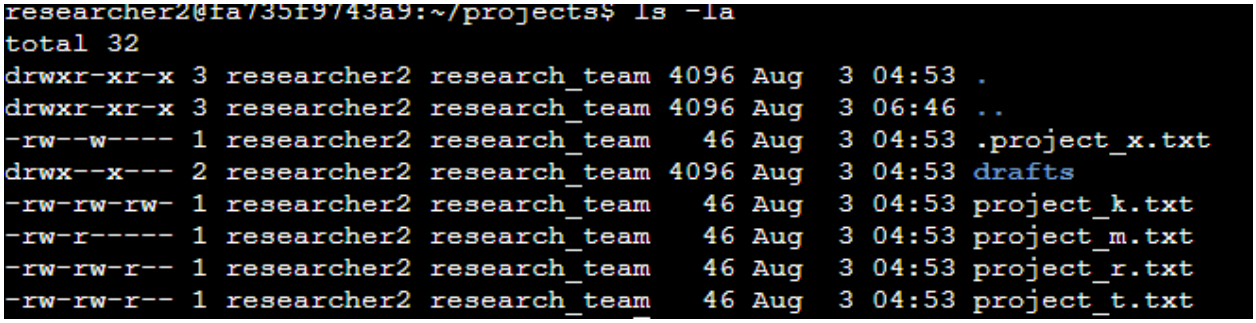
File permissions in Linux

Project description

Examining existing permissions on the file system. Determining if the permissions match the authorization that should be given. If they do not match, modify the permissions to authorize the appropriate users and remove any unauthorized access.

Check file and directory details



The project directory contains Total of five files and one directory with the permissions shown in the above SS.
All the files and directories are from the research_team group.
The user is researcher2
The files names are: project_k.txt, project_m.txt, project_r.txt, project_t.txt
Hidden files are: .project_x.txt
There is a drafts directory

Describe the permissions string

From the above SS. One of the permission strings of the file named project_k.txt is given as, -rw-rw-rw-
The following represents the permissions:
User: has read and write permissions but execute permissions are not given
Group: has read and write permissions but execute permissions are not given
Other: has read and write permissions but execute permissions are not given

Change file permissions

Changing file permissions can be done using the chmod command.
The Syntax for which is chmod [permissions to be changed] [file name]
Lets change the permissions of file name project_k.txt
Removing the read and write permissions for both the group and Other.
Before the command the permissions were:

```
-rw-rw-rw- 1 researcher2 research_team   46 Aug  3 04:53 project_k.txt
```

Command for removing the permissions:

```
researcher2@fa735f9743a9:~/projects$ chmod g-r,g-w,o-r,o-w project_k.txt
```

After running the command new permissions:

```
-rw------- 1 researcher2 research_team   46 Aug  3 04:53 project_k.txt
```

Change file permissions on a hidden file

The name of the hidden file present is .project_x.txt
The permissions for the hidden are as follows:

```
-rw--w---- 1 researcher2 research_team   46 Aug  3 04:53 .project_x.txt
```

Removing the write permission from the group and adding the read permission:
chmod g-w,g+r .projects_x.txt

After the command the changed permissions are:

```
-rw-r----- 1 researcher2 research_team   46 Aug  3 04:53 .project_x.txt
```

Change directory permissions

The only directory in the projects directory is drafts.
The following Are the permissions for drafts directory:

```
drwx--x--- 2 researcher2 research_team 4096 Aug  3 04:53 drafts
```

Changing the permissions:
chmod g+r drafts

Changed permissions are as follows:

```
drwxr-x--- 2 researcher2 research_team 4096 Aug  3 04:53 drafts
```

Summary

This depicts the capability of the linux console to easily change the permissions for directories and files so as to control authorization.