

Pablo Barrientos

07/07/2023

Lab Assignment 2-3 File System Management--File and Directory Permissions Linux+ and LPIC-

1

1. Login to Linux and issue the following four commands:

whoami

groups

touch file1

ls -l

And, show your results.

```
u6397202@cois-linux:~$ whoami
u6397202
u6397202@cois-linux:~$ groups
u6397202 itsc63972
u6397202@cois-linux:~$ touch file1
u6397202@cois-linux:~$ ls -l
total 16
drwxr-xr-x 2 u6397202 u6397202 4096 Jul  7 20:28 Back-ups
-rw-r--r-- 1 u6397202 u6397202    0 Jul  7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202  313 Jul  7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul  7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
```

2. Issue the commands:

chown root file1

chgrp sys file1

And, show the results.

```
u6397202@cois-linux:~$ chown root file1
chown: changing ownership of 'file1': Operation not permitted
u6397202@cois-linux:~$ chgrp sys file1
chgrp: changing group of 'file1': Operation not permitted
```

3. Using vi or vim, create a file named script1 with the following lines:

pwd

ls -l

w

Then, issue the commands: "cat script1" and "ls -l".

4. Run the command to add execute permission to script1 for the file owner. Show the results.

```
u6397202@cois-linux:~$ chmod u+x script1
```

5. Run script1 by entering is on the command line as: “./script1” Show the results.

```
u6397202@cois-linux:~$ ./script1
/home/itsc63972/u6397202
total 20
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 20:28 Back-ups
-rw-r--r-- 1 u6397202 u6397202 0 Jul 7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202 313 Jul 7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
-rwxr--r-- 1 u6397202 u6397202 12 Jul 7 22:38 script1
22:39:56 up 137 days, 7:46, 2 users, load average: 0.01, 0.02, 0.00
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
u6397406 pts/1    47.223.39.12    22:34    17.00s 0.03s  0.03s -bash
u6397202 pts/2    70.122.10.242   22:35     4.00s 0.03s  0.00s -bash
```

6. Remove the write permission for group members and other users for samplescript. Show the command and the results.

```
u6397202@cois-linux:~$ chmod go-w script1
u6397202@cois-linux:~$ ls -l
total 20
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 20:28 Back-ups
-rw-r--r-- 1 u6397202 u6397202 0 Jul 7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202 313 Jul 7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
-rwxr--r-- 1 u6397202 u6397202 12 Jul 7 22:38 script1
```

7. Use touch to create file test1. Assign using numeric representation read, write, execute for the owner; and, read and write for group members, and read for all other users. Show the command and the result.

```
u6397202@cois-linux:~$ touch test1
u6397202@cois-linux:~$ chmod 764 test1
u6397202@cois-linux:~$ ls -l
total 20
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 20:28 Back-ups
-rw-r--r-- 1 u6397202 u6397202 0 Jul 7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202 313 Jul 7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
-rwxr--r-- 1 u6397202 u6397202 12 Jul 7 22:38 script1
-rwxrw-r-- 1 u6397202 u6397202 0 Jul 7 22:41 test1
```

8. Create a new file using touch named “fileX”; and a new directory using mkdir named “dirX”. Then run the command: ls -l.

```
total 24
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 20:28 Back-ups
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 22:43 dirX
-rw-r--r-- 1 u6397202 u6397202 0 Jul 7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202 0 Jul 7 22:43 fileX
-rw-r--r-- 1 u6397202 u6397202 313 Jul 7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
-rwxr--r-- 1 u6397202 u6397202 12 Jul 7 22:38 script1
-rwxrw-r-- 1 u6397202 u6397202 0 Jul 7 22:41 test1
```

9. Run the command “umask”. (umask provides the amount to subtract for each numeric permission; in this case 0000) Now run the umask command to change the umask value to 0044. Run umask without an argument.
10. Next, create a new file named fileY; and a new directory named dirY. Run the ls -l command. Note the differences between fileX and fileY; and the differences between dirX and dirY.
11. Run the commands to remove directories dirX and dirY; then run the commands to removed files fileX and fileY. Run ls -l to verify.
12. Create a file named sFile; then create a directory named sDir. Run ls -l to verify.
13. Run the command: chmod 6755 sFile and show the results. (note the execute position for the file owner and group have changed)

```
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 20:28 Back-ups
-rw-r--r-- 1 u6397202 u6397202 0 Jul 7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202 313 Jul 7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul 7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
-rwxr--r-- 1 u6397202 u6397202 12 Jul 7 22:38 script1
drwx-wx-wx 2 u6397202 u6397202 4096 Jul 7 22:46 sDir
-rwsr-sr-x 1 u6397202 u6397202 0 Jul 7 22:46 sFile
-rwxrw-r-- 1 u6397202 u6397202 0 Jul 7 22:41 test1
```

14. Run the command: `chmod 1777 sDir` and show the results. (Note that the execute bit (position) for the owner, group, and other users have changed.)

```
total 24
drwxr-xr-x 2 u6397202 u6397202 4096 Jul  7 20:28 Back-ups
-rw-r--r-- 1 u6397202 u6397202    0 Jul  7 22:35 file1
-rw-r--r-- 1 u6397202 u6397202  313 Jul  7 20:27 hosts
drwxr-xr-x 2 u6397202 u6397202 4096 Jul  7 19:42 Lab-Files
drwxr-xr-x 2 u6397202 itsc63972 4096 May 24 10:18 public_html
-rwxr--r-- 1 u6397202 u6397202   12 Jul  7 22:38 script1
drwxrwxrwt 2 u6397202 u6397202 4096 Jul  7 22:46 sDir
-rwsr-sr-x 1 u6397202 u6397202    0 Jul  7 22:46 sFile
-rwxrw-r-- 1 u6397202 u6397202    0 Jul  7 22:41 test1
```