Linux Management Permissions

**Exercises about file and directory permission**

1. List the permissions in your current directory, including hidden files.

ls -la perm1

1. Create a file called perm1. Now, check the default permissions and user and group ownership

cd exercises/

ls -la perm1

1. Change permissions of perm1 so that everyone can read and only the owner user can write. Specify the command in all possible ways.

chmod 644 perm1

ls -l

ls -l perm1

chmod 664 perm1

ls -l perm1

chmod 644 perm1

ls -l perm1

chmod 664 perm1

chmod u=rw,g=r,o=r perm1

ls -l perm1

chmod 664 perm1

chmod a=r,u=rw perm1

1. Create a file called script1.sh, including the content below. List the default permissions.

#!/bin/bash

clear who

nano script1.sh

ls -l script1.sh

1. Remove the read permission from the owner and try to open the file

chmod u=-r script1.sh

cat script1.sh

1. Remove the write permission from the owner on the file script.sh. Add the line below. Is it possible? Why?

new line

chmod u=-w script1.sh

ls -l script1.sh

echo new line >> script1.sh

1. Change the permissions on the file script1.sh so that the owner can read, write and execute, but you deny all the permissions from the group and others.

chmod 700 script1.sh

No

1. Add the line indicated in exercise 6, in case it was not possible. Try to run the file like a command.

ls -l script1.sh

echo new line >> script1.sh

./script.sh

1. Remove the read permission from the owner on the file script1.sh. Try to run the file. Is it possible?

chmod u=-3 script1.sh

ls -l script1.sh

No

1. Create a directory called “systems”. Remove the write permission from it and try to copy script1.sh inside.

mkdir systems

chmod u=-w script1.sh

cp scripts systems/\*

1. If you were not able to copy the file, add the write permission again and copy the file inside.

chmod u+w script1.sh

cp scr ipts systems/\*

1. Remove the read permission from the user on the directory “systems” and try to list its contents.

chmod u-r script1.sh

ls –l systems

1. Change the permissions from “sytems” so that the owner can read, write and execute, but the group and others can only read.

chmod 744 systems

ls –l systems

1. Remove the execute permission from “systems”. Can you execute systems/script1.sh? Is it possible to acces the directory to execute the file?

chmod 444 systems/script.sh

ls –l systems

bash systems/script.sh

1. Assign the execute permission to the directory again

chmod a+x systems/script.sh

ls –l systems

1. Create two files called “lucy” and “charles” into “systems”. Change permissions of “charles”, so that others can write and execute.

touch systems {lucy, charles}

chmod o+w systems/script.sh

1. Change permissions of “lucy” so that the owner can read and execute, the group can read and write and others can only write. Specify the command in all possible ways.

chmod u=rx,g=r,w,o=w systems/lucy

1. Log in as root. Change the ownership of “charles” to “root”. Exit the root session. Now, try to change the permission so that others cannot read and execute. Is it possible? Why?

1. Change the permissions of “charles” so that everybody can do everything

1. Change the permissions of “lucy” so that the group can read and write, but the owner and others cannot do anything. Can you open the file?

1. Create a group called “newgroup”. Set the group as the owner of the file “lucy” and “root” as the owner user.

1. Add your user to the secondary group “newgroup”. Try to open the file “lucy” now. Is it possible?

1. Change permissions of “lucy” so that everybody can read.
2. Do exercise 13 again, but this time granting permissions to the folder “systems” including files and subfolders
3. Change the group owner of “systems” to “root” including files and subfolders.