

Activity 3 : Linux

Group No : 25

Group Member :

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Part 2 Managing User Accounts & Permissions

2.1 Creating a new user account

As you might have noticed, you are using this Linux system with your “root” account, a.k.a. super user. This account simply has unlimited privileges. In a sense, it is convenient, but, in another sense, it is also a risk. It is by no mean safe and preferable for every user of a system to use the same root account. We should consider creating one “non-root” for each user instead.

To create a new user use the following command:

```
adduser [USERNAME]
```

As a byproduct, a new “home” directory will be created beneath “/home”.

Note: adduser requires “super-user” privilege.

2.2 Make the new user a “sudoer”

It is generally a bad idea to use “root” account to do everything, since most of commands do not require super-user privilege to perform, and some commands if performed wrongly can leave a devastated result. We should instead use a normal account, and should we need a super-user privilege only then we will elevate our privilege using “sudo” prefix, meaning “super user do”.

However, by default, newly created users will not even be able to use “sudo” at all. A superuser, a.k.a root, must explicitly tell which usernames can use this prefix in a “sudoer” group:

```
usermod -aG sudo [USERNAME]
```

Explanation this will append (-a) [USERNAME] to a group (-G) named “sudo” which by default can perform “sudo” prefixes.

Now, you can start using your newly created user with normal privilege, and only when we are in need of such super privilege, we will prefix “sudo” in front of such commands.

Caution when you execute a command with “sudo” prefix, it will ask for **your** password, not **root’s** password. Thus, granting anyone to use sudo means granting one almost unlimited privileges.

2.3 Leaving the “root” account

Now, logout from your root account, and re-login using the newly created one.

2.4 Create a file

Create a file named “group.txt” with the content of “GROUP XX”, where XX is a group number, created via the application figlet, and save this file in a new user home directory.

Make sure that it is the new user who creates this file, not the root user !

*** ANSWER THIS *** Write down how you did it.

1. create user with ‘adduser’ command then login with that user
2. use ‘figlet "GROUP 25" > group.txt’ command

2.5 Ownerships and Permissions

Learn more about Linux file permissions and ownerships from

<https://help.ubuntu.com/community/FilePermissions>

*** ANSWER THIS *** Now describe the permissions and ownerships of the file “group.txt” above:

```
tumrabert@g-25:~$ ls -l
total 4
-rw-rw-r-- 1 tumrabert tumrabert 9 Feb  2 03:25 group.txt
```

```
Owner permission = Read & Write  
Group permission = Read & Write  
Public permission = Read
```

2.6 Changing ownership of a file

Use the following command to change the ownership of the file “group.txt”.

```
sudo chown [username]:[group] ~/group.txt
```

*** ANSWER THIS *** Change the ownership to “root:root”, then try editing the file, without sudo. What happens ?

```
nano show “File 'group.txt' is unwritable”.
```

2.7 Changing permission of a file

*** ANSWER THIS *** Use the following command to change the permissions of the file “group.txt” so that everyone can read and write that file ? Describe how you do it ?

```
sudo chmod [permission] ~/group.txt
```

```
use “sudo chmod 666 ~/group.txt”
```

```
read permission is 4
```

```
write permission is 2
```

```
execute permission is 1
```

```
the permission form is “UGO”
```

```
U means owner/user permission
```

```
G means group permission
```

```
O means public/other permission
```

```
We want read & write permission, so the permission code is 4+2 = 6
```