

A thick black L-shaped frame is positioned on the left and bottom edges of the slide, framing the central text.

INTRODUCTION TO LINUX

LEC 4

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Agenda

- User and group creation
- To remove user
- To remove group
- Permissions

To remove user

- When you create a new user → primary group is automatically created
- To remove user

`userdel username`

For check `# cat /etc/passwdno user`

For check `# cat /etc/groupno group`

To remove group

- To remove a group

groupdel groupname

for check cat /etc/groupno group

- To remove a primary group

userdel username

For check cat /etc/passwdno user

For check cat /etc/groupthe group will not be removed if and only if it is a primary group for another user

groupdel groupname

For check cat /etc/groupstill exist

To check if you can delete a user

- In the root mode
- `# adduser std1` → you have std1 account and group std1
- `#adduser std2` → you have std2 account and group std2
- Assign one user into the other one's group
- `#usermod -g std2 std1` → you assigned std1 (as an account) inside std2 (as a group)
- Try to remove std2 and its group
- `# userdel std2` → you will get a message that the group can not be deleted as another account (std1) inside

To add a removed user

- If you removed user but its primary group still exist.

`user add user2`

You will receive the following message

Group user2 exists if you want to add this user to that group, use `—g`

To add this user

`useradd —g user2 user2`

`id user2`

User and group creation

Lab

- Create a user

```
useradd user3
```

```
id user3 or cat /etc/passwd
```

- create a file from user3

```
su – user3
```

```
Touch file3
```

```
ls -l
```

The owner-user is user3 the owner primary group is user3

- Change the primary group

```
usermod -g hasan admin
```

```
Ls -l
```

Now file3 is owned by primary group admin

Permissions

- Each file has :

1- user owner: the user who owns the file

2- group: this file belongs to this group so all the group's members are able to edit this file

3- others: neither user owner nor group member.

The file permissions are: 1- readr

2- write....w

3- execute...x

Permissions

- To express a file you need 10 bits, 9 for permissions and 1 for file type.

user

rwX

group

rwX

others

rwX

Example:

- rwX rwxr-x

Permissions exercise

- Find the permission for each file:

- rw- r-- r-- file1 user rw- group r- others r--

d r-- r-- r-- test

c r-- rwx rwx test2

ls -l for more examples

To add Permissions

- If we have the following permission for a file

- rw- r-- r-- file1

You can change it by

`chmod o+w file1`

`ls -l` for check

You can change it by

`chmod u+x file1`

`ls -l` for check the file becomes executable.

lab

- Create a file file414

```
touch file414
```

- Write commands inside the file414

```
nano file414.....date  cal  ls ....save
```

- Change file414 permissions to be executable

```
chmod u+x file414
```

- Execute file414

```
./file414
```

To remove Permissions

- If we have the following permission for a file

`-rw- rw- r-- file1`

You can change it by

`chmod g-w file1`

`ls -l` for check

To add and remove permission

- You can add more than one permission in one line:

```
-r-- r-- r-- file1
```

You can change it by

```
Chmod ug+w file1
```

it will add w for both user and group

```
Chmod ug+w,o+x file1
```

it will add w for both user and group and add x for other

To add and remove permission

- You can add or remove to all of them in one line:

```
-r-- r-- r-- file1
```

You can change it by

`Chmod a+w file1` it will add w for all

`Chmod a-w, file1` it will remove w from all

`Chmod -w, file1` it will remove w from all

To change permissions for a folder

- Create a folder folder1

`Mkdir folder1`

- Move some files inside

`Cp file7 file8 folder1`

- To apply permissions for the folder and files inside it use `–R`

`Chmod –R go-rwx folder1`

`rwx` will be removed from `g` and `o` from the folder and what is inside

File permission

- Each file in linux has an associated permission level.
- To find the permission of the file;

`Ls -l filename`

r....read only permission

w...write permission

x...execute permission

`Ls -l /` to display all files and directory

File and Directory permissions

- *If these permissions are for a file*

- r....view the file

- w...write, edit, overwrite, and delete the file

- x...to run the file

- *If these permissions are for a directory*

- r.... display what is inside (i.e ls)

- w...add, remove files from the directory (i.e cp ...)

- x...change the directory (i.e cd)

lab

- Switch user, create directory then remove all permissions

```
Su – zaa
```

```
Mkdir test2
```

```
chmod a-rwx test2
```

```
cd test2/ .....access denied
```

To allow access, add x permission

```
chmod u+x test2
```

```
cd test2/ .....done
```

```
ls test2/ .....access denied
```

lab

To allow ls, add w permission

Chmod u+r test2

ls test2/done

Touch file55 test2/access denied

allow file creation, add w permission

Chmod u+w test2

Touch file55 test2/done