File Permissions

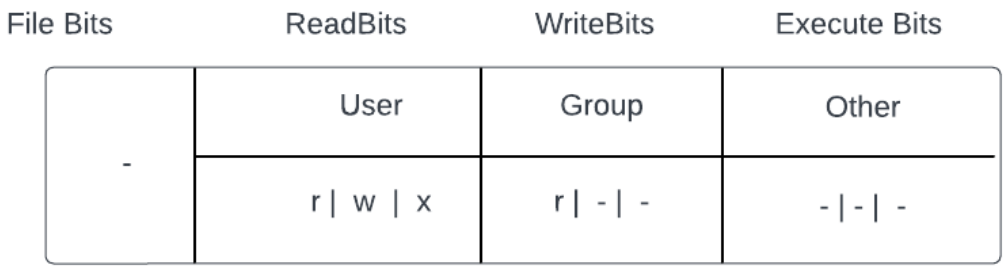
Topics Covered

- All users are contained within the paswd file in the directory /etc/passwd
- If you want to add a user one of the places you can do that is the passwd and the group files

What are groups?

- A group is like users but a group can have multiple users

FIile permissions:



File Bits:

- - ; regular file
- b ; special file
- c ; special file

- d ; directory
- l ; symbolic link (reference to another file)
- p ; FIFO
- s ; socket link (network connection)

User Bits | Group | Other

- r ; can read
- w ; can write
- x ; execute ; If you have a programme who can execute that file

example: **-|rw-|r—|r—**

- The first - tells me it is a regular file
- the rw- tells me the user bits can read and write to the file
- The r— in the group bits tells me that other users in the group can only read the file but not write to it
- The r— in the other tell me that everyone else

- For a directory file type, to be able to open the directory you need to have the executable bits set

Changing a file permissions:

chown : Change ownership

```
$ chown <user who owns it > : <user / group who will be given ow
```

- e.g. If I owned a file, and I wanted to tranfer ownership to brian:

```
$ chown Hamza : Brian
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- This only changes who own the file not what they can do, e.g. if hamza could only read the file before, after chowning brian brian can now only read it too

- To change permissions of the file, the user who owns it must change file permissions using **chmod**