

## Summary :

- Background

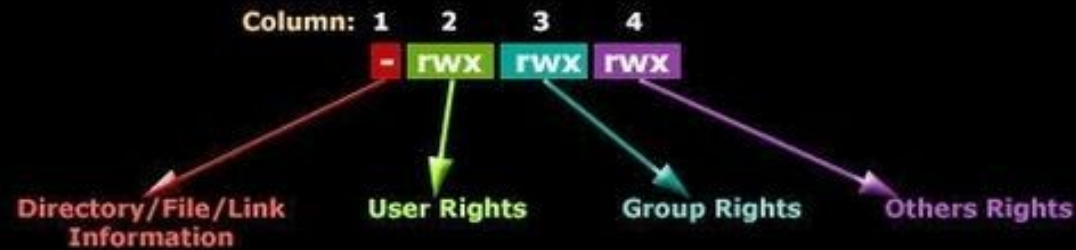
  - Permissions

  - Different type of distributions...

- Tips and tricks

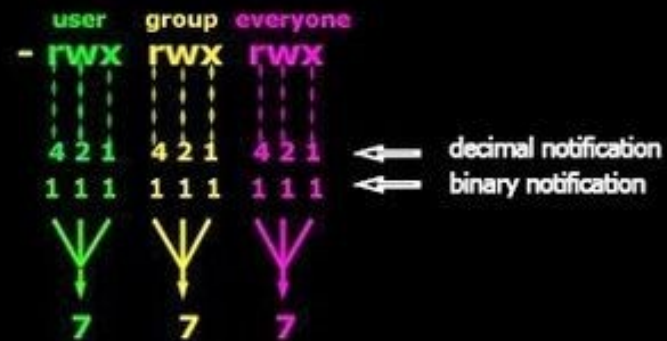
- Labs

## Understanding The Linux File Permissions



While the first column defines a directory, file or link, the next 3 columns (2, 3, 4) define the permissions for the User, Group and Others (everyone else) groups.

## Linux Permissions Made Easy



decimal notation: add each number to obtain the value ( $4 + 2 + 1 = 7$ )

binary notation : convert it to decimal then you should have the value ( $r-x = 101 \text{ base } 2 = 5 \text{ base } 10$ )

## Important when you will try to use */etc/fstab*

$$\begin{array}{r} 777 \\ -027 \text{ (umask)} \\ \hline 750 \text{ resulting permission} \end{array}$$

no permission for *other*

5 = read, execute permission for *group*

7 = read, write, execute permission for *user*

**Exercice : Give the permission numbers as well as owner and group owner!**

```
drwxr-xr-x 6 pierre pierre
drwxr-xr-x 15 pierre pierre
drwxrwxr-x 9 root http
-rw-r--r-- 1 pierre pierre
drwxr-xr-x 4 root http
drwx----- 9 pierre pierre
-rwxr-x--- 1 pierre pierre
drwxr-xr-x 6 999 root
-rw-r--r-- 1 pierre pierre
```

You have two main types of distributions : **Point** release and **rolling** release

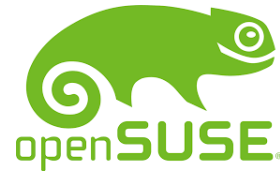
### Point release

- Updates less often (typically, every 6, 9 or 12 months)
- Usually more stable because software are thoroughly tested
- Good for old hardware because of compatibility
- Security can be an issue
- Softwares are not up-to-date and does not come with all the latest features
- Can cause problem with dependencies

### Rolling release

- Updates frequently (when a package is updated)
- Usually less stable
- Compatibility can be an issue on old hardware
- Security is up to date
- You get the latest features

*It exists as well semi-rolling releases, which update more frequently than point releases*

**Point release****Rolling release**

- Copy whole line with the keyboard :
  - CTRL + A (go to the beginning of the line)
  - CTRL + K (cut)
  - CTRL + Y (paste)
- Moving the cursor around :
  - ALT+F (Move forward a word)
  - ALT+B (Move back a word)
- Extract file name from the path : *basename <path>*
- Remove the file extension as well : *basename -s'extension' <path>*
- Repeat the last command : *!!*
- Repeat the last command that matches a string : *!<string>*
- Reuse the argument of the last command : *!\$*
- Command substitution :
  - today=\$(date +%m-%d-%Y)*
  - echo \$today*

**You can continue the labs !**