# Linux Comand Line

## Resume

**sudo** is a superuser

**echo** Display a line of text

- **pwd** - Print name of current working directory
- **cd** - Change directory
- **ls** - List directory contents

- **cd** Changes the working directory to your home directory.
- **cd -** Changes the working directory to the previous working directory.
- **cd ~user_name** Changes the working directory to the home directory of user_name. For example, cd ~bob will change the directory to the home directory of user "bob."

- **ls –** List directory contents
- **file** – Determine file type
- **less** – View file contents

- **-a --all** List all files, even those with names that begin with a period, which are normally not listed (i.e., hidden).
- **-A --almost-all** Like the -a option above except it does not list . (current directory) and .. (parent directory).
- **-d --directory Ordinarily**, if a directory is specified, ls Will list the contents of the directory, not the directory itself. Use this option in conjunction with the -l option to see details about the directory rather than its contents.
- **-F --classify** This option will append an indicator carácter to the end of each listed name. For example, a "/" if the name is a directory.
- **-h --human-readable** In long format listings, display file sizes in human readable format rather than in bytes.
- **-l** Display results in long format.
- **-r --reverse** Display the results in reverse order. Normally, ls displays its results in ascending alphabetical order.
- **-S Sort** results by file size.
- **-t** Sort by modification time.
- **-rw-r--r--** Access rights to the file. The first character indicates the type of file.
- **/** The root directory. Where everything begins.
- **/bin** Contains binaries (programs) that must be present for the system to boot and run.
- **/boot** Contains the Linux kernel, initial RAM disk image (for drivers needed at boot time), and the boot loader.

*Interesting files:*

● /boot/grub/grub.conf or menu.lst, which

are used to configure the boot loader.

● /boot/vmlinuz, the Linux kernel

- **/dev** This is a special directory which contains device nodes.“Everything is a file” also applies to devices.
- **/etc** The /etc directory contains all of the system-wide configuration files.
- **/home** In normal configurations, each user is given a directory in /home. Ordinary users can only write files in their home directories.
- **/lib** Contains shared library files used by the core system programs. These are similar to DLLs in Windows.
- **/lost+found** Each formatted partition or device using a Linux file system, such as ext3, will have this directory.
- **/media** On modern Linux systems the /media directory Will contain the mount points for removable media such as USB drives.
- **/opt** The /opt directory is used to install “optional” software. This is mainly used to hold commercial software products that may be installed on your system.

- **/root** This is the home directory for the root account.
- **/sbin** This directory contains “system” binaries. These are programs that perform vital system tasks that are generally reserved for the superuser.
- **/tmp** The /tmp directory is intended for storage of temporary, transient files created by various programs.
- **/usr** The /usr directory tree is likely the largest one on a Linux system. It contains all the programs and support files used by regular users.
- **/var** With the exception of /tmp and /home, the directories we have looked at so far remain relatively static, that is, their contents don't change.

## Manipulating Files And Directories

- **cp –** Copy files and directories
- **mv –** Move/rename files and directories
- **mkdir –** Create directories
- **rm –** Remove files and directories
- **ln –** Create hard and symbolic links

- **-a, --archive** Copy the files and directories and all of their attributes, including ownerships and permissions. Normally, copies take on the default attributes of the user performing the copy.

- **-i, --interactive** Before overwriting an existing file, prompt the user for confirmation. If this option is not specified, cp will silently overwrite files.
- **-r, --recursive** Recursively copy directories and their contents. This option (or the -a option) is required when copying directories.
- **-u, --update** When copying files from one directory to another, only copy files that either don't exist, or are newer than the existing corresponding files, in the destination directory.
- **-v, --verbose** Display informative messages as the copy is performed.

## Redirection

- **cat -** Concatenate files
- **sort -** Sort lines of text
- **uniq -** Report or omit repeated lines
- **grep -** Print lines matching a pattern
- **wc -** Print newline, word, and byte counts for each file
- **head -** Output the first part of a file
- **tail -** Output the last part of a file
- **tee -** Read from standard input and write to standard output and files

### Pipelines

The ability of commands to read data from standard input and send to standard output is ilized by a shell feature called pipelines. Using the pipe operator **"|"** (vertical bar), the standard output of one command can be piped into the standard input of another.

● clear – Clear the screen

● history – Display the contents of the history list

### Permissions

- **id –** Display user identity
- **chmod** – Change a file's mode
- **umask** – Set the default file permissions
- **su** – Run a shell as another user
- **sudo** – Execute a command as another user
- **chown** – Change a file's owner
- **chgrp** – Change a file's group ownership
- **passwd** – Change a user's password

## Permissions attributes

r read

w write

x execute

| Octal | Binary | File mode |
|---|---|---|
| 0 | 000 | --- |
| 1 | 001 | --x |
| 2 | 010 | -w- |
| 3 | 011 | -wx |
| 4 | 100 | r-- |
| 5 | 101 | r-x |
| 6 | 110 | rw- |
| 7 | 111 | rwx |

**su** Switch user

**exit**

**ls -l** ver los permisos de las carpetas

***Para añadir a alguien a un grupo:***

Usermod -G _____(nombre del grupo) ____(nombre del usuario)

***Cambiar propietario y permisos a los ficheros***

Sudo chown (nombre user que queremos de propietario) (ruta completa del doc)

***Permisos totales a un usuario***

sudo chmod 700 (nombre carpeta/grupo)

***Asignar usuarios***

useradd -d /home/(nombre del usuario) -m -s/bin/bash (nombre usuario)

***Asignar contraseña a un usuario***

Sudo usseradd -d/home/(carpeta) -m -s /bin/ssh (nombre user)

Sudo passwd (contraseña)

***Para crear un nuevo grupo de usuarios***

Sudo groupadd (nombre del grupo)

***Para borrar un grupo***

Sudo groudel (nombre del grupo)

- adduser
- useradd
- groupadd

**cat** para ver el texto en la terminal

**| (pipe)** redirecciona la salida estándar de un comando a la entrada estándar de otro comando.

**> (redirección)**redirecciona la salida estándar de un comando o archivo, si no existe lo crea y si existe lo sobrescribe.

**>>(adicción)** añade al final de un archivo el texto que se desea.