**LINUX DIRECTORY STRUCTURE**



* Root – Root account’s home directory. It is the administrator window, it has all the privileges like r, w, x.
* tmp – Contains all the temporary data. Items/contents in this directory will be erased when you reboot your system.
* var – Files & Folders where the system must be able to write during the operations.

**Basic Commands**

**Account**

$ - indicates that you are logged in as normal user.

# - indicates that you are logged in as root user.

su(Switch User) -when you enter su command, it will prompt you a root password, if you enter root password, it will take you to the root account.

su [login name] – It will prompt you to enter a password of that particular login, it will take you to that account. Used to switch to a different user.

sudo – Executes only that command with super/root user privileges.

whoami – To check whether you are a root user / which user you are logged in as.

passwd – Command used to change the account’s password.

**pwd** – Displays the current working directory of the terminal.

**echo** – Command that writes its arguments to standard output.

**locate filename** – Searches entire computer & locates where that file is located/stored.

**cd**

Changing directory with relative path concept

$pwd

/home/kt

$cd abc

$pwd

/home/kt/abc

Changing directory with absolute path concept

$pwd

/home/kt

$cd /home/kt/abc

$pwd

/home/kt/abc

cd .. – moves one level up

$pwd

/home/kt/abc

$cd ..

$pwd

/home/kt

cd ../.. – moves two level up

$pwd

/home

cd ./ - changes to current directory

cd ~ - Changes the directory to home directory.

cd / - Changes the directory to root directory.

cd .. – Changes the directory to its parent directory.

cd [dir name] – change to particular directory.

**ls – lists all files**

ls -l - lists files along with parameters

ls -a - lists files along with hidden files.

ls -laS > Filename – Output of the command gets stored in the specified file.

**mkdir-** To create a directory.

**mkdir ./Dirname –** To create a directory in current working directory.

**mv Filename Dirname/Filename -**move File to corresponding directory.

**cp file1 file2 –** file1 is copied to file2 (file2 original is lost, file1 remain unmodified).

**cat –** display the contents of file on screen.

**less –** writes contents of file on screen a page at a time. Mostly used for larger files.

**head-** writes first ten lines on screen.

**tail –** writes last ten lines on screen.

**rm –** remove a file

**rmdir –** remove a directory

**cat /etc/passwd –** Displays the users.

**cat /etc/shadow –** Display user’s password in encrypted format.

**Package Manager in ubuntu** (How to manage the package that we have installed or we need to install in ubuntu)

apt-get – To install the applications.

apt-get install -y <packagename> - To install the particular package from repository.

apt-get remove -y <packagename> - To uninstall the particular package from repository.

apt-cache search <packagename>\* - To search for the particular package which is already installed.

apt-cache policy <packagename> - Displays the installed and available version.

sudo dpkg -i google-chrome-stable\_current\_amd64.deb – To install the downloaded package.

sudo apt-get upgrade – This upgrades the older versions of the packages to the newer versions.

sudo chown user:group <Filename>– To change ownership of a file.

sudo chown -R user:group <Filename>/<Dirname> - To change the ownership recursively.

sudo chmod 777 <Filename> - To change the permissions of a file.

nano <Filename> - To provide input to the File.

rm -rf <dirname> - To remove a directory.

**Find**

. – Represents search for all the files/directories.

type f/d – Represents whether it is a file/directory.

-iname – Represents ignore case-sensitive.

find . -type f -name “file extension” – To find the file with particular extension(case-sensitive).

find . -type f -iname “file extension” - To find the file with particular extension(ignore case-sensitive).

find . -type f -iname “filename\*” – To find all the files with that particular filename.

find /etc -type f -iname “\*conf” – To find all files of certain type i.e., config files in /etc folder.

find . -type f -perm 0664 – To find the files with the 0664 permissions.gr

**grep**

Used to search text or searches the given file for lines containing a match to the given strings or words. By default, grep displays the matching lines.

grep “Word” ./\* - Searches for a particular word in all the files in current working directory.

grep -i “word”./\* - ignore case sensitive along with above command.

grep -n -i “” ./\* - Displays the matched lines and their line numbers.

grep [options] pattern [files]

**Options Description**

-c : This prints only a count of the lines that match a pattern

-h : Display the matched lines, but do not display the filenames.

-i : Ignores, case for matching

-l : Displays list of a filenames only.

-n : Display the matched lines and their line numbers.

-v : This prints out all the lines that do not matches the pattern

-e exp : Specifies expression with this option. Can use multiple times.

-f file : Takes patterns from file, one per line.

-E : Treats pattern as an extended regular expression (ERE)

-w : Match whole word

-o : Print only the matched parts of a matching line, with each such part on a separate output line.

find . -type f -size -10k -iname “\*.fileextension” -exec grep -i -n “word” {} + > <filename>

finds all files with that extension less than 10k byte which has that particular word and end the flag and output that to a file.

But it was not displayed on the screen.

**To display the output on the screen directly when the command is executed.**

find . -type f -size -10k -iname “\*.fileextension” -exec grep -i -n “word” {} + | tee <filename>

**Process**

An application that is running

PID – used to manage the process

User – Who manages the process.

ps aux

a = show processes for all users

u = display the process's user/owner

x = also show processes not attached to a terminal

pgrep <processname> - Displays the process id of the processes.

kill -9 <processid> - kills the particular process.

killall <processname> - Kills all processes related to that process.

sudo service <servicename> start – To start a service.

sudo service <servicename> stop – To stop a service.

sudo service <servicename> restart – To restart a service (To update a service).

**Similar to above syntax**

sudo systemctl start <servicename>

sudo systemctl stop <servicename>

sudo systemctl restart <servicename>

**Cron tab**

To schedule the tasks

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E.g.: \* \* \* \* \* apt-get upgrade -y

crontab -e – To install cron tab.