**Linux Commands**

1. To know the name
   1. Hostname (it’s the server or computer name)
2. Create a new user (Paul)
   1. sudo useradd Paul
   2. when new user is created it is stored in a default group same as user name
3. How can I switch to root user
   1. sudo su –
   2. sudo su
4. Create a new group (Adam)
   1. sudo groupadd Adam
5. Assign user to a group
   1. sudo usermod –append –groups g1 user1 (user1 is assigned to g1)
   2. sudo usermod -aG g1 user1 (user1 is assigned to group g1)
6. print all users belonging to a group
   1. sudo lid -g group\_name
7. List of documents
   1. ls (list directory contents)
   2. man ls (list of all commands)
   3. ls -l (shows all files and directories )
8. Creating a file
   1. touch file\_name
   2. creating a file name with . is called a hidden file and can be seen using ls -la
      1. example : $ touch .file\_name
   3. cat > file\_name (creates a fie\_name and allows to enter content and Ctrl+d to come out of it )
   4. cat >> file\_name (allows to append content to the file\_name and ctrl+d to exit)
   5. cat f1 f2 > f3( copies data of f1 and f2 into f3)
9. To display first 10 lines of content of a file
   1. head file\_name (first 10 lines of the file)
   2. head -n 3 file\_name ( first 3 lines of the file)
10. To display last 10 lines of the file
    1. tail file\_name (last 10 lines of the file)
    2. tail -n 4 file\_name (last 4 lines of the file)
    3. tail -n +43 file\_name (gives the data from 43rd line till the end)
11. Creating a new directory
    1. Mkdir directory\_name
12. Changing directory
    1. cd directory\_name
13. list of hidden files
    1. ls -la
14. clear the screen
    1. clear
15. to know the location
    1. pwd (present working directory)
       1. o/p - /home/cloud\_user/testing
16. going back directory
    1. cd . (current directory)
    2. cd ..
       1. 1 step back to directory
    3. cd ../..
       1. 2 steps back to directory
17. Opening a file or edit a file or view
    1. vi file\_name (open file in edit mode )
    2. Esc + i (edit)
    3. Esc+x (to delete a character )
    4. Esc +dd (to delete an entire line)
    5. Esc +:wq!(save and quit)
    6. :q!(Without saving)
    7. cat file\_name (view the content of a file)
       1. more file\_name (view the content of file page wise and pressing tab gives more pages). Press following for respective actions:
          1. q (to quit)
          2. f or spacebar or enter(for next pages )
          3. b (for going back to previous pages)
       2. less file\_name (view the contents from bottom of file)
18. Copy files
    1. cp old\_file new\_file
    2. cat f1 f2 f3 > f4 ( to copy more than 1 file into another file , here it copies f1 f2 and f3 into f4 file)
19. Move or rename fie
    1. mv old\_file new\_file
20. Delete or remove files or directory
    1. rm file\_name
    2. rm -r directory\_name (-r recursively removes all inside files of directory)
    3. rm -rf directory\_name(to remove all the files in a directory forcibly with asking yes or no)
    4. rmdir directory\_name (removes empty directory)
21. to sort the list of files date wise
    1. ls -ltr
22. System date
    1. date
23. how to know user\_id
    1. id (user id logged in and group associated with it)
24. words count , lines and characters
    1. wc file\_name ( no of lines, words and characters in the file name)
    2. cat file\_name | wc -l ( no of lines)
    3. wc -l file\_name (no of lines)
    4. wc -w file\_name ( no of words)
    5. wc -c file\_name( no of characters)
25. to view line numbers of a file
    1. vi file\_name and then
    2. esc : set number
       1. (or) cat -n file\_name
26. Delete a word from a line, or a line in a file
    1. vi filename and then
    2. Esc x (deletes single character)
    3. Esc dd (deletes whole line)
27. Copying lines in a text file
    1. Select the text from the file and copy and then
    2. Paste by right clicking
28. Finding a word in a text file
    1. cat file\_name | grep search\_word (case sensitive)
    2. cat file\_name | grep -i search\_word (ignore case)
    3. grep -i search\_word file\_name
29. find the file names (it finds in entire linux machine)
    1. .(current directory), ~(home directory), folder\_name/(folder)
    2. find . -name file\_name ( it exists, it shows in the current directory)
    3. find /home -name file\_name (it searches in the home directory)
    4. find . -type f (finds all the files in the current directory)
    5. find . -type d (finds all the directories in the current directory)
    6. find . -name ‘d\*’ -type f(finds all the files starting with d in the current directory)
    7. find ~ -name ‘d\*’ -type f(finds all files starting with d in the root)
    8. find . -type f -empty (finds empty files in current directory)
    9. find d1/\* -type d | wc -l (count of directories inside d1 directory only)
    10. find d1/ -type d | wc -l (count of directories inside d1 directory including d1)
30. locate (it works on updating the data base) (-y is for auto approval)
    1. yum install locate -y (install locate)
    2. locate file\_name
       1. (it searches in locate database ) once the db is updated it shows the path of the file or else it gives nothing
    3. sudo updatedb (updates the db )
31. to display text
    1. echo “This is a message”
32. to check status of previous command
    1. echo $? (o/p –0 if previous command successful and some other number means some error in previous command)

**Grep (global regular expressions Print)**

Used for searching

1. searching for a word in all files
   1. grep -i word\_name \*
2. searching for a word in a file
   1. grep -i word\_name file\_name

**SED (Stream editor)**

Performs functions like search,find,replace, insertion , deletion without opening the file using regular expressions.

1. Replace a word in a file
   1. sed ‘s/old/new/’ f1 (finds and replaces first occurrence of old word to new word in f1 file)
   2. sed ‘s/od/new/2’ f1(finds and replaces second occurrence of old word in every line with new word in f1 file)
   3. sed ‘s/od/new/g’ f1 (finds and replaces all occurrence of old with new)
2. displays only the lines that matches with the replacement (-n)
   1. sed -n ‘s/old/new/p’ file\_name
3. replace a word in a particular line
   1. sed ‘3 s/old/new/’ f1 (finds and replaces old word with new in 3rd line)
4. print only the line that replaces ( -n and /p)
   1. sed -n ‘s/old/new/p’ f1
5. replace between lines
   1. sed ‘1,3 s/old/new/’ f1 (finds and replaces old with new word between lines 1 and 3)
6. delete a particular line of a file
   1. sed ‘5d’ f1 (deletes 5th line without opening the file)
7. delete last or first line of a file
   1. sed ‘$d’ f1 (deletes last line )
   2. sed ‘1d’ f1 (deletes first line)
8. modify input file (-i ) and saves to the file
   1. sed -i ‘3 s/this/that/’ f1 (finds and replaces this with that in 3rd line and saves to the file f1)
9. deletes from specific line to end of file
   1. sed ‘3,$d’ f1 (deletes all lines from 3rd line to end of file)
   2. sed ‘nth,$d’ f1 (deletes from nth line to end of file)
10. delete all the blank lines
    1. sed ‘/^$/d’ f1 (deletes all the blank lines)
11. delete the lines with a specific word
    1. sed ‘/word/d’ f1 (deletes all the lines that contains word)
12. insert a blank line between each line
    1. sed ‘G’ f1 (inserts a blank line between each line)
    2. sed ‘G;G’ f1 (inserts 2 blank lines between each)
    3. sed ‘G;G….G;G’ f1 (inserts as many G blank lines between each line)
13. inserts some space intendation for each line in the starting
    1. sed ‘s/^/ /‘ f1
14. to view particular lines
    1. sed -n ‘2,9p’ f1 (display lines from 2 to 9)
15. to view all users
    1. cat /etc/passwd
16. to view all groups
    1. cat /etc/group
17. to change user
    1. su – username
       1. then enter password
18. to change password for an user
    1. su passwd user\_name
19. to remove user from the group
    1. sudo gpasswd -d user\_name group\_name
20. to remove a group
    1. sudo groupdel group\_name
21. scp
    1. copying files from 1 server to another
    2. scp file\_name user\_name@hostname:/tmp (copies the file\_name into tmp directory)
    3. scp -r directory\_name user\_name@hostname:/tmp (copies the directory into other server)
22. find specific user present or not
23. connect to another server
    1. ssh cloud\_user@ 05d32e10342c.mylabserver.com ( connects to the user cloud\_user with hostname -- 05d32e10342c.mylabserver.com after entering the password)
24. chmod (changing the file permissions of a file to a user, group or others) r-read(4), w-write(2),x-execute(1) . First rwx (for user), second rwx (for group) ,last rwx for others.
    1. -rw-rw-r- -
    2. –
       1. - means file
       2. d means directory
    3. rw- (for user ) (first rw-)
       1. read write execute
    4. rw-(for group)(second rw-)
       1. read write execute
    5. r- - (for others)(last r - - )
25. install something in linux (yum install – it will install all the dependencies first)
    1. yum install tree (install tree)
    2. yum install telnet
26. to uninstall the software (yum remove)
    1. yum remove tree
27. to check updates
    1. yum check-update
28. to update a software
    1. yum update software\_name
    2. yum clean all (to clean up all)
29. command to check list of installed packages
    1. yum list installed
    2. rpm -qa
       1. rpm -qa | grep -i tree (to check tree installed or not)
    3. rpm -qi tree(to get the details)
    4. download anything from world wide web
       1. wget url (working url to download the resources)
30. command to check list of all packages
    1. yum list
31. to check version
32. sudo -l
33. basic calculator (bc)
    1. echo ‘1+2’ | bc (outputs 3)
    2. echo ‘abc’ | rev (outputs in reverse)
34. uptime details of current instance
    1. uptime
35. to check all commands executed so far
    1. history
    2. history -r (to remove duplicate)
    3. history -c (to clear all the commands)
36. to execute last command
    1. !!
37. To execute specific command from already executed commands
    1. !12 (executes 12th executed command)
38. Switching an account
    1. sudo su – (switching to root account)

**Find and Locate**

Find and locate used find the files in linux machine

Locate is used to find the files in locate database

Ssh

Ssh hostname port 22

Ssh user@

To check server up or not

telnet hostname 22

to install telnet

yum install telnet

to check telnet installed or not

locate telnet

telnet hostname 8080

scp example

scp file\_name user@server:/directory/

**File Permissions**

**chmod (gives permissions to user, group and others)**

1. chmod 755 file\_name (gives all permissions for user )
   1. chmod 756 file\_name (it gives rwx permission for user, r-x for groups,rw- for others)
      1. read (r-4) write(w-2)execute(x-1)
   2. chmod u+rwx file\_name(rwx for user)
   3. chmod g+rx file\_name (rx for groups)
   4. chmod o-w file\_name(removes write for others)

**chown (Changing ownership of the file )**

used to change the owner name / group name of a file

* example1: chown user1:group1 file\_name (changes the owner to user1 and group to group1 for the file file\_name)
* example2: chown user1 file\_name (changes owner to user1 for file\_name)
* example3: chown :group1 file\_name (change only the group for file\_name)
* example4: chown user3 -R dir1 (to change owner of all contents of directory need to use -R)

**wget(utility which retrieves files from world wide web)**

weget downloads many features from web

$wget <url>

**Curl (**It is used to send request )

**Htop (advanced top command)**

Free(free up some space details)

lsblk (find all memory blocks attached to device)