1. **How to check a process running with full path information?**

**Command :- ps aux or top**

**Difference is top command updates the processes in real-time**

**O/p of ps aux**

**USER PID %CPU %MEM VSZ RSS TTY STAT START TIME COMMAND**

**root 1 0.0 0.0 191724 4196 ? Ss Mar29 52:42 /usr/lib/systemd/systemd --switched-root --system --deserialize 22**

**root 2 0.0 0.0 0 0 ? S Mar29 0:05 [kthreadd]**

**root 3 0.0 0.0 0 0 ? S Mar29 2:21 [ksoftirqd/0]**

**root 5 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/0:0H]**

**root 7 0.7 0.0 0 0 ? S Mar29 1185:44 [rcu\_sched]**

**root 8 0.0 0.0 0 0 ? S Mar29 0:00 [rcu\_bh]**

**root 9 0.1 0.0 0 0 ? S Mar29 259:20 [rcuos/0]**

**root 10 0.0 0.0 0 0 ? S Mar29 0:00 [rcuob/0]**

**root 11 0.0 0.0 0 0 ? S Mar29 0:00 [migration/0]**

**root 12 0.0 0.0 0 0 ? S Mar29 0:57 [watchdog/0]**

**root 13 0.0 0.0 0 0 ? S Mar29 0:51 [watchdog/1]**

**root 14 0.0 0.0 0 0 ? S Mar29 0:00 [migration/1]**

**root 15 0.0 0.0 0 0 ? S Mar29 1:25 [ksoftirqd/1]**

**root 17 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/1:0H]**

**root 18 0.0 0.0 0 0 ? S Mar29 41:15 [rcuos/1]**

**root 19 0.0 0.0 0 0 ? S Mar29 0:00 [rcuob/1]**

**root 20 0.0 0.0 0 0 ? S Mar29 0:50 [watchdog/2]**

**root 21 0.0 0.0 0 0 ? S Mar29 0:00 [migration/2]**

**root 22 0.0 0.0 0 0 ? S Mar29 1:26 [ksoftirqd/2]**

**root 24 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/2:0H]**

**root 25 0.0 0.0 0 0 ? S Mar29 42:32 [rcuos/2]**

**root 26 0.0 0.0 0 0 ? S Mar29 0:00 [rcuob/2]**

**root 27 0.0 0.0 0 0 ? S Mar29 0:51 [watchdog/3]**

**root 28 0.0 0.0 0 0 ? S Mar29 0:00 [migration/3]**

**root 29 0.0 0.0 0 0 ? S Mar29 1:10 [ksoftirqd/3]**

**root 31 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/3:0H]**

**root 32 0.1 0.0 0 0 ? S Mar29 243:04 [rcuos/3]**

**root 33 0.0 0.0 0 0 ? S Mar29 0:00 [rcuob/3]**

**root 34 0.0 0.0 0 0 ? S Mar29 0:50 [watchdog/4]**

**root 35 0.0 0.0 0 0 ? S Mar29 0:00 [migration/4]**

**root 36 0.0 0.0 0 0 ? S Mar29 1:14 [ksoftirqd/4]**

**root 38 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/4:0H]**

**root 39 0.0 0.0 0 0 ? S Mar29 39:16 [rcuos/4]**

**root 40 0.0 0.0 0 0 ? S Mar29 0:00 [rcuob/4]**

**root 41 0.0 0.0 0 0 ? S Mar29 0:51 [watchdog/5]**

**root 42 0.0 0.0 0 0 ? S Mar29 0:00 [migration/5]**

**root 43 0.0 0.0 0 0 ? S Mar29 1:08 [ksoftirqd/5]**

**root 45 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/5:0H]**

**root 46 0.0 0.0 0 0 ? S Mar29 36:38 [rcuos/5]**

**root 47 0.0 0.0 0 0 ? S Mar29 0:00 [rcuob/5]**

**root 48 0.0 0.0 0 0 ? S Mar29 0:51 [watchdog/6]**

**root 49 0.0 0.0 0 0 ? S Mar29 0:00 [migration/6]**

**root 50 0.0 0.0 0 0 ? S Mar29 2:12 [ksoftirqd/6]**

**root 52 0.0 0.0 0 0 ? S< Mar29 0:00 [kworker/6:0H]**

1. Using vi editor, how to globally replace a string?

Command :- :%s/old string/new string/g

For e.g we want to change Hello world to Hello Broadridge

Command will look like :%s/world/Broadridge/g

%s is to tell vi which string has to be searched

g is global flag for vi to continue search for occurence of string which has to

be replaced

1. How to search for a string in all files under a folder and sub-folders?

Command :- grep “String” /Directory path

grep -c display number of lines of matching string

-h display matched line and hide filename

-i ignore Case

-l Display list of file

-n Display String and line number

1. How to remove control-m characters? Refer file /home/srinivasan.r/unix/ctrlm.txt on agni server which contains these characters.

Ans :- when we copy files from windows to linux this type of problem will occur because of extra spaces and tabs in windows linux fills it with illegal characters

Command :-

1:- :%s/^M//g

2:- sed 's/^M//g' filename

1. How to redirect the output of a command to a file output.txt and errors to another file errors.txt ?

To redirect output of command to a file

Command :- pwd > filename.txt

For redirecting error the command is

Command filename.txt 2> errorfile.txt

1. How to redirect the output of a command and append to the file?

Command :- command >> filename.txt

1. How to redirect STDERR to STDOUT?

Command :- cmd >> file.txt 2>&1

For e.g.

cat op.txt >> Demo.txt 2>&1

[1]+ Exit 1 cat op.txt 2 >> Demo.txt

[niraj.fegade@agni ~]$ cat Demo.txt

/home/niraj.fegade

cat: op.txt: No such file or directory

8. How to find memory usage on a unix system

free / vmstat

[niraj.fegade@agni ~]$ free

total used free shared buff/cache available

Mem: 16166420 12221052 1094768 255496 2850600 3516804

Swap: 8257532 2399116 5858416

[niraj.fegade@agni ~]$ vmstat

procs -----------memory---------- ---swap-- -----io---- -system-- ------cpu-----

r b swpd free buff cache si so bi bo in cs us sy id wa st

1 0 2399116 1094520 5328 2845380 0 0 1 12 0 0 1 1 99 0 0

9 . How to find how you are logged in as

Command :- whoami

O/p :- niraj.fegade

1. How to find the type of machine you are currently on and name of the machine

Command :- hostname

O/p:-

[niraj.fegade@agni ~]$ hostname

agni.orcsoftware.com

11. How to find out if a particular port is being used

Command - netstat -tulpn

-t :- display TCP sockets

-u:- display UDP sockets

-l:- display listening sockets

-p:- list process name that open sockets

-n :- don’t use DNS

12 .How do seperate a process from the current running shell so that it continues to run even after the user logs out.

Ctrl + Z then bg to put the suspended task in background

1. How do you know how  much disk is available?

Command :- df

O/p:-

[niraj.fegade@agni ~]$ df

Filesystem 1K-blocks Used Available Use% Mounted on

devtmpfs 8071772 0 8071772 0% /dev

tmpfs 8083208 266156 7817052 4% /dev/shm

tmpfs 8083208 1084 8082124 1% /run

tmpfs 8083208 0 8083208 0% /sys/fs/cgroup

/dev/mapper/ol-root 52403200 34859900 17543300 67% /

/dev/sda1 1038336 252728 785608 25% /boot

/dev/mapper/ol-cores 52403200 68836 52334364 1% /cores

/dev/mapper/ol-opt\_tbricks 461148160 274514796 186633364 60% /opt/tbricks

tmpfs 1616644 0 1616644 0% /run/user/36779

tmpfs 1616644 0 1616644 0% /run/user/37930

tmpfs 1616644 0 1616644 0% /run/user/37895

tmpfs 1616644 0 1616644 0% /run/user/37928

1. What is the difference between kill -9 and just kill

kill command sends a singal to kill the process gracefully or in steps it is the safe way to kill or stop any process

kill-9 commands sends a signal to kill a process immediately. It is a forceful way to terminate any process.

1. What permissions chmod 710 on a directory do?

chmod is used to change the file permissions

In 710

7 is for owner permission

1 is for group permission

0 is for everyone.

1 -execute

2 -write

3 -write and execute

4 -read

5 -read and execute

6 -read and write

7 -read, write and execute

1. How to run a process in the background ? How to bring it to the foreground ?

bg- to run the process in background

fg- connect the background process again to foreground.

1. How to find how many times the word “hello” occurs in a file.

grep command is used to search for a particular string in a file

To search how many times hello occur in a file

grep hello filename.txt | wc -l

1. How to check whether a machine is reachable from your machine.

ping is the command used to check whether machine is reachable from our machine

\* List number of files in a directory and count lines in each file

Command - wc -l `find directoryname -type f`

\* Find the files which are 5 days older and then zip them

Command is `find niraj -mtime 5 -print`

To zip the file we put

Zip -r filename before above command so now full command is

zip -r filename `find niraj -mtime 5 -print`

[niraj.fegade@agni ~]$ zip -r zipfile `find niraj -type f`

adding: niraj/myfile.txt (stored 0%)

[niraj.fegade@agni ~]$ ls

Demo.txt errorfile.txt niraj zipfile.zip

 read a file and replace 10th appearance of the word "the" to "abc" and write the output in another file

sed **'s/the/abc/10' file1.txt > file2.txt**

**s specifies the substitution operation. / are delimeters. 10 is the number of occurance of “the” which we want to replaced by “abc”.**

\* list of 5 largest files from any directory

[niraj.fegade@agni ~]$ du -a | sort -n -r | head -n 5

76 .

20 ./.bash\_history

12 ./.swp

4 ./zipfile.zip

4 ./.viminfo

du --> to show file space usage.

du -a --> to show all fiiles with directories

sort --> to sort contetnt in file alphabetically.

sort -n --> to sort by numeric value.

sort -r --> to sort and show output reversly.

head --> to show first lines of output or piped data. (bydefault 10 lines)

head -n --> to show specific nos of lines

\* find out the available memory on the server, how long the server has been up

Command :- free -g | uptime

\* find out the pid of the process and kill the process gracefully/forcefully

ps aux | grep process name …

kill process ID

\* find out how many users are connected to port 22 on a server

netstat | grep :22 | grep ESTABLISHED | wc -l