**Working with a Vi Editor:**

1: Create a file using vi. Enter the following text:

A network is a group of computers that can communicate with each other, share

resources, and access remote hosts or other networks. Netware is a computer network

operating system designed to connect, manage, and maintain a network and its

services. Some of the network services are Netware Directory Services (NDS), file

system, printing and security.

* [admin@sushil Desktop]$ vi network.txt

1. Change the word “Netware” in the second line to “Novell Netware”.

* :%s/Netware/Novell

b. Insert the text “(such as hard disks and printers)” after “share resources” in the

first line.

* /share resources
* a to append text and type “such as hard disks and printers”

c. Append the following text to the file:

“Managing NDS is a fundamental administrator role because NDS provides a single

point for accessing and managing most network resources.”

* Vi.network
* G and type text and save

Working shell

1. Type some text on the shell separated by space

* [admin@sushil Desktop]$ Hello this is test sentence.

1: Move cursor one word back

* Alt + b

2: Move cursor one word forward

* Alt + f

3: Move cursor to the first character

* Ctrl + a

4: Move cursor to the end

* Ctrl + e

5: Delete test from second word to last character

* Ctrl + a, Alt + f, Ctrl + k

6: Delete the current line

* Ctrl + u

2: In lab 4 we have created a file errorlog.txt. Display it using cat command using

command completion.

* [admin@sushil Desktop]$ cat errorlog.txt

3: Display history of command used so far.

* [admin@sushil Desktop]$ history

1 ifconfig

2 exit

3 passwd root

4 cd /root/

5 exit

6 hostname host01

7 su - root

8 yum update -y

9 su root

10 su -

11 cd

12 poweroff

13 ifconfig

4: Search ls command in history file

* [admin@sushil Desktop]$ history | grep ls

19 ls

28 echio ls

29 echo ls

30 echo ls -l

253 ls -d /etc/\*[ab]\*

255 ls

257 ls

259 ls

265 history | grep ls

5: Repeat the last command rd

* [admin@sushil Desktop]$ cat errorlog.txt
* cat: data.txt: No such file or directory
* [admin@sushil Desktop]$ !!
* cat errorlog.txt
* cat: data.txt: No such file or directory

6: Execute 3 command from history file.

267 touch myfile

268 rm mtfile

269 rm myfile

270 history

* [admin@sushil Desktop]$ !267; !268; !269

touch myfile; rm mtfile; rm myfile

rm: cannot remove 'mtfile': No such file or directory

7: What are the different shells available.

* [admin@sushil Desktop]$ cat /etc/shells

/bin/sh

/bin/bash

/usr/bin/sh

/usr/bin/bash

Understanding access permissions

7.1: Create an empty file “demofile” and perform following instruction

* [admin@sushil Desktop]$ touch demofile
* [admin@sushil Desktop]$ ls
* command\_substitution.sh errorlog.txt lsdoc newfriends users
* demofile friends network.txt test\_python variables.sh

1. Revoke read permission from owner and use cat command.

* [admin@sushil Desktop]$ chmod u-r demofile
* [admin@sushil Desktop]$ cat demofile
* cat: demofile: Permission denied

2. Revoke write permission from owner and open using vi

editor and add some contain in it.

* [admin@sushil Desktop]$ chmod u-w demofile
* [admin@sushil Desktop]$ vi demofile
* Permission denied (to edit when opened)

3. Add read and write permission to owner.

* [admin@sushil Desktop]$ chmod u+rw demofile

4. Revoke write and execute from other and group

* [admin@sushil Desktop]$ chmod go-rw demofile

5. Add write permission to group only

* [admin@sushil Desktop]$ chmod g+w demofile

1. Assign read permission to all

* [admin@sushil Desktop]$ chmod a+r demofile

1. Revoke read permission from others

* [admin@sushil Desktop]$ chmod o-r demofile

1. Give the execute permission for the user for a file chap1

* [admin@sushil Desktop]$ chmod u+x chap1

1. Give the execute permission for user, group and others for a file add.c

* [admin@sushil Desktop]$ touch add.c
* [admin@sushil Desktop]$ chmod a+x add.c

10. Remove the execute permission from user, give read permission to

group and others for a file aa.c

* [admin@sushil Desktop]$ chmod u-x,g+r,o+r aa.c

11. Give execute permission for users for a.c, kk.c, nato and myfile using

single command

* [admin@sushil Desktop]$ chmod u+x a.c kk.c nato myfile

7.2: Create an directory “demo” and copy /etc/passwd file in it

* [admin@sushil ~]$ sudo mkdir demo

[sudo] password for admin:

[admin@sushil ~]$ ls

Demo

[admin@sushil ~]$ sudo cp /etc/passwd demo/

1. Display contents of demo

* [admin@sushil ~]$ ls demo

2. Revoke read permission from demo directory and use ls

command on it

* [admin@sushil ~]$ sudo chmod go-rx demo

[admin@sushil ~]$ ls demo

ls: cannot open directory 'demo': Permission denied

3. Revoke write permission from demo directory and try to copy

/etc/profile file in it

* [admin@sushil ~]$ sudo chmod u-w demo

[admin@sushil ~]$ sudo cp /etc/profile demo/

4. Delete passwd file from demo directory

🡪[admin@sushil ~]$ sudo rm demo/passwd

5. Revoke execute permission from demo directory and try cd

command on demo.

🡪[admin@sushil ~]$ sudo chmod u-x demo

[admin@sushil ~]$ cd demo

bash: cd: demo: Permission denied

**Using Process-Related Commands**

1. Find out the PID of the processes that are activated by you

* [admin@sushil ~]$ ps -u $USER
* PID TTY TIME CMD
* 2049 ? 00:00:02 systemd
* 2051 ? 00:00:00 (sd-pam)
* 2067 ? 00:00:00 gnome-keyring-d
* 2071 tty2 00:00:00 gdm-wayland-ses
* 2075 ? 00:00:00 dbus-broker-lau
* 2077 ? 00:00:03 dbus-broker

1. Find out the information about all the processes that are currently active

* [admin@sushil ~]$ ps -ef
* UID PID PPID C STIME TTY TIME CMD
* root 1 0 0 Jan27 ? 00:00:12 /usr/lib/systemd/systemd r
* root 2 0 0 Jan27 ? 00:00:00 [kthreadd]
* root 3 2 0 Jan27 ? 00:00:00 [pool\_workqueue\_]
* root 4 2 0 Jan27 ? 00:00:00 [kworker/R-rcu\_g]

3. Start a different process in the background. Find out the status of the background

process using the PID of the same.

* [admin@sushil ~]$ sleep 100 &
* [2] 83286
* [admin@sushil ~]$ ps -p $!
* PID TTY TIME CMD
* 83286 pts/0 00:00:00 sleep

1. Run a job in background

* [admin@sushil ~]$ sleep 100 &
* [2] 83286

1. Bring a last background job in fore ground

* [admin@sushil ~]$ fg

bash: fg: job has terminated

[1]+ Done sleep 100

1. Run 3 jobs in background and bring first job in foreground

* [admin@sushil ~]$ sleep 100 &
* [3] 83306
* [2] Done
* [admin@sushil ~]$ sleep 200 &
* [4] 83311
* [admin@sushil ~]$ sleep 300 &
* [5] 83316
* [admin@sushil ~]$ fg %1
* sleep 100

1. Stop current job

* [admin@sushil ~]$ kill -SIGSTOP %1
* [1]+ Stopped vim greet.sh (wd: ~/programs)
* (wd now: ~)
* [4] Done sleep 200

1. Start stopped job

* [admin@sushil ~]$ jobs
* [1]+ Stopped vim greet.sh (wd: ~/programs)
* [2]- Stopped sleep 100

1. Run a job

* [admin@sushil ~]$ sleep 100
* [2] 83286

1. Kill last job

* [admin@sushil ~]$ kill %1

[1]+ Stopped vim greet.sh (wd: ~/programs)

(wd now: ~)

1. Kill your shell using process id

* [admin@sushil ~]$ kill -9 $$

1. Execute a ls command by setting priority as -10 using nice command

* [admin@sushil ~]$ sudo nice -n -10 ls

1. Display a date on every hour using cron tab

* [admin@sushil ~]$ crontab -e

crontab: installing new crontab

[admin@sushil ~]$ crontab -l

0 \* \* \* \* date >> /home/hourly\_date.log