Red Hat System Administration I

Day5

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Lab 4 cont.

1. List the user commands and redirect the output to /tmp/commands.list

ls /bin > /tmp/commands.list

```
nada :>ls /bin > /tmp/commands.list
nada :>cat /tmp/commands.list
[
ac
aconnect
addr2line
adwaita-1-demo
airscan-discover
alias
alsaloop
alsamixer
alsaunmute
amidi
amixer
aplay
aplaymidi
appstreamcli
appstream-compose
appstream-util
apropos
apropos.man-db
ar
arch
arecord
arecordmidi
arpaname
arping
as
aseqdump
```

nputer, move the mouse pointer outside or press Ctrl+Alt

2. Count the number of user commands.

wc -l /tmp/commands.list

```
nada :>wc -l /tmp/commands.list
1510 /tmp/commands.list
```

3. Get all the users' names whose first character in their login is 'g'.

cut -f1 -d: /etc/passwd | grep ^g

```
nada :>cut -f1 -d: /etc/passwd | grep ^g
games
geoclue
gdm
gnome-initial-setup
```

4. Get the logins name and full names (comment) of logins starts with "g".

cut -f1,5 -d: /etc/passwd | grep ^g

```
nada :>cut -f1,5 -d: /etc/passwd |grep ^g
games:games
geoclue:User for geoclue
gdm:
gnome-initial-setup:
```

5. Save the output of the last command sorted by their full names in a file.

note k2 not k5 because this deal with the previous output npt the original file

cut -f1,5 -d: /etc/passwd | grep ^g | sort -t: -k2 > sortedUsers

```
nada :>cut -f1,5 -d: /etc/passwd | grep ^g | sort -t: -k2 > sortedUsers
nada :>cat sortedUsers
gdm:
gnome-initial-setup:
games:games
geoclue:User for geoclue
```

6. Write two commands: first:
to search for all files on the system that named .bash_profile.

find / -name .bash_profile 2> /dev/null

We expect the errors so we put errors in /dev/null

```
nada :>find / -name .bash_profile 2> /dev/null
/etc/skel/.bash_profile
/home/nada_mohamed2243/.bash_profile
```

Second: sorts the output of ls command on / recursively, Saving their output and error in 2 different files and sending them to the background.

ls -lR / 2> ls_errors > ls_output

```
nada :>ls -lR / >ls_output 2> ls_errors
```

```
mnada :>more ls_errors
ls: cannot open directory '/boot/efi': Permission denied
ls: cannot open directory '/boot/grub2': Permission denied
ls: cannot open directory '/boot/loader/entries': Permission denied
ls: cannot open directory '/etc/audit': Permission denied
ls: cannot open directory '/etc/cups/ssl': Permission denied
ls: cannot open directory '/etc/firewalld': Permission denied
ls: cannot open directory '/etc/grub.d': Permission denied
ls: cannot open directory '/etc/lvm/archive': Permission denied
ls: cannot open directory '/etc/lvm/backup': Permission denied
ls: cannot open directory '/etc/lvm/cache': Permission denied
ls: cannot open directory '/etc/lvm/devices': Permission denied
ls: cannot open directory '/etc/nftables': Permission denied
ls: cannot open directory '/etc/pki/rsyslog': Permission denied
```

```
nada :>more ls_output
/:
total 28
dr-xr-xr-x.    2 root root    6 Jun 25  2024 afs
lrwxrwxrwx.   1 root root    7 Jun 25  2024 bin -> usr/bin
dr-xr-xr-x.   5 root root 4096 Dec 25 13:09 boot
drwxr-xr-x.  20 root root 3440 Dec 30 14:10 dev
drwxr-xr-x. 135 root root 8192 Dec 30 14:09 etc
drwxr-xr-x.   5 root root   56 Dec 29 15:07 home
lrwxrwxrwx.   1 root root    7 Jun 25  2024 lib -> usr/lib
lrwxrwxrwx.   1 root root    9 Jun 25  2024 lib64 -> usr/lib64
drwxr-xr-x.   2 root root    6 Jun 25  2024 media
drwxr-xr-x.   3 root root   18 Dec 25 12:59 mnt
drwxr-xr-x.   2 root root    6 Jun 25  2024 opt
dr-xr-xr-x. 380 root root    0 Dec 30 14:09 proc
dr-xr-x---.   4 root root 4096 Dec 29 15:14 root
drwxr-xr-x.  46 root root 1180 Dec 30 14:09 run
lrwxrwxrwx.   1 root root    8 Jun 25  2024 sbin -> usr/sbin
drwxr-xr-x.   2 root root    6 Jun 25  2024 srv
dr-xr-xr-x.  13 root root    0 Dec 30 14:09 sys
drwxrwxrwt.  24 root root 4096 Dec 30 14:15 tmp
drwxr-xr-x.  12 root root  144 Dec 25 12:57 usr
```

7. Display the number of users who is logged now to the system.

who | wc -l

```
nada :>who
nada_mohamed2243 seat0          2024-12-30 14:10 (login screen)
nada_mohamed2243 tty2           2024-12-30 14:10 (tty2)
nada :>who |wc -l
2
```

8. Display lines 7 to line 10 of /etc/passwd file

cat -n → for only numbers

cat -n /etc/passwd | head | tail -4

```
nada :>cat -n /etc/passwd | head | tail -4
     7  shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
     8  halt:x:7:0:halt:/sbin:/sbin/halt
     9  mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
    10  operator:x:11:0:operator:/root:/sbin/nologin
```

9. What happens if you execute:

cat filename1 | cat filename2

```
nada :>vi filename1
nada :>vi filename2
nada :>cat filename1 | cat filename2
 i am 23 years old
nada :>more filename1
my name is nada
nada :>more filename2
 i am 23 years old
nada :>
```

This command does not merge the contents of the two files; it simply outputs the contents of the second file (`filename2`).
If we want to concatenate
cat filename1 filename2

ls | rm

This command attempts to pipe the output of `ls` (a list of files and directories) into `rm`. But , `rm` does not accept file names from standard input (via the pipe).
`rm` expects file names as direct arguments.

```
nada :>ls
Desktop     file       ls_errors  mycv       Pictures     Templates
Documents   filename1  ls_output  myteam     Public       test
Downloads   filename2  Music      oldpasswd  sortedUsers  Videos
nada :>ls | rm
rm: missing operand
Try 'rm --help' for more information.
```

ls /etc/passwd | wc –l

This command will list the `/etc/passwd` file and then count the number of lines in the output, which will always be 1 since `ls` will only list the file name.

```
nada :>ls /etc/passwd
/etc/passwd
nada :>ls /etc/passwd | wc -l
1
```