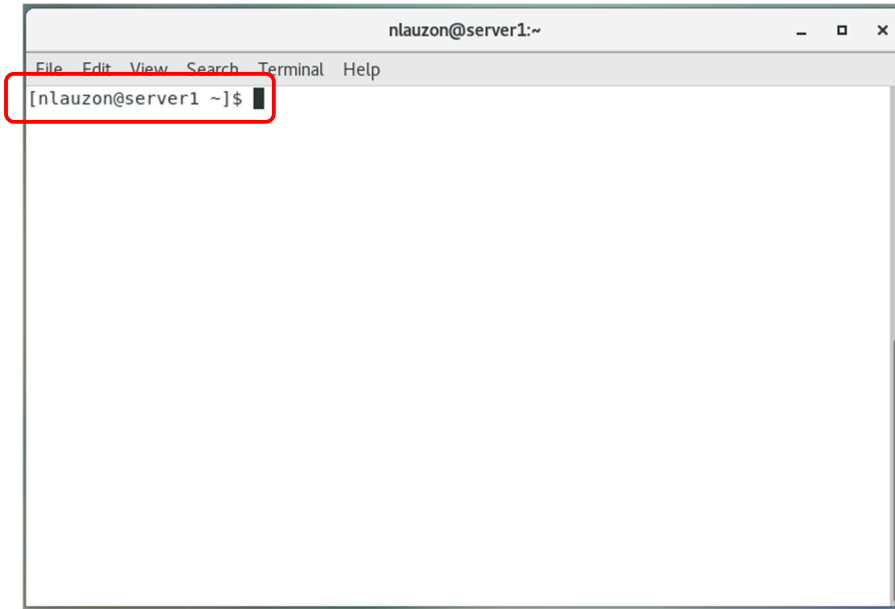


File Search and Handling 1

Nicolas Lauzon

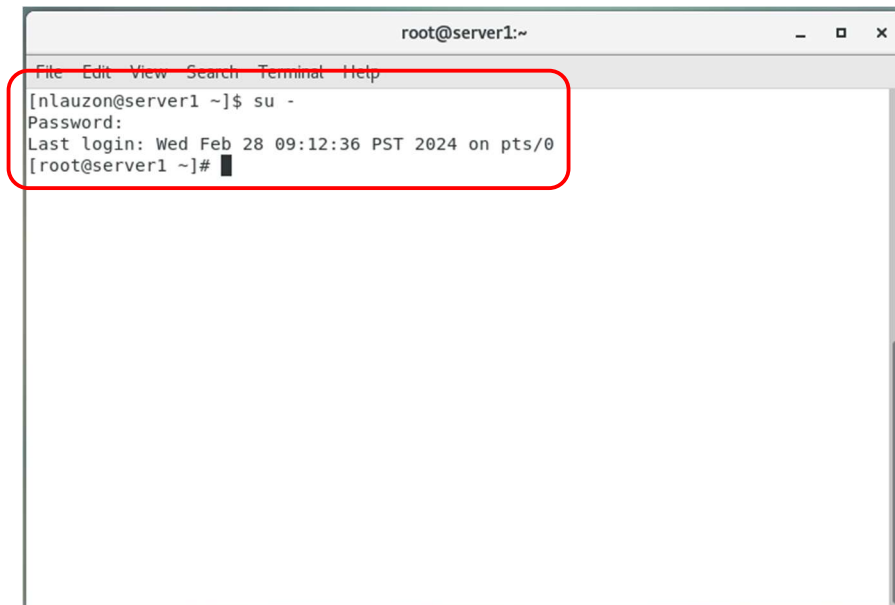
1. Log to your Linux system as normal user and display your current directory.



A terminal window titled 'nlaizon@server1:~' with a menu bar containing 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The prompt '[nlaizon@server1 ~]\$' is highlighted with a red box.

```
nlaizon@server1:~  
File Edit View Search Terminal Help  
[nlaizon@server1 ~]$
```

2. Switch account and log as superuser (root)



A terminal window titled 'root@server1:~' with a menu bar containing 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The sequence of commands and prompts '[nlaizon@server1 ~]\$ su -', 'Password:', 'Last login: Wed Feb 28 09:12:36 PST 2024 on pts/0', and '[root@server1 ~]#' is highlighted with a red box.

```
root@server1:~  
File Edit View Search Terminal Help  
[nlaizon@server1 ~]$ su -  
Password:  
Last login: Wed Feb 28 09:12:36 PST 2024 on pts/0  
[root@server1 ~]#
```

3. Copy the file /etc/samba/smb.conf to your normal user home profile and rename it smb

```
nlaizon@server1:~  
File Edit View Search Terminal Help  
[nlaizon@server1 ~]$ su -  
Password:  
Last login: Wed Feb 28 09:12:36 PST 2024 on pts/0  
[root@server1 ~]# /etc/samba/smb.conf ~/smb  
-bash: /etc/samba/smb.conf: Permission denied  
[root@server1 ~]# /etc/samba/smb.conf /home/nlaizon/smb  
-bash: /etc/samba/smb.conf: Permission denied  
[root@server1 ~]# cp /etc/samba/smb.conf /home/nlaizon/smb  
[root@server1 ~]# exit  
logout  
[nlaizon@server1 ~]$ ls  
computers  doc3      mailports  Pictures    smb        Tmp1  
Desktop    DOCS      maintenance PRINTS      sort1      Tmp2  
dir1       Documents Music      pro        sort2      Tmp3  
dir2       Downloads mypasswd  PROJECTS   sort3      Trip3  
doc1       file2     myservices Public      sortR      Trips  
doc2       Foods     newservices shopping_list Templates  Videos  
[nlaizon@server1 ~]$
```

4. Switch account back to normal user

```
nlaizon@server1:~  
File Edit View Search Terminal Help  
[nlaizon@server1 ~]$ su -  
Password:  
Last login: Wed Feb 28 09:12:36 PST 2024 on pts/0  
[root@server1 ~]# /etc/samba/smb.conf ~/smb  
-bash: /etc/samba/smb.conf: Permission denied  
[root@server1 ~]# /etc/samba/smb.conf /home/nlaizon/smb  
-bash: /etc/samba/smb.conf: Permission denied  
[root@server1 ~]# cp /etc/samba/smb.conf /home/nlaizon/smb  
[root@server1 ~]# exit  
logout  
[nlaizon@server1 ~]$ ls  
computers  doc3      mailports  Pictures    smb        Tmp1  
Desktop    DOCS      maintenance PRINTS      sort1      Tmp2  
dir1       Documents Music      pro        sort2      Tmp3  
dir2       Downloads mypasswd  PROJECTS   sort3      Trip3  
doc1       file2     myservices Public      sortR      Trips  
doc2       Foods     newservices shopping_list Templates  Videos  
[nlaizon@server1 ~]$
```

5. Copy the file smb to a new file named mysmb

```

nlaizon@server1:~
File Edit View Search Terminal Help
[root@server1 ~]# /etc/samba/smb.conf ~/smb
-bash: /etc/samba/smb.conf: Permission denied
[root@server1 ~]# /etc/samba/smb.conf /home/nlaizon/smb
-bash: /etc/samba/smb.conf: Permission denied
[root@server1 ~]# cp /etc/samba/smb.conf /home/nlaizon/smb
[root@server1 ~]# exit
logout
[nlaizon@server1 ~]$ ls
computers  doc3      mailports  Pictures      smb          Tmp1
Desktop    DOCS      maintenance PRINTS         sort1        Tmp2
dir1       Documents Music       pro           sort2        Tmp3
dir2       Downloads mypasswd   PROJECTS      sort3        Trip3
doc1       file2     myservices Public        sortR        Trips
doc2       Foods     newservices shopping_list Templates     Videos
[nlaizon@server1 ~]$ cp smb mysmb
[nlaizon@server1 ~]$ ls
computers  DOCS      Music       pro           sort3        Trips
Desktop    Documents mypasswd    PROJECTS      sortR        Videos
dir1       Downloads myservices  Public        Templates
dir2       file2     mysmb       shopping_list Tmp1
doc1       Foods     newservices smb           Tmp2
doc2       mailports Pictures     sort1        Tmp3
doc3       maintenance PRINTS      sort2        Trip3
[nlaizon@server1 ~]$

```

6. Using one single command, display a long listing for the files smb and mysmb

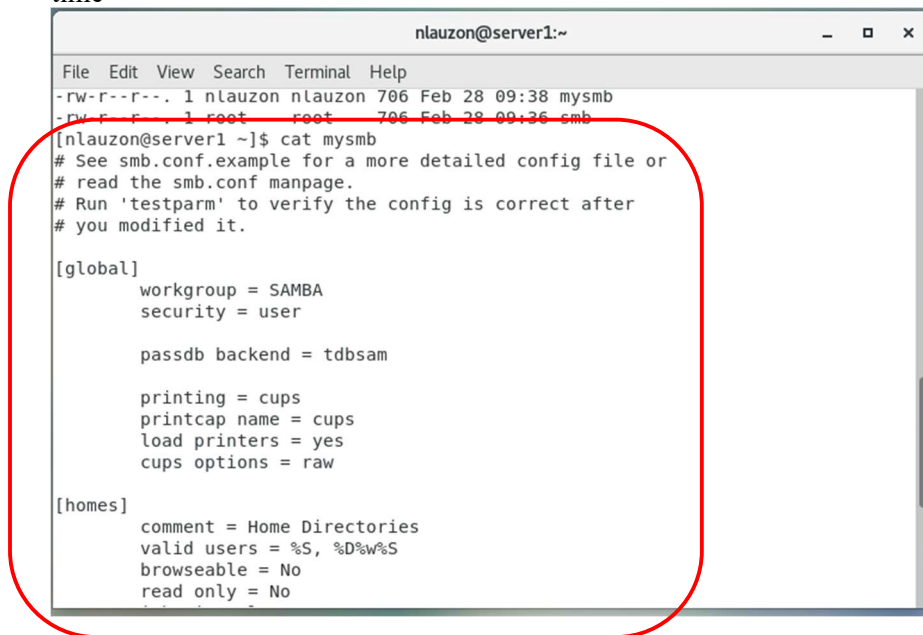
```

nlaizon@server1:~
File Edit View Search Terminal Help
-bash: /etc/samba/smb.conf: Permission denied
[root@server1 ~]# cp /etc/samba/smb.conf /home/nlaizon/smb
[root@server1 ~]# exit
logout
[nlaizon@server1 ~]$ ls
computers  doc3      mailports  Pictures      smb          Tmp1
Desktop    DOCS      maintenance PRINTS         sort1        Tmp2
dir1       Documents Music       pro           sort2        Tmp3
dir2       Downloads mypasswd   PROJECTS      sort3        Trip3
doc1       file2     myservices Public        sortR        Trips
doc2       Foods     newservices shopping_list Templates     Videos
[nlaizon@server1 ~]$ cp smb mysmb
[nlaizon@server1 ~]$ ls
computers  DOCS      Music       pro           sort3        Trips
Desktop    Documents mypasswd    PROJECTS      sortR        Videos
dir1       Downloads myservices  Public        Templates
dir2       file2     mysmb       shopping_list Tmp1
doc1       Foods     newservices smb           Tmp2
doc2       mailports Pictures     sort1        Tmp3
doc3       maintenance PRINTS      sort2        Trip3
[nlaizon@server1 ~]$ ls -l *smb
-rw-r--r--. 1 nlaizon nlaizon 706 Feb 28 09:38 mysmb
-rw-r--r--. 1 root    root    706 Feb 28 09:36 smb
[nlaizon@server1 ~]$

```

7. Use the command cat to display the file mysmb

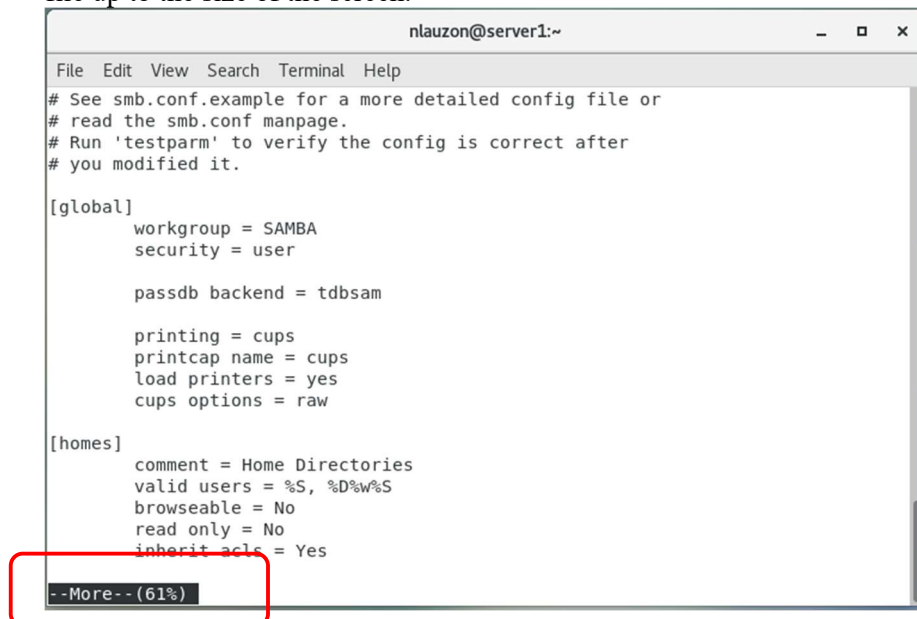
Using the command `cat mysmb`. The `cat` command just discharges to the screen the whole file at a time



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
-rw-r--r--. 1 nlaizon nlaizon 706 Feb 28 09:38 mysmb  
-rw-r--r--. 1 root root 706 Feb 28 09:36 smb  
[nlaizon@server1 ~]$ cat mysmb  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%W%S  
    browseable = No  
    read only = No
```

8. Use the command more to display the file mysmb

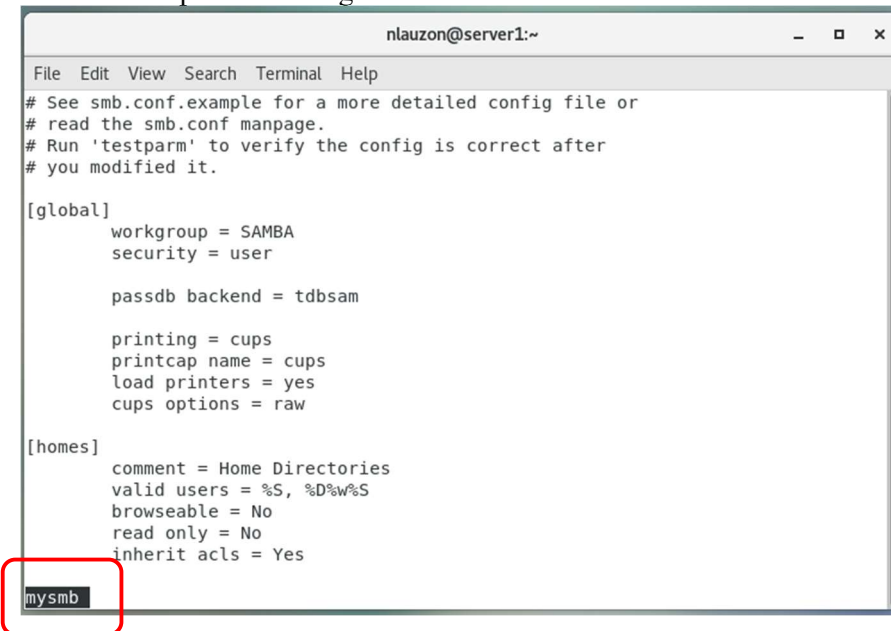
Using the command `more mysmb`. The `more` command just discharges to the screen the content of the file up to the size of the screen.



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%W%S  
    browseable = No  
    read only = No  
    inherit acls = Yes  
--More-- (61%)
```

9. Use the command less to display the file mysmb

Using the command `less mysmb`. The `less` command does the same as the `more` command. However, it offers more options to navigate the file.



A terminal window titled 'nlauzon@server1:~' showing the output of the `less mysmb` command. The window displays the contents of the `mysmb` file, which is a configuration file for Samba. The file content includes comments and configuration options for the global and homes sections. The `mysmb` filename is highlighted in a red box at the bottom of the terminal window.

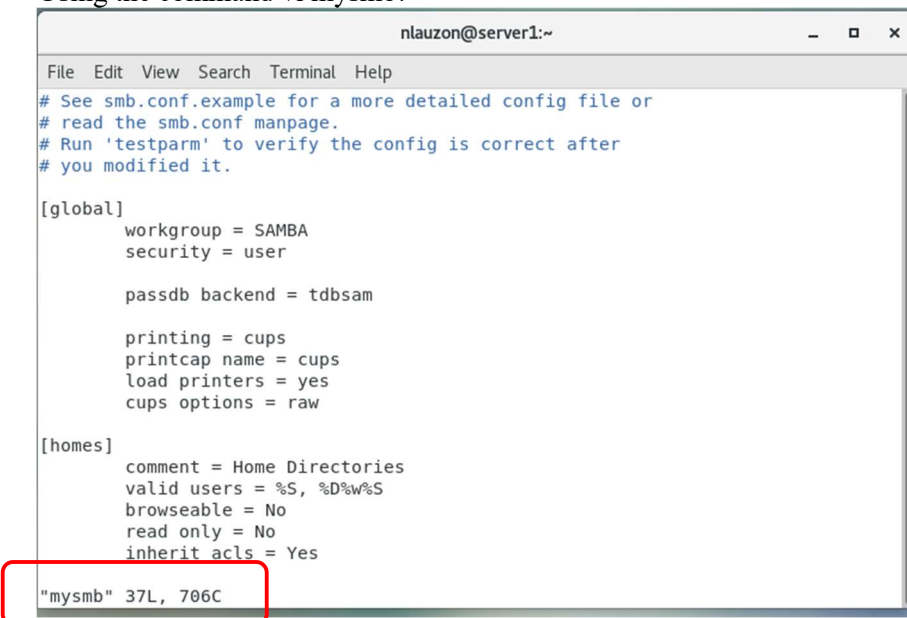
```
nlauzon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%W%S  
    browseable = No  
    read only = No  
    inherit acls = Yes  
  
mysmb
```

10. Note de difference between cat , more and less

The `more` command just discharges to the screen the content of the file up to the size of the screen. The `less` command does the same as the `more` command. However, it offers more options to navigate the file (up and down arrows to move line by line, or the `b` key to move up by a screen height).

11. Open your file mysmb using the editor vi

Using the command `vi mysmb`:

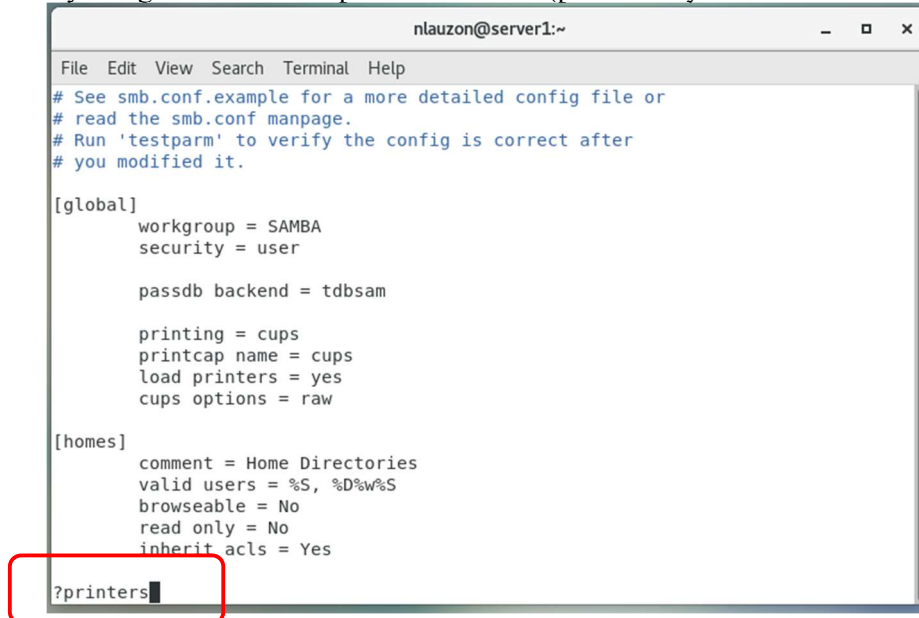


A terminal window titled 'nlauzon@server1:~' showing the output of the `vi mysmb` command. The window displays the contents of the `mysmb` file, which is a configuration file for Samba. The file content includes comments and configuration options for the global and homes sections. The `mysmb` filename is highlighted in a red box at the bottom of the terminal window.

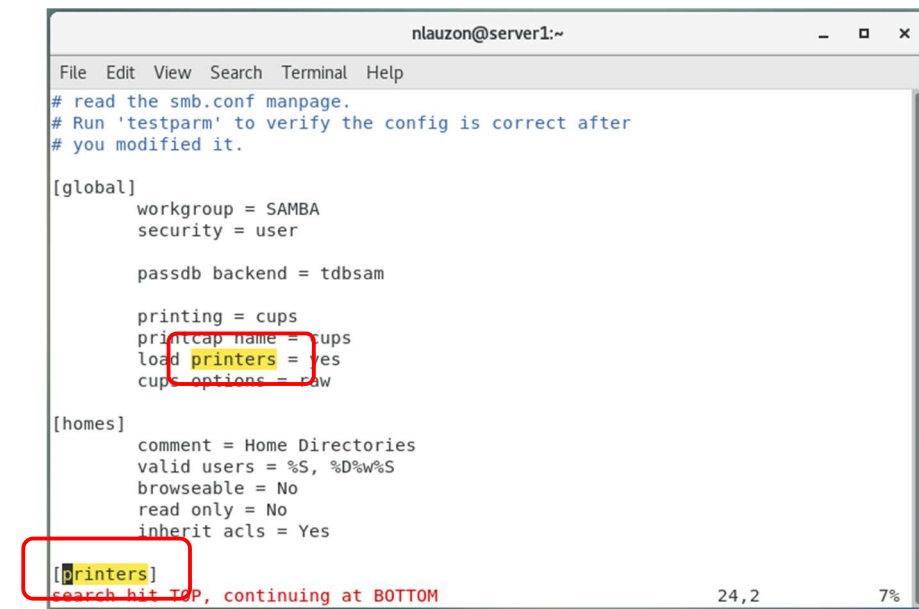
```
nlauzon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%W%S  
    browseable = No  
    read only = No  
    inherit acls = Yes  
  
"mysmb" 37L, 706C
```

12. Search for the word printers

By using the command `?printers` within vi (pres esc key first to access the command mode).



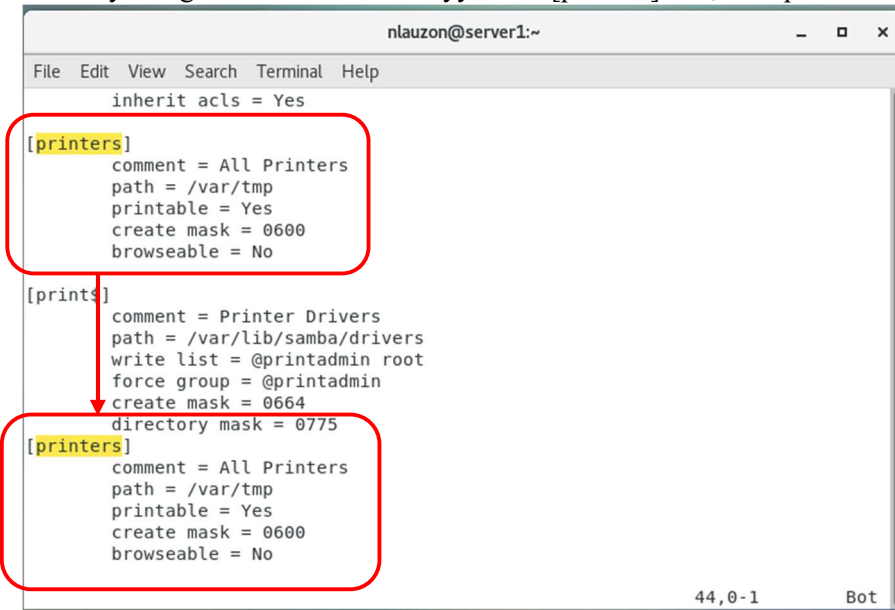
```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%w%S  
    browseable = No  
    read only = No  
    inherit acls = Yes  
  
?printers
```



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%w%S  
    browseable = No  
    read only = No  
    inherit acls = Yes  
  
[printers]  
search hit TOP, continuing at BOTTOM  
24,2 7%
```

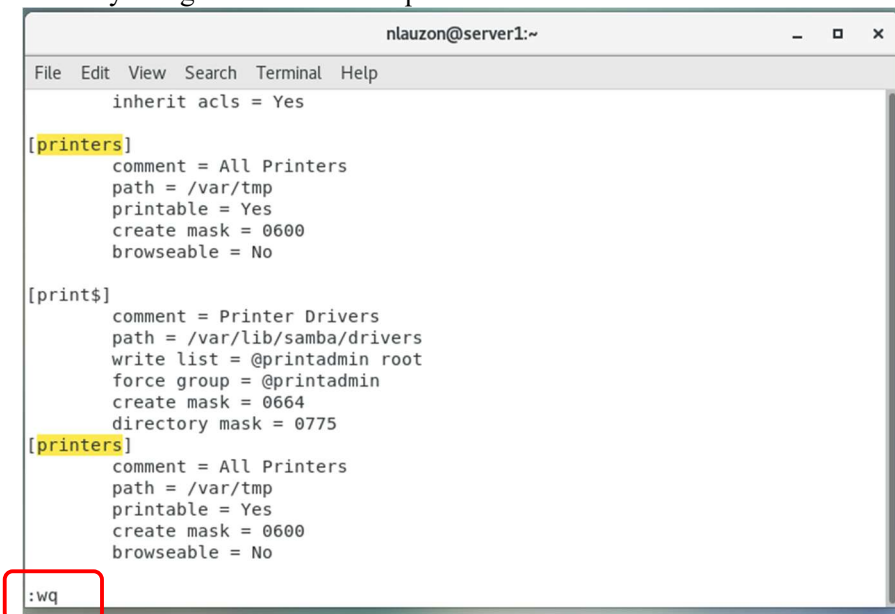
13. Copy the next 7 lines , starting on the line including [printers] and paste at the end of the file then save your change and exit vi.

Done by using in vi the command 7yy at the [printers] line, then p at the end of the file:



```
nlauzon@server1:~  
File Edit View Search Terminal Help  
inherit acs = Yes  
[printers]  
comment = All Printers  
path = /var/tmp  
printable = Yes  
create mask = 0600  
browseable = No  
[prints]  
comment = Printer Drivers  
path = /var/lib/samba/drivers  
write list = @printadmin root  
force group = @printadmin  
create mask = 0664  
directory mask = 0775  
[printers]  
comment = All Printers  
path = /var/tmp  
printable = Yes  
create mask = 0600  
browseable = No  
44,0-1 Bot
```

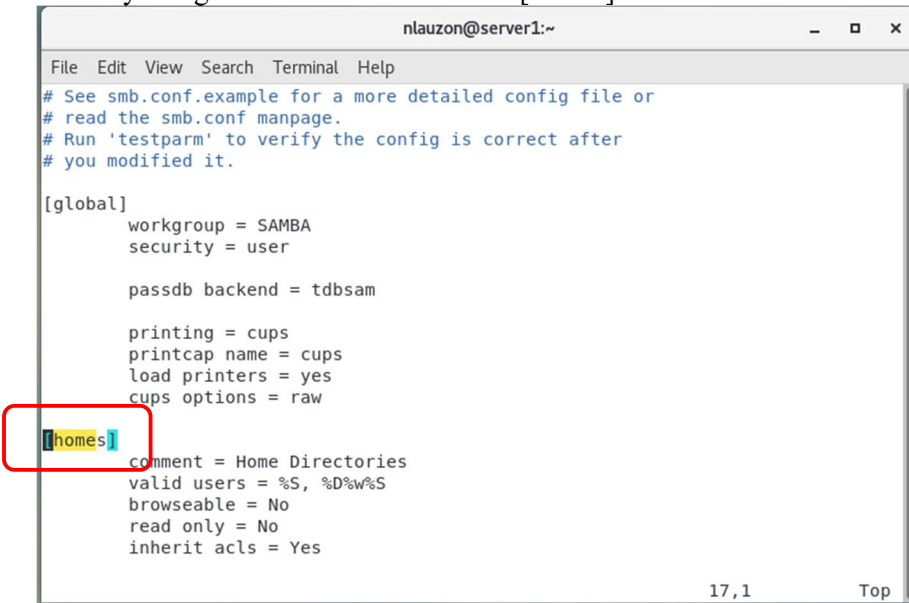
Done by using the command :wq



```
nlauzon@server1:~  
File Edit View Search Terminal Help  
inherit acs = Yes  
[printers]  
comment = All Printers  
path = /var/tmp  
printable = Yes  
create mask = 0600  
browseable = No  
[print$]  
comment = Printer Drivers  
path = /var/lib/samba/drivers  
write list = @printadmin root  
force group = @printadmin  
create mask = 0664  
directory mask = 0775  
[printers]  
comment = All Printers  
path = /var/tmp  
printable = Yes  
create mask = 0600  
browseable = No  
:wq
```

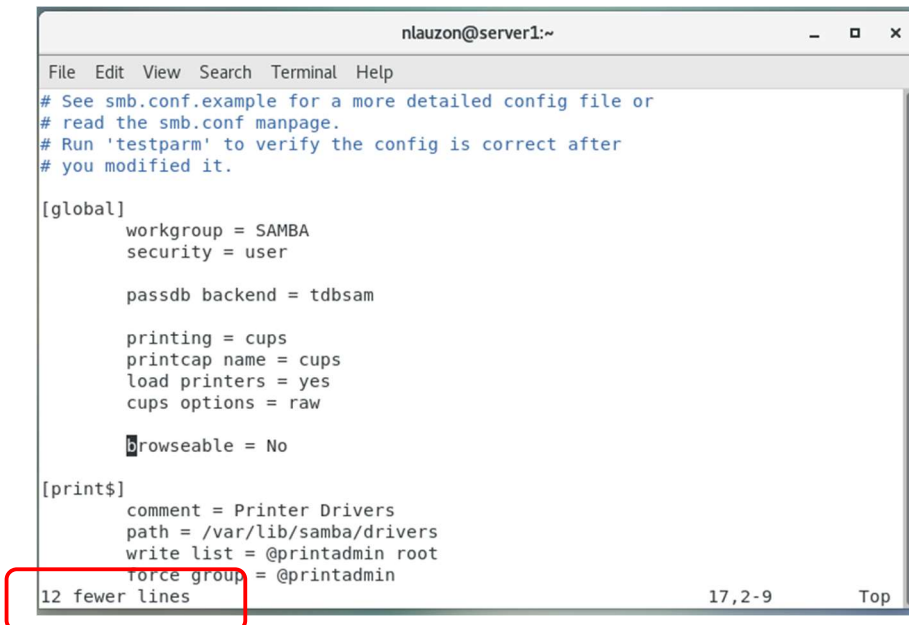
14. Open your file mysmb again using the editor vi and search for the word homes then delete the next 12 lines. Exit vi without saving your change.

Done by using the command 12dd at the [homes] line



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%w%S  
    browseable = No  
    read only = No  
    inherit acls = Yes
```

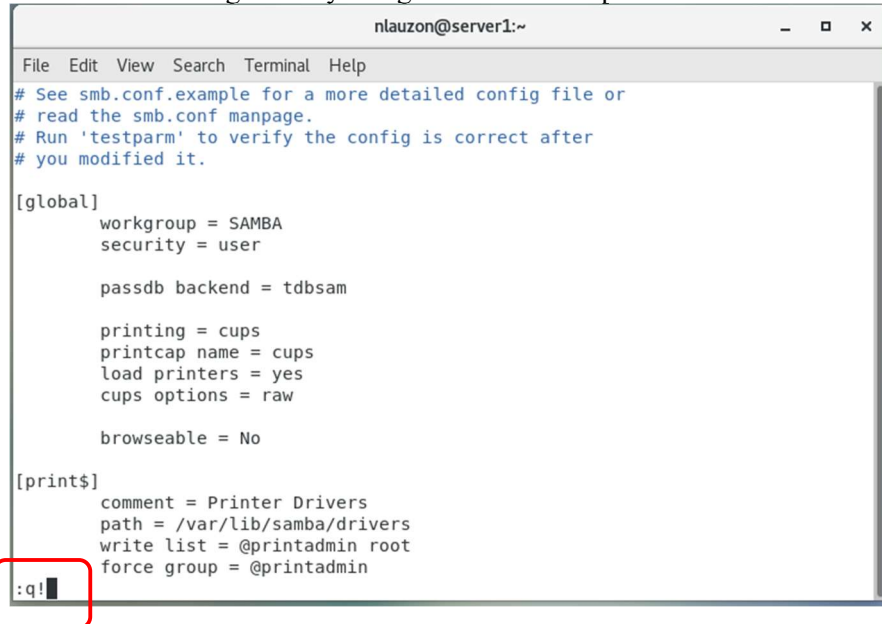
17,1 Top



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
    browseable = No  
  
[print$]  
    comment = Printer Drivers  
    path = /var/lib/samba/drivers  
    write list = @printadmin root  
    force group = @printadmin
```

12 fewer lines 17,2-9 Top

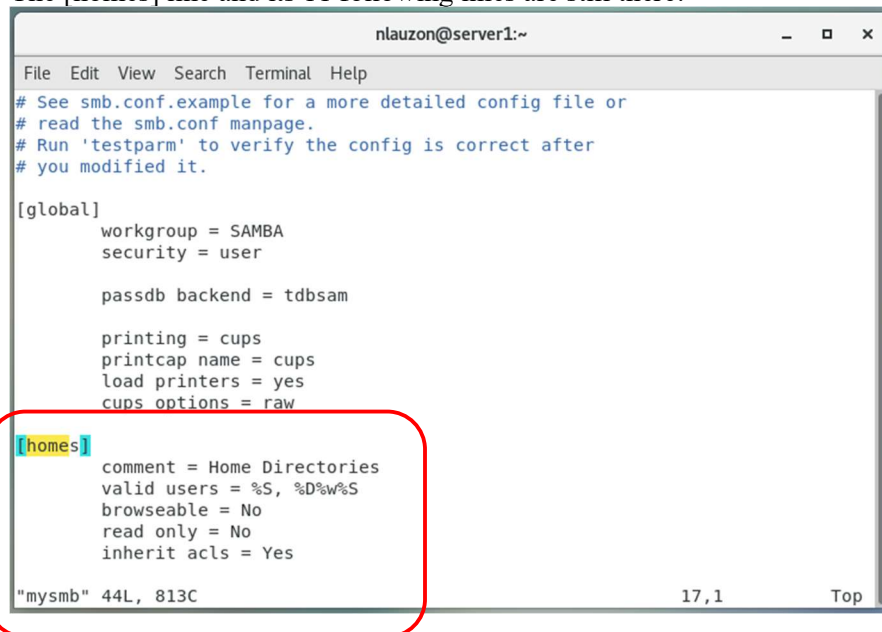
Exit without saving done by using the command :q!



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
    browseable = No  
  
[print$]  
    comment = Printer Drivers  
    path = /var/lib/samba/drivers  
    write list = @printadmin root  
    force group = @printadmin  
:q!
```

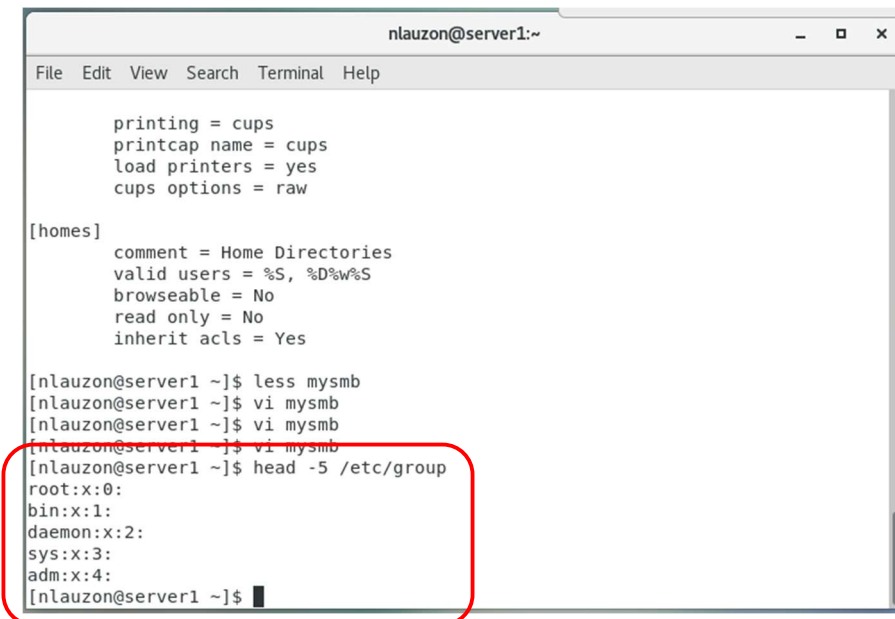
15. Open your file mysmb again using the editor vi and verify that your change was not saved.

The [homes] line and its 11 following lines are still there:



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
# See smb.conf.example for a more detailed config file or  
# read the smb.conf manpage.  
# Run 'testparm' to verify the config is correct after  
# you modified it.  
  
[global]  
    workgroup = SAMBA  
    security = user  
  
    passdb backend = tdbsam  
  
    printing = cups  
    printcap name = cups  
    load printers = yes  
    cups options = raw  
  
[homes]  
    comment = Home Directories  
    valid users = %S, %D%W%S  
    browseable = No  
    read only = No  
    inherit acls = Yes  
"mysmb" 44L, 813C 17,1 Top
```

16. Display the first 5 lines of the file /etc/group



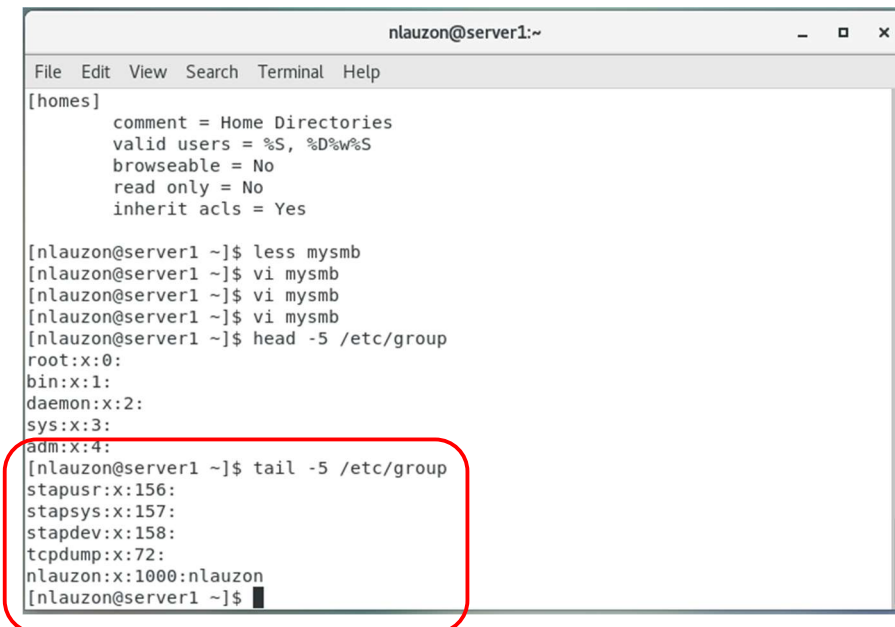
A terminal window titled 'nlauzon@server1:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The window shows the contents of the /etc/group file. The first five lines are highlighted with a red box. The output of the 'head -5 /etc/group' command is shown.

```
printing = cups
printcap name = cups
load printers = yes
cups options = raw

[homes]
comment = Home Directories
valid users = %S, %D%S
browseable = No
read only = No
inherit acls = Yes

[nlauzon@server1 ~]$ less mysmb
[nlauzon@server1 ~]$ vi mysmb
[nlauzon@server1 ~]$ vi mysmb
[nlauzon@server1 ~]$ vi mysmb
[nlauzon@server1 ~]$ head -5 /etc/group
root:x:0:
bin:x:1:
daemon:x:2:
sys:x:3:
adm:x:4:
[nlauzon@server1 ~]$
```

17. Display the last 5 lines of the file /etc/group

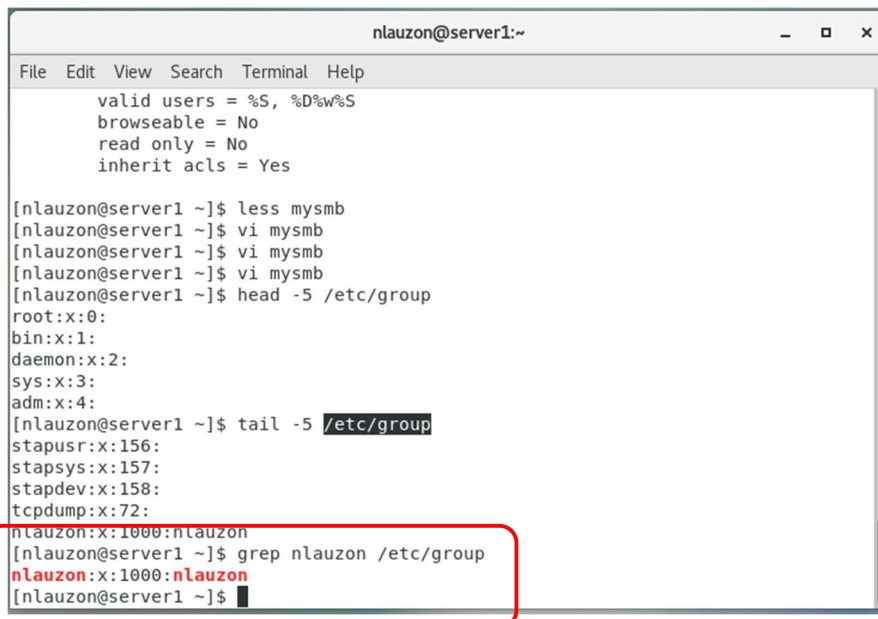


A terminal window titled 'nlauzon@server1:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The window shows the contents of the /etc/group file. The last five lines are highlighted with a red box. The output of the 'tail -5 /etc/group' command is shown.

```
[homes]
comment = Home Directories
valid users = %S, %D%S
browseable = No
read only = No
inherit acls = Yes

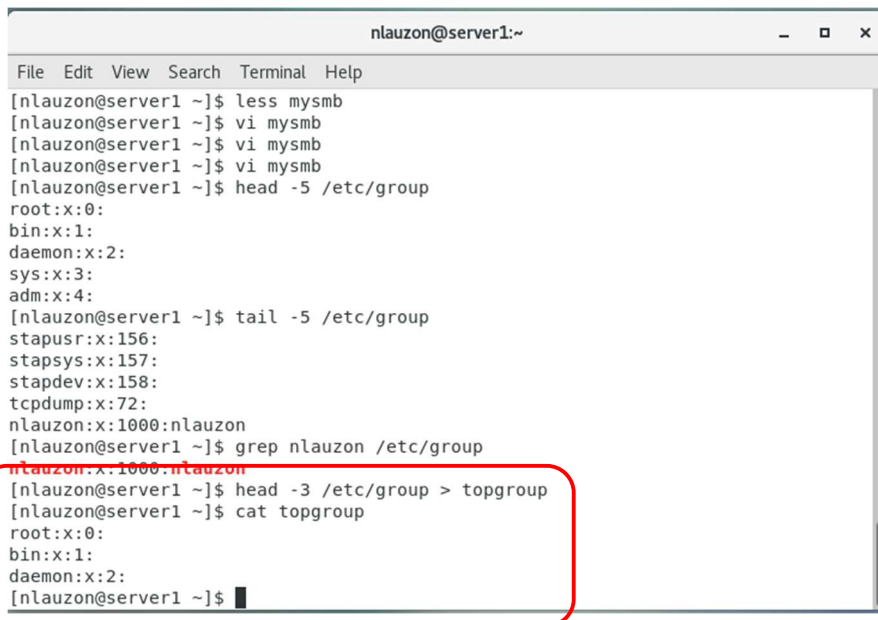
[nlauzon@server1 ~]$ less mysmb
[nlauzon@server1 ~]$ vi mysmb
[nlauzon@server1 ~]$ vi mysmb
[nlauzon@server1 ~]$ vi mysmb
[nlauzon@server1 ~]$ head -5 /etc/group
root:x:0:
bin:x:1:
daemon:x:2:
sys:x:3:
adm:x:4:
[nlauzon@server1 ~]$ tail -5 /etc/group
stapusr:x:156:
stapsys:x:157:
stapdev:x:158:
tcpdump:x:72:
nlauzon:x:1000:nlauzon
[nlauzon@server1 ~]$
```

18. Display the line relating to your username of the file /etc/group



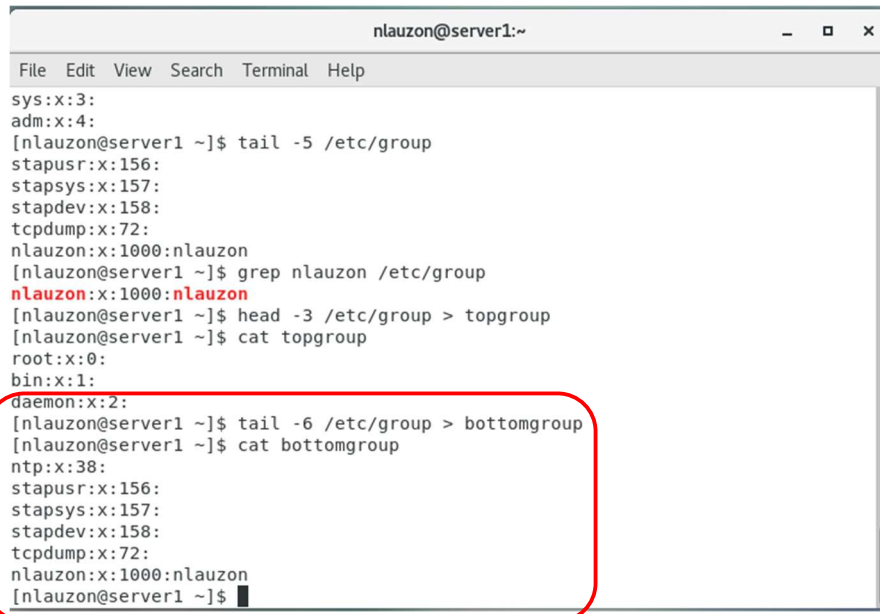
```
nlaizon@server1:~  
File Edit View Search Terminal Help  
valid users = %S, %D%S  
browseable = No  
read only = No  
inherit acls = Yes  
[nlaizon@server1 ~]$ less mysmb  
[nlaizon@server1 ~]$ vi mysmb  
[nlaizon@server1 ~]$ vi mysmb  
[nlaizon@server1 ~]$ vi mysmb  
[nlaizon@server1 ~]$ head -5 /etc/group  
root:x:0:  
bin:x:1:  
daemon:x:2:  
sys:x:3:  
adm:x:4:  
[nlaizon@server1 ~]$ tail -5 /etc/group  
stapusr:x:156:  
stapsys:x:157:  
stapdev:x:158:  
tcpdump:x:72:  
nlaizon:x:1000:nlaizon  
[nlaizon@server1 ~]$ grep nlaizon /etc/group  
nlaizon:x:1000:nlaizon  
[nlaizon@server1 ~]$
```

19. Display the first 3 lines of the file /etc/group and redirect the output to a new file named topgroup. Verify the content of the new file.



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
[nlaizon@server1 ~]$ less mysmb  
[nlaizon@server1 ~]$ vi mysmb  
[nlaizon@server1 ~]$ vi mysmb  
[nlaizon@server1 ~]$ vi mysmb  
[nlaizon@server1 ~]$ head -5 /etc/group  
root:x:0:  
bin:x:1:  
daemon:x:2:  
sys:x:3:  
adm:x:4:  
[nlaizon@server1 ~]$ tail -5 /etc/group  
stapusr:x:156:  
stapsys:x:157:  
stapdev:x:158:  
tcpdump:x:72:  
nlaizon:x:1000:nlaizon  
[nlaizon@server1 ~]$ grep nlaizon /etc/group  
nlaizon:x:1000:nlaizon  
[nlaizon@server1 ~]$ head -3 /etc/group > topgroup  
[nlaizon@server1 ~]$ cat topgroup  
root:x:0:  
bin:x:1:  
daemon:x:2:  
[nlaizon@server1 ~]$
```

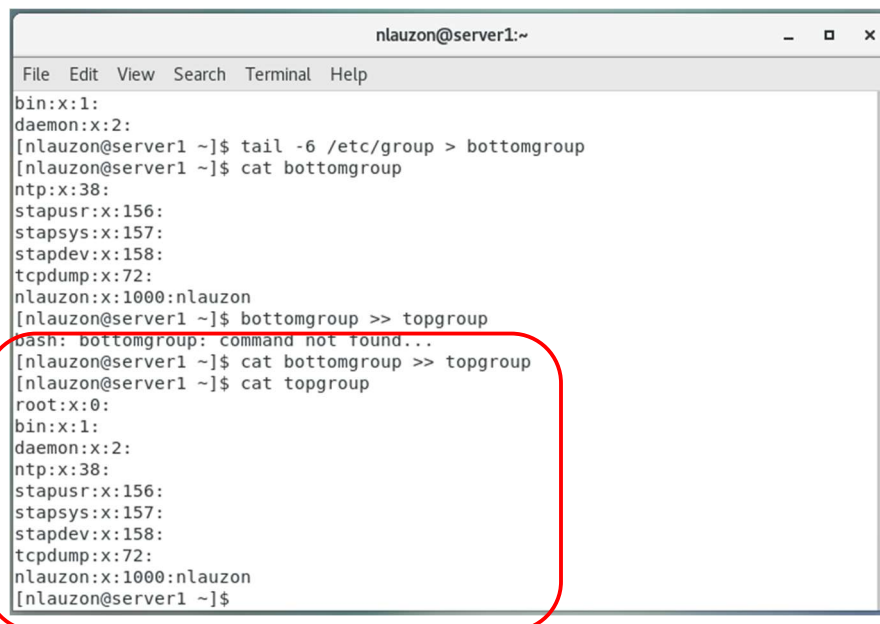
- 20. Display the last 6 lines of the file /etc/group and redirect the output to a new file named bottomgroup . Verify the content of the new file.**

A terminal window titled 'nlauzon@server1:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
sys:x:3:
adm:x:4:
[nlauzon@server1 ~]$ tail -5 /etc/group
stapusr:x:156:
stapsys:x:157:
stapdev:x:158:
tcpdump:x:72:
nlauzon:x:1000:nlauzon
[nlauzon@server1 ~]$ grep nlauzon /etc/group
nlauzon:x:1000:nlauzon
[nlauzon@server1 ~]$ head -3 /etc/group > topgroup
[nlauzon@server1 ~]$ cat topgroup
root:x:0:
bin:x:1:
daemon:x:2:
[nlauzon@server1 ~]$ tail -6 /etc/group > bottomgroup
[nlauzon@server1 ~]$ cat bottomgroup
ntp:x:38:
stapusr:x:156:
stapsys:x:157:
stapdev:x:158:
tcpdump:x:72:
nlauzon:x:1000:nlauzon
[nlauzon@server1 ~]$
```

The last three lines of the output (ntp, stapusr, stapsys, stapdev, tcpdump, nlauzon) are highlighted with a red box.

- 21. Append the file bottomgroup to the file topgroup and verify the new content of the file topgroup.**

A terminal window titled 'nlauzon@server1:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
bin:x:1:
daemon:x:2:
[nlauzon@server1 ~]$ tail -6 /etc/group > bottomgroup
[nlauzon@server1 ~]$ cat bottomgroup
ntp:x:38:
stapusr:x:156:
stapsys:x:157:
stapdev:x:158:
tcpdump:x:72:
nlauzon:x:1000:nlauzon
[nlauzon@server1 ~]$ bottomgroup >> topgroup
bash: bottomgroup: command not found...
[nlauzon@server1 ~]$ cat bottomgroup >> topgroup
[nlauzon@server1 ~]$ cat topgroup
root:x:0:
bin:x:1:
daemon:x:2:
ntp:x:38:
stapusr:x:156:
stapsys:x:157:
stapdev:x:158:
tcpdump:x:72:
nlauzon:x:1000:nlauzon
[nlauzon@server1 ~]$
```

The last five lines of the output (bin, daemon, ntp, stapusr, stapsys, stapdev, tcpdump, nlauzon) are highlighted with a red box.

22. Rename the file topgroup to mygroup

```
nlaunon@server1:~
File Edit View Search Terminal Help
ntp:x:38:
stapusr:x:156:
stapsys:x:157:
stapdev:x:158:
tcpdump:x:72:
nlaunon:x:1000:nlaunon
[nlaunon@server1 ~]$ ls
bottomgroup  doc3      maintenance PRINTS      sort2      topgroup
computers    DOCS      Music       pro         sort3      Trip3
Desktop      Documents mypasswd   PROJECTS    sortR      Trips
dir1         Downloads myservices Public       Templates  Videos
dir2         file2     mysmb       shopping_list Tmp1
doc1         Foods     newservices smb          Tmp2
doc2         mailports Pictures     sort1       Tmp3
[nlaunon@server1 ~]$ mv topgroup mygroup
[nlaunon@server1 ~]$ ls
bottomgroup  doc3      maintenance Pictures     sort1      Tmp3
computers    DOCS      Music       PRINTS      sort2      Trip3
Desktop      Documents mygroup     pro         sort3      Trips
dir1         Downloads mypasswd   PROJECTS    sortR      Videos
dir2         file2     myservices Public       Templates
doc1         Foods     mysmb       shopping_list Tmp1
doc2         mailports newservices smb          Tmp2
[nlaunon@server1 ~]$
```

23. Find all directories starting with “yum” under the /usr/share/doc directory.

In here, I used the option -iname, to see if there were any uppercase instances.

```
nlaunon@server1:~
File Edit View Search Terminal Help
[nlaunon@server1 ~]$ ls
bottomgroup  doc3      maintenance PRINTS      sort2      topgroup
computers    DOCS      Music       pro         sort3      Trip3
Desktop      Documents mypasswd   PROJECTS    sortR      Trips
dir1         Downloads myservices Public       Templates  Videos
dir2         file2     mysmb       shopping_list Tmp1
doc1         Foods     newservices smb          Tmp2
doc2         mailports Pictures     sort1       Tmp3
[nlaunon@server1 ~]$ mv topgroup mygroup
[nlaunon@server1 ~]$ ls
bottomgroup  doc3      maintenance Pictures     sort1      Tmp3
computers    DOCS      Music       PRINTS      sort2      Trip3
Desktop      Documents mygroup     pro         sort3      Trips
dir1         Downloads mypasswd   PROJECTS    sortR      Videos
dir2         file2     myservices Public       Templates
doc1         Foods     mysmb       shopping_list Tmp1
doc2         mailports newservices smb          Tmp2
[nlaunon@server1 ~]$ find /usr/share/doc -type d -iname yum*
/usr/share/doc/yum-metadata-parser-1.1.4
/usr/share/doc/yum-plugin-fastestmirror-1.1.31
/usr/share/doc/yum-3.4.3
/usr/share/doc/yum-utils-1.1.31
/usr/share/doc/yum-langpacks-0.4.2
[nlaunon@server1 ~]$
```

24. Redirect the precedent output to a new file named yumdir. Verify the content of the new file.

```

nlaizon@server1:~
File Edit View Search Terminal Help
doc2      mailports Pictures      sort1      Tmp3
[nlaizon@server1 ~]$ mv topgroup mygroup
[nlaizon@server1 ~]$ ls
bottomgroup doc3      maintenance Pictures      sort1      Tmp3
computers   DOCS      Music        PRINTS       sort2      Trip3
Desktop     Documents mygroup       pro          sort3      Trips
dir1        Downloads mypasswd      PROJECTS     sortR      Videos
dir2        file2     myservices    Public       Templates
doc1        Foods     mysmb        shopping_list Tmp1
doc2        mailports newservices  smb          Tmp2
[nlaizon@server1 ~]$ find /usr/share/doc -type d -iname yum*
/usr/share/doc/yum-metadata-parser-1.1.4
/usr/share/doc/yum-plugin-fastestmirror-1.1.31
/usr/share/doc/yum-3.4.3
/usr/share/doc/yum-utils-1.1.31
/usr/share/doc/yum-langpacks-0.4.2
[nlaizon@server1 ~]$ find /usr/share/doc -type d -iname yum* > yumdir
[nlaizon@server1 ~]$ cat yumdir
/usr/share/doc/yum-metadata-parser-1.1.4
/usr/share/doc/yum-plugin-fastestmirror-1.1.31
/usr/share/doc/yum-3.4.3
/usr/share/doc/yum-utils-1.1.31
/usr/share/doc/yum-langpacks-0.4.2
[nlaizon@server1 ~]$

```

25. Find all filenames starting with “api” and ending in “.html” under the /usr/share/doc directory.

Again, I used the option -iname, to see if there were any uppercase instances. I also highlight the duplicate file at the root our discussion in class on February 28.

```

nlaizon@server1:~
File Edit View Search Terminal Help
/usr/share/doc/yum-utils-1.1.31
/usr/share/doc/yum-langpacks-0.4.2
[nlaizon@server1 ~]$ find /usr/share/doc -type f -iname api*.html
/usr/share/doc/libsample-rate-0.1.8/api.html
/usr/share/doc/libsample-rate-0.1.8/api_callback.html
/usr/share/doc/libsample-rate-0.1.8/api_full.html
/usr/share/doc/libsample-rate-0.1.8/api_misc.html
/usr/share/doc/libsample-rate-0.1.8/api_simple.html
/usr/share/doc/python-kitchen-1.1.1/html/api-collections.html
/usr/share/doc/python-kitchen-1.1.1/html/api-exceptions.html
/usr/share/doc/python-kitchen-1.1.1/html/api-il8n.html
/usr/share/doc/python-kitchen-1.1.1/html/api-iterutils.html
/usr/share/doc/python-kitchen-1.1.1/html/api-overview.html
/usr/share/doc/python-kitchen-1.1.1/html/api-pycompat24.html
/usr/share/doc/python-kitchen-1.1.1/html/api-pycompat25.html
/usr/share/doc/python-kitchen-1.1.1/html/api-pycompat27.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text-converters.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text-display.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text-misc.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text-utf8.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text.html
/usr/share/doc/python-kitchen-1.1.1/html/api-versioning.html
/usr/share/doc/neon-0.30.0/html/api.html
[nlaizon@server1 ~]$

```


26. Create a directory named html on your home directory.

```

nlaizon@server1:~
File Edit View Search Terminal Help
/usr/share/doc/python-kitchen-1.1.1/html/api-text-misc.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text-utf8.html
/usr/share/doc/python-kitchen-1.1.1/html/api-text.html
/usr/share/doc/python-kitchen-1.1.1/html/api-versioning.html
/usr/share/doc/neon-0.30.0/html/api.html
[nlaizon@server1 ~]$ ls
bottomgroup  doc3      maintenance  Pictures      sort1      Tmp3
computers    DOCS      Music        PRINTS        sort2      Trip3
Desktop      Documents mygroup      pro           sort3      Trips
dir1         Downloads mypasswd     PROJECTS      sortR      Videos
dir2         file2     myservices   Public        Templates  yumdir
doc1         Foods     mysmb        shopping_list Tmp1
doc2         mailports newservices  smb           Tmp2
[nlaizon@server1 ~]$ mkdir html
[nlaizon@server1 ~]$
[nlaizon@server1 ~]$ ls
bottomgroup  doc3      mailports  newservices  smb      Tmp2
computers    DOCS      maintenance Pictures      sort1      Tmp3
Desktop      Documents Music       PRINTS        sort2      Trip3
dir1         Downloads mygroup    pro           sort3      Trips
dir2         file2     mypasswd   PROJECTS      sortR      Videos
doc1         Foods     myservices Public        Templates  yumdir
doc2         html      mysmb      shopping_list Tmp1
[nlaizon@server1 ~]$

```

27. Copy the result of the precedent search to your new directory html.

I applied here the default copy command, and I remember you using the overwrite warning option `-i`. In both instances, yours in class and mine here, one of the files among the 20 is not copied. This leads me to muse about the possibility of having tens of thousands of files to copy, with hundreds and even thousands of duplicates...

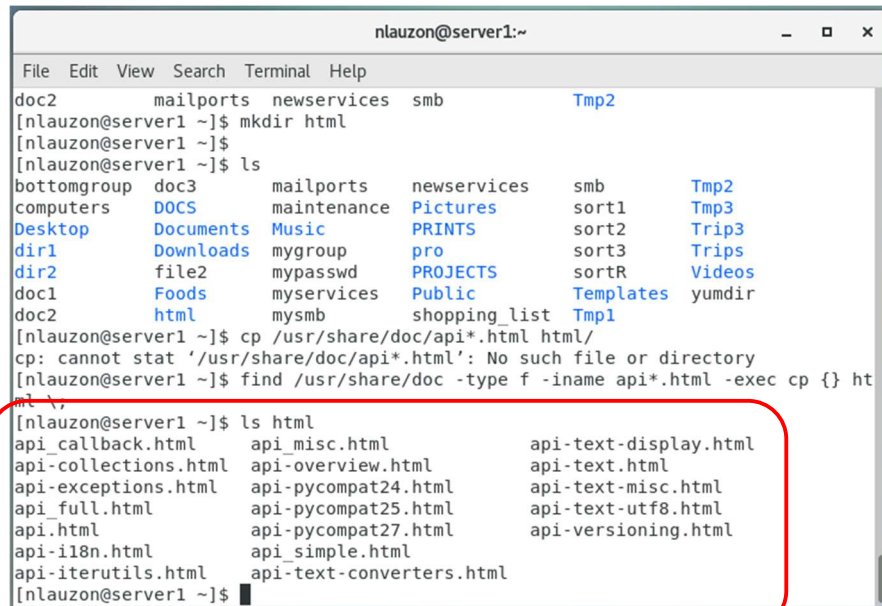
```

nlaizon@server1:~
File Edit View Search Terminal Help
doc2      mailports  newservices  smb      Tmp2
[nlaizon@server1 ~]$ mkdir html
[nlaizon@server1 ~]$
[nlaizon@server1 ~]$ ls
bottomgroup  doc3      mailports  newservices  smb      Tmp2
computers    DOCS      maintenance Pictures      sort1      Tmp3
Desktop      Documents Music       PRINTS        sort2      Trip3
dir1         Downloads mygroup    pro           sort3      Trips
dir2         file2     mypasswd   PROJECTS      sortR      Videos
doc1         Foods     myservices Public        Templates  yumdir
doc2         html      mysmb      shopping_list Tmp1
[nlaizon@server1 ~]$ cp /usr/share/doc/api*.html html/
cp: cannot stat '/usr/share/doc/api*.html': No such file or directory
[nlaizon@server1 ~]$ find /usr/share/doc -type f -iname api*.html -exec cp {} ht
ml \;
[nlaizon@server1 ~]$ ls html
api_callback.html      api_misc.html      api-text-display.html
api-collections.html  api-overview.html  api-text.html
api-exceptions.html   api-pycompat24.html api-text-misc.html
api_full.html          api-pycompat25.html api-text-utf8.html
api.html               api-pycompat27.html api-versioning.html
api-i18n.html          api_simple.html
api-iterutils.html     api-text-converters.html
[nlaizon@server1 ~]$

```

28. Verify the content of your new directory html

As I mentioned in the previous question, only 19 files are copied, and not the 20 in the original directories.



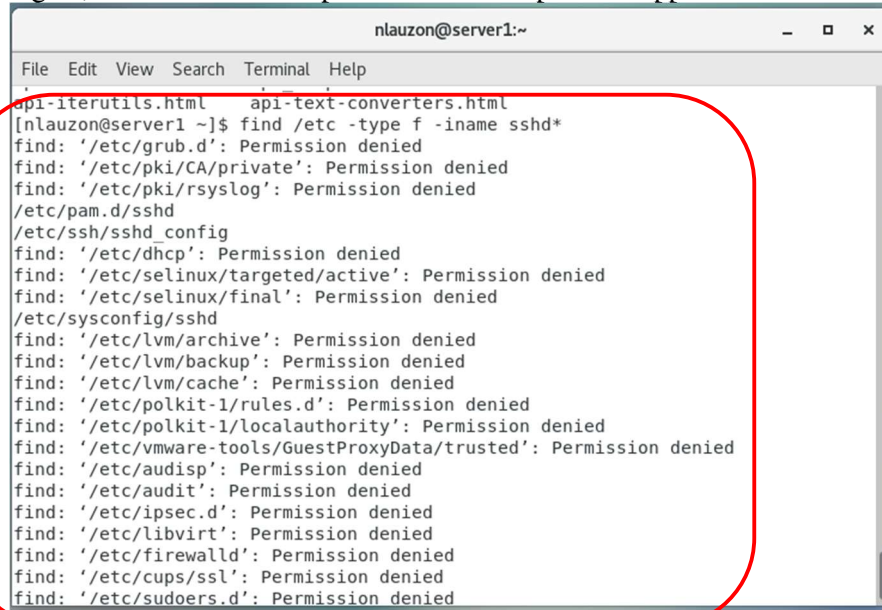
```

nlaunon@server1:~
File Edit View Search Terminal Help
doc2      mailports  newservices  smb      Tmp2
[nlaunon@server1 ~]$ mkdir html
[nlaunon@server1 ~]$
[nlaunon@server1 ~]$ ls
bottomgroup  doc3      mailports  newservices  smb      Tmp2
computers    DOCS      maintenance Pictures      sort1    Tmp3
Desktop      Documents Music      PRINTS      sort2    Trip3
dir1         Downloads mygroup    pro         sort3    Trips
dir2         file2     mypasswd   PROJECTS    sortR    Videos
doc1         Foods     myservices Public       Templates yumdir
doc2         html      mysmb      shopping_list Tmp1
[nlaunon@server1 ~]$ cp /usr/share/doc/api*.html html/
cp: cannot stat '/usr/share/doc/api*.html': No such file or directory
[nlaunon@server1 ~]$ find /usr/share/doc -type f -iname api*.html -exec cp {} ht
ml \;
[nlaunon@server1 ~]$ ls html
api_callback.html      api_misc.html          api-text-display.html
api-collections.html  api-overview.html      api-text.html
api-exceptions.html   api-pycompat24.html    api-text-misc.html
api_full.html          api-pycompat25.html    api-text-utf8.html
api.html              api-pycompat27.html    api-versioning.html
api-il18n.html         api_simple.html
api-iterutils.html     api-text-converters.html
[nlaunon@server1 ~]$

```

29. Find all files under the /etc directory with the name is "sshd"

Again, I used the -iname option to check for possible uppercases instances.

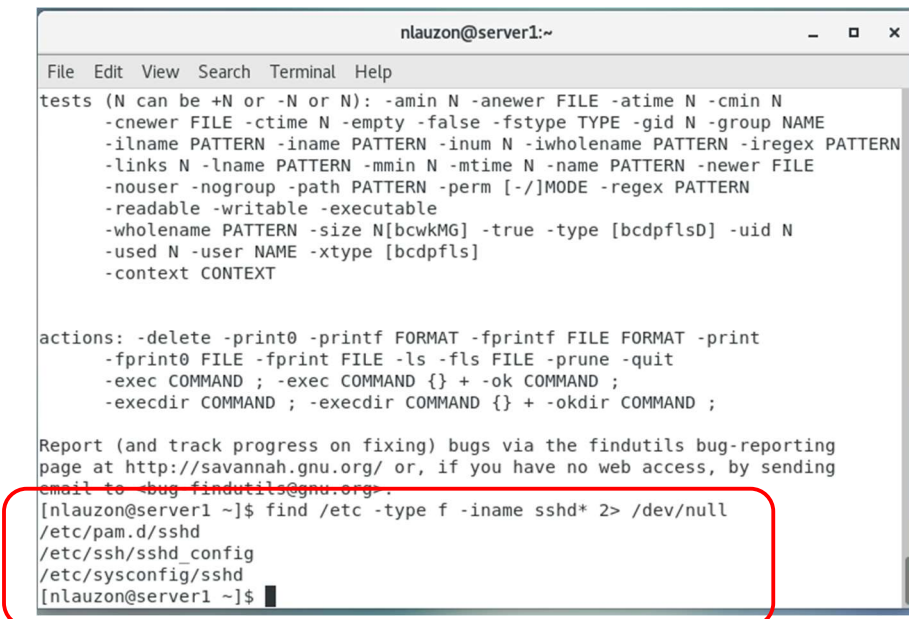


```

nlaunon@server1:~
File Edit View Search Terminal Help
api-iterutils.html      api-text-converters.html
[nlaunon@server1 ~]$ find /etc -type f -iname sshd*
find: '/etc/grub.d': Permission denied
find: '/etc/pki/CA/private': Permission denied
find: '/etc/pki/rsyslog': Permission denied
/etc/pam.d/sshd
/etc/ssh/sshd_config
find: '/etc/dhcp': Permission denied
find: '/etc/selinux/targeted/active': Permission denied
find: '/etc/selinux/final': Permission denied
/etc/sysconfig/sshd
find: '/etc/lvm/archive': Permission denied
find: '/etc/lvm/backup': Permission denied
find: '/etc/lvm/cache': Permission denied
find: '/etc/polkit-1/rules.d': Permission denied
find: '/etc/polkit-1/localauthority': Permission denied
find: '/etc/vmware-tools/GuestProxyData/trusted': Permission denied
find: '/etc/audisp': Permission denied
find: '/etc/audit': Permission denied
find: '/etc/ipsec.d': Permission denied
find: '/etc/libvirt': Permission denied
find: '/etc/firewalld': Permission denied
find: '/etc/cups/ssl': Permission denied
find: '/etc/sudoers.d': Permission denied

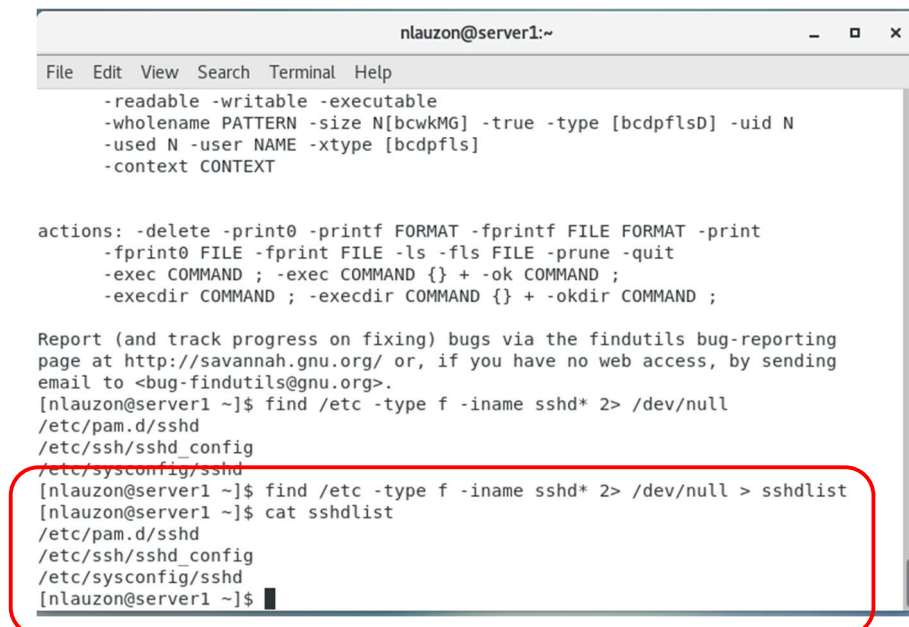
```


30. Suppress the display of the "permission denied" messages.



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
tests (N can be +N or -N or N): -amin N -anewer FILE -atime N -cmin N  
-cnewer FILE -ctime N -empty -false -fstype TYPE -gid N -group NAME  
-ilname PATTERN -iname PATTERN -inum N -iwholename PATTERN -iregex PATTERN  
-links N -lname PATTERN -mmin N -mtime N -name PATTERN -newer FILE  
-nouser -nogroup -path PATTERN -perm [-/]MODE -regex PATTERN  
-readable -writable -executable  
-wholename PATTERN -size N[bcwkMG] -true -type [bcdpflsD] -uid N  
-used N -user NAME -xtype [bcdpfls]  
-context CONTEXT  
  
actions: -delete -print0 -printf FORMAT -fprintf FILE FORMAT -print  
-fprintf0 FILE -fprintf FILE -ls -fls FILE -prune -quit  
-exec COMMAND ; -exec COMMAND {} + -ok COMMAND ;  
-execdir COMMAND ; -execdir COMMAND {} + -okdir COMMAND ;  
  
Report (and track progress on fixing) bugs via the findutils bug-reporting  
page at http://savannah.gnu.org/ or, if you have no web access, by sending  
email to <bug-findutils@gnu.org>.  
[nlaizon@server1 ~]$ find /etc -type f -iname sshd* 2> /dev/null  
/etc/pam.d/sshd  
/etc/ssh/sshd_config  
/etc/sysconfig/sshd  
[nlaizon@server1 ~]$
```

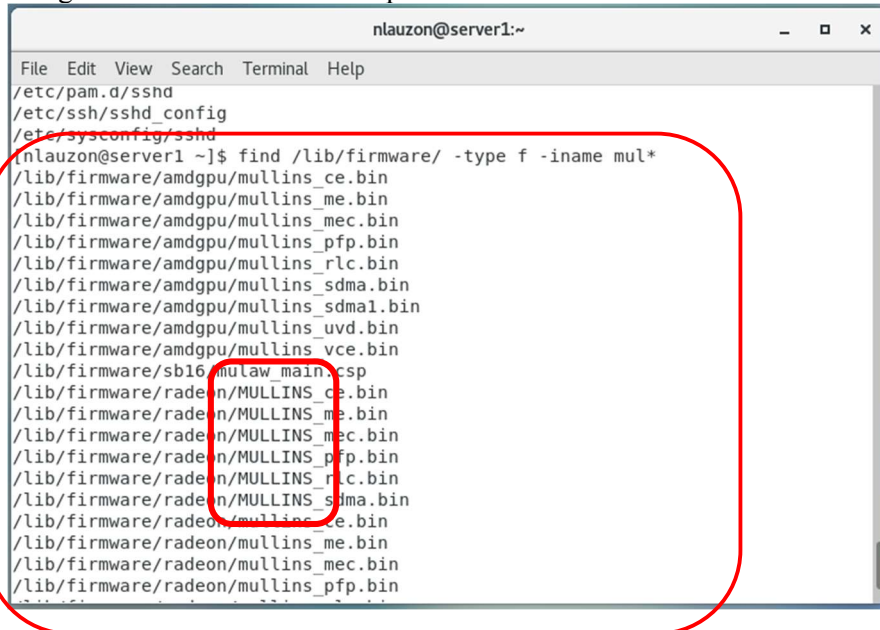
31. Redirect the precedent output to a new file named sshdlist. Verify the content of the new file.



```
nlaizon@server1:~  
File Edit View Search Terminal Help  
-readable -writable -executable  
-wholename PATTERN -size N[bcwkMG] -true -type [bcdpflsD] -uid N  
-used N -user NAME -xtype [bcdpfls]  
-context CONTEXT  
  
actions: -delete -print0 -printf FORMAT -fprintf FILE FORMAT -print  
-fprintf0 FILE -fprintf FILE -ls -fls FILE -prune -quit  
-exec COMMAND ; -exec COMMAND {} + -ok COMMAND ;  
-execdir COMMAND ; -execdir COMMAND {} + -okdir COMMAND ;  
  
Report (and track progress on fixing) bugs via the findutils bug-reporting  
page at http://savannah.gnu.org/ or, if you have no web access, by sending  
email to <bug-findutils@gnu.org>.  
[nlaizon@server1 ~]$ find /etc -type f -iname sshd* 2> /dev/null > sshdlist  
[nlaizon@server1 ~]$ cat sshdlist  
/etc/pam.d/sshd  
/etc/ssh/sshd_config  
/etc/sysconfig/sshd  
[nlaizon@server1 ~]$
```

32. Find all filenames under the `/lib/firmware/` directory starting with “mul” or “MUL”

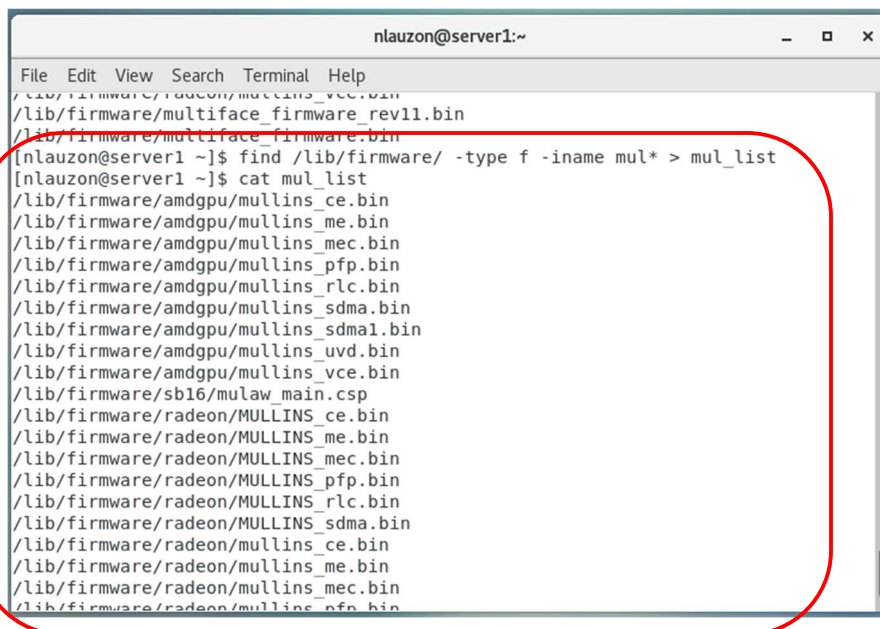
A legitimate use of the `-iname` option this time.



A terminal window titled 'nlauzon@server1:~' showing the output of the command `find /lib/firmware/ -type f -iname mul*`. The output lists various firmware files in the `/lib/firmware/` directory, including `amdgpu/mullins_*.bin` and `radeon/MULLINS_*.bin`. A red rounded rectangle highlights the entire output list.

```
nlauzon@server1 ~]$ find /lib/firmware/ -type f -iname mul*
/lib/firmware/amdgpu/mullins_ce.bin
/lib/firmware/amdgpu/mullins_me.bin
/lib/firmware/amdgpu/mullins_mec.bin
/lib/firmware/amdgpu/mullins_pfp.bin
/lib/firmware/amdgpu/mullins_rlc.bin
/lib/firmware/amdgpu/mullins_sdma.bin
/lib/firmware/amdgpu/mullins_sdma1.bin
/lib/firmware/amdgpu/mullins_uvd.bin
/lib/firmware/amdgpu/mullins_vce.bin
/lib/firmware/sb16/mulaw_main.csp
/lib/firmware/radeon/MULLINS_ce.bin
/lib/firmware/radeon/MULLINS_me.bin
/lib/firmware/radeon/MULLINS_mec.bin
/lib/firmware/radeon/MULLINS_pfp.bin
/lib/firmware/radeon/MULLINS_rlc.bin
/lib/firmware/radeon/MULLINS_sdma.bin
/lib/firmware/radeon/mullins_ce.bin
/lib/firmware/radeon/mullins_me.bin
/lib/firmware/radeon/mullins_mec.bin
/lib/firmware/radeon/mullins_pfp.bin
```

33. Redirect the precedent output to a new file named `mul_list`. Verify the content of the new file.



A terminal window titled 'nlauzon@server1:~' showing the command `find /lib/firmware/ -type f -iname mul* > mul_list` and its execution. Below, the command `cat mul_list` is used to verify the contents of the newly created file. The output of `cat mul_list` is identical to the output of the `find` command in the previous screenshot. A red rounded rectangle highlights the output of the `cat` command.

```
nlauzon@server1 ~]$ find /lib/firmware/ -type f -iname mul* > mul_list
nlauzon@server1 ~]$ cat mul_list
/lib/firmware/amdgpu/mullins_ce.bin
/lib/firmware/amdgpu/mullins_me.bin
/lib/firmware/amdgpu/mullins_mec.bin
/lib/firmware/amdgpu/mullins_pfp.bin
/lib/firmware/amdgpu/mullins_rlc.bin
/lib/firmware/amdgpu/mullins_sdma.bin
/lib/firmware/amdgpu/mullins_sdma1.bin
/lib/firmware/amdgpu/mullins_uvd.bin
/lib/firmware/amdgpu/mullins_vce.bin
/lib/firmware/sb16/mulaw_main.csp
/lib/firmware/radeon/MULLINS_ce.bin
/lib/firmware/radeon/MULLINS_me.bin
/lib/firmware/radeon/MULLINS_mec.bin
/lib/firmware/radeon/MULLINS_pfp.bin
/lib/firmware/radeon/MULLINS_rlc.bin
/lib/firmware/radeon/MULLINS_sdma.bin
/lib/firmware/radeon/mullins_ce.bin
/lib/firmware/radeon/mullins_me.bin
/lib/firmware/radeon/mullins_mec.bin
/lib/firmware/radeon/mullins_pfp.bin
```