

Huỳnh Tấn Dương

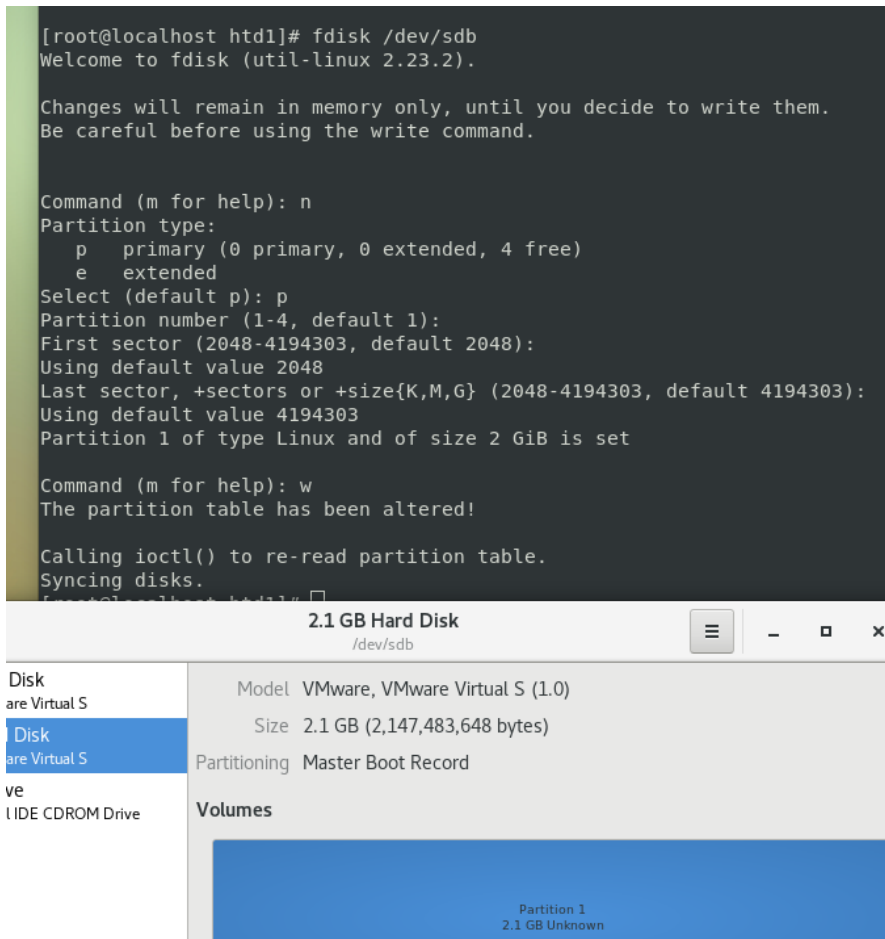
3122410061

Hoàn thành 6/6 phần 1+phần 2 +5 ví dụ shell

Bài 1/



Bài 2/



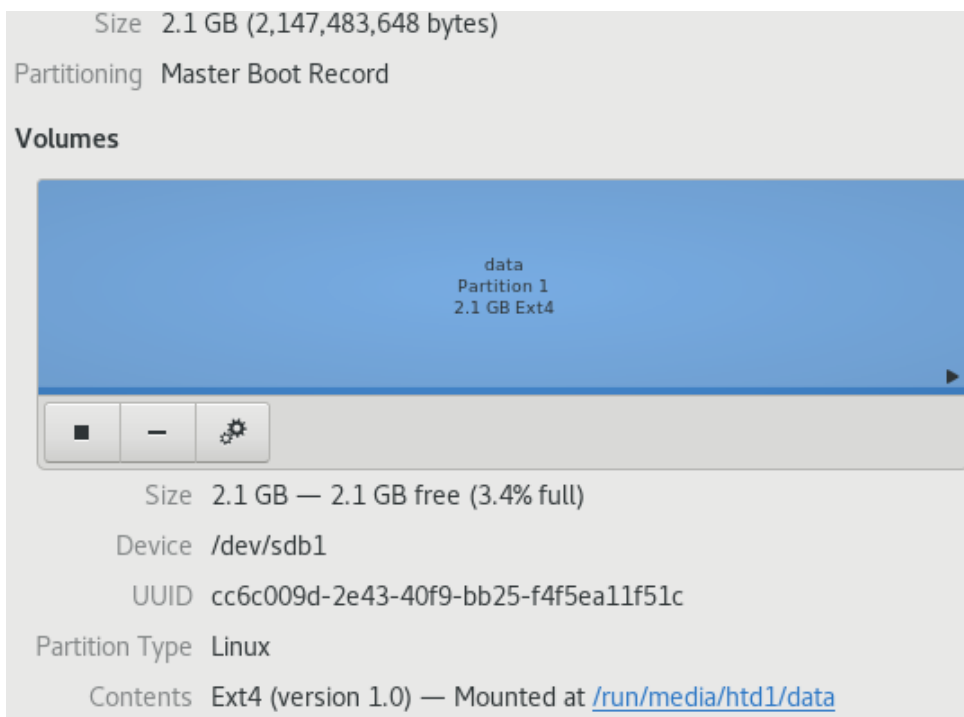
```
[root@localhost htd1]# sudo mke2fs -t ext4 -L data /dev/sdb1
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=data
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
131072 inodes, 524032 blocks
26201 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

[root@localhost htd1]#
```

Bài 3/

ổ đĩa mount ở /run/media/htd1/data nên để tạo thư mục /data/u1,u2 trên ổ đĩa mới thì phải tạo trong thư mục /run/media/htd1/data/u1,u2 (lý do mount tại đường dẫn này nhằm tạo label data cho ổ đĩa”



```
File Edit View Search Terminal Help
[root@localhost ~]# cd /run/media/htd1/data
[root@localhost data]# mkdir u1
[root@localhost data]# mkdir u2
[root@localhost data]#
```

Bài 4/

```
File Edit View Search Terminal Help
[root@localhost ~]# useradd u1
[root@localhost ~]# useradd u2
[root@localhost ~]#
```

```
File Edit View Search Terminal Help
[root@localhost ~]# chmod 700 /run/media/htd1/data/u1
[root@localhost ~]# chmod 700 /run/media/htd1/data/u2
```

```
[root@localhost ~]# sudo chown u1 /run/media/htd1/data/u1
[root@localhost ~]# sudo chown u2 /run/media/htd1/data/u2
```

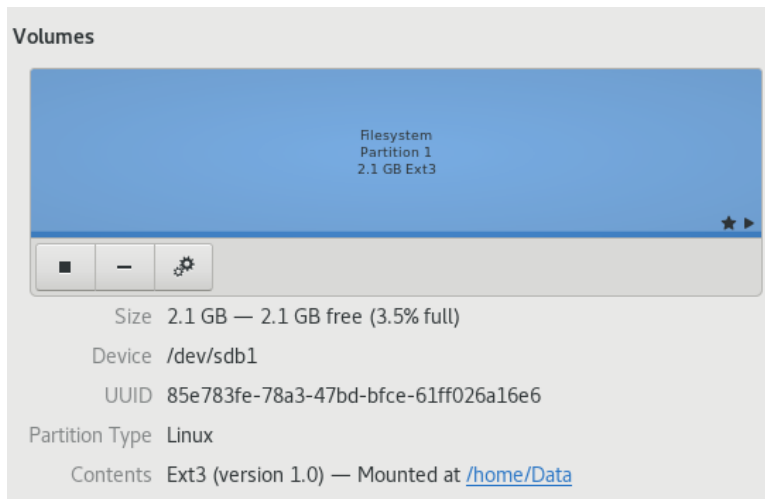
Bài 6/

```
[root@localhost htd1]# fdisk /dev/sdb
```

```
[root@localhost htd1]# mkfs -t ext3 /dev/sdb1
```

```
[root@localhost home]# mkdir Data
```

```
[root@localhost home]# mount /dev/sdb1 ./Data
```



```
[root@localhost etc]# nano ./fstab
```

```
GNU nano 2.3.1 File: ./fstab
#
# /etc/fstab
# Created by anaconda on Thu Mar 14 18:12:40 2024
#
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
UUID=6c87b56b-4a07-4533-9d1f-bf172ec0c887 / xfs defaults 0 0
UUID=7f2eae44-9210-4f80-ae0f-6ee5dc21c689 /boot xfs defaults 0 0
UUID=1db9ec13-f09c-4632-a32c-a0f12b6b6cd3 swap swap defaults 0 0
/dev/sdb1 /home/Data ext3 defaults,usrquota,grpquota 1 2
```

```
[root@localhost etc]# quotacheck -cug /home/Data
```

(Bước này nhằm tạo 2 file aquota.user và aquota.group tự động)

Tạo lại 2 thư mục u1 cho user u1 quyền sử dụng và u2 cho u2 sử dụng trong /home/Data/

```
[root@localhost home]# mkdir u1
```

```
[root@localhost home]# mkdir u2
```

Gán quyền cho thư mục ứng với user tương ứng

```
[root@localhost home]# chmod 700 /home/Data/u1 u1
```

```
[root@localhost home]# chmod 700 /home/Data/u2 u2
```

Chuyển chủ sở hữu thư mục về đúng user

```
[root@localhost home]# chown u1 ./u1
```

```
[root@localhost home]# chown u2 ./u2
```

Cấu hình quota soft và hard từ 0 ->2048KB(2MB)

```
[root@localhost home]# edquota -u u1
```

```
Disk quotas for user u1 (uid 1004):  
Filesystem      blocks      soft      hard      inodes      soft      hard  
/dev/sdb1        2048      2048      2048        220         0         0
```

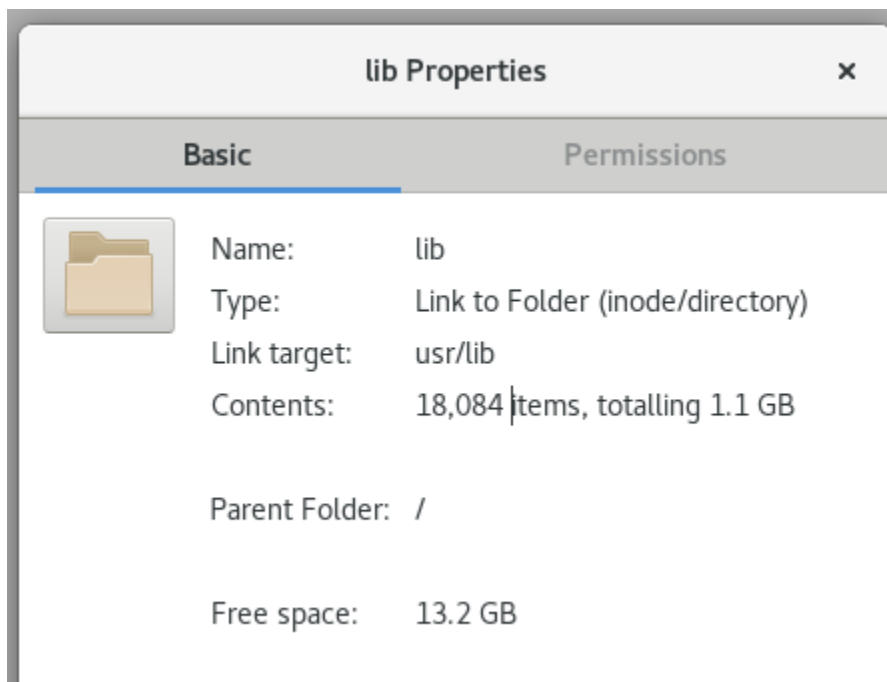
```
[root@localhost home]# edquota -u u2
```

```
Disk quotas for user u2 (uid 1005):  
Filesystem      blocks      soft      hard      inodes      soft      hard  
/dev/sdb1        2048      2048      2048        220         0         0
```

Sau khi cấu hình xong thì khởi động quota

```
[root@localhost home]# quotaon /dev/sdb1
```

Kiểm tra thư mục dùng để test là /home/lib/ có kích thước 1.1GB >2MB



Đăng nhập bằng user u1 thử truy cập folder /home/Data/u2 của user u2 thì bị từ chối

```
[ul@localhost home]$ ls
Data hduong htd1 u1 u2 user1 user2
[ul@localhost home]$ cd Data
[ul@localhost Data]$ ls
aquota.group aquota.user lost+found u1 u2
[ul@localhost Data]$ cd u2
bash: cd: u2: Permission denied
[ul@localhost Data]$ cd u1
[ul@localhost u1]$ ls
```

Ta thực hiện copy file /lib/ (1,1GB) sang folder /home/Data/u1 (quota 2MB) của user u1 thì ta thấy báo lỗi vì kích thước không phù hợp

```
[ul@localhost u1]$ cp -rf /lib/ /home/Data/u1
sdb1: write failed, user block limit reached.
cp: error writing '/home/Data/u1/lib/grub/i386-pc/mpi.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/mpi.mod': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/grub/i386-pc/pxeboot.image': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/pxeboot.image': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/grub/i386-pc/msdospart.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/msdospart.mod': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/grub/i386-pc/pxeboot.img': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/pxeboot.img': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/grub/i386-pc/multiboot.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/multiboot.mod': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/grub/i386-pc/pxechain.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/pxechain.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/multiboot2.mod': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/grub/i386-pc/raid5rec.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/grub/i386-pc/raid5rec.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/nativedisk.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/true.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/net.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/truecrypt.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/newc.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/udf.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/nilfs2.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/ufs1.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/normal.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/ufs1_be.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/ntfs.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/raid6rec.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/ntfscmp.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/ufs2.mod': Disk quota exceeded
cp: cannot create regular file '/home/Data/u1/lib/grub/i386-pc/ntldr.mod': Disk quota exceeded

cp: cannot create directory '/home/Data/u1/lib/crda': Disk quota exceeded
cp: cannot create directory '/home/Data/u1/lib/gcc': Disk quota exceeded
cp: error writing '/home/Data/u1/lib/ibus-engine-ten1': Disk quota exceeded
cp: failed to extend '/home/Data/u1/lib/ibus-engine-ten1': Disk quota exceeded
[ul@localhost u1]$ █
```

Tương tự với user u2

```
[u2@localhost ~]$ cd ..
[u2@localhost home]$ ls
Data  hduong  htd1  u1  u2  user1  user2
[u2@localhost home]$ cd Data
[u2@localhost Data]$ ls
aquota.group  aquota.user  lost+found  u1  u2
[u2@localhost Data]$ cd u1
bash: cd: u1: Permission denied
[u2@localhost Data]$ cd u2
[u2@localhost u2]$ ls
[u2@localhost u2]$ cp -rf /lib/ /home/Data/u2
sdb1: write failed, user block limit reached.
cp: error writing '/home/Data/u2/lib/grub/i386-pc/mpi.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/grub/i386-pc/mpi.mod': Disk quota exceeded
cp: error writing '/home/Data/u2/lib/grub/i386-pc/pxeboot.image': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/grub/i386-pc/pxeboot.image': Disk quota exceeded
cp: error writing '/home/Data/u2/lib/grub/i386-pc/msdospart.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/grub/i386-pc/msdospart.mod': Disk quota exceeded
cp: error writing '/home/Data/u2/lib/grub/i386-pc/pxeboot.img': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/grub/i386-pc/pxeboot.img': Disk quota exceeded
cp: error writing '/home/Data/u2/lib/grub/i386-pc/multiboot.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/grub/i386-pc/multiboot.mod': Disk quota exceeded
cp: error writing '/home/Data/u2/lib/grub/i386-pc/pxechain.mod': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/grub/i386-pc/pxechain.mod': Disk quota exceeded

cp: cannot create directory '/home/Data/u2/lib/alsa': Disk quota exceeded
cp: cannot create directory '/home/Data/u2/lib/firewalld': Disk quota exceeded
cp: cannot create directory '/home/Data/u2/lib/tuned': Disk quota exceeded
cp: cannot create directory '/home/Data/u2/lib/crda': Disk quota exceeded
cp: cannot create directory '/home/Data/u2/lib/gcc': Disk quota exceeded
cp: error writing '/home/Data/u2/lib/ibus-engine-teni': Disk quota exceeded
cp: failed to extend '/home/Data/u2/lib/ibus-engine-teni': Disk quota exceeded
[u2@localhost u2]$ █
```

Phần 2 Tiến trình

ps-ax |more

ps-ax|grep init

```
[htd1@localhost ~]$ ps -ax | more
  PID TTY          STAT TIME  COMMAND
    1 ?        Ss   0:03  /usr/lib/systemd/systemd --switched-root --system --deserialize 22
    2 ?        S    0:00  [kthreadd]
    4 ?        S<   0:00  [kworker/0:0H]
    6 ?        S    0:00  [ksoftirqd/0]
    7 ?        S    0:00  [migration/0]
    8 ?        S    0:00  [rcu_bh]
    9 ?        R    0:01  [rcu_sched]
   10 ?        S<   0:00  [lru-add-drain]
   11 ?        S    0:00  [watchdog/0]
   13 ?        S    0:00  [kdevtmpfs]
   14 ?        S<   0:00  [netns]
   15 ?        S    0:00  [khungtaskd]
   16 ?        S<   0:00  [writeback]
   17 ?        S<   0:00  [kintegrityd]
   18 ?        S<   0:00  [bioaset]
   19 ?        S<   0:00  [bioaset]
   20 ?        S<   0:00  [bioaset]
   21 ?        S<   0:00  [kblockd]
   22 ?        S<   0:00  [md]
   23 ?        S<   0:00  [edac-poller]
   24 ?        S<   0:00  [watchdogd]
   30 ?        S    0:19  [kswapd0]
   31 ?        SN   0:00  [ksmd]
   32 ?        SN   0:00  [khugepaged]
   33 ?        S<   0:00  [crypto]
```

```
[htd1@localhost ~]$ ps -ax | grep init
  630 ?        SNs   0:00  /usr/sbin/alsactl -s -n 19 -c -E ALSA_CONFIG_PATH=/etc/alsa/alsactl.conf --initfile=/lib/alsa/init/00main rdaemon
 6805 pts/1    R+    0:00  grep --color=auto init
[htd1@localhost ~]$
```

ps-ef |more

ps-ef|grep login

```
6805 pts/1    R+    0:00  grep --color=auto init
[htd1@localhost ~]$ ps -ef | more
  UID          PID    PPID  C TIME  TTY          TIME CMD
root           1      0  0 07:06 ?        00:00:03 /usr/lib/systemd/systemd --switched-root --system --deserialize 22
root           2      0  0 07:06 ?        00:00:00 [kthreadd]
root           4      2  0 07:06 ?        00:00:00 [kworker/0:0H]
root           6      2  0 07:06 ?        00:00:00 [ksoftirqd/0]
root           7      2  0 07:06 ?        00:00:00 [migration/0]
root           8      2  0 07:06 ?        00:00:00 [rcu_bh]
root           9      2  0 07:06 ?        00:00:01 [rcu_sched]
root          10      2  0 07:06 ?        00:00:00 [lru-add-drain]
root          11      2  0 07:06 ?        00:00:00 [watchdog/0]
root          13      2  0 07:06 ?        00:00:00 [kdevtmpfs]
root          14      2  0 07:06 ?        00:00:00 [netns]
root          15      2  0 07:06 ?        00:00:00 [khungtaskd]
root          16      2  0 07:06 ?        00:00:00 [writeback]
root          17      2  0 07:06 ?        00:00:00 [kintegrityd]
root          18      2  0 07:06 ?        00:00:00 [bioaset]
root          19      2  0 07:06 ?        00:00:00 [bioaset]
root          20      2  0 07:06 ?        00:00:00 [bioaset]
root          21      2  0 07:06 ?        00:00:00 [kblockd]
root          22      2  0 07:06 ?        00:00:00 [md]
root          23      2  0 07:06 ?        00:00:00 [edac-poller]
root          24      2  0 07:06 ?        00:00:00 [watchdogd]
root          30      1  0 07:06 ?        00:00:19 [kswapd0]
root          31      2  0 07:06 ?        00:00:00 [ksmd]
root          32      2  0 07:06 ?        00:00:00 [khugepaged]
```



```
[htdl@localhost ~]$ ps -ef | grep login
root      643      1  0 07:07 ?        00:00:00 /usr/lib/systemd/systemd-login
htdl      1743     1  0 07:07 ?        00:00:00 /usr/bin/gnome-keyring-daemon --daemonize --login
u1        3201     1  0 07:12 ?        00:00:00 /usr/bin/gnome-keyring-daemon --daemonize --login
u2        4628     1  0 07:18 ?        00:00:00 /usr/bin/gnome-keyring-daemon --daemonize --login
htdl      6821    6323  0 07:36 pts/1    00:00:00 grep --color=auto login
```

ps-ax |more

```
[htdl@localhost ~]$ ps -ax | more
  PID TTY          STAT TIME  COMMAND
    1 ?        Ss     0:03 /usr/lib/systemd/systemd --switched-root --system --deserialize 22
    2 ?        S       0:00 [kthreadd]
    4 ?        S<      0:00 [kworker/0:0H]
    6 ?        S       0:00 [ksoftirqd/0]
    7 ?        S       0:00 [migration/0]
    8 ?        S       0:00 [rcu_bh]
    9 ?        R       0:01 [rcu_sched]
   10 ?        S<      0:00 [lru-add-drain]
   11 ?        S       0:00 [watchdog/0]
   13 ?        S       0:00 [kdevtmpfs]
   14 ?        S<      0:00 [netns]
   15 ?        S       0:00 [khungtaskd]
   16 ?        S<      0:00 [writeback]
   17 ?        S<      0:00 [kintegrityd]
   18 ?        S<      0:00 [bioaset]
   19 ?        S<      0:00 [bioaset]
   20 ?        S<      0:00 [bioaset]
   21 ?        S<      0:00 [kblockd]
   22 ?        S<      0:00 [md]
   23 ?        S<      0:00 [edac-poller]
   24 ?        S<      0:00 [watchdogd]
   30 ?        S       0:19 [kswapd0]
   31 ?        SN      0:00 [ksmd]
   32 ?        SN      0:00 [khugepaged]
   33 ?        S<      0:00 [crypto]
   41 ?        S<      0:00 [kthrotld]
   42 ?        S       0:01 [kworker/u256:1]
   43 ?        S<      0:00 [kmpath_rdacd]
   44 ?        S<      0:00 [kaluad]
   45 ?        S<      0:00 [kpsmoused]
   47 ?        S<      0:00 [ipv6_addrconf]
   60 ?        S<      0:00 [deferwq]
   65 ?        S       0:00 [kauditd]
```

Pstree -np|more

```
[htdl@localhost ~]$ pstree -np | more
systemd(1)-+-systemd-journal(378)
|   -lvmetad(402)
|   -systemd-udevd(416)
|   -auditd(566)-+-{auditd}(567)
|               `--audispd(568)-+-sedispatch(570)
|                               `--{audispd}(571)
|   -smartd(596)
|   -avahi-daemon(597)---avahi-daemon(611)
|   -polkitd(598)-+-{polkitd}(618)
|               | -{polkitd}(629)
|               | -{polkitd}(631)
|               | -{polkitd}(637)
|               | -{polkitd}(646)
|               `--{polkitd}(664)
|   -lsmd(599)
|   -rpcbind(600)
|   -dbus-daemon(609)---{dbus-daemon}(628)
|   -chronyd(615)
|   -gssproxy(616)-+-{gssproxy}(622)
|               | -{gssproxy}(623)
|               | -{gssproxy}(624)
|               | -{gssproxy}(625)
|               `--{gssproxy}(626)
|   -alsactl(630)
|   -VGAAuthService(632)
|   -vmtoolsd(633)---{vmtoolsd}(687)
|   -rngd(634)
|   -udisksd(636)-+-{udisksd}(660)
|               | -{udisksd}(665)
|               | -{udisksd}(679)
|               `--{udisksd}(733)
|   -rtkit-daemon(638)-+-{rtkit-daemon}(655)
|                       `--{rtkit-daemon}(656)
|   -accounts-daemon(639)-+-{accounts-daemon}(654)
|                           `--{accounts-daemon}(663)
|   -abrttd(640)
```

ps-ax|more

ps-ax|wc -l

```
[htdl@localhost ~]$ ps -ax | more
  PID TTY          STAT       TIME COMMAND
    1 ?        Ss         0:03 /usr/lib/systemd/systemd --switched-root --system --deserialize 22
    2 ?        S          0:00 [kthreadd]
    4 ?        S<         0:00 [kworker/0:0H]
    6 ?        S          0:00 [ksoftirqd/0]
    7 ?        S          0:00 [migration/0]
    8 ?        S          0:00 [rcu_bh]
    9 ?        R          0:01 [rcu_sched]
   10 ?        S<         0:00 [lru-add-drain]
   11 ?        S          0:00 [watchdog/0]
   13 ?        S          0:00 [kdevtmpfs]
   14 ?        S<         0:00 [netns]
   15 ?        S          0:00 [khungtaskd]
   16 ?        S<         0:00 [writeback]
   17 ?        S<         0:00 [kintegrityd]
   18 ?        S<         0:00 [bioaset]
   19 ?        S<         0:00 [bioaset]
   20 ?        S<         0:00 [bioaset]
   21 ?        S<         0:00 [kblockd]
   22 ?        S<         0:00 [md]
   23 ?        S<         0:00 [edac-poller]
   24 ?        S<         0:00 [watchdogd]
   30 ?        S          0:19 [kswapd0]
   31 ?        SN         0:00 [ksmd]
   32 ?        SN         0:00 [khugepaged]
   33 ?        S<         0:00 [crypto]
   41 ?        S<         0:00 [kthrotld]
   42 ?        S          0:01 [kworker/u256:1]
   43 ?        S<         0:00 [kmpath_rdacd]
   44 ?        S<         0:00 [kaluad]
   45 ?        S<         0:00 [kpsmoused]
   47 ?        S<         0:00 [ipv6_addrconf]
   60 ?        S<         0:00 [deferwq]
   95 ?        S          0:00 [kauditd]
  238 ?        S<         0:00 [mpt_poll_0]
  239 ?        S<         0:00 [mpt/0]
```

```
248 ?        S<         0:00 [scsi_cmnd_
[htdl@localhost ~]$ ps -ax | wc -l
341
[htdl@localhost ~]$
```

Thực hiện cài đặt sendmail và bind để sử dụng service sendmail và named

```
[root@localhost htdl]# sudo yum install sendmail sendmail-cf
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.nhanhoa.com
 * extras: download.nus.edu.sg
 * updates: download.nus.edu.sg
base
extras
updates
Resolving Dependencies
--> Running transaction check
--> Package sendmail.x86_64 0:8.14.7-6.el7 will be installed
--> Processing Dependency: procmail for package: sendmail-8.14.7-6.el7.x86_64
--> Package sendmail-cf.noarch 0:8.14.7-6.el7 will be installed
--> Processing Dependency: m4 for package: sendmail-cf-8.14.7-6.el7.noarch
--> Running transaction check
--> Package m4.x86_64 0:1.4.16-10.el7 will be installed
--> Package procmail.x86_64 0:3.22-36.el7_4.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                                                    Arch
=====
Installing:
sendmail                                                    x86_64
sendmail-cf                                                noarch
Installing for dependencies:
m4                                                         x86_64
procmail                                                   x86_64

Transaction Summary
=====
Install 2 Packages (+2 Dependent packages)

Total download size: 1.3 M
Installed size: 3.4 M
Is this ok [y/d/N]: y
Downloading packages:
```

```
[root@localhost htd1]# yum install bind bind-utils -y
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.nhanhoa.com
 * extras: download.nus.edu.sg
 * updates: download.nus.edu.sg
Package 32:bind-utils-9.11.4-26.P2.el7_9.15.x86_64 already installed
Resolving Dependencies
--> Running transaction check
---> Package bind.x86_64 32:9.11.4-26.P2.el7_9.15 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                                     Arch
=====
Installing:
bind                                         x86_64

Transaction Summary
=====
Install 1 Package

Total download size: 2.3 M
Installed size: 5.4 M
Downloading packages:
bind-9.11.4-26.P2.el7_9.15.x86_64.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 32:bind-9.11.4-26.P2.el7_9.15.x86_64
  Verifying  : 32:bind-9.11.4-26.P2.el7_9.15.x86_64

Installed:
  bind.x86_64 32:9.11.4-26.P2.el7_9.15

Complete!
```

```
[root@localhost htd1]# service named start
Redirecting to /bin/systemctl start named.service
[root@localhost htd1]# service sendmail start
Redirecting to /bin/systemctl start sendmail.service
[root@localhost htd1]#
```

Ps-ax|grep named

Ps-ax|grep sendmail

```
[root@localhost htd1]# ps -ax | grep named
7365 ?          Ssl    0:00 /usr/sbin/named -u named -c /etc/named.conf
7476 pts/1      R+     0:00 grep --color=auto named
[root@localhost htd1]# ps -ax | grep sendmail
7430 ?          Ss     0:00 sendmail: accepting connections
7458 ?          Ss     0:00 sendmail: Queue runner@01:00:00 for /var/spool/clientmqueue
7484 pts/1      R+     0:00 grep --color=auto sendmail
[root@localhost htd1]#
```

```
[root@localhost htd1]# ps -ax | grep named
7365 ?          Ssl    0:00 /usr/sbin/named -u named -c /etc/named.conf
7492 pts/1      S+     0:00 grep --color=auto named
[root@localhost htd1]#
```

Service named đang hoạt động với PID =7365

Hủy tiến trình

```
[root@localhost htd1]# kill -9 7365
[root@localhost htd1]# kill -9 7430
[root@localhost htd1]# ps -ax | grep named
7524 pts/1      R+     0:00 grep --color=auto named
[root@localhost htd1]# ps -ax | grep sendmail
7540 pts/1      R+     0:00 grep --color=auto sendmail
[root@localhost htd1]#
```

Ps-au u1(tận dụng user u1 đã tạo ở bài trên)

```
[root@localhost ~]# ps -au u1
  PID TTY          TIME CMD
 3201 ?        00:00:00 gnome-keyring-d
 3219 ?        00:00:00 gnome-session-b
 3249 ?        00:00:00 dbus-launch
 3252 ?        00:00:00 dbus-daemon
 3281 ?        00:00:00 imsettings-daem
 3285 ?        00:00:00 gvfsd
 3290 ?        00:00:00 gvfsd-fuse
 3372 ?        00:00:00 ssh-agent
 3393 ?        00:00:00 at-spi-bus-laun
 3398 ?        00:00:00 dbus-daemon
 3403 ?        00:00:00 at-spi2-registr
 3430 ?        00:00:15 gnome-shell
 3440 ?        00:00:00 pulseaudio
 3455 ?        00:00:00 ibus-daemon
 3459 ?        00:00:00 ibus-dconf
 3464 ?        00:00:00 ibus-x11
 3467 ?        00:00:00 ibus-portal
 3476 ?        00:00:00 xdg-permission-
 3477 ?        00:00:00 gnome-shell-cal
 3487 ?        00:00:00 evolution-sourc
 3494 ?        00:00:00 dconf-service
 3510 ?        00:00:00 goa-daemon
 3516 ?        00:00:00 mission-control
 3521 ?        00:00:00 gvfs-udisks2-vo
 3532 ?        00:00:00 gvfs-afc-volume
 3546 ?        00:00:00 goa-identity-se
 3553 ?        00:00:00 gvfs-gphoto2-vo
 3563 ?        00:00:00 gvfs-mtp-volume
 3571 ?        00:00:00 gvfs-goa-volume
 3597 ?        00:00:00 gsd-power
 3599 ?        00:00:00 gsd-print-notif
 3602 ?        00:00:00 gsd-rfkill
 3606 ?        00:00:00 gsd-screensaver
 3613 ?        00:00:00 gsd-sharing
 3616 ?        00:00:00 gsd-sound
 3619 ?        00:00:00 gsd-xsettings
 3622 ?        00:00:00 gsd-wacom
 3628 ?        00:00:00 gsd-smartcard
```

Cài đặt mc

```
[root@localhost ~]# yum -y install mc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.nhanhoa.com
 * extras: download.nus.edu.sg
 * updates: download.nus.edu.sg
Resolving Dependencies
--> Running transaction check
---> Package mc.x86_64 1:4.8.7-11.el7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                                     Arch
=====
Installing:
mc                                           x86_64

Transaction Summary
=====
Install 1 Package

Total download size: 1.7 M
Installed size: 5.6 M
Downloading packages:
mc-4.8.7-11.el7.x86_64.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 1:mc-4.8.7-11.el7.x86_64
  Verifying  : 1:mc-4.8.7-11.el7.x86_64

Installed:
mc.x86_64 1:4.8.7-11.el7

Complete!
```


Find / -name pass

Left File Command Options Right

Name	Size	Modify time
/	7	Mar 14 18:13
/bin	4096	Mar 14 19:14
/boot	3320	Mar 28 07:07
/dev	12288	Mar 28 07:47
/etc	90	Mar 28 06:52
/home	7	Mar 14 18:13
/lib	9	Mar 14 18:13
/lib64	6	Apr 10 2018
/media	18	Mar 14 19:06
/mnt	32	Mar 14 18:53
/opt	0	Mar 28 07:06
/proc	4096	Mar 28 07:50
/root	1300	Mar 28 07:47
/run	8	Mar 14 18:13
/sbin	6	Apr 10 2018
/srv	0	Mar 28 07:06
/sys	16384	Mar 28 07:50
/tmp	155	Mar 14 18:13
/usr	4096	Mar 28 07:41
/var		

Hint: Use C-x t to copy tagged file names to the command line.
[root@localhost /]# find / -name pass

```
[root@localhost /]# find / -name pass
find: '/run/user/1005/gvfs': Permission denied
find: '/run/user/1004/gvfs': Permission denied
find: '/run/user/1001/gvfs': Permission denied
```

Thao tác tiến trình hậu cảnh

```
[root@localhost lib]# find / -name abc.txt&
[1] 8304
[root@localhost lib]# find: '/proc/8305': No such file or directory
find: '/proc/8306': No such file or directory
find: '/proc/8307': No such file or directory
find: '/run/user/1005/gvfs': Permission denied
find: '/run/user/1004/gvfs': Permission denied
find: '/run/user/1001/gvfs': Permission denied
jobs
[1]+  Exit 1                  find / -name abc.txt
[root@localhost lib]# service named restart&
[1] 8326
[root@localhost lib]# Redirecting to /bin/systemctl restart named.service
jobs
[1]+  Done                  service named restart
[root@localhost lib]#
```

Top

```
top - 07:55:23 up 48 min,  5 users,  load average: 0.61, 0.40, 0.39
Tasks: 340 total,  1 running, 339 sleeping,  0 stopped,  0 zombie
%Cpu(s): 10.0 us, 20.0 sy,  0.0 ni, 70.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
KiB Mem : 995460 total,  74380 free, 654624 used, 266456 buff/cache
KiB Swap: 2097148 total, 1024252 free, 1072896 used. 150840 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1943	htdl	20	0	3036912	114704	26600	S	5.3	11.5	0:59.28	gnome-shell
6314	htdl	20	0	834716	12020	4916	S	5.3	1.2	0:07.41	gnome-terminal-
8423	root	20	0	162244	2424	1524	R	5.3	0.2	0:00.04	top
1	root	20	0	194220	4056	1448	S	0.0	0.4	0:04.79	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kthreadd
4	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kworker/0:0H
6	root	20	0	0	0	0	S	0.0	0.0	0:00.61	ksoftirqd/0
7	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
8	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_bh
9	root	20	0	0	0	0	S	0.0	0.0	0:01.88	rcu_sched
10	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	lru-add-drain
11	root	rt	0	0	0	0	S	0.0	0.0	0:00.05	watchdog/0
13	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfs
14	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	netns
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khungtaskd
16	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	writeback
17	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kintegrityd
18	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	bioaset
19	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	bioaset
20	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	bioaset
21	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kblockd
22	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	md
23	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	edac-poller
24	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	watchdogd
30	root	20	0	0	0	0	S	0.0	0.0	0:25.99	kswapd0
31	root	25	5	0	0	0	S	0.0	0.0	0:00.00	ksmd
32	root	39	19	0	0	0	S	0.0	0.0	0:00.01	khugepaged
33	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	crypto
41	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kthrotld
43	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kmpath_rdacd
44	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kaluad
45	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kpsmoused
47	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	ipv6_addrconf
60	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	deferwq

Phần shell

```
test1.sh
~/Desktop/shell/ctrucrenhanh

#!/bin/bash
clear
echo "Hello $USER"
echo -n "Today is "|
date "+%A %d %B %Y"
echo -n "There is/are "
who|wc -l
echo connection on $HOSTNAME
echo "Calendar" ;cal
exit 0
```

```
File Edit View Search Terminal Help
Hello htd1
Today is Thursday 28 March 2024
There is/are 5
connection on localhost.localdomain
Calendar
    March 2024
Su Mo Tu We Th Fr Sa
      1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
[htd1@localhost ctrucrenhanh]$
```

```
test2.sh
~/Desktop/shell/ctrucnhanh

#!/bin/bash
echo "Is it morning? Please answer yes or no"
read timeofday
if [ $timeofday = "yes" ]; then
    echo "Good morning"
else
    echo "Good afternoon"
fi
exit 0
```

```
[htdl@localhost ctrucnhanh]$ bash ./test2.sh
Is it morning? Please answer yes or no
ko
Good afternoon
[htdl@localhost ctrucnhanh]$ bash ./test2.sh
Is it morning? Please answer yes or no
co
Good afternoon
[htdl@localhost ctrucnhanh]$ bash ./test2.sh
Is it morning? Please answer yes or no
yes
Good morning
[htdl@localhost ctrucnhanh]$
```

```
test3.sh
~/Desktop/shell/ctrucrenhanh

#!/bin/sh
echo "Is it morning? Please answer yes or no"
read timeofday

if [ $timeofday = "yes" ];
then
    echo "Good morning"

elif [ $timeofday = "no" ];
then
    echo "Good afternoon"

else
    echo "Sorry, $timeofday not recognized.Enter yes or no "
    exit 1
fi

exit 0
```

```
htd1@localhost:~/Desktop/shell/

File Edit View Search Terminal Help

[htd1@localhost ctrucrenhanh]$ bash ./test3.sh
Is it morning? Please answer yes or no
yes
Good morning
[htd1@localhost ctrucrenhanh]$ bash ./test3.sh
Is it morning? Please answer yes or no
n
Sorry, n not recognized.Enter yes or no
[htd1@localhost ctrucrenhanh]$ bash ./test3.sh
Is it morning? Please answer yes or no
no
Good afternoon
[htd1@localhost ctrucrenhanh]$

[htd1@localhost ctrucrenhanh]$ bash ./test3.sh
Is it morning? Please answer yes or no

./test3.sh: line 5: [: =: unary operator expected
./test3.sh: line 9: [: =: unary operator expected
Sorry,  not recognized.Enter yes or no
[htd1@localhost ctrucrenhanh]$
```

```
Open  test4.sh  Save  -
~/Desktop/shell/ctrucrenhanh

#!/bin/sh
echo -n "Is it morning? Please answer yes or no: "
read timeofday

if [ "$timeofday" = "yes" ];
then
    echo "Good morning"

elif [ "$timeofday" = "no" ];
then
    echo "Good afternoon"

else
    echo "Sorry, $timeofday not recognized.Enter yes or no: "
    exit 1
fi

exit 0
```

```
[htdl@localhost ctrucrenhanh]$ bash ./test4.sh
Is it morning? Please answer yes or no:
Sorry, not recognized.Enter yes or no:
[htdl@localhost ctrucrenhanh]$ bash ./test4.sh
Is it morning? Please answer yes or no: yes
Good morning
[htdl@localhost ctrucrenhanh]$ bash ./test4.sh
Is it morning? Please answer yes or no: no
Good afternoon
[htdl@localhost ctrucrenhanh]$ bash ./test4.sh
Is it morning? Please answer yes or no: ko
Sorry, ko not recognized.Enter yes or no:
[htdl@localhost ctrucrenhanh]$
```

```
test5.sh
~/Desktop/shell/ctrucrenhanh
Open Save
#!/bin/sh
echo "Is it morning? Please answer yes or no: "
read timeofday

case "$timeofday" in
    "yes" | "y" | "Yes" | "YES")    echo "Good morning ";;
    "n*" | "N*")                  echo "Good afternoon ";;
    *)                             echo "Sorry, answer nt
recognised";;
esac

exit 0
```

ở đây em nhận thấy nếu case “n*” hoặc “N*” thì phải nhập đúng text n* hoặc N* nó mới in ra Good afternoon nên em thử “n”* và “N”* thì thấy khi nhập (n + kí tự bất kì) hoặc (N+kí tự bất kì) mới in ra Good afternoon

```

[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
yes
Good morning
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
y
Good morning
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
Yes
Good morning
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
YES
Good morning
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
no
Sorry, answer nt recognised
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
No
Sorry, answer nt recognised
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
n*
Good afternoon
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
N*
Good afternoon
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
ko
Sorry, answer nt recognised
[htdl@localhost ctrucrenhanh]$

```

```

test5.sh
~/Desktop/shell/ctrucrenhanh
Open Save
echo "Is it morning? Please answer yes or no: "
read timeofday

case "$timeofday" in
    "yes" | "y" | "Yes" | "YES")    echo "Good morning ";;
    "n"* | "N"*)                  echo "Good afternoon ";;
    *)                             echo "Sorry, answer nt
recognised";;
esac

exit 0

```



```
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
no
Good afternoon
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
No
Good afternoon
[htdl@localhost ctrucrenhanh]$ bash ./test5.sh
Is it morning? Please answer yes or no:
Nah
Good afternoon
[htdl@localhost ctrucrenhanh]$
```