

Dat151 – Oblig4

NFS,LVM AND LOGGING

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Task 1: NFS

In this assignment I used two raspberry pi mini-computers running a debian based operating system (raspian), not Centos 8. But the process is pretty much the same. This was just more convenient since I have these machines on my home network already setup.

Server:

```
## Server side
$ sudo apt-get install nfs-kernel-server -y
$ sudo chown -R pi:pi /home/
$ sudo find /home/ -type d -exec chmod 755 {} \;
$ sudo find /home/ -type f -exec chmod 644 {} \;
$ id pi
uid=1000(pi) gid=1000(pi)
grupper=1000(pi),4(adm),20(dialout),24(cdrom),27(sudo),29(audio),44(video),
46(plugdev),60(games),100(users),105(input),109(netdev),999(spi),998(i2c),9
97(gpio)
$ sudo nano /etc/exports
$ sudo exportfs -ra
$ hostname -I
10.0.0.6
$ sudo update-rc.d rpcbind enable
$ sudo service rpcbind restart
```

Client:

```
$ id pi
uid=1000(pi) gid=1000(pi)
grupper=1000(pi),4(adm),20(dialout),24(cdrom),27(,29(audio),44(video),46(pl
ugdev),60(games),100(users),101(input),108(netdev(spi),998(i2c),997(gpio)
$ sudo mkdir -p /mnt/nfs
$ sudo chown -R pi:pi /mnt/nfs/
$ sudo mount 10.0.0.6:/home/ /mnt/nfs/
$ sudo nano /etc/fstab ##To make the client auto connect and mount to the
server
(added: 10.0.0.6:/home/ /mnt/nfs nfs rw 0 0 )
$ cd /mnt/nfs/
$ ls
pi
pi@adrianpi:/mnt/nfs $ cd pi
pi@adrianpi:/mnt/nfs/pi $ ls
Desktop Downloads Music Public Videos
Documents MagPi Pictures Templates
```

Testing

```
##Testing (AdrianPI client) (AdrianDC Server)

pi@adrianpi:/mnt/nfs/pi $ touch Hei.txt
pi@adrianpi:/mnt/nfs/pi $ ls -al | grep Hei.txt
-rw-r--r-- 1 pi pi 0 feb. 7 10:57 Hei.txt

pi@AdrianDC:~ $ ls -al | grep Hei.txt
-rw-r--r-- 1 pi pi 0 feb. 7 10:57 Hei.txt
```

As shown; when making a file on the clientside for the shared folder it shows up in the correct folder on the server side.

Task 2: LVM

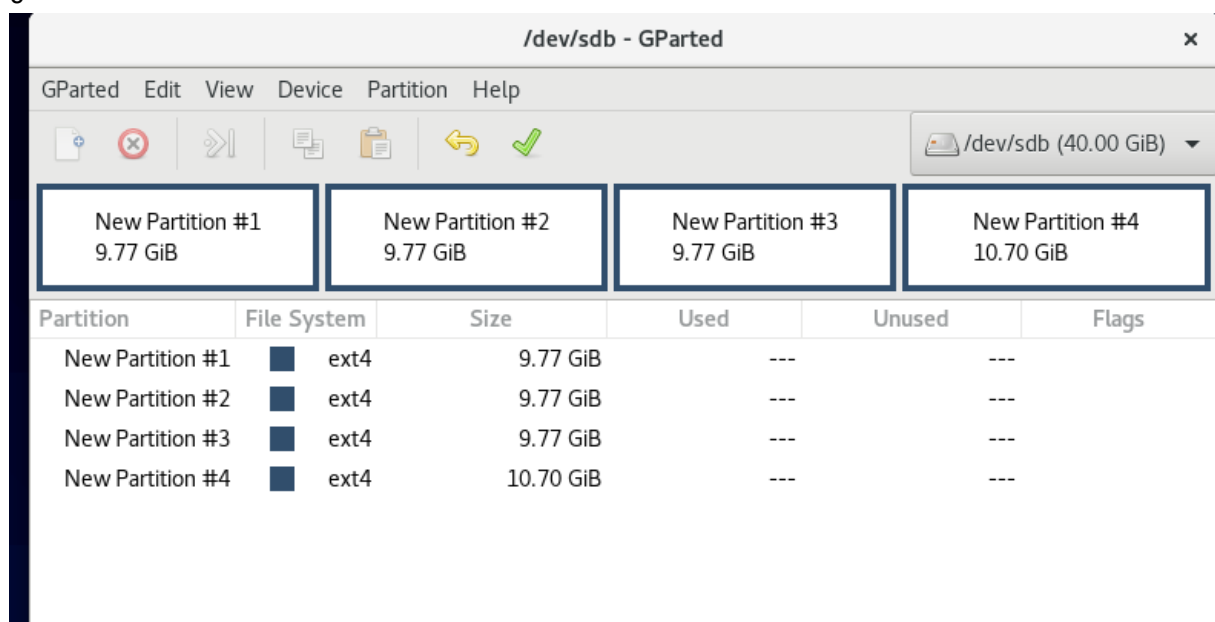
In assignment 0 in the course we were only asked to make one extra partition.

- You should at least make the following partitions:
 - / - root system
 - /boot - necessary if LVM
 - /home - home folders (user files)
 - swap - swap partition, 1-2 times physical memory
 - An empty physical partition of at least 10GB – to be used in later assignments.
 - This partition must not be a LVM logical volume.
 - You can use LVM for the partitions /, /home and swap.
 - You must use a physical partition for /boot.

Screenshot of the partition part of Assignment 0

And since resizing this partition and then making more seemed like a hassle and I have access to a virtual centos install. I added a new epty drive and made 4 partitions on this using gparted.

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Making the LVM

```
$sudo pvcreate /dev/sdb1 /dev/sdb2 /dev/sdb3 /dev/sdb4
```

```
$sudo vgdisplay
```

#shows each of the partitions as separate units.

```
$sudo vgcreate vGroup /dev/sdb1 /dev/sdb2 /dev/sdb3 /dev/sdb4
Volume group "vGroup" successfully created
```

Task 3: Logging

Local logging

First I do local logging on the virtual centos machine.

```
#Local logging
$sudo nano /etc/rsyslog.conf

#added this line:
auth.debug /var/log/auth.log
#This adds the logs from the authentication process like login.
```

Centralized logging

Now since I have the raspberry pi computers from the previous assignment (1) I will use these for the centralized logging. I will chose to have the machine «adrianpi» as the server since this has a connected monitor and I intend to use the logging to show events and failures from the rest of my linux units on this.

I will only be showing AdrianDC configuration for logging to the adrianpi.

Server config:

```
#uncommented these lines in /etc/rsyslog.conf to allow for connection
module(load="imudp")
input(type="imudp" port="514")
module(load="imtcp")
input(type="imtcp" port="514")

#then I did a restart of the service
$sudo systemctl restart rsyslog
```

Client config:

```
$sudo nano /etc/rsyslog.conf
#Added this to the bottom of the file (10.0.0.2 is the ip of the server)
*. * @@10.0.0.2:514

$sudo nano /etc/rsyslog.d/10-rsyslog.conf
#Added this to the file I created:
*. * @@10.0.0.2:514
#restarting server
$sudo systemctl restart rsyslog
```