# CSCI4113
# LAB2 Notes

Milan Formanek

February 7, 2019

## 1.

With the lsblk command you can list all the block devices.

```
[root@machinee ~]# lsblk
NAME            MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
fd0               2:0    1    4K  0 disk
sda               8:0    0    6G  0 disk
sda1              8:1    0  500M  0 part /boot
sda2              8:2    0  5.5G  0 part
  centos-swap 253:0    0  512M  0 lvm  [SWAP]
  centos-root 253:1    0    5G  0 lvm  /
sdb               8:16   0  5.7G  0 disk
sr0              11:0    1 1024M  0 rom
[root@machinee ~]#
```

In this lab I will be adding sdb to the centos lvgroup, creating /home and /temp lvs. Migrating the data over to the new lvs from existing folders. Finally modifying /etc/fstab to auto mount the filesystems at desired locations.

## 2.

First off we will initialize /dev/sdb as a physical volume.

```
[root@machinee ~]# pvcreate /dev/sdb
  Physical volume "/dev/sdb" successfully created.
```

Then add the physical volume to the ”centos” volume group.

```
[root@machinee ~]# vgextend centos /dev/sdb
  Volume group "centos" successfully extended
```

Now we will create the 2 logical volumes home and tmp.

```
[root@machinee ~]# lvcreate -n home -L 4G centos
  Logical volume "home" created.
[root@machinee ~]# lvcreate -n tmp -l 100%FREE centos
  Logical volume "tmp" created.
```

() We can see the new lvs are now created on /dev/sdb.

```
[root@machinee ~]# lsblk
NAME            MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
fd0               2:0    1    4K  0 disk
sda               8:0    0    6G  0 disk
âãsda1            8:1    0  500M  0 part /boot
âãsda2            8:2    0  5.5G  0 part
  âãcentos-swap 253:0    0  512M  0 lvm  [SWAP]
  âãcentos-root 253:1    0    5G  0 lvm  /
sdb               8:16   0  5.7G  0 disk
âãcentos-home   253:2    0    4G  0 lvm
âãcentos-tmp    253:3    0  1.7G  0 lvm
sr0              11:0    1 1024M  0 rom
[root@machinee ~]#
```

```
Last step in preparing the new storage space is to format the tmp and boot lvs.
[root@machinee ~]# mkfs.xfs /dev/centos/home
meta-data=/dev/centos/home       isize=512    agcount=4, agsize=262144 blks
         =                       sectsz=512   attr=2, projid32bit=1
         =                       crc=1        finobt=0, sparse=0
data     =                       bsize=4096   blocks=1048576, imaxpct=25
         =                       sunit=0      swidth=0 blks
naming   =version 2              bsize=4096   ascii-ci=0 ftype=1
log      =internal log           bsize=4096   blocks=2560, version=2
         =                       sectsz=512   sunit=0 blks, lazy-count=1
realtime =none                   extsz=4096   blocks=0, rtextents=0
[root@machinee ~]# mkfs.xfs /dev/centos/tmp
meta-data=/dev/centos/tmp        isize=512    agcount=4, agsize=112640 blks
         =                       sectsz=512   attr=2, projid32bit=1
         =                       crc=1        finobt=0, sparse=0
data     =                       bsize=4096   blocks=450560, imaxpct=25
         =                       sunit=0      swidth=0 blks
naming   =version 2              bsize=4096   ascii-ci=0 ftype=1
log      =internal log           bsize=4096   blocks=2560, version=2
         =                       sectsz=512   sunit=0 blks, lazy-count=1
realtime =none                   extsz=4096   blocks=0, rtextents=0
[root@machinee ~]#
```

Then we mount the new filesystems as tmp2 and home2 directories.

```
[root@machinee ~]# cd /
[root@machinee /]# ls
bin   dev  home   lib    media  opt   root  sbin  sys  usr
boot  etc  home2  lib64  mnt    proc  run   srv   tmp  var
[root@machinee /]# mkdir tmp2
[root@machinee /]# mount /dev/centos/home /home2
[root@machinee /]# mount /dev/centos/home /tmp2
```

After that we move the contents of tmp and home to the new locations.

```
[root@machinee ~]# mv /home/* /home2
[root@machinee /]# mv /tmp/* /tmp2
```

Then I unmount the temp mounts and reboot

```
[root@machinee ~]# umount /home2
[root@machinee /]# umount /tmp2
[root@machinee /]# reboot
```

## 3.

Last step is modifying the /etc/fstab config file.

```
[root@machinee ~]# nano nano /etc/fstab
```

Then finally the fstab file is edited to represent the table in the lab2 guide.