

Exercise 9: Configuring Hardware - Part 2 - 2

I. Prepare the environment

*If you haven't done the Exercise 8 yet, please do the **Prepare the environment** steps from Exercise 8 to add 1 more disk to the CentOS server. This exercise will need it.*

II. Working with filesystems

1. Login to the CentOS system with student.
2. Using the sdb hard disk (created in the last exercise) to create 3 partitions with the following information:
 - Partition 1: 100MB from the default first sector
 - Partition 2: 100MB right after the partition 1
 - Partition 3: 150MB right after the partition 2
3. On the first partition, create a swap filesystem and add it to the system
4. On the second partition, create the ext3 filesystem and mount it to the /apps directory
5. On the third partition, create the ext4 filesystem and mount it to the /db directory
6. Do the sufficient configurations to ensure that all of the above partition will be mounted automatically after system restart.
7. The DBA team ask you to add 200MB more to the /db directory. Use the appropriate tool to satisfy that request.

Exercise Instructions

- I. Prepare the environment
- II. Working with partitioning tools

1. Login to the CentOS system with student.

Log int to the CentOS system with the user name and password provided:
student/lpic1@123

2. Using the sdb hard disk (created in the last excercise) to create 3 partitions with the following information:
 - Partition 1: 100MB from the default first sector
 - Partition 2: 100MB right after the partition 1
 - Partition 3: 150MB right after the partition 2

\$ sudo fdisk /dev/sdb

You may need to use **d** command delete all the partitions created in the last exercise. After that, using **n** command and following the step on the screen to create 3 partitions as required above.

3. On the first partition, create a swap filesystem and add it to the system

\$ sudo mkswap /dev/sdb1

Viewing the /proc/swaps to note the current swap devices of the system. You could note that the /dev/sdb1 is not in here.

\$ sudo swapon /dev/sdb1

Review the /proc/swaps to confirm that the new swap device (/dev/sdb1) is added to the system.

4. On the second partition, create the ext3 filesystem and mount it to the /apps directory

\$ sudo mkfs -t ext3 /dev/sdb2

\$ sudo mount /dev/sdb2 /apps

5. On the third partition, create the ext4 filesystem and mount it to the /db directory

\$ sudo mkfs -t ext4 /dev/sdb3

\$ sudo mount /dev/sdb3 /db

6. Do the sufficient configurations to ensure that all of the above partition will be mounted automatically after system restart.

\$ sudo blkid

Note the UUID of your devices to add to the /etc/fstab file

```
$ sudo vi /etc/fstab
```

Input the configuration for your devices as follows

<device to mount>	<mount point>	<filesystem type>	<options>	<dump>	<pass>
UUID=...	swap	swap	defaults	0	0
UUID=...	/apps	ext3	defaults	0	0
UUID=	/db	ext4	defaults	0	0

```
:wq!
```

7. The DBA team ask you to add 200MB more to the /db directory. Use the appropriate tool to satisfy that request.

- Umount the filesystem

```
$ sudo umount /db
```

- Using parted to increase the partition size.
- Using resize2fs to increase the filesystem size

```
$ sudo resize2fs /dev/sdb3
```

- Mount the filesystem and check the size

```
$ sudo mount /dev/sdb3
```