Section 13 Lab
LPIC-1, Exam 1 (101-500)
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Recommended Linux Distributions for this exercise:

- CentOS version 7
- Ubuntu Desktop 18.04LTS

Note: For a successful lab session, it is assumed you are using the recommended Linux distribution(s) and the recommended version, and that your Linux systems are booted. In addition, it is assumed that you can log into the system as a standard user as well as either the root account or a user with super user privileges. Also, you should have successfully completed the prior sections' labs and sessions & viewed this section's videos.

Follow these actions to explore concepts and commands covered in this section (but please feel free to explore as much as you want. And don't forget that you can get help on the usage of these commands through the man pages. Type in **man** and follow it with the utility name, then press Enter to view information on the utility):

1. Log into either your Ubuntu or CentOS distro tty2 terminal, using the username and password you created when you installed the system.
2. View the mass storage devices on this system, by typing **lsblk** and pressing Enter.
3. View the device files directory, by typing **ls /dev** and pressing Enter. Try to find the device files in this directory that match the mass storage devices you saw in the previous step. (For example: If you saw **sda** in the preceding step, look for the **/dev/sda** device file.)
4. View partition information for this system by typing **cat /proc/partitions** and pressing Enter.
5. View the filesystems used on the disks by typing **lsblk -f** and pressing Enter. Do you see a partition that is labeled as swap? Are there any LVMs?
6. View the devices on this system again, by typing **lsblk** and pressing Enter. This time notice the partition information and to which disk they belong.
7. View the devices on this system again, by this time display the dependencies in an inverse order, by typing **lsblk -s** and pressing Enter. Notice the differences between displaying the information in this way versus the previous step's method.
8. Look at the various devices on this system by their WWID, by typing **ls /dev/disk/by-id** and pressing Enter.
9. Look at the various devices on this system by their UUID, by typing **ls /dev/disk/by-uuid** and pressing Enter.
10. Look at the various devices on this system by how they are attached to the PCI bus, by typing **ls /dev/disk/by-path** and pressing Enter.
11. Look at the various devices on this system by their labels, by typing **ls /dev/disk/by-label** and pressing Enter. It is okay if this directory is empty or you get a "not found" message. If it is empty or not found, that just means none of your disks are using labels.
12. Look to see if for seeing if any particular volumes on your system are participating in logical volumes (LVM), by typing **lsblk -p** and pressing Enter. If they are, you'll see **/dev/mapper/** listed in the display.
13. View the mapper directory files by typing **ls -l /dev/mapper/** and pressing Enter.
14. See if the **lsdev** utility is available on this system (most likely it is not) by typing **which lsdev** and pressing Enter. If you receive the **lsdev** utility's absolute directory reference from the **which** command, try it out by typing **lsdev** and pressing Enter.
15. View the first file from which **lsdev** pulls its information, by typing **cat /proc/dma** and pressing Enter.
16. View the next file from which **lsdev** pulls its information, by typing **cat /proc/interrupts** and pressing Enter.
17. View the third file from which **lsdev** pulls its information, by typing **cat /proc/ioports** and pressing Enter.