Section 21 Lab
LPIC-1, Exam 1 (101-500)
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Recommended Linux Distributions for this exercise:

- CentOS version 7

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 CentOS distro tty2 terminal, using the username and password you created when you installed the system.
2. If you are logged into the CentOS distro, and do not have access to use the **sudo** command for super user privileges, log into the root account, by typing **su -** and pressing Enter, then enter the root account's password, you created when you installed the system. You will need to NOT enter **sudo** whenever it is listed for a step. WARNING: Be careful in the root account!
3. Download an RPM file for which to use in this lab by typing **sudo yumdownloader iotop** and pressing Enter. This may take a while.
4. View the RPM file by typing **ls *.rpm**. Record the app name, its version number, revision number, and CPU architecture. Including any optional file name information as well, such as distribution.
5. Install the **iotop** utility, by typing **sudo rpm -i iotop** and use tab-completion to complete the full name of the **.rpm** file. Once you have the correct name for the file, press Enter. It's OK, if you get no messages for this installation.
6. Determine if the **iotop** utility is installed by typing **rpm -q iotop** and pressing Enter. If you get its package file name without the **.rpm**, it is installed.
7. Try the **iotop** utility, by typing **sudo iotop** and pressing Enter. This utility is similar to **top**, but monitors disk I/O and requires super user privileges to run. When you are done, press **q** to leave the utility.
8. View the **yum** configuration file, by typing **cat /etc/yum.conf** and pressing Enter. Record any reference to the **/etc/yum.repos.d/** directory.
9. View the **/etc/yum.repos.d/** directory by typing **ls /etc/yum.repos.d/** and pressing Enter. Record the various repository files listed in this directory. (If you'd like to view one, pick one out and use **cat** to view its contents.)
10. You do not need to update repository information prior to using **yum**, because it is done automatically. Try installing the **iptraf-ng** utility, by typing **sudo yum install iptraf-ng** and pressing Enter. If asked any y/d/N questions during the process, type **y** and press Enter.
11. View the status of the **iptrag-ng** package, by typing **yum list iptraf-ng** and pressing Enter. If you were successfully in the previous step, you should see it listed as an installed package.
12. Get a detailed description of the **iptrag-ng** package, by typing **yum info iptraf-ng** and pressing Enter. Read through the various displayed package information. What does this utility do?
13. Look at the **iptrag-ng** package's dependencies, by typing **yum deplist iptraf-ng** and pressing Enter. Read through the various displayed package dependency information.
14. Find the absolute directory reference of the **iptraf-ng** utility, by typing **which iptraf-ng** and pressing Enter.
15. Determine what package provides the the **iptraf-ng** utility, by typing **yum provides *absolute-directory-reference-of-iptraf-ng*** and pressing Enter. (Don't actually type ***absolute-directory-reference-of-iptraf-ng***, but instead provide the absolute directory reference of the **iptrag-ng** utility you discovered in the previous step. Note that repository information is provided too.