CIS 4930 – Intro. Systems Administration

Summer A 2019

Project 2 Due Date: 5/21/2019 before midnight Points: 50

Description:

This project implements topics from the chapters dealing with the Linux file system configuration, and system services.

NOTE: Do not make modifications to the any accounts or the system not prescribed. If you break your system and an assignment is affected by it, you will not regain those points. Your machine may have to be reset and previous work will be lost. I encourage you to "play" on a system you have built using the text outside of the class.

Objectives:

1. Create files and directories.
2. Understand the permissions on files.
3. Tar and zip files and folders and copy to other locations
4. Unzip the copies to the new locations.

Resources:

You have supplemental pdf files in this module, which may help you to understand using 'tar' and 'gzip'. I will also provide a demonstration of these utilities and place an embedded link in Module 2.

Requirement:

1. I recommend reading these steps over and reviewing any needed materials before making changes.
2. Log into your system.
3. Verify you are in your home directory using 'pwd'. This will be your initial working directory.
4. Create two folders/directories in your home directory and name the first 'module2' and the second 'backups'

5. Run the following commands, redirecting '>' the output to text files with the same name as the commands but with '.txt' extensions.
    a. EXAMPLE: list – l > list.txt
    b. dmesg
    c. df –h
    d. lspci
    e. lsblk
    f. top "You will need to use ctrl-c to kill top"
    g. uname –a
    h. uptime

    NOTE: You should have seven text files: dmesg.txt, df.txt, lspci.txt, lsblk.txt, top.txt, uname.txt, and uptime.txt

6. Use the list command to verify you have the required files in your home directory.
7. Do the following steps in order for grade.
    a. Change the file permissions on all the .txt files in your home directory to '700' with one chmod command and a wildcard '*'.
    b. Copy all the files using cp into the module2 directory.
    c. Change to the module2 folder and issue the list command with –l.
    d. Note that the file permissions moved with the files.
8. Use cd to get back to your home directory.
9. You should be able to see both the module2 and backups folders from here using the list command.
10. Use the history command with the pipe '|' command to send it to the wc –lm command. This shows you the lines and words in your history file.
11. Use the history command with redirection '>' to create a mod2hist.txt but place the text file in the module2 folder. Your history file will show me the commands you did in step 6.
12. Now use the tar utility to create a tar file of the module2 directory. You would use the –cvf arguments with tar to do this. Name your tar file mod2.tar or module2.tar.
13. Now compress the tar file you created using gzip or xz (your choice).
14. Copy the compressed file into the backup's directory leaving the original in your home folder.
15. Delete your module2 directory (not the backed up copy) using the 'rm' command.
16. Run the list command to see that it is indeed gone.
17. Now unzip and untar the back up the directory.
18. When you run list in your home directory, you should see both the backups and the module2 directory again.
19. When you run the list -l command you should see the directory and all the permissions have been restored.
20. You now know how to easily create and restore directories on a Linux system.

Rubric:

Component	Requirement	Max. Points	Points Earned
Project 2		50 pts	
Use of commands and utilities	All commands recorded and performed correctly	15 pts	
The tar file contains the required text files	The backup copy will be untarred by me for inspection.	15 pts	
Directory and files	All files and folders specified are in place	20 pts	
		Total points	