CIS 90 Linux Lab Exercise

Lab X1: UNIX in Review - Extra Credit Lab
Spring 2018

Objectives

This lab will give you review exercises in UNIX commands, file systems, processes, and shell scripting. This will help you prepare for the final exam.

Forum

Browse to: http://opus-ii.cis.cabrillo.edu/forum/

Check the forum for any late breaking news about this lab. The forum is also the place to go if you get stuck, have a question or want to share something you have learned about this lab.

Procedure

Log into your home directory on Opus, and make a subdirectory called *review*. Perform the following tasks and place the results of any steps of your work into this directory.

1. The UNIX operating system is often divided into three parts:
   - The kernel (*/boot/vmlinuz**)
   - The shells (/bin/{bash,ksh,sh,csh,tcsh})
   - The commands (*/bin/**)
   Make one file, called *unix*, that contains a long listing of all these files. Make sure this *unix* file ends up in your *review* directory. There should be no duplicates. Count the number of files in your long listing and append this count to the end of your *unix* file.

2. Copy the output of the man page for the banner command to a file called *banner*.

3. Find a way to list all the files in and under your home directory and save the output to a file called *myfiles*.

4. Find all regular files in the */etc* branch of the file tree that were modified between May 15, 2013 and May 29, 2013. Record their absolute pathnames in a file called, *doves*.

5. Using the */etc/passwd* file, mail yourself a list of just the UIDs for all the CIS 90 students. Then read your mail and save that message, with the mail headers, to a file called *mail90* in your *review* directory.

6. See if you can figure out a way to run the **banner** command on the output of the **date** command with the date formatted as the full weekday name (e.g. Sunday). Save the command you used and the output of the command to a file called *today*.

7. Save a list of all processes <u>currently being run by root</u> to a file called *processes*. **vi** this file and remove any lines that contain a process whose name does not end in the letter 'd'. For example you would keep the processes named [ksoftirqd/1], /usr/sbin/httpd and sshd:.

8. With one pipeline command make a sorted single column list of the inode numbers for all the poems in your *poems/* directory and sub-directories. Save the command you used and the output of the command to a file called *iPoems*.

Submittal

You should now have 8 files in your *review* directory. Write a shell script, named *labx1*, that will let me view these files one at a time. The shell script should let me view the files as many times as I want before exiting the program. I want to be able to run this program from anywhere on the system.

Once you have tested and debugged this program, copy it to the directory */home/rsimms/turnin/cis90* naming it *labx1.$LOGNAME*. Make sure it is executable for me and that I can read your files. (I am a member of the cis90 group).

Grading rubric (30 points maximum)

3 points each for doing each step above correctly and completely.
6 points for correct script submittal, permissions, and pathnames.