

System Administration for Beginners

Week 2 Laboratory

September 22, 2008

1 Getting Started

There are several ways to get laboratories done; you must either be at the computing facilities at Soda Hall or remotely connected to the computers in Soda Hall using your computer at home or at other laboratories like the Open Computing Facility. For more information on how to remotely connect to the computers in Soda Hall, see the following:

- <http://inst.eecs.berkeley.edu/connecting.html#network>
- <http://www.ocf.berkeley.edu/~eleen/web/ssh.html>
- http://docs.ocf.berkeley.edu/wiki/SSH_Secure_Shell

The second and third URLs were designed as a tutorial on how to remotely connect to the Open Computing Facility (OCF). Most of the steps remain the same, regardless of where you are connecting to. However, you will want to change the hostname like `solar.cs.berkeley.edu` instead of `ocf.berkeley.edu`.

2 Submission Guidelines

In an email to `cardi+decal@ocf.berkeley.edu` and `jchu+decal@ocf.berkeley.edu`, please provide your full name, inst login (`cs198-XX`), your email address, and the answers to the following questions. If there is no specific information being asked, please include any information or output that you think would help show your understanding of the material (text only). Type the answers out into the body of the email; no attachments are necessary.

NOTE: It is advisable that you first compose your lab submission in some text editor and then copy and paste the final version into an email. Some webmail clients will timeout or log you off after a certain period of time and lose any unsaved work.

3 Week 2 Laboratory

1. Describe the process of logging into the Solaris systems at Soda Hall. Suppose you just sat down at a terminal. How would you login? How would you open a web browser and a terminal?
2. What is the command to determine where you are in the UNIX filesystem?
3. What are the commands to make a new file? Do you have to make a new file before editing it?
4. Create a new file. How would you copy the file to a different location? How would you copy multiple files at the same time?
5. Download a text file from the Internet. **HINT:** Use *wget* to get some webpage. What commands could you use to display the contents of the file? **EXTRA:** That file may be very long; is there a command that will allow you to “scroll” through the text?
6. What are the commands to make a new directory? If you wanted a directory hierarchy of `foo/bar`, where `bar` is a sub-directory of `foo`, and `foo` does not exist, do you have to create `foo` first? Read the *man* page for the command to make a new directory and see if there is an option for automatically creating parent directories.
7. Make a new directory and create a few files in that directory. How do you list all the files in that directory? How would you list the files so that all their attributes are displayed (e.g., owner, size, creation time)?
8. Using only one command, how would you delete all the files in the directory created in the previous step?
9. Make another directory and create a few files in that directory. Try deleting the directory. What happens? Can you figure out a method for deleting a non-empty directory?
10. How would you rename a file? **HINT:** There is no ‘rename’ command. There’s an easy and a hard way to rename a file; try looking for both.
11. How would you change the permissions on a file? Describe the three categories of permissions, and the three categories of users to whom these permissions apply. **EXTRA:** How would you change file ownership?
12. Can a file and a directory have the same name? Are file and directory names case-sensitive?
13. Start a web-browser process. Can you figure out the process name and process ID for the web-browser? **HINT:** It probably contains the word “mozilla” or “firefox”.
14. How would you kill the process in the previous step? What if you didn’t know the process ID?