CS380

Lab 7

Remote logins and remote file copy

A very simple lab, and for some of you just doing something you already do every day.

Complete this on or before March 24. The final step is a submission via the venerable CS department "submit" program. There is nothing else to hand in.

Step 1: Preparation
Mac: no prep required.
PC: download and install PuTTY

Step 2: Connect to the CS department servers
Mac:
1. Open a terminal window. In the finder go to Applications / Utilities. Find terminal.app and double click on it.
2. ssh YOU@powerpuff.cs.brynmawr.edu where YOU is your CS department UNIX login
3. Enter your CS department password when prompted.

PC:
1. Start PuTTY
2. In the configuration window:
    1. Enter powerpuff.cs.brynmawr.edu into the hostname area.
    2. Be sure the connection type is SSH
    3. Click on "open"
    4. "login as:" Enter your CS department login
    5. Enter your CS department password

Step 3a: Set up public/private keys
1. Skip 3a if you have done this before
2. Execute the UNIX command:
    ssh-keygen
    hit return 3 times when asked for input
3. Do the following in UNIX:
    cd ~/.ssh
    cp id_rsa.pub authorized_keys
    chmod 700 id_rsa

Step 3: Move along
1. Department policy is that you not do actual processing on powerpuff. So, you need to log into one of the machines in the CS department labs. To pick a machine:
2. execute the program: /home/gtowell/bin/labmachines.sh
    1. The first time you use this, you may be asked for permission about each machine querried (I think I got a setting to not do this). If asked, say yes. This script will give output of the following form (the full output is longer):

```
>>>>>> mira UPPPP
1 users
```

```
0.36, load
>>>>>> capella UPPPP
0 users
0.21, load
>>>>>> wasat
DDOWN
>>>>>> canopus UPPPP
0 users
0.21, load
```

2. The name after ">>>>>" is the name of a machine in one of the CS labs. The next line or 2 give information about the usage of the machine. For instance, "wasat" is down; mira has one user and the rest have no users. Generally you want a load less than 1.0. Pick one that is up, has few users and low load. For instance, canopus looks like a good choice.
3. ssh on the the machine you chose in step 2.
   ssh YOU@canopus
4. Because of what you did in 3a you should not have to enter a password
5. Execute /home/gtowell/bin/labmachines.sh > labstatus.txt
   This creates a file "labstatus.txt" which you will use in the next step

Step 4: Copy the file you just created to your local machine:
MAC:
1. Open a new terminal window
2. scp YOU@powerpuff.cs.brynmawr.edu:labstatus.txt labstatus.txt
3. enter your password when prompted

PC:
1. open windows power shell. (You can also use the venerable command window.) On my PS, I entered "power" into the "type here to search" area in lower left
2. scp YOU@powerpuff.cs.brynmawr.edu:labstatus.txt labstatus.txt
3. enter your password when prompted

Step 5: Copy from your local machine to CS.
1. In your remote login window
   1. create a new directory (in your home directory) named P380-1 You can name it anything, but the directions below assume this name
2. On you local machine find a likely file (an image is good)
   1. determine the full local path of that file or copy it to the directory in which your shell is open. I assume you copied and that the file is named image.pdf
   2. Back in the window you used in step 4 (I.e., a command prompt on your local machine)
   3. scp image.pdf YOU@powerpuff.cs.brynmawr.edu:P380-1/
   4. enter your password when prompted
   5. scp labstatus.txt YOU@powerpuff.cs.brynmawr.edu:P380-1/

Step 6: Finish:
1. Back in the window on which you are connected to the remote machine:
2. /home/gtowell/bin/submit -c 380 -p 1 -d P380-1
   1. Do NOT use the version of submit in /usr/local/bin. It will not work.
3. enter "exit" a lot windows to back out and quit.