Remote Access to Unix Machines

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Overview

We are using a set of Computer Science Unix machines for this semester. Therefore, you need to ensure your account is activated, that you can remotely access the machines, and that you become familiar with using Linux to create files, move around the directory (folder) structure, etc. This tutorial is aimed at getting you up to speed on these aspects before the semester starts, so you can hit the ground running.

Remote Access to Computer Science Machines

We are using the machines <phe,phi,pho,phum>.cs.duke.edu for this semester. The only way to access these machines is remotely over the Internet. The main item necessary for this is a secure shell client, but we will also utilize X-windows so we can run programs with graphical interfaces (GUIs). Note that for much of this course you won't need X-windows, but I include it here for completeness.

MAC OS

2. Logout of your MAC
3. Login to your MAC

X-windows is now ready for use on your MAC. Next up is the secure shell client, on a MAC this is easy since it has a shell built in via the Terminal Application.

4. Open the Terminal App. You can find Terminal in the Applications/Utilities folder or by searching in Spotlight for Terminal.
5. At the command prompt type ssh -X netID@<machinenname>.cs.duke.edu where netID is your Duke NetID and machinenname is one of phe,phi,pho,phum. Note: that the images below use login.cs.duke.edu, you need to use one of the above machines. This command initiates a secure shell connection to the machine <machinenname>.cs.duke.edu. If this is the first connection that you've made to <machinenname>.cs.duke.edu, you will receive a warning about the authenticity of the host and RSA key fingerprint. This is expected behavior for first-time connections. If you typed the machine name correctly, you can just type yes and the
appropriate information will be added to your local machine, and you shouldn't see the error again on subsequent connections.

6. Enter your Duke NetID password.
If you see the question “Terminal type? [vt100]” just press enter. Ta-dah! You are now successfully connected to a remote machine over the Internet. Goto the *At the Remote Machine Command Prompt* section after the Windows information below.

**Windows**
Follow appropriate directions there to SSH into one of the course machines.

**Linux**
If you are using Linux then you probably don’t need these instructions, but just in case...
Simply start at step 4 of the Mac instructions.
1. Open a Terminal
2. Type `SSH -X netID@<machinename>.cs.duke.edu` at the prompt

**At the remote machine command prompt**
You now have a terminal session that is connected to login.cs.duke.edu Note login.cs.duke.edu is a virtual name and that the actual machine name you are connected to may be quicksort.cs.duke.edu or some other machine.
You should see a command prompt that is something like `netID@phe:$` with a blinking cursor after the `$` You may see a slightly different prompt with a `>` instead of the `$`, not a big deal...

1. Type `date` at this prompt, this is a unix command to display today’s date, as shown below (I did this in June 2013).
2. Type `xterm` at the prompt. This should open a window on your machine's screen that gives you another terminal. If this fails, you've done something wrong in setting up X-windows, please review the steps above according to your operating system.

```
alvy@quicksort$ xterm
```

3. Click in the xterm window to activate it. Close the new xterm window by typing `exit` at the prompt within the xterm window or by clicking the `x` button of the xterm window.

4. Type `logout` at the prompt in your initial session window to end the SSH connection and disconnect from the remote machine.