

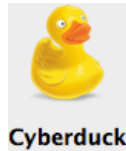
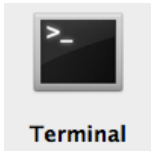
Introduction

Welcome to the CSULB Mathematics and Statistics cluster, Pyramid (8 quad-core Intel Processor Blade Cluster)! From here you will be able to run some of the open source software (e.g., vim, Openoffice, and xfig), perform intense calculations (via e.g., MATLAB and Maple), and even compile your LaTeX documents. This tutorial provides Mac users a guide to set up their system to connect to Pyramid assuming that the user(s) have already obtained account access from the system administrator (Dr. Jen-Mei Chang: jchang9@csulb.edu).

To start, you will need to confirm that you have three programs on your computer:

- Terminal
- Cyberduck
- The X Window System

All should exist on your computer already, but you may need to get the most updated version of Cyberduck.



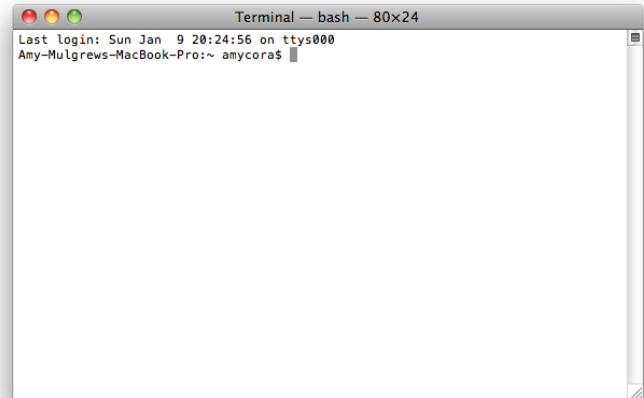
The following tutorial has two parts:

- A. Terminal: a tutorial for accessing and navigating the cluster Pyramid@CSULB on a mac
- B. Cyberduck: a tutorial for transferring files between your local machine and the cluster

A. TERMINAL: a tutorial for accessing and navigating the cluster Pyramid@CSULB on a mac

Login to the cluster:

1. Open Terminal. This program should already exist on your mac.
2. Be sure you are connected to the internet.



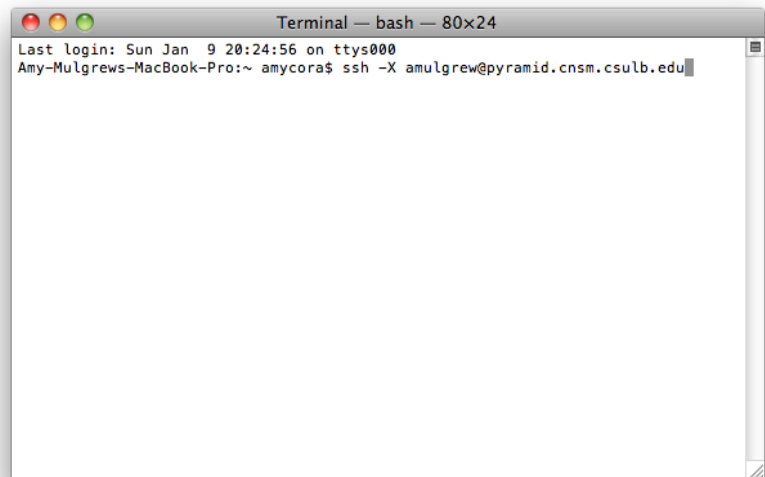
3. If you want to have the user interface via X11, in the same line type:

`ssh -X name@pyramid.cnsml.csulb.edu`

If you do not want to use the memory of a user interface, in the same line type:

`ssh name@pyramid.cnsml.csulb.edu`

4. Enter password. Notice that the cursor will not move as you type the password.



You are now logged in to your own directory in the cluster.

Navigating within the cluster:

<i>What you type</i>	<i>Function</i>
<code>ls</code>	list files in current directory
<code>ls -l</code>	list files in current directory and information about those files
<code>pwd</code>	current directory
<code>cd</code>	change directory name_of_folder
<code>tab</code>	autofinish file name
<code>cd ..</code>	change directory up one level
<code>cd ../../</code>	change directory up two levels
<code>history</code>	view all of your past typed commands
<code>chmod 777 file_name.pdf</code>	make file_name.pdf accessible to all user
<code>exit</code>	exit the cluster

Using MatLab in the cluster:

<i>What you type</i>	<i>Function</i>
matlab	opens matlab. If you are logged in via ssh -X, this will open matlab with a GUI.
matlab -nojvm	opens matlab without the GUI. Only need if you were logged in via ssh -X.
matlab &	opens matlab in a new window

Editing files/latex files in the cluster:

<i>What you type</i>	<i>Function</i>
vim name_of_file.tex	lets you edit the file within the cluster

How to edit while in vim:

(a good website for all the commands <http://www.tuxfiles.org/linuxhelp/vimcheat.html>)

<i>What you type</i>	<i>Function</i>
i	insert before cursor
ESC key	exit insert mode
:w	save
:q	quit and save
:q!	quit, don't save

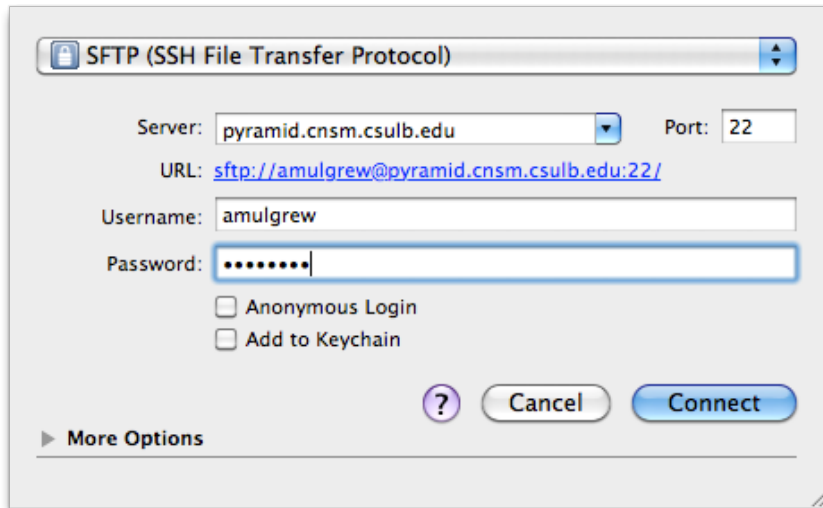
How to compile a .tex file in the cluster:

Type: pdflatex name_of_file.tex

How to view a pdf file:

Type: acroread name_of_file.pdf

B. CYBERDUCK: a tutorial for transferring files between your local machine and the cluster
Open the connection via the Open Connection tab at the top left.
Choose the appropriate server and input your Username and Password.



- Once connected, you can manage your files in the cluster in the same fashion as you would in your Finder window.
- Use the Action tab to upload, download, synchronize and edit files in the cluster.
- You can also drag and drop files from the cluster to your Finder and from the Finder to the cluster.