

Running Applications from the Research Cluster of X Using Cygwin

Updated 1/28/2009

First, you need to get a cluster account for research. Please see the relevant webpage under academic technologies at Tufts for who is eligible and how to get an account.

<http://go.tufts.edu/cluster/>

Note: Below, when I show a command you type at the prompt, the “%” sign is the prompt... it is not something extra you type! It is a placeholder for whatever the Unix shell displays as your prompt.

Windows

If you don't have Cygwin, it is free – you can download and install from

<http://www.cygwin.com/>

Make sure when you install you include the default X11 packages so that X works.

To use cluster programs over X-windows using Cygwin:

1. Run cygwin from the desktop icon.
2. At the Cygwin prompt, type:

```
% startx
```

From the Xterm, either from Cygwin or from Mac OS,

3. In the new xterm window that pops up, log in to the Linux cluster by typing:

```
% ssh -Y cluster.uit.tufts.edu
```

4. It will ask for your password. Enter your cluster password. If you don't have a cluster account, you have to request one. Check the Tufts IT webpage for information on obtaining a cluster account (<http://go.tufts.edu/cluster/>).
5. Once you are logged in to the cluster, type the following at the prompt to see what software is available:

```
% module avail
```

6. When you know what package you want to use (for example, Comsol), type the following:

```
% module load comsol  
% comsol
```

When you are done, quit the application, and log out of the cluster by typing “exit”. Also log out of both Cygwin windows by typing “exit”.

Special Notes on Mathematica on the Cluster using Cygwin

As of Fall 2008, the Mathematica fonts were not naturally installed in Cygwin. Here are the steps to go through to get Mathematica working:

1. Download <http://tufts.edu/~rwhite07/mathematica-fonts.tgz> to your P: drive.
2. Run cygwin from the desktop icon.
3. At the cygwin prompt (you only have to do this once for each computer you work on):

```
% mkdir /usr/lib/X11/fonts/Mathematica
% cp /cygdrive/p/mathematica-fonts.tgz /usr/lib/X11/fonts/Mathematica
% cd /usr/lib/X11/fonts/Mathematica
% tar -xzf mathematica-fonts.tgz
```

4. The following steps you will have to run every time you start cygwin:

```
% startx
```

Now do this in the new xterm that pops up:

```
% xset fp+ '/usr/lib/X11/fonts/Mathematica/Type1'
% xset fp+ '/usr/lib/X11/fonts/Mathematica/BDF'
% xset fp rehash
% ssh -Y cluster01.tccs.tufts.edu
```

Put in your cluster password

4. At the cluster prompt:

```
% module load mathematica
% mathematica &
```

I found that on the computers in Blake, if I clicked anywhere in that little startup window, it crashed. On my desktop in my office that did not happen. But if I ignored the startup window and just started working in the main window it worked OK.