COMP/CS 605: Advanced Parallel Computing
Topic: Visualizing Results using Gnuplot on tuckoo

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X11 forwarding to run Gnuplot on tuckoo

- Using X11 forwarding will allow you to visualize data or run graphical applications, e.g.:
  - `ncview` to view NetCDF data files or
  - ParaProf performance analyzer

Setting up X11 (xterm) using SSH Forwarding

- Launch *SSH* X11 terminal on your computer
- *SSH* onto rohan (OS X):
  
  `ssh -Y rohanUserName@rohan.sdsu.edu`

- *SSH* from rohan to tuckoo:
  
  `ssh -Y tuckooUserName@tuckoo.sdsu.edu`

- Software required: some form of X11 window application
  - OSX: XQuartz X Window System
  - Windows: XMing or PuTTY (select Connection/SSH/X11)
- To Test, run the command `% xclock &`
Gnuplot: interactive commands

- run Gnuplot: `[mthomas] % gnuplot`
- Interactive commands:
  - `set pm3d`
  - `set view 60, 60, 1, 1`
  - `set title "Plot of My Data"`
  - `set ylabel 'Y-axis'`
  - `set xlabel 'X-axis'`
  - `splot 'wave.32.stat.out' matrix with lines`
  - `set palette rgbformulae 22,13,-31`
"Wave" Generator, wave-dyn.c, running on tuckoo to calculate Airy Disk Function (N=32, f=0.5, g=0.25, s=4)
Gnuplot References

- http://lowrank.net/gnuplot/index-e.html
- http://gnuplot.sourceforge.net/demo/
- http://www.ma.utexas.edu/users/ktaliaferro/gnuplot_examples.html#3dpar
- and many more