Box’s 1 minute Bio

• **PhD in CS (1995):**
  • PhD Thesis: Resource management/allocation in Heterogeneous Parallel Distributed Computing

• **7 years in industry labs (Bell-Labs, Lucent Technologies)**
  • Highly Reliable Software/system (IN, Service Management)
  • Architect, PM, Tech lead (15-30 team size)
  • R&D -> 4 major network management products

• **Associate Professor in CS since 2002.**
  • 15 graduate students (4 PhD)

• **Research Interest**
  • Cluster computing, Fault Tolerance OS/Runtime, Reliability, Availability and Serviceability and Security (RASS) in HPC/HEC, Software Engineering

• **Services**
  • IEEE Cluster Computing Program committee member 2004-2005
  • A founder and CO-Chair: High Availability and Performance Computing 2003-2004

• 2003 Outstanding Teach Award, COES, Louisiana Tech U.
• Creator of www.searchkatrina.org
Appeared in a front cover in two major Linux magazines, various technical papers, research exhibitions.

web site: http://xcr.cenitlatech.edu/ha-oscar

HA-OSCAR beta was released to open source community in March 2004
Research Collaborators

• National, Academic and Industry Labs

  • ORNL
  • Intel, Dell, Ericsson
  • Lucent, CRAY
  • IU, NCSA, OSU, NCSU, UNM, TTU, UIUC, ASU
  • Systran
  • Sandia, Ames

• More on the way; US Army, NetQoS, MIT, IBM, Apple
Intro to Linux/Unix (user commands)

Box
What is Linux?

- Open Source Operating system
- Developed by Linus Torvalds at the U. of Helsinki in Finland since 1991.
- Under GNU GPL, its source code is free for everyone to download and use.
- One of the most popular, especially for server markets
• Source code can be modified to fit your need.
• Quite portable – good for new hardware products
• Supports various hardware platforms. Majority on x86
• True multi-tasking operating system.
• Being immunized against all kinds of viruses.
Login

- Login at terminal/console, X-window
- Remote terminal – ssh
  - Putty – windows, openssh.org
Putty login screen
Navigate around and file/dir commands

- List a directory – `ls`
- Get more help – `man %command`
- Change directory – `cd`
- Forward slash in Linux/Unix
- Create directory – `mkdir`
- Remove file or dir – `rm`
- List a file content – `cat`, `more`
Create/edit a file

- Vi
- Emacs
- Any of you favorite editor
Compile and run your program

- Gcc – gnu c compiler
- G++ – c++
- Mpicc – mpi c compiler
- Default executable – a.out

- Run your program.
  - Make sure your $PATH is set
  - ./a.out – normal program
  - Mpi – mpirun or qsub (pbs)…