Welcome!

Parallel Computing on Ranger and Longhorn

May 16-17, 2012
Center for Advanced Computing (CAC)

• Mission:
  – *To Enable the Success of Cornell Researchers, Collaborators, and Supporters whose Work Demands Advanced-Computing Solutions*

• Organization:
  – Cornell core facility
  – Staff of expert consultants, systems administrators & programmers
  – CAC Director reports to the Vice Provost for Research-
  – CAC has a Faculty Oversight Committee, chaired by VPR
    • Includes leaders in the fields of engineering, life sciences, social sciences, computer science, & business
CAC Services

- Maintenance and support of general-purpose, high-performance computing systems
  - [http://www.cac.cornell.edu/services/HPCsystemsList.aspx](http://www.cac.cornell.edu/services/HPCsystemsList.aspx)
  - Faculty and research group assistance in the preparation of proposals
- Research project participation and consulting
  - Parallel code development/optimization/extensive debugging or development
  - Database design, implementation and maintenance
  - Develop pipelines for data intensive research
ranger.tacc.utexas.edu

• Ranger is an open science research XSEDE resource built and operated by TACC as the first of the new NSF Track2 HPC acquisitions.

• [http://www.tacc.utexas.edu/resources/hpc](http://www.tacc.utexas.edu/resources/hpc)

• Operating System: Linux
  – Number of Nodes: 3,936
  – Number of Processing Cores: 62,976
  – Total Memory: 123TB
  – Peak Performance: 579.4TFlops
  – Total Disk: 1.73PB (shared)
    31.4TB (local)
Computing Accounts

• Workshop/training accounts
  – Access to ranger.tacc.utexas.edu and longhorn.tacc.utexas.edu
  – ssh required
  – Account will be deleted after one week

• XSEDE Allocations
  – PIs may request Startup, Education, or Research allocations.
  – https://portal.xsede.org/
  – Go to Allocations tab

• CAC Services
  – PI may set up projects for
    • compute time
    • consulting time
    • Maintenance
    • Storage
    • Red Cloud
  – http://www.cac.cornell.edu/services/
Workshop Logistics

• Refreshments
  – Morning and afternoon breaks provided
  – No food or beverages permitted in training room
  – Lunch on your own

• Restrooms

• Room access
Workshop Web Page

http://www.cac.cornell.edu/education/training/parallelMay2012.aspx

• Agenda
• Lecture slides
• Links