Summary, Action Items and Milestones

1st HiPCAT THEGrid Workshop

July 8 – 9, 2004

Univ. of Texas at Arlington

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Summary So Far

- High energy physics computing going on
- And of interest at practically every major institution in Texas
- 39 people registered, 23 attended here
- Good tour of local facilities
- What's next? This discussion...

What does each institution have?

- UH
  - HPC that shared by many discipline throughout the university
  - Leonard Johnson has own facility ➔
    - 256 dual node Itanium ➔ Support ALICE DC
    - Small clusters (10s of machines) for benchmarking
  - Local desktop clustering done by the department ➔ Physics has about 4 IT people
  - Can identify dedicated machines and put them together as a cluster for THEGrid

What does each institution have?

- SMU
  - 30 Intel machine under complete control of HEP + 6TB Storage ➔ ATLAS
  - 4 Faculty + 4PD + students on ATLAS
- A&M
  - No current plans for grid
  - Possible CDF CAF installation in the near future

How much human resources does an institution need to start?

- A graduate student (preferably knowledgeable in computer)
- A part time postdoc
- Try to utilize interdisciplinary collaboration with CSE to obtain valuable manpower
  - Need a physics faculty to drive the effort
  - UH has a CS PhD students for reconstruction

Suggested Action Items

- Build and distribute small system
  - (one machine per campus minimum) to implement HEP grid standards (desktop cluster paradigm) as a starting point.
- Form a steering committee
  - (one person per institution, 3- person executive committee), with subgroups, with challenge to expand this greatly.
  - Charge: identify cluster resources, software to be installed, THEGrid environment, tools, projects, etc.
- Hardware platforms? (Specifically investigate 64-bit options, hardware alternatives for cpu and storage.)

Communication Action Items

- Mailing list(s): HiPCAT has started one but it is centrally administered. ➔ By July 12
  - TTU will host Mailman based list on our server (highenergy.phys.ttu.edu) - self-service
- Web site ➔ By Aug. 9
  - Host page on HiPCAT site. TTU to design this page and beginning info.
- Regular THEGrid meetings
  - Contact: Alan Sill
  - Weekly: First meeting on July 23
  - Time : Fridays at 9:30am
  - Teleconference: ESNet teleconferencing
    - dial: 510-883-7860
    - Input id 8274743 (82tgrid)#

Communication Action Items, cnt'd

- Regular executive committee meeting ➔ Coincide with THEGrid weekly meeting
  - Members: Larry Pinsky, Alan Sill, Jae Yu
- Regular workshop
  - 2nd workshop at UH (Thanks, Larry!)
    - In October 7th and 8th
    - Includes a hands-on session to finish off SC2004 prep
  - Interval: To be determined at the 2nd meeting

Tools & Environment

- OS: Start with RH 7.3 (e.g Fermi) Linux, aim to support all grid-compatible versions of Unix. Minimum: CERN/Fermilab versions.
  - See http://cdfkits.fnal.gov/grid/ for manual to install yum, etc. if not starting from Fermi distribution.
- Everyone should get a DOE Grid personal certificate. Machines will need them also...
  - use HiPCAT's? Patrick McGuigan to follow up with Phil about this in our context.
- Ganglia to be used to aggregate monitoring, MonALISA where possible. (Alan add links to installation info. page.)
  - UTA to host central ganglia site.
- Bandwidth monitoring: Add one node each to FNAL WAN bandwidth monitoring.
  - Alan will request THEGrid subset to be made once enough nodes are established.
- Groupware through biogrid
  - Ask for presentation by Paul Medley of UTA at next HiPCAT meeting.

SC2004 Demo Plan

- Primary demo: Display ganglia resource monitoring of THEGrid
- Preparation
  - Setup a cluster
    - Desktop cluster if none already exist
    - Established cluster if exist
  - Install ganglia in each institution, including web front and server
  - Central display service provided by UTA, putting together THEGrid ganglia page
- Tasks and Milestones (SC2004: Nov. 6 – 12)
  - Distribute ganglia installation guideline by TTU: July 12
  - Complete installation of ganglia at institutions: Sept. 1
  - Complete central display service (UTA): Oct. 1

Discussion on Funding

- Complete THEGrid proposal document
  - By when: Aug. 31
  - Distribute the document to the distribution list: July 13 ➔ Alan Sill
  - Revision to include the list of Texas institutions with HEP, NP and AP along with their projects: Larry Pinsky
    - Circulate the first draft: Aug. 9
  - Where do we submit this document to
    - HiPCAT
  - Raise awareness on THEGrid and HiPCAT to local university administration and volunteer to go with them to persuade state legislature
    - Write a short primer for people to use for local universities and post: Larry Pinsky
  - What are we asking for?
    - Bandwidth and infrastructure (network and people) ➔ Pry out the allocated money
    - Look for matching from state toward federal funds
- What are the sources?
  - State? ➔ Maybe a bit harder due to possible conflict with HiPCAT
    - Should be part of HiPCAT for state
  - Federal? ➔ Executive committee should be aware of available programs in various federal agencies

Action Items and Completion Dates

Name	Action Item	Dates
Sill+Smith	Form a mail distribution list	7/12/04
Yu	Distribute web link to ganglia installation	7/12/04
Sill	Distribute THEGrid proposal	7/13/04
All	Bring the names of institutional reps.	7/23/04
Sill	First THEGrid weekly meeting	7/23/04
Sill+Smith	Design and activate THEGRid web page & link from HiPCAT project page	8/9/04
Pinsky	Compile and distribute the HEP, NP and AP list in the state of Texas	8/9/04
Sill+Yu+all	Complete THEGrid proposal	8/31/04
All	Complete forming a small cluster and install ganglia for SC2004 demo	9/1/04
Yu	Complete THEGrid central ganglia service	10/1/04
Pinsky	2nd THEGrid workshop at UH	10/7 – 8/04
All via HiPCAT	SC2004 Demo	11/6 – 12/04