TeraGrid

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TBD

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Outline

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TeraGrid

About

TeraGrid is an open scientific discovery infrastructure combining leadership class resources at eleven partner sites to create an integrated, persistent computational resource.

Short Form

- Lots of Compute
- Lots of Storage
- Powerful Support

Support

Local Support

- The CAC is the campus-wise local resource for TeraGrid support, and U of M user advocate on TG
- tg-support@umich.edu
- http://cac.engin.umich.edu/teragrid/

TG Wide

- help@teragrid.org
- http://teragrid.org/userinfo/

Resources

Compute

- Over 16 Compute (Batch) systems available
- Range from 0.34 TFlops to 608 TFlops
- Special resources such as GPU's and Cell CPUs available
- Shared memory, Distributed memory clusters, and Grid systems

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Hardware Examples

NICS Kraken

- CRAY XT5
- 66,048 AMD CPUs
- PGI Compilers
- 2.4 PetaByte Scratch Disk

Hardware Examples

PSC Pople

- SGI Altix 4700
- 768 Intel Itanium II's
- Intel Compilers
- 1.54Tbytes Shared Memory

Resources

Storage

- Each site/system has local scratch and NFS/Lustre home directories.
- Each site/system has own quota/purge policy
- Archive storage (Longterm/huge storage) is available at several sites, most are over 1PetaByte in size

Visualization

- TeraGrid also gives access to several Vis clusters and walls
- Not as easy to use due to location but is available

Allocations

Submit all requests via POPS:
`https://pops-submit.teragrid.org/`

Startup/Education Allocations
- Up-to 200,000 Service Units (SUs)
- Up to 5TB Disk and 25TB Tape/Archive
- Granted all year long, for quick turn around, and startups

Research Allocations
- Allocations larger than Startups
- Granted at intervals during the year
- Requires formal proposal

`http://teragrid.org/userinfo/access/allocations.php`

Starup/Education Allocations

Startup Requirements
- Granted all year long
- Use to make formal proposal for Research Allocation
  - Define goals
  - Discover target system
  - Estimate number of needed SU's
- Easier request process requiring a curriculum vitae and abstract

Details on Starup Allocations
`http://teragrid.org/userinfo/access/dac.php`

Research Allocations

Research Requirements
- For those who need more than the Startup Allocation
- Allocations start January 1, April 1, July 1, and October 1
- Requests are submitted in September, December, March, and June
- Requires formal request to TeraGrid

Tips for Writing a Request
`http://teragrid.org/userinfo/access/allocations.php#writing`