

State of the LSC Data Analysis Activities:

Alan Wiseman
University of Wisconsin -- Milwaukee

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LSUG Group Grid Computing Applications Development

- Timeline proposed after March LSC Meeting (Brady)
 - » Develop prototype applications using LAL and LALApps (+6 Months)
 - » Assess nature of prototypes, revise, draft white paper (+12 months)
 - » Develop grid-computing howto for LSC (+18 months)
- LAL Infrastructure Development (since S2)
 - » LAL forms underlying data analysis engine (Jolien Creighton, Librarian)
- Participation in LAL development effort (since S2 release)
 - » W. Anderson, Babak, Bose, Brady, Brown, Chin, Churches, Cokalea, J. Creighton, Fairhurst, Klimenko, Krishnan, Mendell, Messaratiki, Regimbau, Sathyaprakash, Sintes, Sylvestre, T. Creighton, Romano, Tibbits, Torres, Whelan, Woods, Yakushin
- New infrastructure
 - » Interface to frame Library (J. Creighton & Brown)
 - » decimation / PSD estimation (Brown, Brady, Creighton)
 - » LIGO Lightweight input/output and Utilities (Brown, Brady & others as needed)
 - » interface to calibration information (J Creighton, Brown)
 - » improvements in filtering and injection (T Creighton)
 - » improvements to date package (Chin)

Prototype Grid Application Development

- **LALApps** (J. Creighton, Librarian)
 - » Programs for desktop or grid-computing use.
 - **Inspirational Code** (Brown)
 - » Analyzed ~600 hrs S2 data in 1 weekend using Condor on 300 node cluster
 - **Power** (Brady & Ray-Majumdar)
 - » Analyzed all S2 playground data in few hours using Condor on 300 node cluster.
 - **Pulsar** (Papa, Siemens, Allen ...)
 - » Already used in S1, enhanced for S2. Forms centerpiece of Supercomputing 2003 LSC-GriPhyN grid computing demo
 - **Progress of timeline:**
 - » Prototype codes already used in S2 analyses; form integral part for several groups
 - » White-paper is to be started
 - » Howto started. Distributed in LALApps.
 - **Related** (LDR, GriPhyN, iVDGL):
 - » User interface to LSC Data Replica catalog (Koranda & Moe) provides URL for data locations
 - » Codes & pipeline scripts designed to fit into nascent grid technologies like Pegasus & Chimera
- **Learn about LSC Data Grid:**
 - » Extended visits to UWM; all welcome, contact Patrick Brady
 - » (Anderson, Torres already; Babak, Cokalear after LSC; Heng in Dec.)

- LSC DataGrid Server/Client base grid software stack
 - » Built on Virtual Data Toolkit (VDT) from iVDGL project
 - » Grid-SSH, GridFTP, LALdataFind, Globus, Condor, monitoring tools, ...
 - » Installed at AEI, Birmingham, Cardiff, CIT, UTB, UWM
 - S. Grunewald, B. Vallance, R. Balasubramanian, H. Pulapaka, S. Anderson, J. Zamora, S. Morriss, S. Koranda, P. Armor
 - » Single credential for access to resources
 - » Resource details, documentation, software available at LSC DataGrid web pages
<http://www.lsc-group.phys.uwm.edu/lscdatagrid>



DataGrid Details

[Login details](#)
[Service details](#)
[Monitoring](#)
[Grid partners](#)

Information

[What is the LSC DataGrid?](#)
[LSC DataGrid Software](#)
[Getting Certificates](#)
[Documentation](#)
[FAQ](#)
[Contact](#)
[Get Involved](#)

Exits

[LSC](#)
[LIGO](#)
[GridPhyN](#)
[IVDGL](#)

LSC DataGrid Service Details

Rows in blue are LSC resources. Click on the site name for information on getting access if you are a LSC scientist.

Rows in purple are sites for which special access has to be arranged by [Albert Lazzarini](#).

Site	CPU count	login node	GridFTP server	batch jobmanager	RLS server	global scratch
AEI	359	morgane.aei.mpg.de	morgane.aei.mpg.de	morgane.aei.mpg.de/jobmanager-condor	not yet	/home/NOBACKUP
Birmingham	200	tsunami.sr.bham.ac.uk	tsunami.sr.bham.ac.uk	tsunami.sr.bham.ac.uk/jobmanager-condor	none	/raid/1/<login>
Cardiff	160	mini.astro.cf.ac.uk	mini.astro.cf.ac.uk	mini.astro.cf.ac.uk/jobmanager-condor	not yet	none
CIT	?	ldas-grid.ligo.caltech.edu	ldas-grid.ligo.caltech.edu	ldas-grid.ligo.caltech.edu/jobmanager-condor	not yet	?
ISI	35	birdie.isi.edu	smarty.isi.edu sukhna.isi.edu sultan.isi.edu bindas.isi.edu pisa.isi.edu	columbus.isi.edu/jobmanager-condor birdie.isi.edu/jobmanager-condor skywalker.isi.edu/jobmanager-condor	rls://smarty.isi.edu rls://sukhna.isi.edu rls://skywalker.isi.edu	/nfs/cgt-scratch/griphyn
UWM	296	hydra.phys.uwm.edu	hydra.phys.uwm.edu	hydra.phys.uwm.edu/jobmanager-condor	rls://hydra.phys.uwm.edu:39261	/scratch
Grid2003	~1200	details	details	details	details	details
Madison Condor Pool	800	none	beak.cs.wisc.edu	beak.cs.wisc.edu/jobmanager-condor	none	/shared/scratch/griphyn-lig /shared/scratch2/griphyn-lig

The current [grid-mapfile](#) being used by the LSC-GridPhyN working group is [here](#), minus the local UID mappings which should be provided by each admin for now.

LSC DataGrid Monitoring

[Collective realtime LSC cluster usage](#)

Separate monitoring pages:

- AEI: [Ganglia cluster monitor](#)
- Birmingham: [Ganglia cluster monitor](#)
- ISI:
 - [Condor Pool Statistics](#)
 - [Ganglia cluster monitor](#)
- UWM: [Ganglia cluster monitor](#)

Latest results from automated testing:

- [AEI](#)
- [Birmingham](#)
- [Cardiff](#)
- [CIT](#)
- [ISI](#)
- [UWM](#)

LSC DataGrid Partners



LSC Data Grid Report

Wed, 5 Nov 2003 15:40:00 -0600

Get Fresh Data

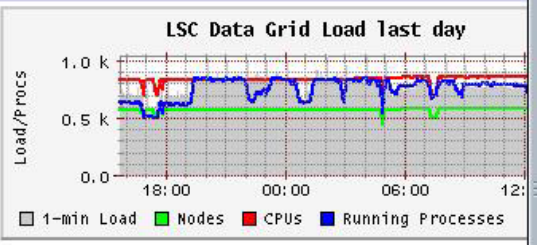
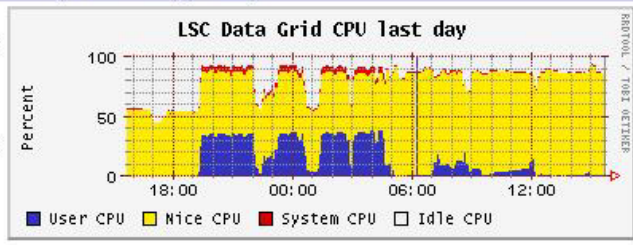
Last Sorted

LSC Data Grid >

LSC Data Grid (4 sources) [\(tree view\)](#)

CPU's
Total: 854

Hosts
Up: 579
Down: 0

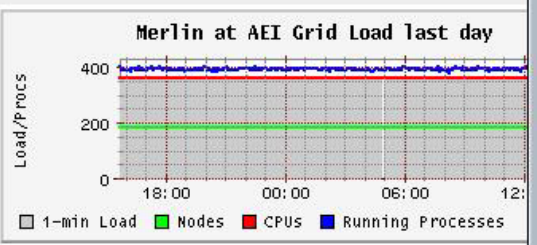
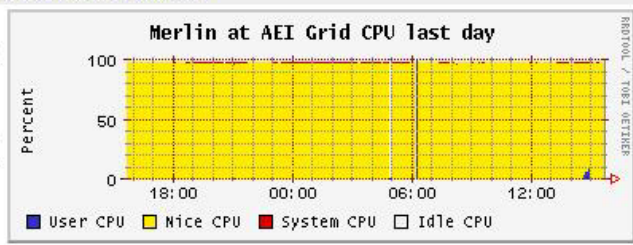


Avg Load (15, 5, 1m):88%, 90%, 85% Localtime:2003-11-05 15:40

AEI-LSC Merlin Grid [\(tree view\)](#)

CPU's
Total: 361

Hosts
Up: 181
Down: 0

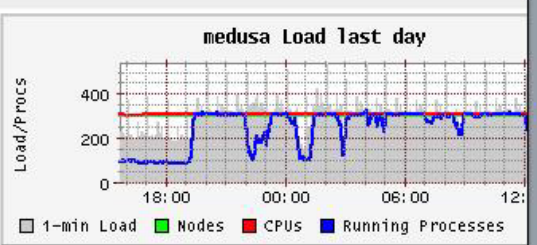
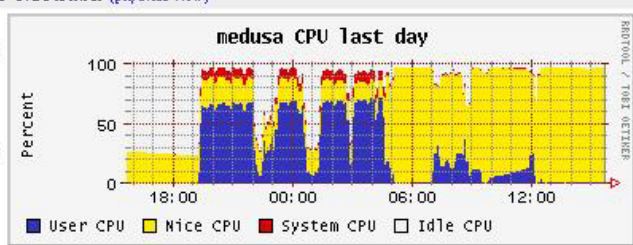


Avg Load (15, 5, 1m):99%, 100%, 100%

UWM-LSC Medusa [\(physical view\)](#)

CPU's
Total: 308

Hosts
Up: 302
Down: 0

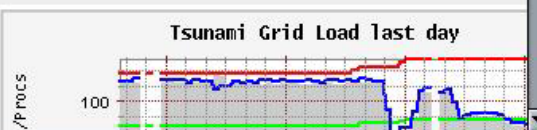
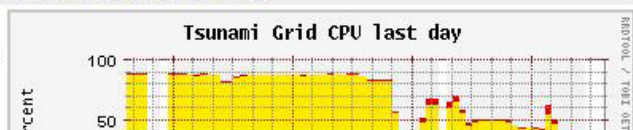


Avg Load (15, 5, 1m):106%, 111%, 98% Localtime:2003-11-05 15:39

Birmingham Tsunami Grid [\(tree view\)](#)

CPU's
Total: 154

Hosts



ukee