

Monitoring at CC - part II

July 5, 2011

Monitoring Requirements From CAF

- Discussed at last CAF meeting
- Summarized in a document attached to the agenda's page
- Document sent to Pierre
- Below a few examples of what is available at some T1 sites
- Monitoring is vital for efficient operation, both for the site and for the Squad

Monitoring - I

- Better monitoring of key component needed
 - FTS
 - dCache / SRM
 - Batch
- We are ready to contribute by suggesting parameters to be instrumented

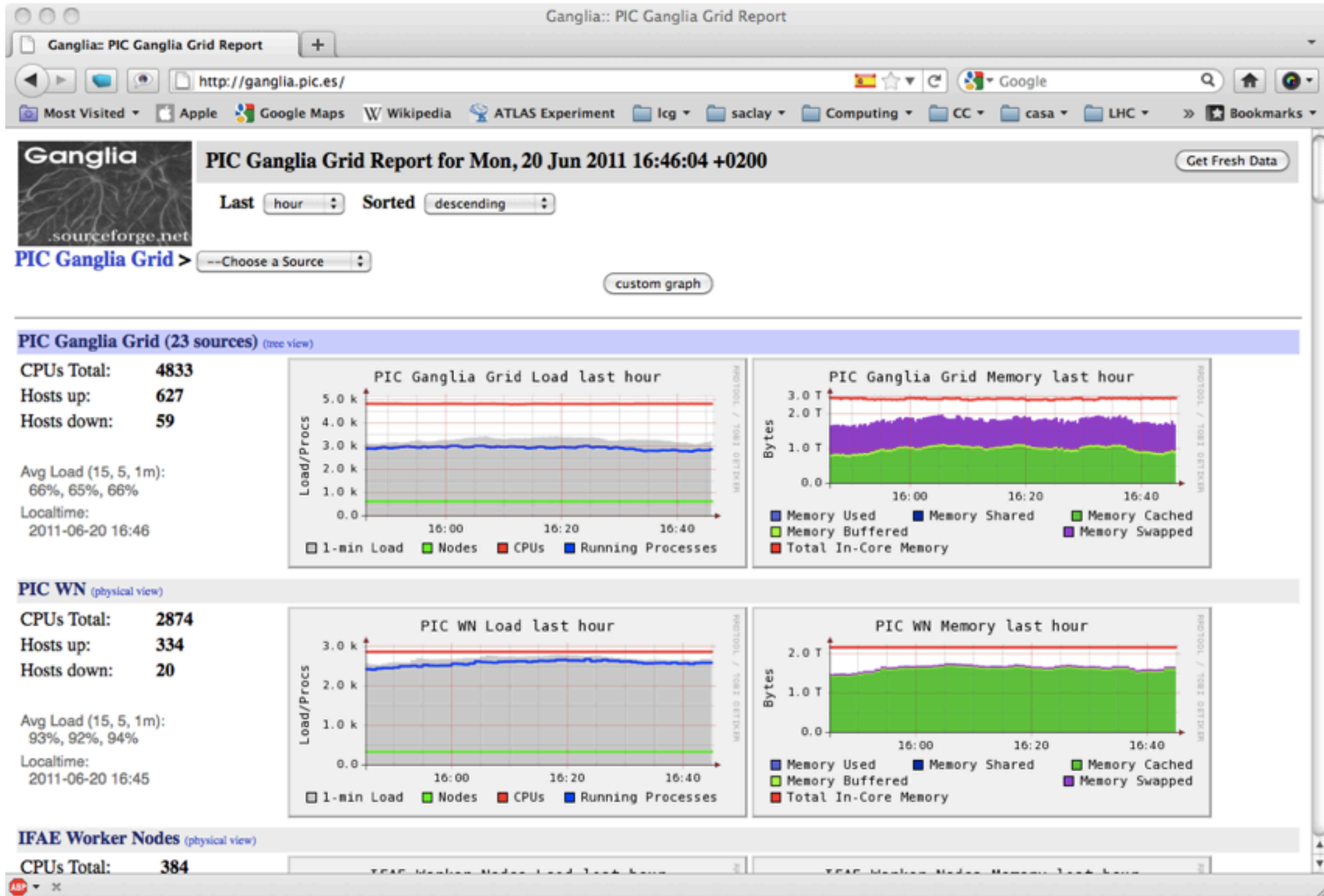
Monitoring - II

- CPU monitoring/accounting:
 - Consumption T1, T2, T3 in form of CPUs, Not number of jobs
 - Available : sum T1+T2+T3 CPU consumption vs time available
 - Compared to pledge values for T1 & T2
- FTS monitoring :
 - History and throughputs in graphical format

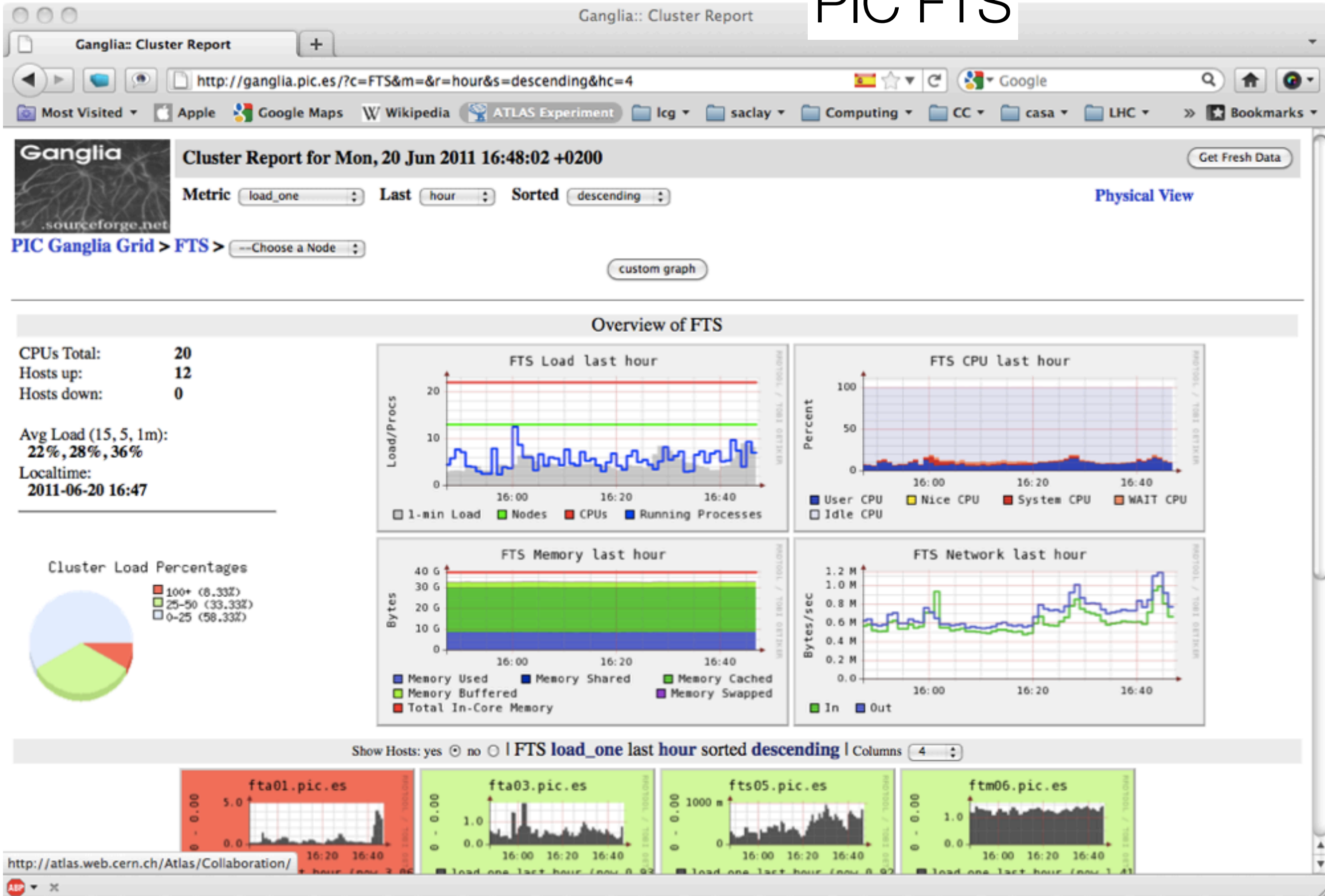
Example Of Monitorings

- FZK site monitoring
 - <http://grid.fzk.de/monitoring/main.html>
- PIC site monitoring
 - <http://ganglia.pic.es/> (passwd needed)
- RAL FTS monitoring
 - <http://ganglia.gridpp.rl.ac.uk/cgi-bin/ganglia-fts/fts-page.pl>
- BNL throughput monitoring
 - <http://www.usatlas.bnl.gov/dq2/throughput/>

PIC



PIC FTS



Ganglia: Cluster Report +

http://ganglia.pic.es/?c=dCache&m=&r=hour&s=descending&hc=4

Most Visited Apple Google Maps Wikipedia ATLAS Experiment lcg saclay Computing CC casa LHC Bookmarks



Cluster Report for Mon, 20 Jun 2011 16:48:43 +0200

Get Fresh Data

Metric Last Sorted

Physical View

PIC Ganglia Grid > dCache >

custom graph

Overview of dCache

CPU's Total: 744
 Hosts up: 68
 Hosts down: 3

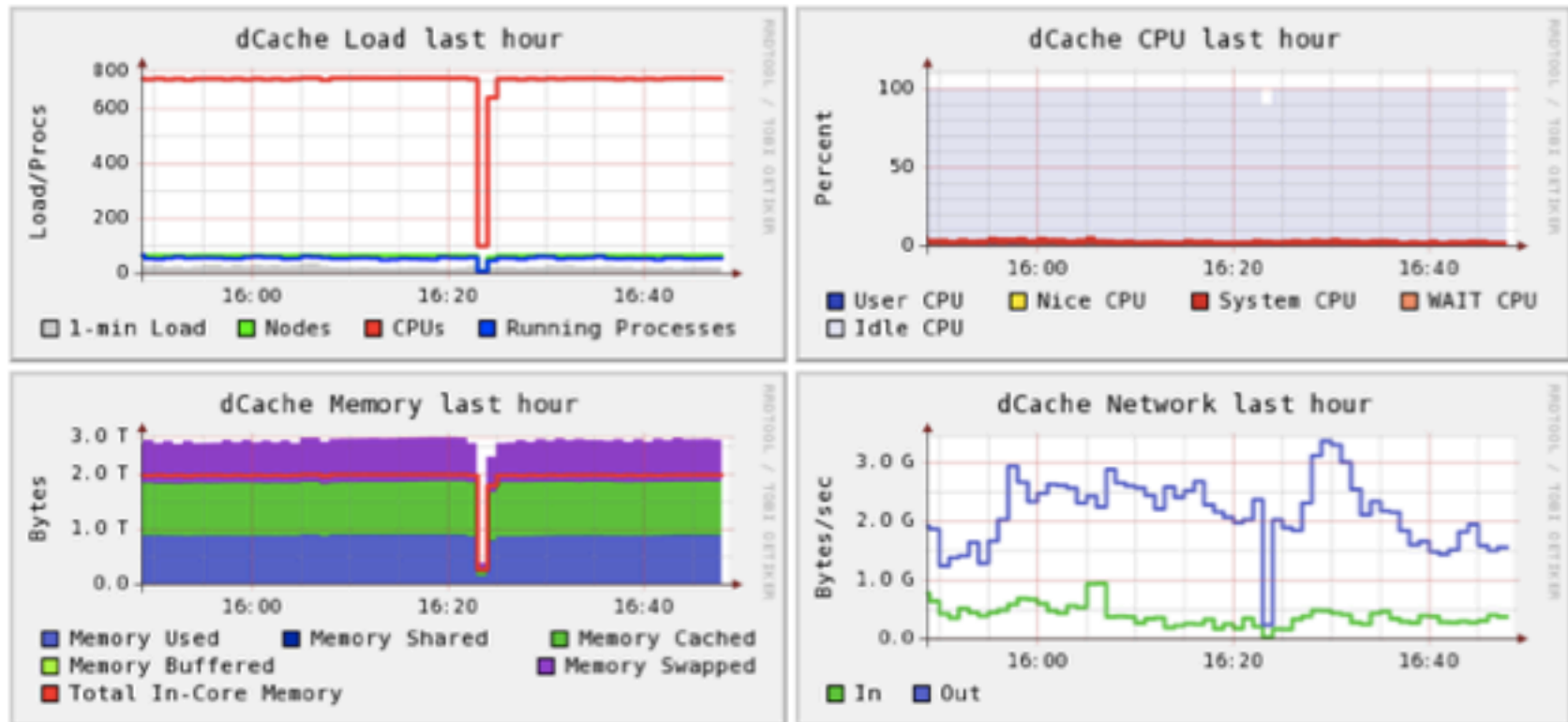
Avg Load (15, 5, 1m):
 2%, 2%, 3%

Localtime:
 2011-06-20 16:48

Cluster Load Percentages



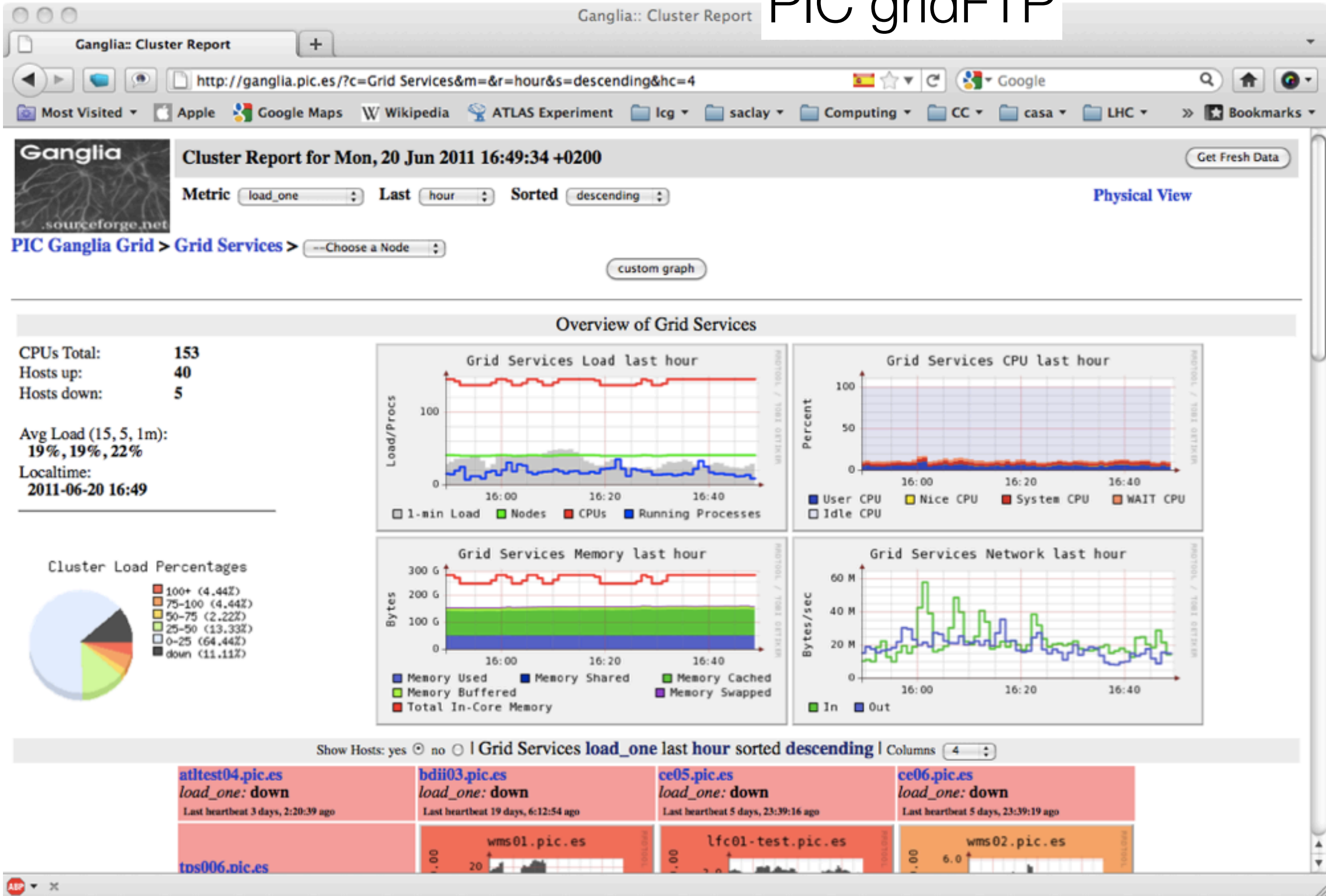
75-100 (1.41%)
 50-75 (1.41%)
 0-25 (92.96%)
 down (4.23%)



Show Hosts: yes no | dCache load_one last hour sorted descending | Columns

<p>dc086.pic.es load_one: down Last heartbeat 183s ago</p>	<p>dc087.pic.es load_one: down Last heartbeat 182s ago</p>	<p>dc103.pic.es load_one: down Last heartbeat 3 days, 6:22:52 ago</p>	<p>dc050.pic.es</p>
--	--	---	----------------------------

PIC gridFTP

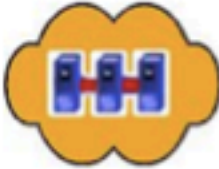
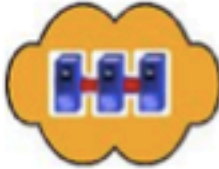





















PIC links to subsystems

Ganglia: PIC Ganglia Grid Report

http://ganglia.pic.es/

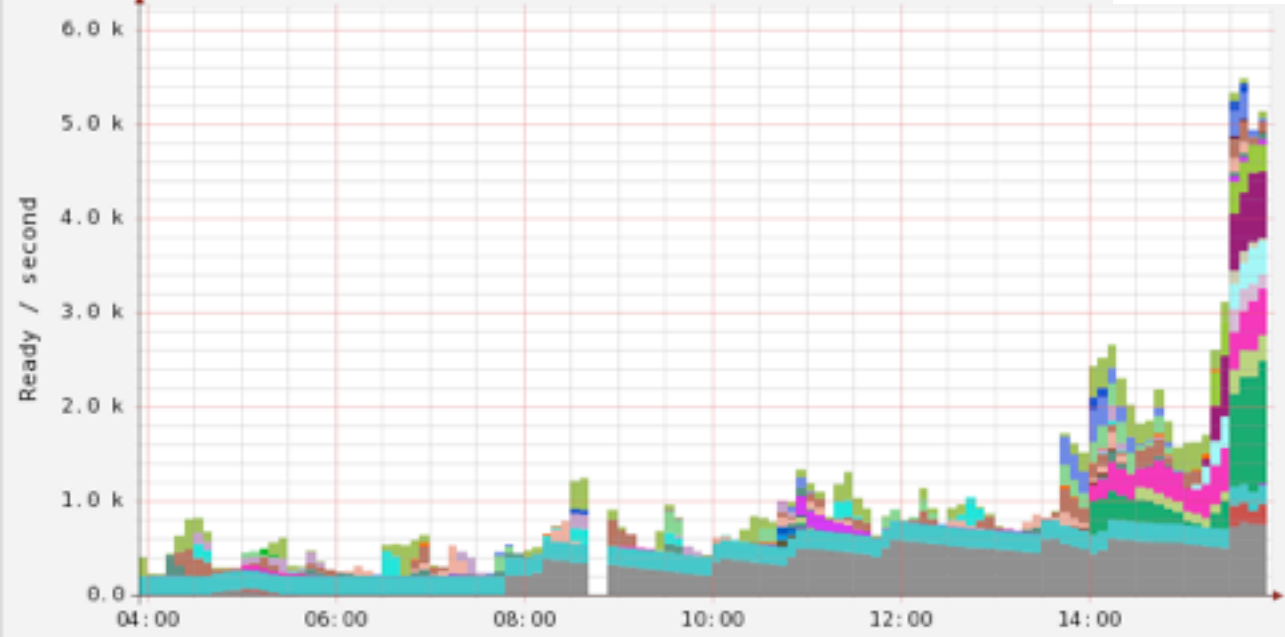
Snapshot of the PIC Ganglia Grid | Legend

PIC WN	IFAE Worker Nodes	FTS	Enstore servers test	Generic
 Astro	 Grid Services	 Enstore servers	 Enstore tapeservers	 dCache servers
 Batch System	 dCache GridFTPs	 Services	 3d	 dCache
 dCache-disk gridftp	 LHC	 dCache-disk servers	 dCache Test Servers	 VM Servers
 Neuro	 dCache Pool Test	 dCache Test GridFTPs		
 	 	 		

Ganglia Web Frontend version 3.0.7 [Check for Updates.](#)
Ganglia Web Backend (*gmetad*) version 3.0.7 [Check for Updates.](#)
Downloading and parsing ganglia's XML tree took 0.0717s

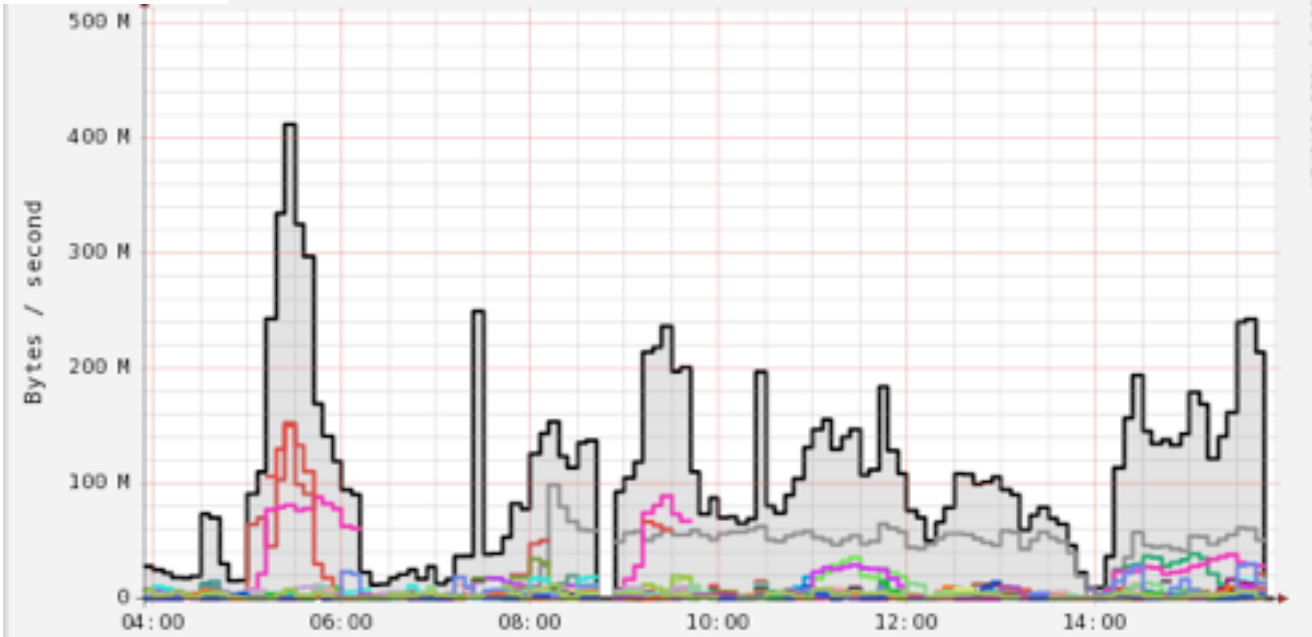
RAL FTS

RAL-LCG2 Tier-1 FTS Ready Files (All Channels)



- BNLATLAS-RALLCG2 (746.70; average = 377.23)
- FZKLCG2-RALLCG2 (214.28; average = 36.17)
- GROUPATLAST2DS-RALLCG2 (201.00; average = 201.00)
- GRPATLST1S-UKILT2QMUL (8.00; average = 8.50)
- GRPATLST1S-UKISCOTGRIDGLASGOW (17.00; average = 2.86)
- GRPATLST2DS-RALLCG2 (1306.54; average = 351.07)
- GRPATLST2DS-UKISOUTHGRIDRALPP (0.28; average = 1.18)
- IN2P3CC-RALLCG2 (273.93; average = 114.80)
- INFNT1-RALLCG2 (491.47; average = 130.33)
- PIC-RALLCG2 (153.52; average = 204.24)
- RALLCG2-UKILT2BRUNEL (0.68; average = 0.42)
- RALLCG2-UKILT2QMUL (0.57; average = 0.13)
- RALLCG2-UKILT2RHUL (349.81; average = 263.56)
- RALLCG2-UKINORTHGRIDLANCSHEP (1.04; average = 1.88)
- RALLCG2-UKINORTHGRIDLIVHEP (0.34; average = 0.26)
- RALLCG2-UKISCOTGRIDDURHAM (7.12; average = 0.74)
- RALLCG2-UKISCOTGRIDECDF (3.16; average = 1.01)
- RALLCG2-UKISCOTGRIDGLASGOW (3.35; average = 3.56)
- RALLCG2-UKISOUTHGRIDOXHEP (0.16; average = 0.60)
- RALLCG2-UKISOUTHGRIDRALPP (32.38; average = 16.56)
- SARAMATRIX-RALLCG2 (30.97; average = 90.42)
- STAR-UKILT2RHUL (707.60; average = 536.62)
- STAR-UKINORTHGRIDLIVHEP (27.07; average = 27.69)
- STAR-UKISOUTHGRIDRALPP (43.02; average = 44.01)
- TAIWANLCG2-RALLCG2 (285.77; average = 328.46)
- TRIUMFLCG2-RALLCG2 (57.38; average = 54.56)
- UKILT2BRUNEL-RALLCG2 (67.10; average = 17.06)
- UKILT2ICHEP-RALLCG2 (10.94; average = 10.45)
- UKILT2QMUL-RALLCG2 (123.32; average = 36.68)
- UKILT2RHUL-RALLCG2 (109.93; average = 54.03)
- UKINORTHGRIDLANCSHEP-RALLCG2 (17.78; average = 27.66)
- UKINORTHGRIDLIVHEP-RALLCG2 (26.13; average = 13.22)
- UKINORTHGRIDMANHEP-RALLCG2 (10.35; average = 24.02)
- UKINORTHGRIDSHEFHEP-RALLCG2 (26.58; average = 4.78)
- UKISCOTGRIDDURHAM-RALLCG2 (84.15; average = 59.54)
- UKISCOTGRIDECDF-RALLCG2 (35.40; average = 51.43)
- UKISOUTHGRIDBHAMHEP-RALLCG2 (2.18; average = 0.81)
- UKISOUTHGRIDCAMHEP-RALLCG2 (26.58; average = 3.52)
- UKISOUTHGRIDOXHEP-RALLCG2 (94.73; average = 15.97)
- UKISOUTHGRIDRALPP-RALLCG2 (67.86; average = 88.79)

RAL-LCG2 Tier-1 FTS Bytes Transferred (All Channels)

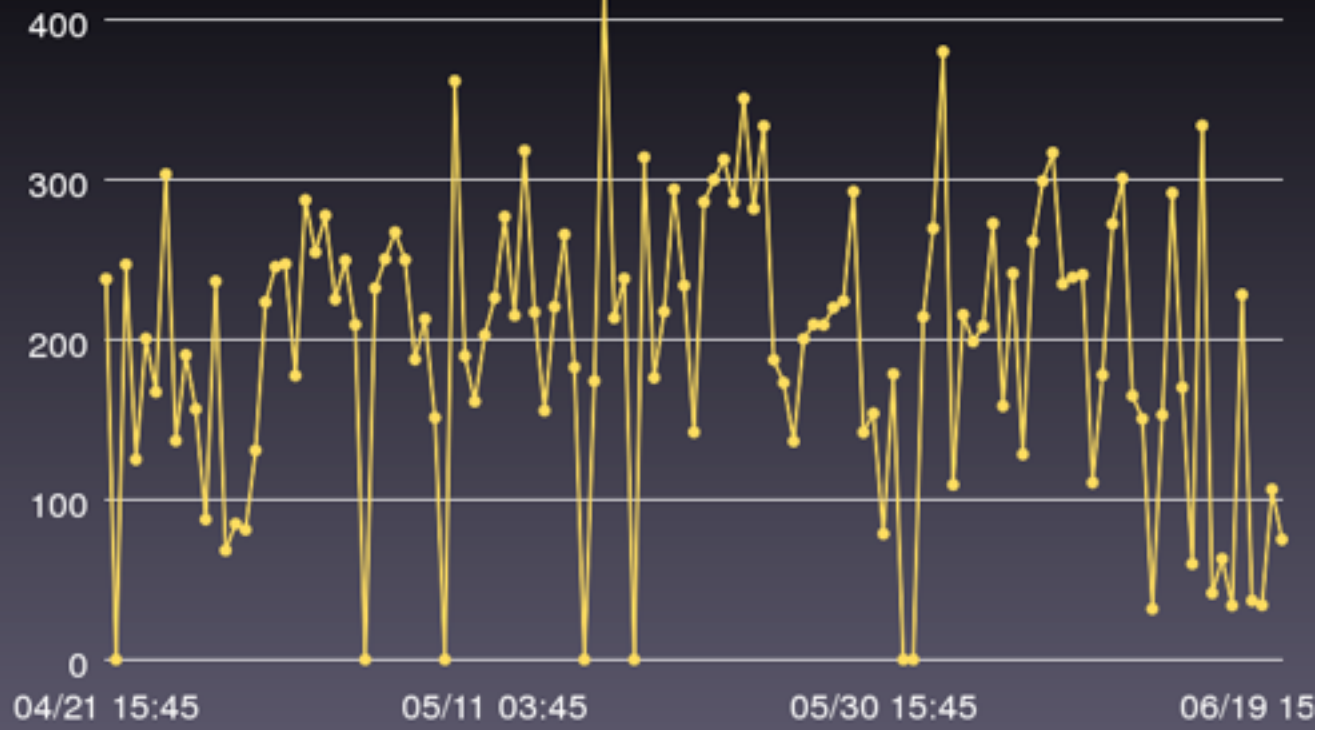


- Total: 104.33M
- BNLATLAS-RALLCG2 (48.41M; average = 40.82M)
- FZKLCG2-RALLCG2 (20.70M; average = 31.47M)
- GRPATLST1S-UKILT2QMUL (2.02M; average = 2.81M)
- GRPATLST1S-UKINORTHGRIDSHEFHEP (267.57; average = 267.57)
- GRPATLST1S-UKISCOTGRIDGLASGOW (4.79M; average = 3.12M)
- GRPATLST2DS-RALLCG2 (5.97M; average = 19.05M)
- IN2P3CC-RALLCG2 (7.20M; average = 4.81M)
- INFNT1-RALLCG2 (27.02M; average = 34.26M)
- NDGFT1-RALLCG2 (17.90k; average = 18.92M)
- NIKHEFELPROD-RALLCG2 (14.11M; average = 14.79M)
- PIC-RALLCG2 (10.75M; average = 3.83M)
- RALLCG2-UKILT2BRUNEL (853.05k; average = 1.83M)
- RALLCG2-UKILT2ICHEP (12.07M; average = 3.14M)
- RALLCG2-UKILT2QMUL (850.46k; average = 2.03M)
- RALLCG2-UKILT2RHUL (14.80M; average = 2.01M)
- RALLCG2-UKINORTHGRIDLANCSHEP (268.55k; average = 21.63M)
- RALLCG2-UKINORTHGRIDLIVHEP (51.21k; average = 1.81M)
- RALLCG2-UKINORTHGRIDMANHEP (331.47k; average = 957.48k)
- RALLCG2-UKINORTHGRIDSHEFHEP (1.12M; average = 843.30k)
- RALLCG2-UKISCOTGRIDDURHAM (286.11k; average = 1.45M)
- RALLCG2-UKISCOTGRIDECDF (6.56M; average = 3.32M)
- RALLCG2-UKISCOTGRIDGLASGOW (79.07k; average = 2.89M)
- RALLCG2-UKISOUTHGRIDBHAMHEP (569.01k; average = 1.50M)
- RALLCG2-UKISOUTHGRIDCAMHEP (44.76k; average = 802.37k)
- RALLCG2-UKISOUTHGRIDOXHEP (134.28k; average = 8.31M)
- RALLCG2-UKISOUTHGRIDRALPP (179.04k; average = 1.22M)
- SARAMATRIX-RALLCG2 (15.70M; average = 4.19M)
- STAR-UKILT2RHUL (7.58M; average = 11.94M)
- STAR-UKINORTHGRIDLIVHEP (17.63M; average = 14.02M)
- STAR-UKISOUTHGRIDRALPP (10.02M; average = 7.97M)
- TAIWANLCG2-RALLCG2 (5.57M; average = 3.29M)
- TRIUMFLCG2-RALLCG2 (7.44M; average = 12.85M)
- UKILT2BRUNEL-RALLCG2 (1.43M; average = 2.43M)
- UKILT2ICHEP-RALLCG2 (1007.58k; average = 1.60M)
- UKILT2QMUL-RALLCG2 (3.28M; average = 2.89M)
- UKILT2RHUL-RALLCG2 (8.89M; average = 2.69M)
- UKINORTHGRIDLANCSHEP-RALLCG2 (4.06M; average = 3.32M)
- UKINORTHGRIDLIVHEP-RALLCG2 (1.30M; average = 2.38M)
- UKINORTHGRIDMANHEP-RALLCG2 (1.49M; average = 2.70M)
- UKINORTHGRIDSHEFHEP-RALLCG2 (9.46M; average = 1.93M)
- UKISCOTGRIDDURHAM-RALLCG2 (440.54k; average = 3.53M)
- UKISCOTGRIDECDF-RALLCG2 (13.25M; average = 5.29M)
- UKISCOTGRIDGLASGOW-RALLCG2 (37.63k; average = 3.59M)

BNL throughput

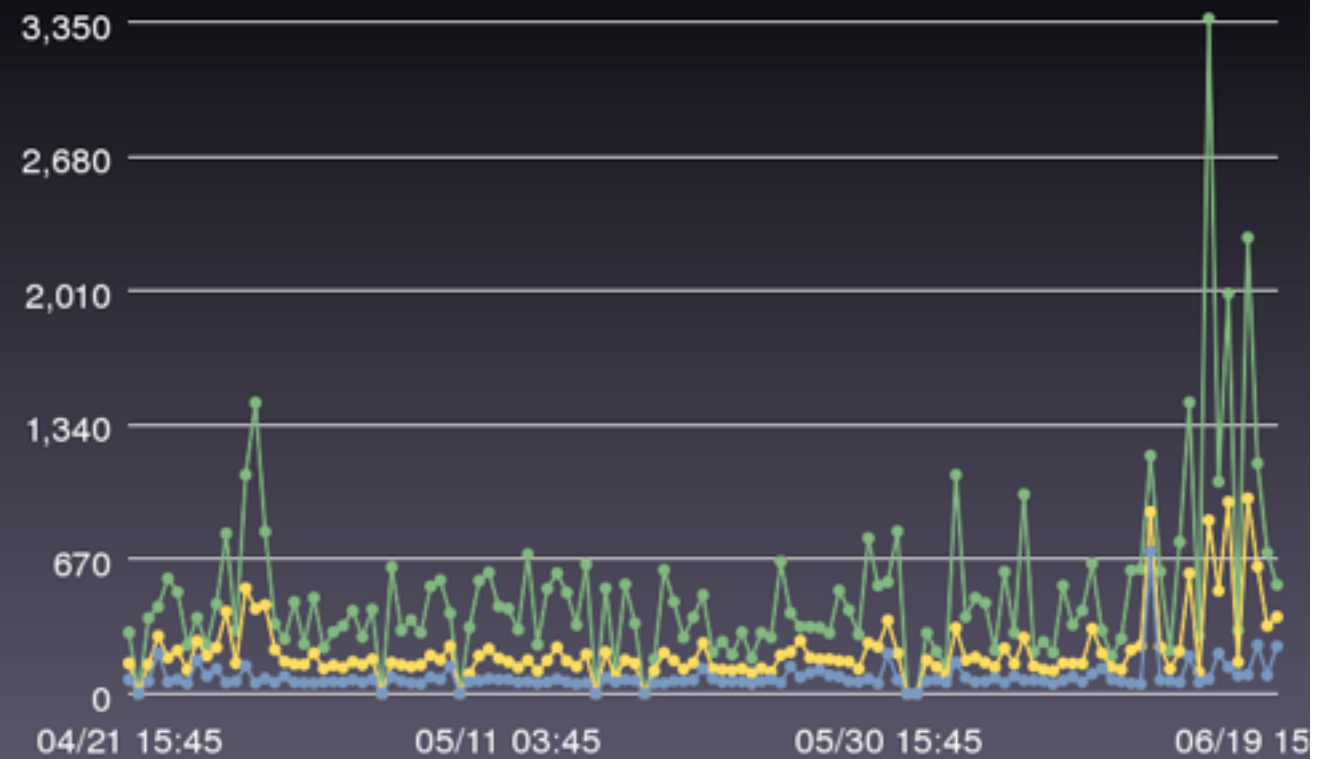
Throughput in MB/s from IN2P3-CC_DATADISK

throughput (MB/s)



Transfer time in seconds from IN2P3-CC_DATADISK

Average Minimum Maximum



FZK main page

Mozilla Firefox

http://grid.fzk...oring/main.html

http://grid.fzk.de/monitoring/main.html

Most Visited Apple Google Maps Wikipedia ATLAS Experiment lcg saclay Computing CC casa LHC Bookmarks

GridKa

Monitoring

Version 1.8

Planned interventions and current problems

Overview

Cluster/Jobs
cpu/elapsed time ratio

PBS job statistics
Faireshare

VO specific SAM results

dCache

- dCache I/O history
- Server Ganglia graphs
- Space tokens

xrootd storage cluster

- Server Ganglia graphs

GPFS file systems

Tape transfers

- Alice
- Atlas
- CMS
- LHCb

Directory tags (CMS)

WMS

- Ganglia graphs

WAN

FTS 2.2

http://maps.google.com/

Page last reloaded: Monday June, 20th 2011, 03:56:24 PM Proxy certificate: **valid**

Overview

Incidents and downtimes: ● There is currently **1** incident or problem reported.
Scheduled interventions within the next 7 days:
0 services will be at risk (or there is an info on a service)
0 outages planned within the next 30 days [Click for more information](#)

Chilled water temperature: **14.0** Time of measurement: 16:55:15

Cluster/Jobs

lrms3 queued/running: 3732 / 8387 lrms1 queued/running: 1717 / 4289 Information as of 16:56
qstat response time lrms3: 0m3.084s Information as of 16:56
qstat response time lrms1: 0m0.638s Information as of 16:56

Jobs last day (lrms3)

Jobs last day (lrms1)

Jobs finished today: 18410 Jobs finished this hour: 708

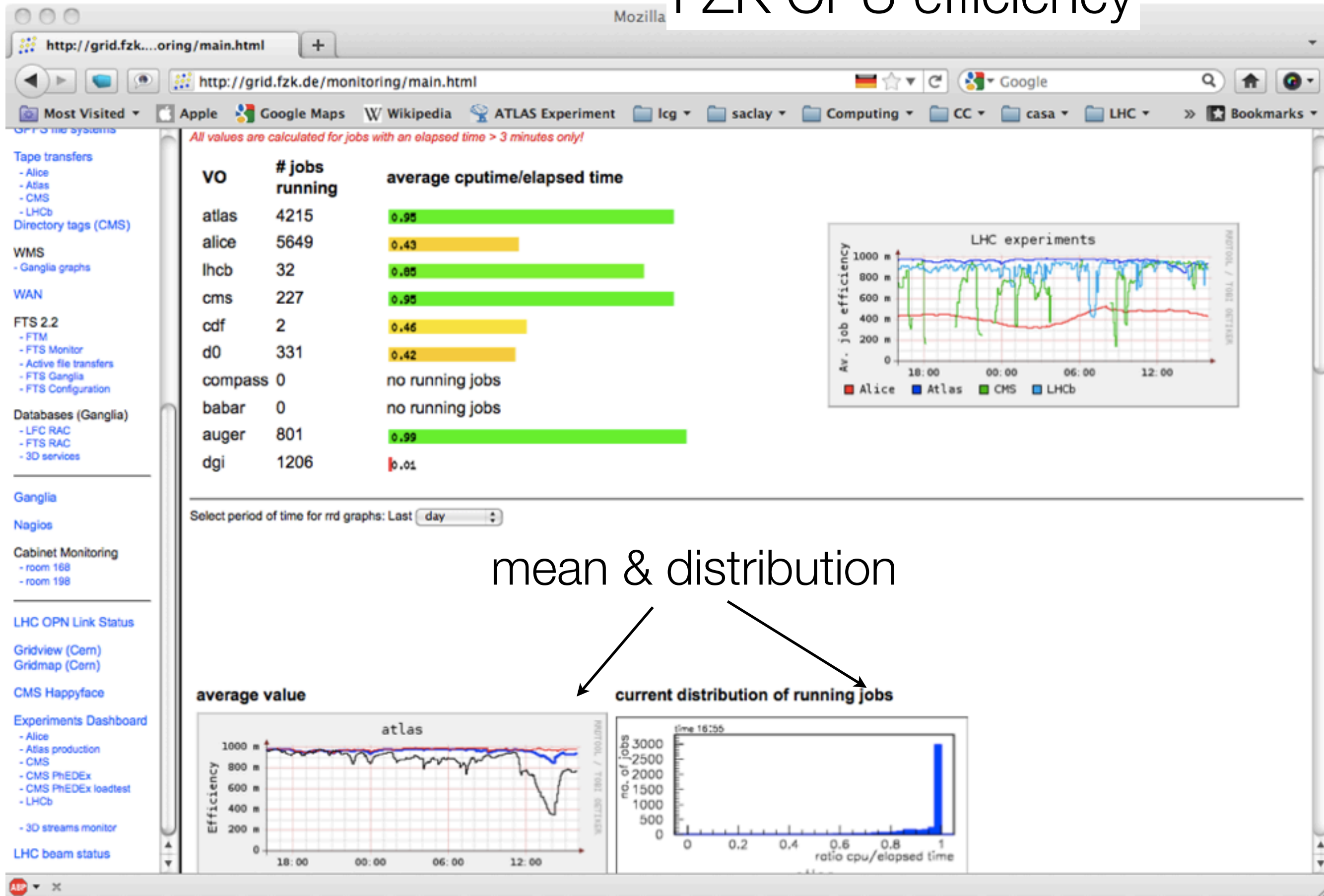
job statistic graphs: [last hour](#) [last 6 hours](#) [last 12 hours](#) [last day](#) [last week](#) [last month](#)

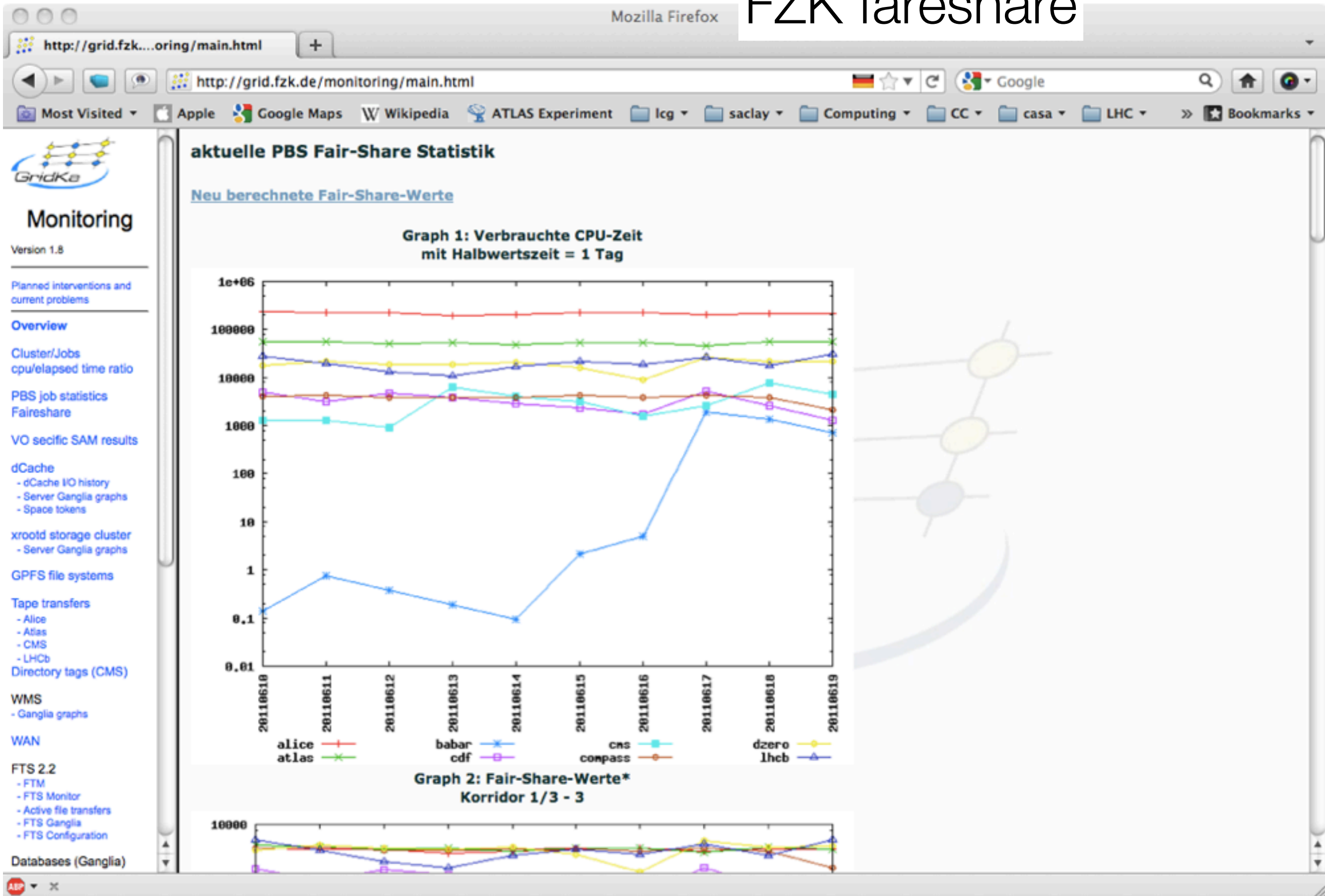
Ratio of cpu/elapsed time of running jobs: **0.61** [details](#)

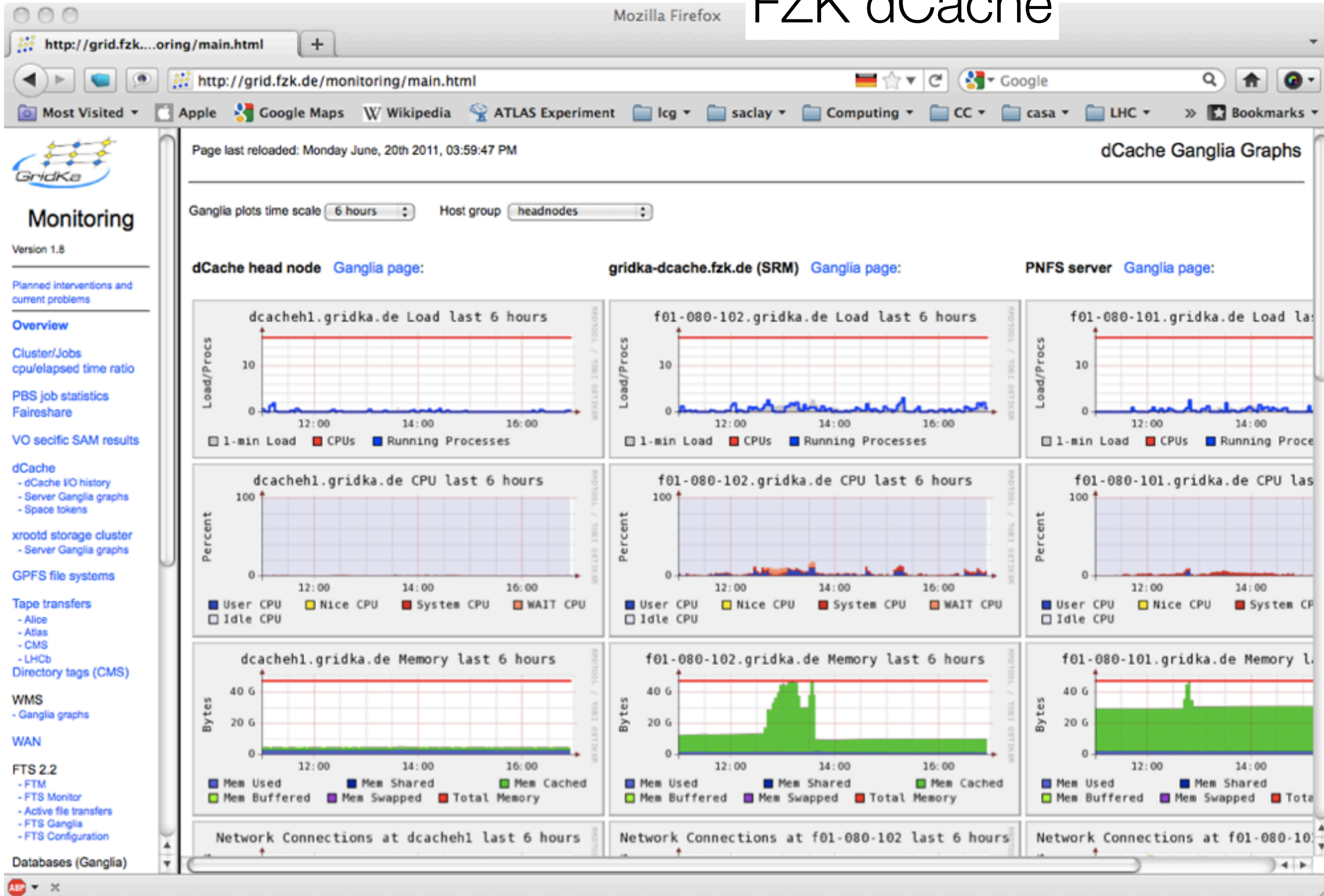
Overall status: **fair** 2427 out of 12463 jobs have a cpu/elapsed time ratio < 0.2 (Last check done: 16:55)

Alice: **fair** Atlas: **good** CMS: **good** LHCh: **good** CDF: **<5 jobs** D0: **bad** Compass: **no jobs** Bahar: **no jobs** Auger: **good**

FZK CPU efficiency







etc...