



Enabling Grids for E-science

UKI ROC

- supporting the LHC experiments
- maintaining the service

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2nd July 2007

www.eu-egee.org
www.ukiroc.eu





<http://www.grid-ireland.org/>



<http://www.gridpp.ac.uk>



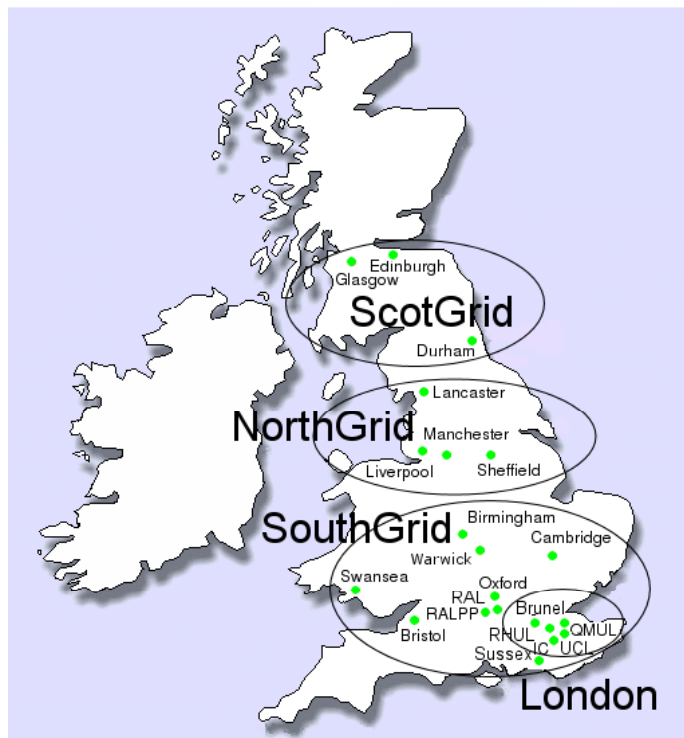
National Grid Service

core production computational and data grid

<http://www.grid-support.ac.uk/>



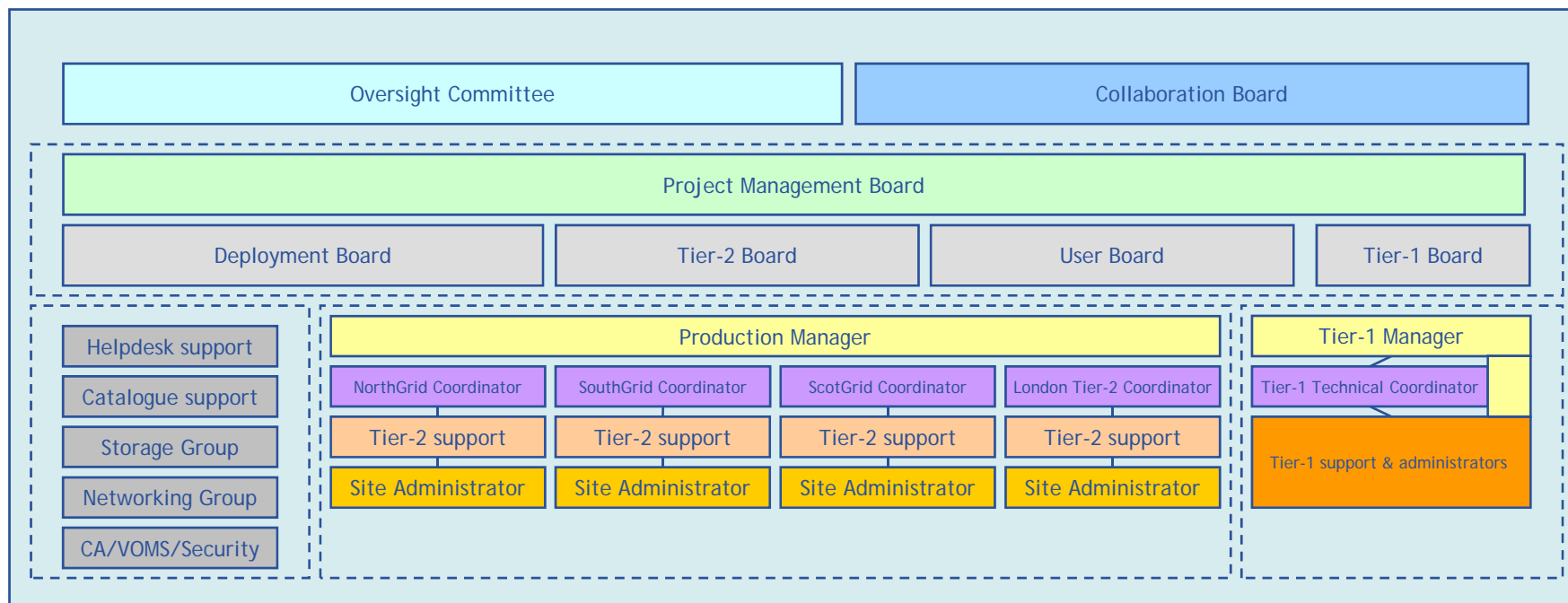
TCD



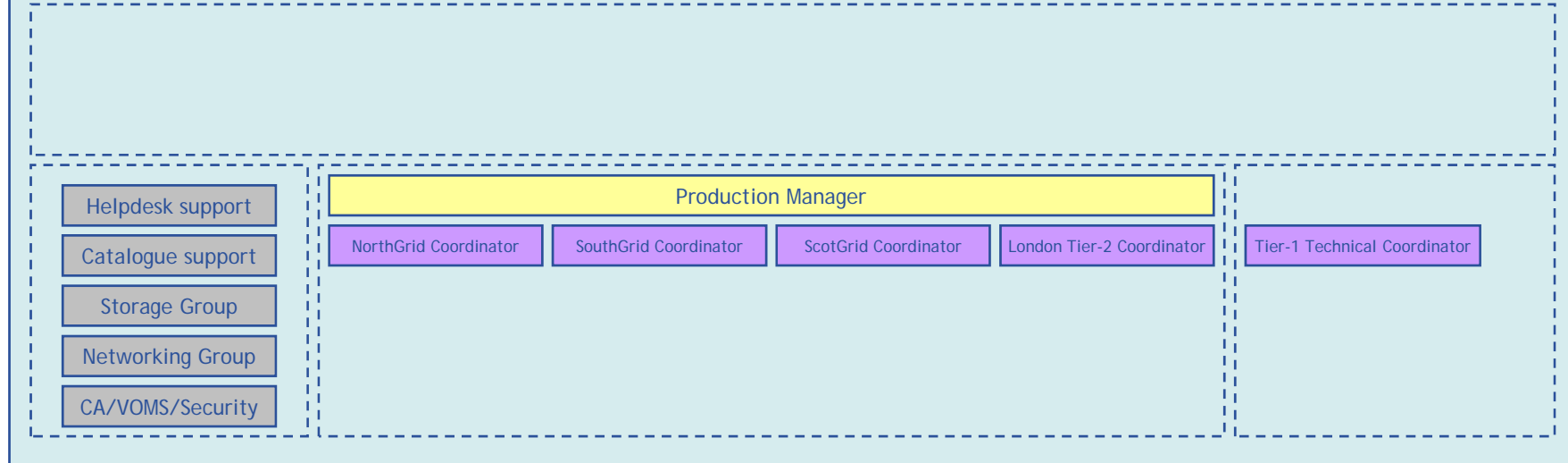
National Grid Service

core production computational and data grid





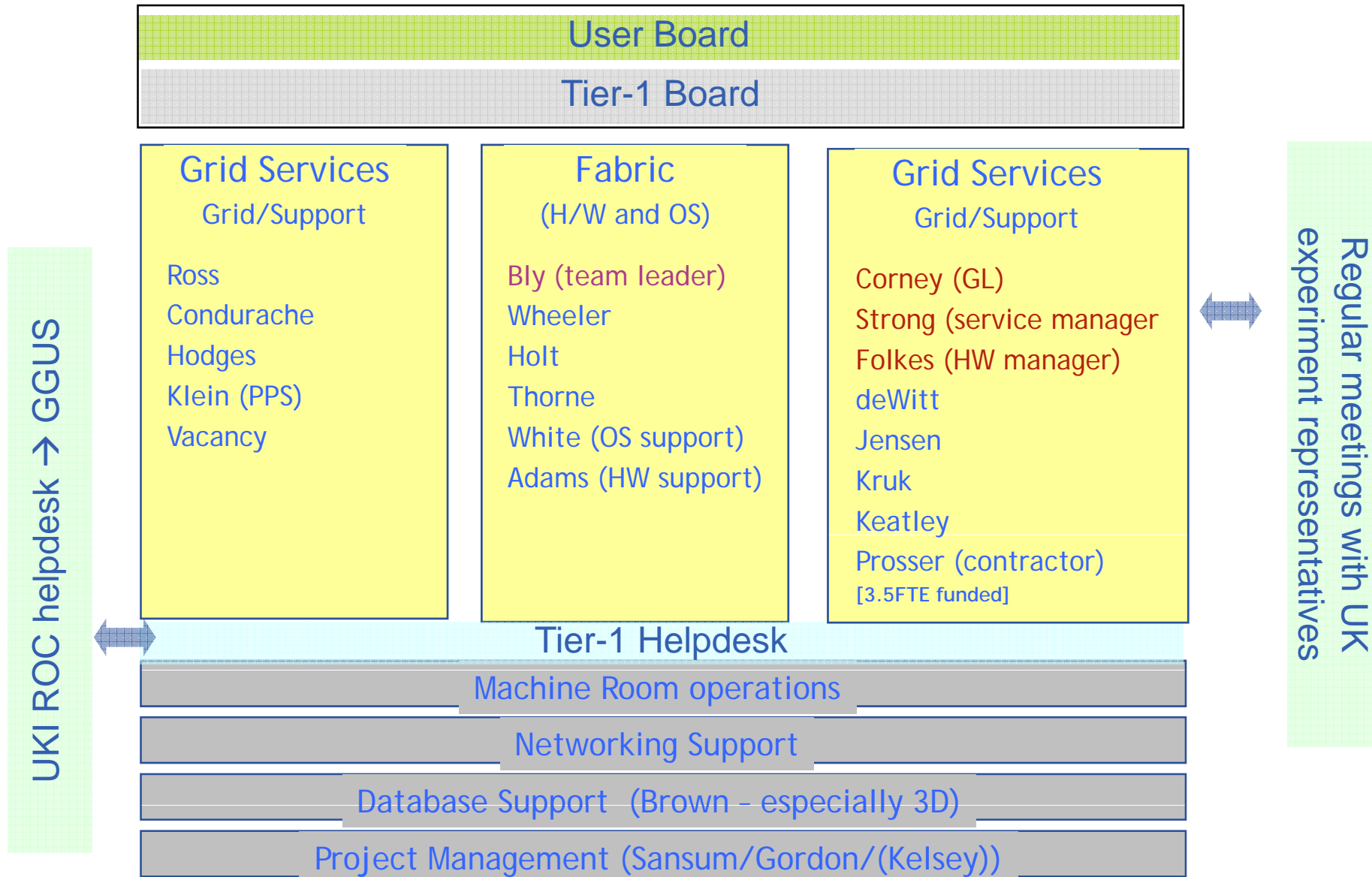
the deployment team & friends!



Example activities from across the deployment team area

- Supporting dCache
- Supporting DPM
- Developing plug-ins
- Constructing metrics
- Supporting network testing
- Running core services
- Ticket process management
- Pre-production service
- Middleware support
- Pre-release testing
- Deployment of new hardware
- Information exchange
- Maintaining site services
- Maintaining production services
- Reviewing documentation
- Liaising with users
- Monitoring use of resources
- Reporting
- Running helpdesks
- Interoperation - parallel deployment

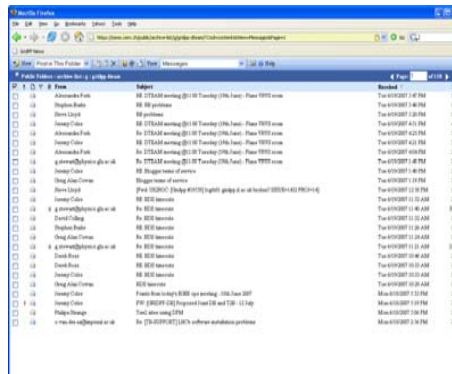




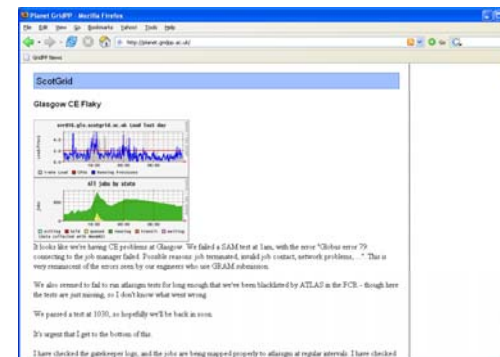
Communication between sites and VO's has several routes



Webpages/Documentation/Wiki

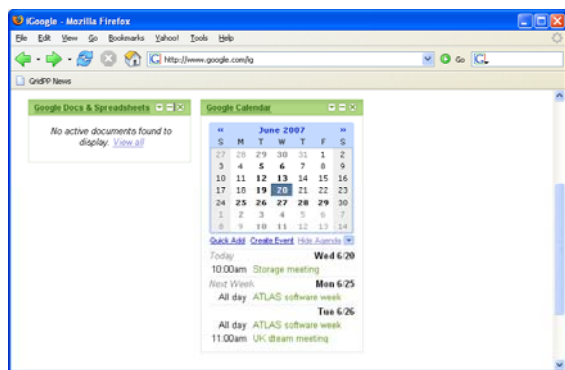


Mail lists - including gridpp-dteam

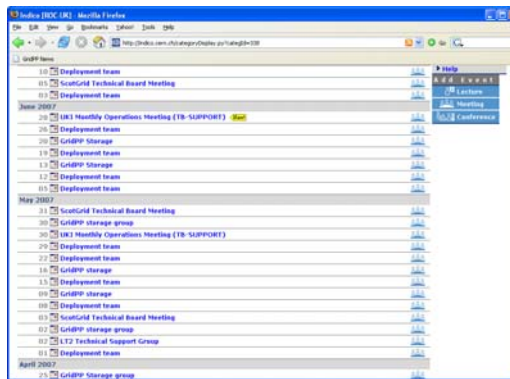


Aggregated operations blogs

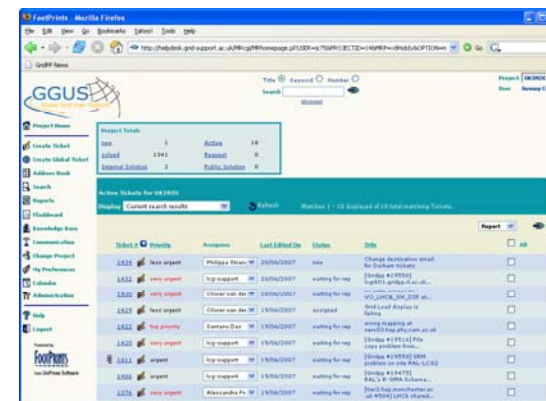
Deployment Team (DTEAM)



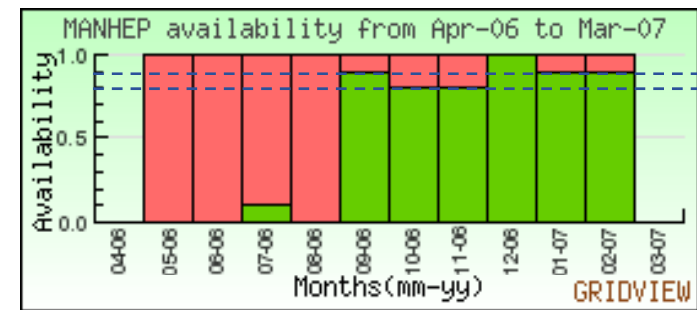
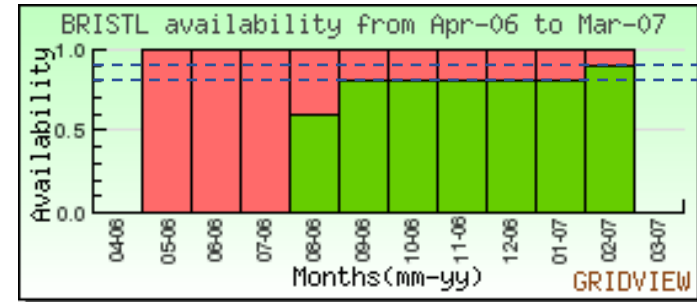
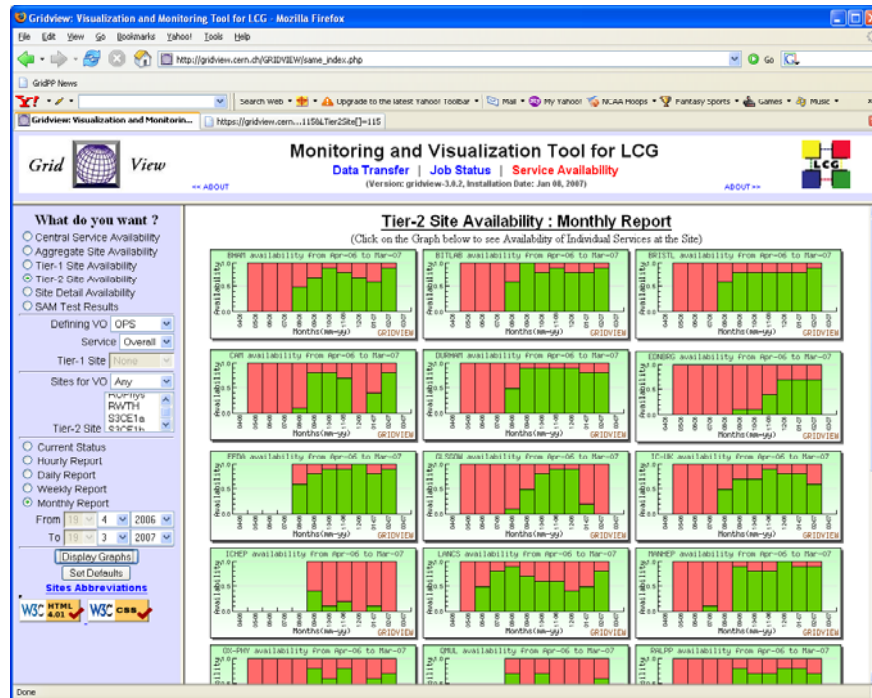
Calendar, actions & issues logs



Weekly DTEAM and monthly UKI meetings (includes LHC expts.)

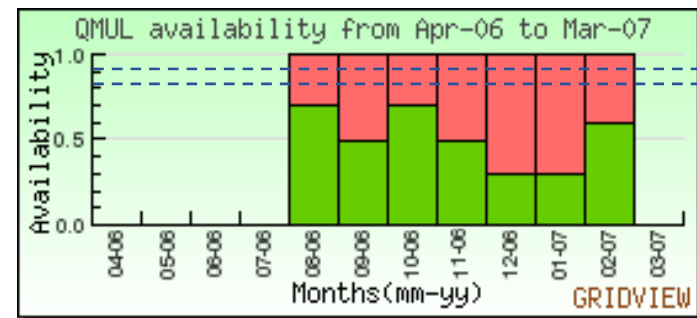
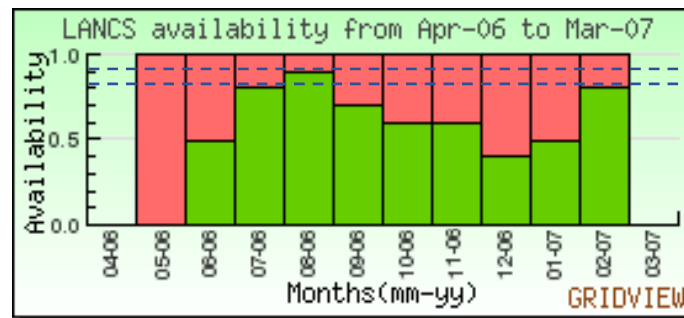


UKI helpdesk/ticket tracking



Targets

- For April >80%
- For June >85%
- For July >90%
- For Sept+ >95%

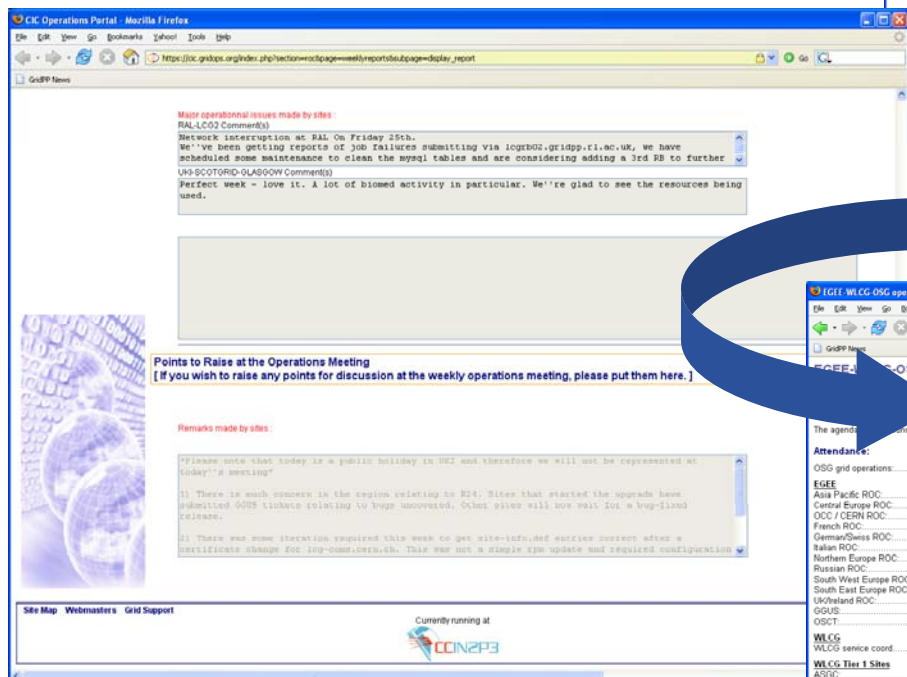


Weekly EGEE/WLCG discussion

General forum to raise site, VO & project issues

Sites

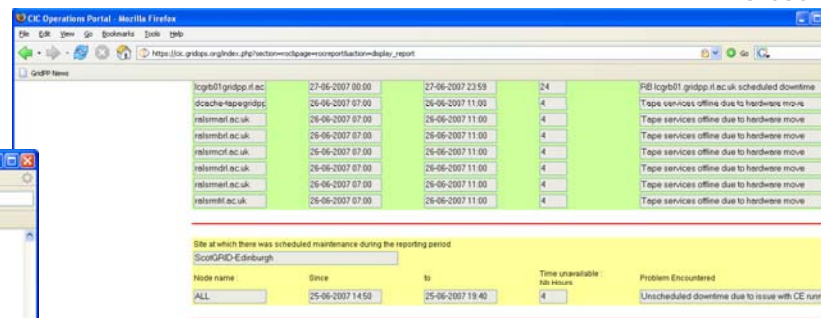
ROC



Major operational issues made by sites
RAL-CCO2 Comment(s)
Network interruption at RAL on Friday 25th. We've been getting reports of job failures submitting via lcgjob02.gridpp.rl.ac.uk, we have scheduled some maintenance to clean the mysql tables and are considering adding a 3rd BB to further UK-SCOTGRID-OLASOOW Comment(s)
Perfect week - love it. A lot of biased activity in particular. We're glad to see the resources being used.

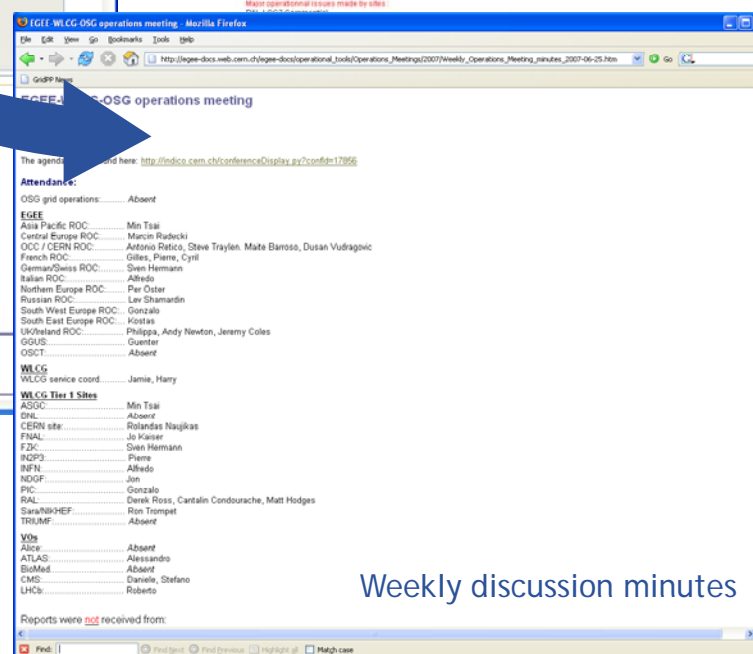
Points to Raise at the Operations Meeting
[If you wish to raise any points for discussion at the weekly operations meeting, please put them here.]

Remarks made by sites
Please note that today is a public holiday in UK and therefore we will not be represented at today's meeting
1) There is much concern in the region relating to R24. Sites that started the upgrade have submitted OOS tickets relating to bugs uncovered. Other sites will not wait for a bug-fixed release.
2) There was some interaction required this week to get site-internal nuclear correct after a certificate change for log-00000000.uk. This was not a simple x509 update and required configuration



Site	Start	End	Time unavailable (hrs)	Problem Encountered
logb01.gridpp.rl.ac.uk	27-06-2007 00:00	27-06-2007 23:59	24	PB logb01.gridpp.rl.ac.uk scheduled downtime
dcache-epsg.gridpp	26-06-2007 07:00	26-06-2007 11:00	4	Tape services offline due to hardware move
ralismst.rl.ac.uk	26-06-2007 07:00	26-06-2007 11:00	4	Tape services offline due to hardware move
ralismst.rl.ac.uk	26-06-2007 07:00	26-06-2007 11:00	4	Tape services offline due to hardware move
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Major Operational Issues Encountered During the Reporting Period
[Describe any major operational problems encountered during the week.]

EGEE/WLCG-OSG operations meeting

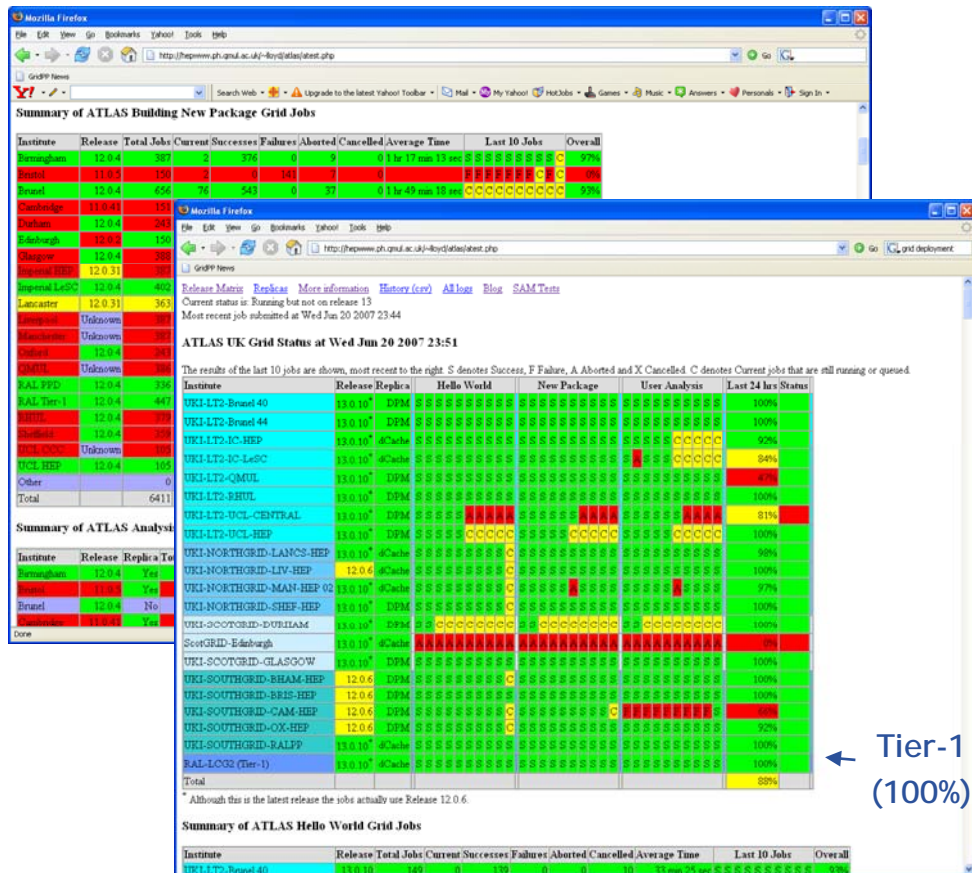
The agenda can be found here: <http://indico.cern.ch/conferenceDisplay.py?confId=17856>

Attendees:

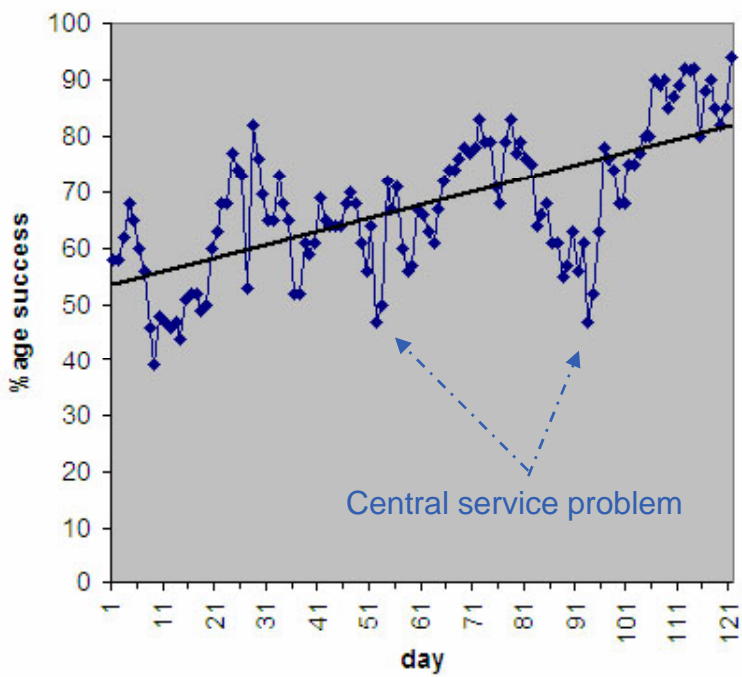
- OSG grid operations: Absent
- EGEE
- Asia Pacific ROC: Min Tsai
- Central Europe ROC: Marcjn Rapacki
- OC / CERN ROC: Antonio Raitio, Steve Traylen, Mate Baross, Dusan Vudragovic
- French ROC: Gilles, Pierre, Cyril
- German/Swiss ROC: Sven Hermann
- Italian ROC: Alfredo
- Northern Europe ROC: Per Oster
- Russian ROC: Lev Shamardin
- South West Europe ROC: Gonzalo
- South East Europe ROC: Kostias
- UK/Ireland ROC: Philippa, Andy Newton, Jeremy Coles
- OSUS: Guenter
- OSCT: Absent
- WLCG
- WLCG service coord: Jamie, Harry
- WLCG Tier 1 Sites
- ASDC: Absent
- DNL: Absent
- CERN site: Rolandas Nagaias
- FINL: Jo Kanne
- FZK: Sven Hermann
- IGPP: Piene
- INFN: Alfredo
- NDGF: Jon
- PIC: Gonzalo
- RAL: Derek Ross, Cantalin Condourache, Matt Hodges
- SaraNikHEF: Ron Tromp
- TRIUMF: Absent
- VOs
- Alice: Absent
- ATLAS: Alessandro
- BioMed: Absent
- CMS: Daniele, Stefano
- LHCb: Roberto

Reports were **not** received from:

Weekly discussion minutes



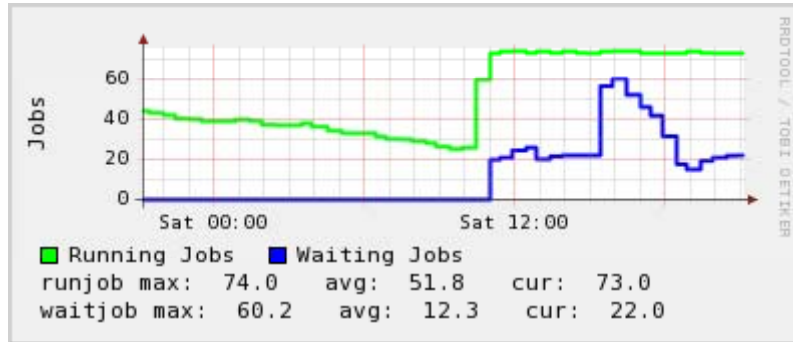
Tier-1 (100%)



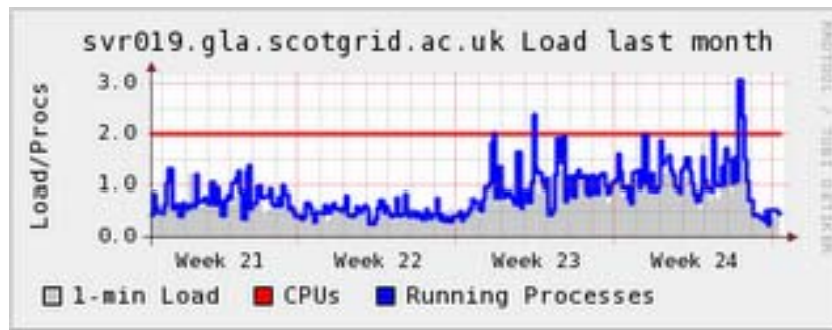
Improvement in overall success rates for ATLAS test jobs

Nb: Tests availability for a normal user. This means full queues will lead to lower success - i.e. the user job can not run within given time!

Ganglia good for trends and status

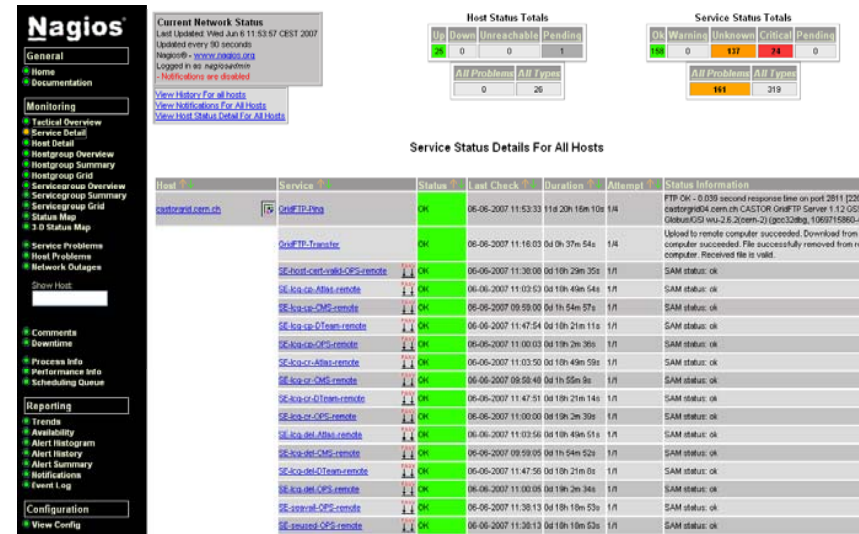


Oxford jobs this weekend



ScotGrid top-level BDII

Nagios for watching service status (alarms)
also see GI work here <http://i4c.sourceforge.net/>



Nagios

Current Network Status
Last loaded: Wed Jun 6 11:53:07 CEST 2007
Updated every 30 seconds
Nagios® - www.nagios.org
Logged in as: nagios@i4c
! Notifications are disabled

Host Status Totals

Up	Down	Unreachable	Pending
0	0	0	1

All Problems: 0 All Types: 26

Service Status Totals

OK	Warning	Unknown	Critical	Pending
0	117	24	0	0

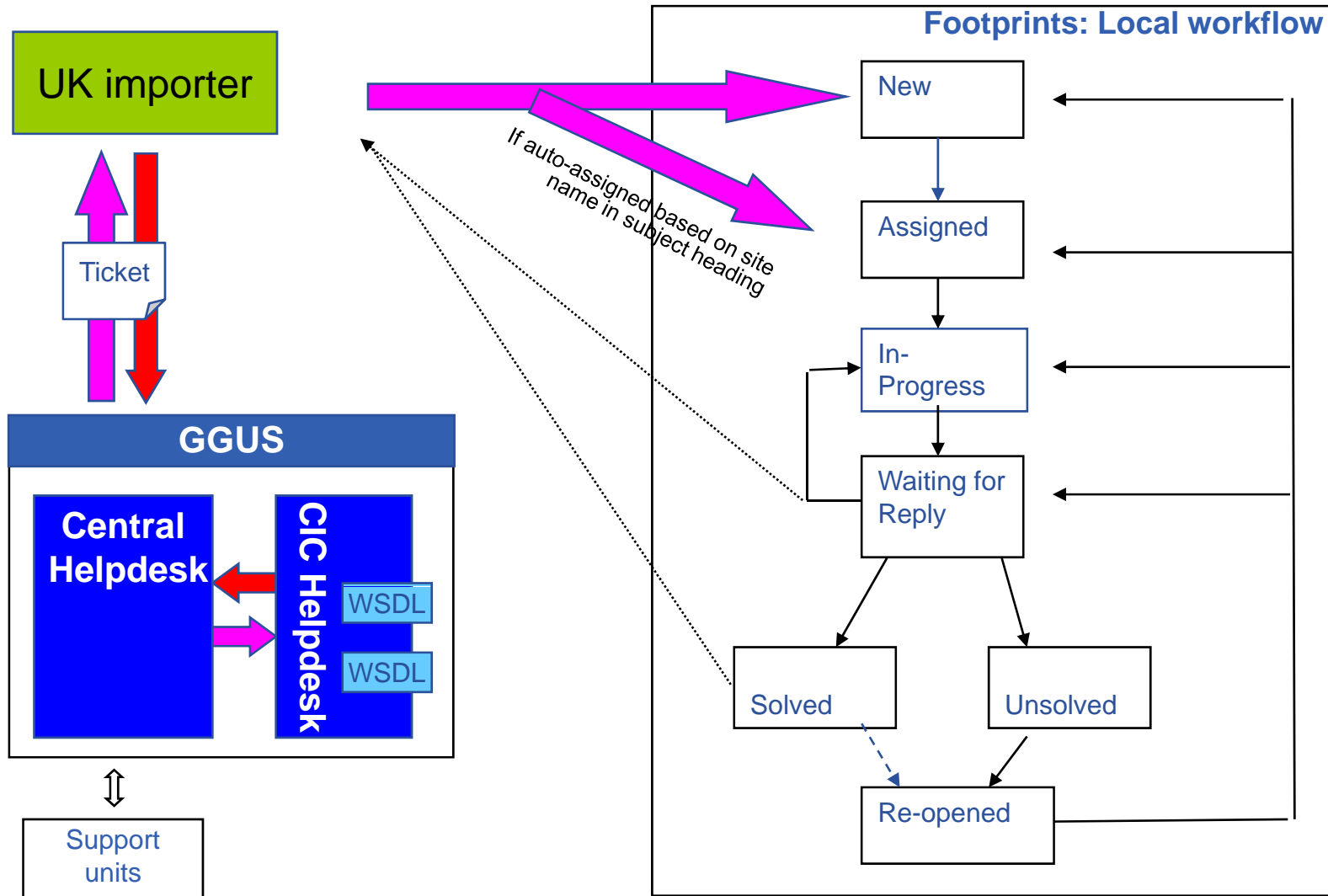
All Problems: 141 All Types: 219

Service Status Details For All Hosts

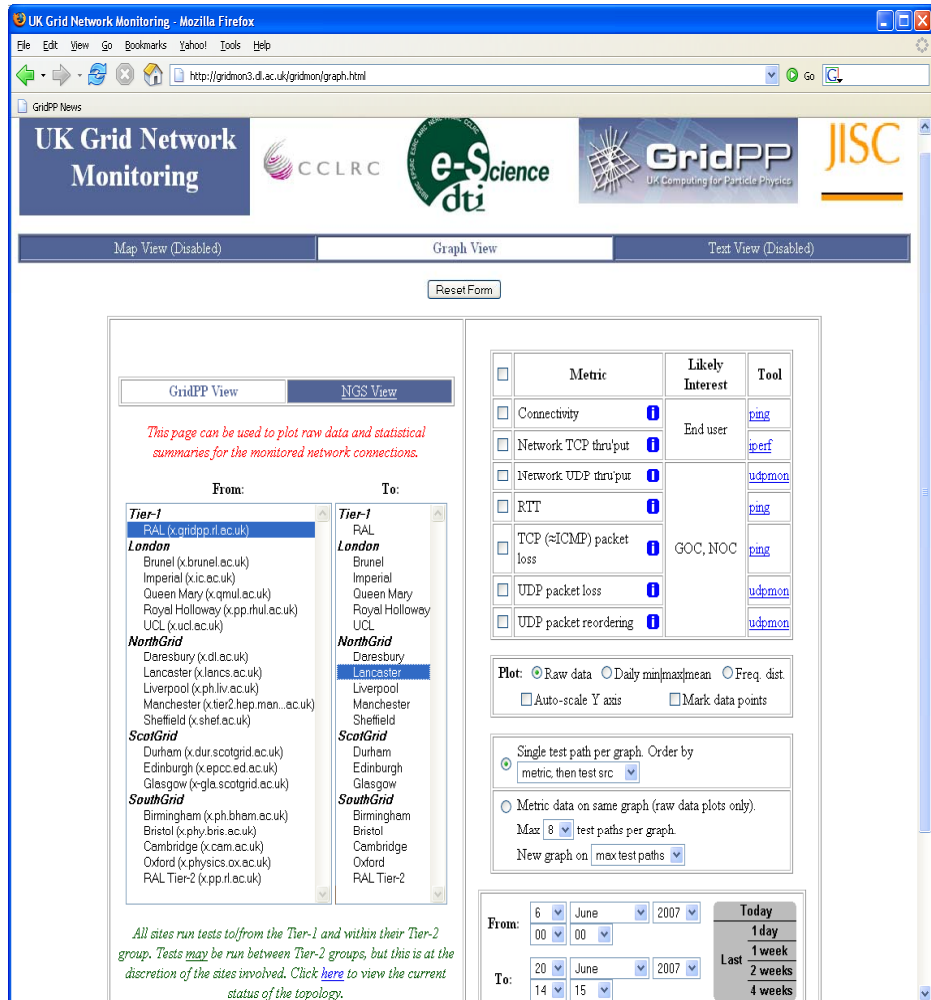
Host	Service	Status	Last Check	Duration	Attempt	Status Information
eastford.cern.ch	GitFTP-Ping	OK	06-06-2007 11:53:33	11s 20h 16m 10s	1/1	FTP OK - 0.039 second response time on port 2011 [220 eastford.cern.ch CACTUS GitFTP Server 1.12.052] GitbusKIOS wu-2.6.20cm-2 [gcc32ibg, 1989715860-42
	GitFTP-Transfer	OK	06-06-2007 11:16:03	0d 0h 37m 54s	1/1	Updated to remote computer: succeeded. Download from r-computer succeeded. File successfully removed from r-computer. Received file is valid.
	SC-host-cert-wiki-CPS-remote	OK	06-06-2007 11:03:00	0d 10h 29m 35s	1/1	SAM status: ok
	SC-icap-Atlas-remote	OK	06-06-2007 11:03:53	0d 10h 49m 54s	1/1	SAM status: ok
	SC-icap-CMS-remote	OK	06-06-2007 09:59:00	0d 10h 54m 57s	1/1	SAM status: ok
	SC-icap-OTeam-remote	OK	06-06-2007 11:47:54	0d 10h 21m 11s	1/1	SAM status: ok
	SC-icap-OPS-remote	OK	06-06-2007 11:03:03	0d 10h 2m 36s	1/1	SAM status: ok
	SC-icap-Atlas-remote	OK	06-06-2007 11:03:50	0d 10h 49m 59s	1/1	SAM status: ok
	SC-icap-CMS-remote	OK	06-06-2007 09:59:40	0d 1h 55m 9s	1/1	SAM status: ok
	SC-icap-OTeam-remote	OK	06-06-2007 11:47:51	0d 10h 21m 14s	1/1	SAM status: ok
	SC-icap-OPS-remote	OK	06-06-2007 11:03:00	0d 10h 2m 39s	1/1	SAM status: ok
	SC-icap-Atlas-remote	OK	06-06-2007 11:03:56	0d 10h 49m 51s	1/1	SAM status: ok
	SC-icap-CMS-remote	OK	06-06-2007 09:59:05	0d 10h 54m 52s	1/1	SAM status: ok
	SC-icap-OTeam-remote	OK	06-06-2007 11:47:56	0d 10h 21m 0s	1/1	SAM status: ok
	SC-icap-OPS-remote	OK	06-06-2007 11:03:05	0d 10h 2m 34s	1/1	SAM status: ok
	SC-icap-CMS-remote	OK	06-06-2007 11:30:13	0d 10h 10m 53s	1/1	SAM status: ok
	SC-icap-OPS-remote	OK	06-06-2007 11:30:13	0d 10h 10m 53s	1/1	SAM status: ok

Nagios display of prototype grid service monitoring tool

- Much going on in systems monitoring area: <http://www.sysadmin.hep.ac.uk/wiki>.
- Also with monitoring grid services: <https://twiki.cern.ch/twiki/bin/view/LCG/GridServiceMonitoringInfo>
- Real time monitor reports are also useful: <http://gridportal.hep.ph.ic.ac.uk/rtm/>



- We encourage cross-site support -



UK Grid Network Monitoring - Mozilla Firefox

http://gridmon3.dl.ac.uk/gridmon/graph.html

GridPP News

UK Grid Network Monitoring

CCLRC e-Science dti GridPP JISC

Map View (Disabled) Graph View Text View (Disabled)

Reset Form

GridPP View NGS View

This page can be used to plot raw data and statistical summaries for the monitored network connections.

From: Tier-1 RAL (x.gridpp.rl.ac.uk) London Brunel (x.brunel.ac.uk) Imperial (x.ic.ac.uk) Queen Mary (x.qmul.ac.uk) Royal Holloway (x.pp.rhul.ac.uk) UCL (x.ucl.ac.uk) NorthGrid Derebury (x.dl.ac.uk) Lancaster (x.lencs.ac.uk) Liverpool (x.ph.liv.ac.uk) Manchester (x.tier2.hep.man.ac.uk) Sheffield (x.shef.ac.uk) ScotGrid Durham (x.dur.scotgrid.ac.uk) Edinburgh (x.epcc.ed.ac.uk) Glasgow (x.gla.scotgrid.ac.uk) SouthGrid Birmingham (x.ph.bham.ac.uk) Bristol (x.phy.bris.ac.uk) Cambridge (x.cam.ac.uk) Oxford (x.physics.ox.ac.uk) RAL Tier-2 (x.pp.rl.ac.uk)

To: Tier-1 RAL London Brunel Imperial Queen Mary Royal Holloway UCL NorthGrid Lancaster Liverpool Manchester Sheffield ScotGrid Durham Edinburgh Glasgow SouthGrid Birmingham Bristol Cambridge Oxford RAL Tier-2

Metric	Likely Interest	Tool
<input type="checkbox"/> Connectivity	<input type="checkbox"/> End user	ping
<input type="checkbox"/> Network TCP thru'put	<input type="checkbox"/> End user	iperf
<input type="checkbox"/> Network UDP thru'put	<input type="checkbox"/>	udpmon
<input type="checkbox"/> RTT	<input type="checkbox"/>	ping
<input type="checkbox"/> TCP (≠ICMP) packet loss	<input type="checkbox"/> GOC, NOC	ping
<input type="checkbox"/> UDP packet loss	<input type="checkbox"/>	udpmon
<input type="checkbox"/> UDP packet reordering	<input type="checkbox"/>	udpmon

Plot: Raw data Daily min/max/mean Freq. dist.

Auto-scale Y axis Mark data points

Single test path per graph. Order by metric, then test src

Metric data on same graph (raw data plots only).

Max 8 test paths per graph.

New graph on max test paths

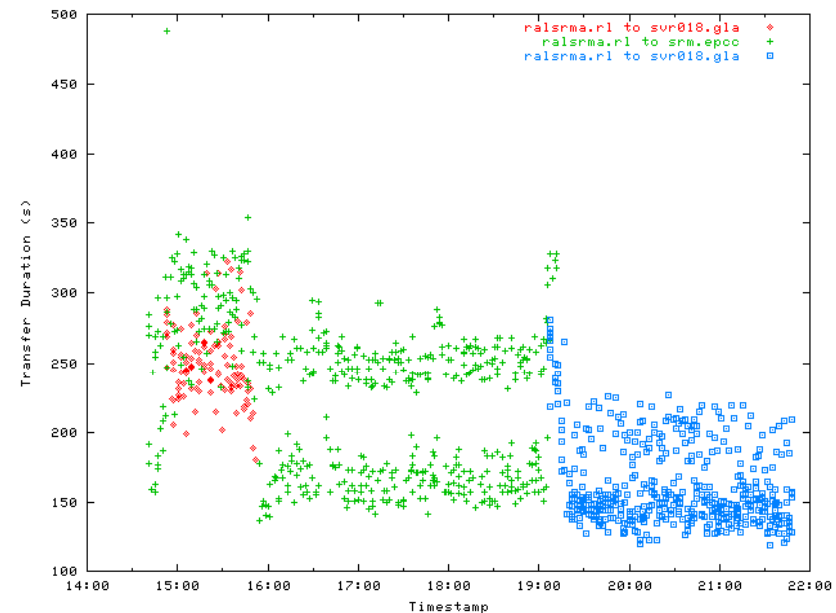
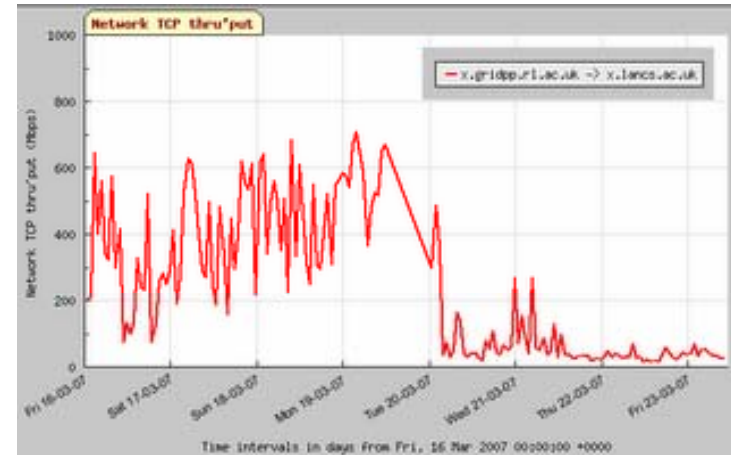
From: 6 June 2007 Today

To: 20 June 2007 Last 1 day

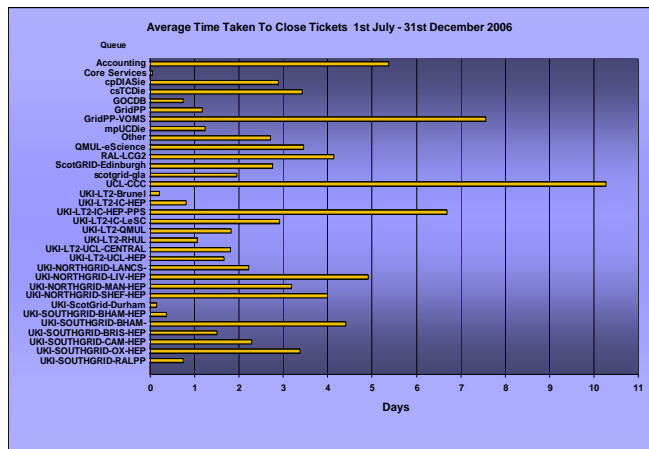
14 15 4 weeks

All sites run tests to/from the Tier-1 and within their Tier-2 group. Tests may be run between Tier-2 groups, but this is at the discretion of the sites involved. Click here to view the current status of the topology.

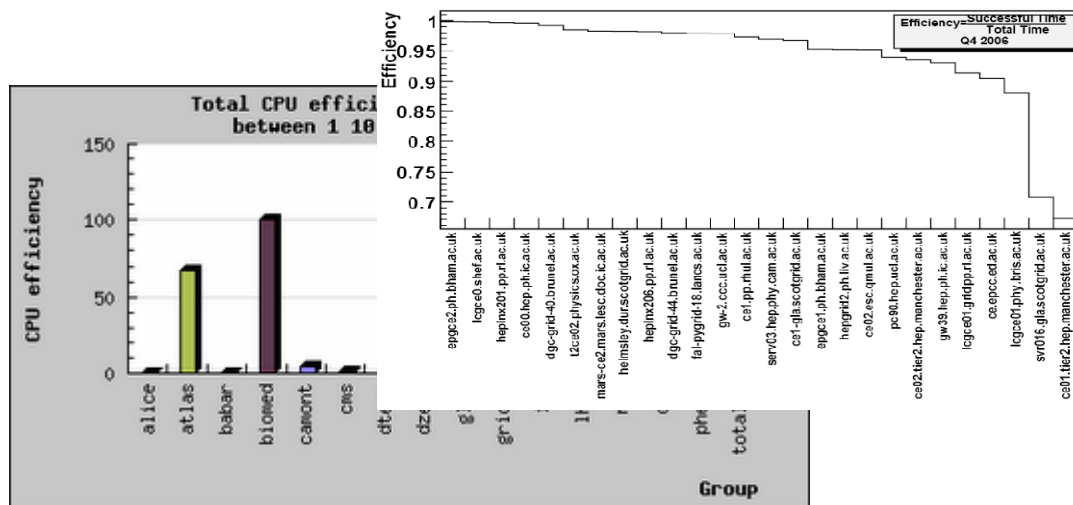
GridMon is now setup and constantly logging data from tests between the Tier-1 and the Tier-2 sites



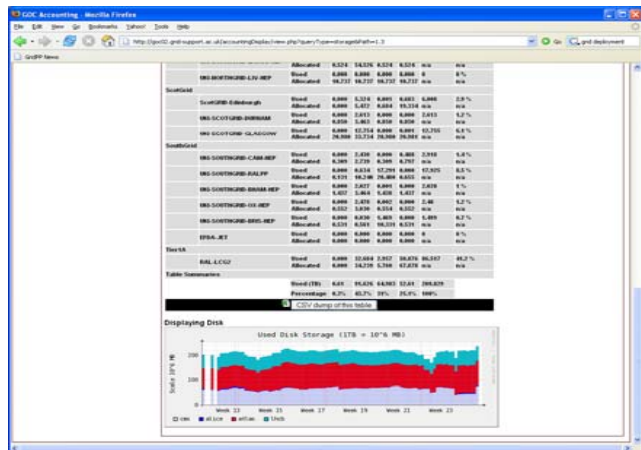
Enabling Grids for E-science



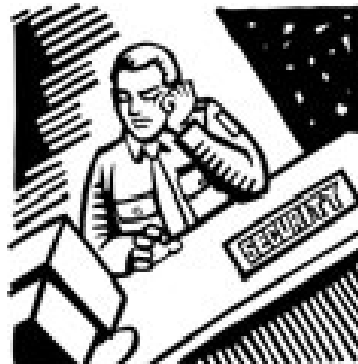
Ticket response times are monitored by the ROC



Data is pulled from various sources to develop views on efficiency



The storage group actively contribute to SRM testing and developing of the accounting. We also check resources that are deployed.



Security - policies and wider engagements are important. We take part in the EGEE security challenges and assess response times.

- Ticket Process Management – insight into current problems
- Security policy work
- Grid Security Vulnerability tracking
- Storage testing (SRM v2.2) – for experience
- Running Pre-production sites – we see what is coming
- Porting the middleware ♣
- EGEE user support activities
- Core Infrastructure Monitoring (COD)

Activities the ROC is developing:

- Grid Operations Centre DataBase (GOCDB)
 - eLearning – virtual environments ♣
 - Accounting sensors – now working on storage
 - Grid MPI ♣
-
- GridPP site readiness reviews – visit the sites to discuss and take-up problems, issues and concerns directly. *This has proved very informative and stimulated sites to think more about the service they are being asked to deliver....*

Summary

1 The UKI ROC has 3 grids. GridPP currently dominates

2 There are **formal structures** in place (including MoUs)

3 Good **communication** is key to maintaining the service

4 There is a lot of **monitoring** in place (Grid node, network....)

5 Performance **metrics** are still developing but critical

6 **Close working** between deployment and user representatives helps

ご幸運を祈ります。