T1 reports – 05/03/2007

ASGC
CPU
 * requested job priority configuration is

Storage
 * Castor2 preproduction service nodes have been deployed and couple disk servers will be deployed this week.
   * This will be provided for CMS for testing.
   * remaining disk servers will be deployed after additional LSF licenses are procured

Atlas
 * DDM AOD replication error fixed on Feb 26th. This required the following action to recover:
  * LFC acl were updated (/grid/atlas have wrong acl configured)
  * DQ2 agents restarted (help resolving the cert error observed in subscription logfile).

Event Log
 Mar 02, 2007
 * castorsc disk server, castor001.grid.sinica.edu.tw with high load
 * restart forcely at Fri, 2 Mar 2007 03:13:36 GMT
 * simple validation pass at Mar 02 12:13:58 CST 2007
  * [lcg00122] ~> srm-get-request-status httpg://sc004.grid.sinica.edu.tw:8443/srm/managerv1 978126474
   * submitTime :Fri Mar 02 12:13:58 CST 2007
   * startTime :Fri Mar 02 13:13:58 CST 2007
   * finishTime :Fri Mar 02 12:14:06 CST 2007

FNAL
This Saturday, March 3, bandwidth for Fermilab''s offsite network access will be significantly reduced during the day, due to hardware upgrades for the optical network equipment that supports most of the Laboratory''s wide area network connectivity. The upgrades are an initial step in enhancing the Laboratory''s offsite network access infrastructure. The maintenance period will start at 8:00am, CST, and is estimated to last until 5:00pm. During the maintenance period, offsite network access will be carried on a 622Mb/s link, instead of the 10Gb/s links normally utilized. Once the upgrades are completed, normal offsite access capacity will be restored.

CERN

 Networking services

 On Tuesday the 13th of March, a new firewall system will go into production.
 At 7h30 the old firewall will be put off-line and the traffic will move to
 the new system. This will cause a short instability for the external network
 connections. Until the 19th of March, the new system will be carefully
 monitored in order to quickly detect any anomaly. Users are invited to
 contact extip@cern.ch in case they notice any connectivity problem with
 external destinations. In order to reduce the number of variables during
 this monitoring phase, from 12h00 of Thursday 8/3/07 to 9h30 of Monday
 19/3/07 only critical firewall changes will be made.

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 Fabric Services
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 - An issue with rootd requiring home directory to be available on the
 diskservers for grid pool accounts was resolved by the ROOT team who
 provided a new RPM. LHCb are testing the new version before on their
 castor instance, we hope to deploy it more widely next week

 - We have liberated ~30 diskservers to allow Western Digital and
 Transtec engineers to upgrade disk firmware. Upgrades for another

~90 servers will need to planned for the coming weeks.

- A hardware problem on the diskserver used by NA48 as their
CDR/reprocessing server is currently under active investigation.
The server will be taken by Elonex for refurbishment, and we
hope to avoid data loss.

- A configuration update on the information provider for the SRM
endpoints (where we added an optional field to satisfy a failing
SAM test) unfortunately introduced a trailing white-space where
there should have been none… Therefore, no SRM information was
published for 2 hours on Thursday afternoon.

- Atlas tier-0 challenge started.

- the configuration and infrastructure for reporting back VOMS
group/roles back to the grid using the information providers is ready
for deployment. We currently support the software, lcgadmin and none
roles. These roles are mapped to special grid pool accounts which are
part of LSF groups with dedicated shares. Awaiting green light…

- Since last week end we have seen occasional high load alarms on
lxmaster01. These were affecting all batch related activities,
including ATLAS T0 activities and job submissions from the CEs.
The origin of the high load could be traced back to two non-Quattor
managed machines which are used for Grid software evaluation. The
information system on these nodes went beserk and hammered the batch
system with useless requests. With the help of GD the services on
these nodes were stopped which fixed the problem.

- Batch Capacity as of today, in state "production":
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1) ATLAS T0 dedicated resources:

HW model ||	slc3		slc4		Sum	
|| nodes	(Ksi2k)	nodes	(Ksi2k)	nodes	(Ksi2k)
Elonex_2.8GHz			10 (20.74)	0 (0.00)	10 (20.74)	
E4_NOC_2800			8 (16.59)	10 (20.74)	18 (37.33)	
e4_07_1			0 (0.00)	170 (2048.16)	170 (2048.16)	
nc_07_1			0 (0.00)	35 (421.68)	35 (421.68)	
ex_05_1			5 (10.37)	0 (0.00)	5 (10.37)	
Sum			23 (47.70)	215 (2490.58)	238 (2538.28)	

2) Public Batch resources available on the Grid:

HW model ||	slc3	
|| nodes	(Ksi2k)	
Transtec_2.8GHz_64 ||	13 (26.96)	
Elonex_2.8GHz_64 ||	3 (6.22)	
Elonex_2.8GHz ||	447 (927.08)	
SEIL_2.4GHz ||	589 (1003.66)	
SEIL_1GHz ||	45 (41.49)	
E4_NOC_2800 ||	334 (692.72)	
tt_06_3 ||	9 (104.80)	
ml_06_1 ||	2 (23.29)	
cv_06_1 ||	359 (746.72)	
ex_05_1 ||	135 (279.99)	
Sum ||	1936 (3852.92)	

3) Public Batch resources on SLC4 (all 64bits architecture except a few boxes):

```
HW model     ||          slc4 |
|| nodes  (Ksi2k) |
---------------------+ +---------------+
Transtec_2.8GHz_64  ||    6 (  12.44) |
Elonex_2.8GHz_64  ||   74 ( 153.48) |
Elonex_2.8GHz  ||    3 (   6.22) |
E4_NOC_2800  ||    2 (   4.15) |
e4_07_1  ||   30 ( 361.44) |
se_07_1  ||  162 (1951.78) |
nc_07_1  ||  163 (1963.82) |
ex_06_9  ||   45 ( 486.00) |
ml_06_1  ||    5 (  58.22) |
ex_05_1  ||   51 ( 105.77) |
---------------------+ +---------------+
Sum  ||  541 (5103.32) |
---------------------+ +---------------+
```

Grid deployment

- Total number of Sites (*): 229

- Software -> Num. Sites (*):
gLite-3_0_2 -> 194
gLite-3_0_1 ->   2
gLite-3_0_0 ->   6
LCG-2_7_0   -> 14
unknown/down -> 13

- Status -> Num. Sites (*):
ok   -> 161
degraded ->   9
down   -> 59

- Average of concurrently running jobs during this week (+): ~30k

(*) Sites that are Certified _and_ Production _and_ Monitored by SAM:
[12]https://lcg-sam.cern.ch:8443/sam/sam.py
To see this page one needs a grid certificate loaded in the browser.
The calculation of the Site availability (Status) is described at:
http://goc.grid.sinica.edu.tw/gocwiki/SAM_Metrics_calculation

(+) Job statistics taken from GStat:
[13]http://goc.grid.sinica.edu.tw/gstat/
[14]http://goc.grid.sinica.edu.tw/gstat/total/GIISQuery_Usage_cpu_.html

For the time being we do not report CPU numbers:
1. Not all the reported CPUs are actually available for grid jobs.
2. Sites with multiple CEs may have their CPUs double-counted.
3. GStat includes sites that are not considered by the SFTs.

CERN Grid Operations managed by GD:
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* Middleware upgrade (update 15 for gLite 3.0) on all the glite
WMS 3.0.
* One new LCG RB put in production for SAM.
* 3 UIs still managed by GD-OPS have been removed from production
definitively.
* Jobs submission blocked on all the gdrb nodes (LCG RBs with old
hardware).

WLCG Services for Dress Rehearsal:
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* The list of services required for the experiments dress rehearsals

starting in summer have been agreed upon. These need to be in place by Apr/1 to allow proper preparation.

WLCG Transfer Service:
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* Transfer ranging from 60 to 200 Mb/s, averaging around 100MB/s per day.
* Involving all major T1 sites except ASGC (Castor upgrade).
* Mostly traffic from CMS, with Atlas switching on in the middle of the week.
* Little activity from Alice and LHCb.
* dTeam tests to stress test FTS2.0 continue.
* The Tier-2 FTS service has now been split away from the Tier-0 export service: expecting experiments to migrate by 1 April.
* Around 15 tickets have been submitted this week for a variety of problems.
* All problems detected by the transfer service on tier-1 SRMs are now being actively followed-up using the EGEE operations infrastructure.
* Throughput plots:
[15]http://gridview.cern.ch/GRIDVIEW/

GridView :
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* Completed the validation of data for the newly deployed Web Service Transport for Gridftp data at CERN. Fixed a few bugs in the server module. Now it is working perfectly ok, without any data loss.
* Deployed the Server for Web Services based Transport in production environment, now it is archiving CERN Gridftp data in production Oracle Database.
* We had discussions with Users and internal discussions in team and formulated a way in which VO specific test results could be displayed in Gridview.

gLite 3.x Integration and Build:
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* Certification repository
.. Details can be found at:
[16]https://savannah.cern.ch/patch/?group=jra1mdw&func=browse&status_id[]=1
    [17]&resolution_id[]=109&resolution_id[]=111&resolution_id[]=102
    [18]&resolution_id[]=103&resolution_id[]=108&report_id=183

* PPS repository
.. Two new patches released to PPS on Monday as 3.0.2 PPS Update 21
.. Six new patches scheduled for next update on Monday for the moment
.. Details can be found at
[19]https://savannah.cern.ch/patch/index.php?go_report=Apply&group=jra1mdw
    [20]&report_id=186&summary=&custom_sb1=104

* Production repository
.. Set of two new patches have been released to production as
3.0.2 Update 15 on Monday:
.. Next set of patches to be released next Monday:
.. Details can be found at
[21]https://savannah.cern.ch/patch/index.php?go_report=Apply&group=jra1mdw
    [22]&func=browse&report_id=188&release=3.0.2+Update+09

gLite 3.x Certification and Testing:
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* Patch overview

.. Certified
 #996 (edg-mkgridmap 2.8.1 more robust)
 #1003 (Dcache 1.7 upgrade)
 #1013 (WMProxy does not create all the needed job directories)
 #1014 (UI Python commands)
#1036 (gLite WMS respects $EDG_WL_SCRATCH)
 #1045 (DPM/LFC 1.6.3)
 #1045 (Matchmaking fix for a field containing a ".")
 #1051 (yaim 3.0.0-38)
 .. Rejected
 #969 (glite-yaim-3.0.1-7 update)
 #1034 (UI configuration bugfix)
 #1027 (aggregate minor bug fixes)

 * SL4
 .. Installation and configuration testing of the natively built
 SL4 gLite 3.1 WN. Still chasing problems with packaging and
 dependencies.
 .. Update to PPS to fix the problem with glite-WN_sl4compat not
 being maintainable after installation.

 * Tests
 .. Further UI tests written, including for lcg_utils and tcsh
 support
 .. glite-CE tests revealed a problem with job cancellation ;
 [23]https://savannah.cern.ch/bugs/index.php?func=detailitem&item_id=24209

 * Configuration
 .. Configuration for dynamic-info-scheduler plugins for lsf and
 condor being worked on.
 .. Work has started on bash configuration for the glite-CE and WMS,
 intended for gLite 3.1.

 * Other Work
 .. Maintenance of experimental 3.1 WMS.
 .. Production LB troubleshooting

 Data Management:
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 * LFC/DPM 1.6.3 is now certified (supports bulk methods in client
 for LFC). LFC 1.6.3 has been installed on the CERN LFC nodes.
 * FTS service split completed. We now have a separate service for
 T0/T1 and T0/T2 transfers. Creation of FTS T2 service
 (tiertwo-fts-ws.cern.ch) to be announced shortly for
 public consumption.
 * Tests of the FTS using SRM 2.2 end points are continuing.
 * Beta sites for dCache 1.8 (supports SRM 2.2) agreed: DESY, FNAL,
 IN2P3. Others to be added.
 * Creation of FTS T2 service (tiertwo-fts-ws.cern.ch) complete to
 be announced shortly for
 public consumption.

 ETICS:
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 * Most of this week has been dedicated to helping the gLite developers
 and integrators in producing WN and UI distributions natively
 compiled on slc3 and slc4/32 machines.
 * Our focus will now shift for slc4/x86_64.
 * Several new external packages have been registered in the Externals
 project for use by gLite components (db4, hibernate, struts,
 dCache-client, jaxb, derby, jxta, exist).
 * A new project has been registered in the ETICS db: GridICE
 * Support tickets received: 8, details can be found in
 https://savannah.cern.ch/support/?group=etics

* A new server is being installed at CNAF to deploy temporarily the
ETICS 1.0 RC, until suitable hardware can be found at CERN. Several
of our nodes are reaching or have reached their end-of-operation
deadline and we are experiencing more and more failures (mainly
hard-disks and power supplies).

Physics Database Services
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The migration to new hardware and extension of the production RAC for
the LHCb experiment from 4 to 6-nodes was carried on last Monday morning
from 8.00 to 11.30.
The upgrade to the ORACLE server version 10.2.0.3 was also performed
at the same time.

With this intervention, we have completed our hardware extension plan
and doubled the capacity of all the experiments/grid RACs. We have
also uniformly upgraded our hardware to RHEL 4 and to the latest
ORACLE release 10.2.0.3.

We observed more occurrences of the ITRAC servers hangs for the CMS
and WLCG production RACs (all our RACs have been upgraded to RHEL 4).
The workaround proposed by ORACLE is to change the default value of
the _high_priority_processes parameter, modifying the priority of the
cache fusion processes (LMS0,1).
We already applied this configuration change to the ATLAS production
RAC two weeks ago. We will now apply this change to all our
production RACs
next week in a rolling (transparent to the user) way.

The 3D OEM repository has been migrated to the new hardware.

New sites have been added to the LHCb COOL streams setup: CNAF and
SARA (the configuration using now 5 destination sites).
IN2P3 has installed new databases for the ATLAS and LHCb experiments.
The streams configurations have been modified to include the new
databases.

Streams propagation reporting ORA-600 KWQPCBK179 (propagation jobs
get stuck - Bug5529797) have been found on the ATLAS Streams setup
using downstream. Oracle will release a patch in about two weeks.

ARDA/EIS
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ALICE:
Production ongoing. Issues with the gLite-CE found and reported.
Finished to implement the SAM tests for the VOBOX.

ATLAS:
Installation and configuration of ATLAS agent nodes at CERN for the
T0 throughput exercise (started Monday at low rate). Foreseen to move
the ATLAS central catalogues service under IT services (load
balanced). Major changes in the Production System framework carried
on. Some changes in the ATLAS monitor (users feedback and fix of
minor issues)

LHCb:
~10,000 concurrent Grid jobs this week, 30% at CERN. Reconstruction
running OK at all Tier-1 and CERN. VOBOX transfers working at full
regime.

CMS:
still testing gLite 3.1 WMS, problems due to frequent locks of the
daemon which logs events to the Logging&Bookkeeping.
Survey of CE accessibility, time limits and consistency with
published information for CMS tiers. Testing job submission to OSG
via LCG RB, also via SAM.

Dashboard:
More views for Grid reliability being added (after discussions with
some Tier1). Monthly report format being discussed.

Other development:
VOMS proxy renewal client is being integrated into the VOBOX
middleware. Currently only renewal on non-VOMS proxies is supported
by the VOBOX.

Tier1 GridKa (FZK)

Main issues this week were:
on 24/2/07 the SRM part of dCache became unresponsive for many hours.
glite to update 14 lead to some CE info system instabilities on 1/3/07
again SRM instabilities on 1/3 which were mitigated with a dcache fix. Next week will tell if this improves
the situation

SARA

Around 10:00 misconfigured ACLs resulted in replication failures.

RAL

dCache SEs has been upgraded to 1.7

PIC

-lcg-CE service:

 +A bad configured acted as a black hole. Some of the jobs that ran in this particular node didn''t succeed
to finish properly. The problem itself was due to the ssh keys that were incorrect so the job output was
not properly transfered to the Computing Element. The problem is now solved after having reconfigured
the node.

 +We still have a quite serious problem with pbs "status=Waiting" jobs at pic. We have asked for help all
around but it seems it''s a known bug which we will hope it will be solved in of torque''s next release.

 +We have closed one of our 3 CE head nodes (ce04.pic.es) to all the VO''s except for the monitoring ones
but we have continued to receive jobs. Some vo''s like lhcb have white lists that ignore the information we
publish and they submit jobs to unpublished resources. We had an open ggus ticket for this. This ticket
was immediately closed (ggus 19135)

-LFC service: There was a problem with PIC''s pre-production central catalog that was published under
CERN''s production top BDII. It seems the problem was not ours. All the PPS sites were published under
Cern''s top-bdii, including PIC. Since we have the central catalog at PIC''s preproduction site there two
central catalogs published at the same time. Judit Novak at cern is solving the problem.

-Top-Bdii service: We still get some errors in our top Bdii. It seems applications like lcg-cr commands fail
while pointing to our top bdii. This causes GSTAT tests to fail from time to time (finding zero entries). We
are investigating it. The problem is serious because a lot of sites in the region use our top-bdii. We must
say instead that we have almost 100% of availability on the top-bdii sam tests, so we do not understand
wether some of the failures are false negatives. Problem under investigation.

-SRM-tape service: no issues.

-SRM-disk service: more stable this week, did not have to restart gridftp doors that often. But the usage
was not very high neither.