

PSS



Workshop Summary

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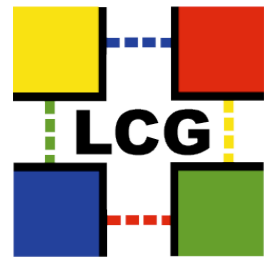
LCG 3D Databases Administrator Meeting
Amsterdam, 21th March 2007



- Jamie:
 - 3D is expected to join established services by April
 - Experience with other services shows that effort for stable service can easily be underestimated
 - Use UTC “Expect the unexpected” and “Think Grid”
- ATLAS
 - need to include few remaining sites in ATLAS COOL replication setup
 - Require $O(100)$ worker nodes to run client scalability test (either T0 or T1)
- Resource planning according to table shown in LCG MB earlier this month
 - no significant changes wrt to GDB Nov '05
 - but will progressively move LFC to experiment cluster



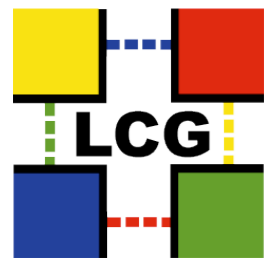
- Based on question catalog from Maria and Doris
- Jules
 - Overview of support structure and tools
 - CIC Portal for announcing planned and unplanned outages via EGEE Broadcast
 - GOCDDB to register outages and disable monitoring
 - 3D monitor should feed GGUS and directly assign target site
- Jamie
 - Contact info for network outages from SC wiki
 - Classification of outages by expected duration
 - will create table with classes, notification time, and step by step procedure on 3D wiki
 - Early notification of planned changes
 - collect info in 3D meetings and pass it to LCG ECM, SCM and operations meeting according to above table



slides from Jamie WLCG Interventions

1. Scheduled service interventions shall normally be performed **outside** of the announced period of operation of the LHC accelerator.
2. In the event of mandatory interventions during the operation period of the accelerator - such as a non-critical security patch^[1] - an announcement will be made using the Communication Interface for Central (CIC) operations portal and the period of scheduled downtime entered in the Grid Operations Centre (GOC) database (GOCDB).
3. Such an announcement shall be made at least **one working day** in advance for interventions of up to 4 hours.
4. Interventions resulting in significant service interruption or degradation longer than 4 hours and up to 12 hours shall be announced at the **Weekly Operations meeting** prior to the intervention, with a reminder sent via the CIC portal as above.
5. Interventions exceeding 12 hours must be announced at **least one week** in advance, following the procedure above.
6. A **further** announcement shall be made once normal service has been resumed.
7. [deleted]
8. Intervention planning should also anticipate any interruptions to jobs running in the site batch queues. If appropriate the queues should be drained and the queues closed for further job submission.

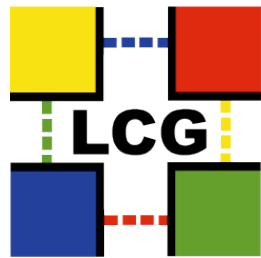
**CERN uses GMOD & SMOD to ensure announcements are made correctly.
(CIC portal and CERN IT status board respectively.)**



Recommendations & Actions



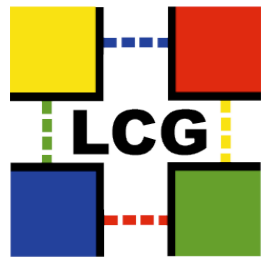
- The use of the EGEE **broadcast tool** for announcing both scheduled and unscheduled interruptions has greatly improved. Improvements in the tool to clarify broadcast targets are underway. Sites are requested to ensure the **nature** and **scope** of the event are **clear** both from the subject and text of the announcement (and are not, for example, deduced from the e-mail address of the sender);
 - ☺ **Tape robot maintenance at CERN 10.30-16.00 Thursday 13 July**
 - ☹ **Tape access interrupted**
- All times should be given in **UTC!** (or local + UTC)



Scheduled Service Interventions

Intervention type	CERN Daily OPS	Weekly OPS	EGEE Broadcast
“Transparent”	✓	Recommended	✓
Up to 4 hours	✓	Recommended	✓
Up to 12 hours	✓	Week of intervention, at least one working day in advance	✓
Over 12 hours	✓	Week prior to intervention	✓

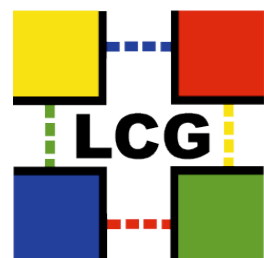
EGEE Broadcast	Both prior to (at least one working day in advance) and after the intervention.
GOCDDB	All scheduled downtimes must be entered in GOCDDB - essential for SAM / GridView tests and service availability
CERN Daily OPS meeting (Tier0 interventions)	Day before, reminder day of, with follow-up day after.
LCG ECM	It is recommended that all interventions are announced / discussed as far in advance as possible.
LCG SCM	Internal Tier0 intervention planning



Unscheduled Service Interventions

EGEE Broadcast	Immediately, with best prognosis of when the (full) service will be back. If not known or uncertain, date / time when further news will be provided. Further announcement when the service is restored.
SMOD / GMOD	Should be kept informed of progress
CERN Daily OPS meeting (Tier0 interventions)	Follow-up on any unscheduled interventions of the previous day.
Post-mortems	Covered in report to weekly operations meeting. Incidents resulting in prolonged down-time or service degradation should be covered in an explicit agenda item.

These guidelines should also be used for scheduled interventions in the case of problems.



Logging Service Operations

- In order to help track / resolve problems, these should be logged in the 'site operations log'
 - Examples include adding / rebooting nodes, tape movements between robots, restarting daemons, deploying new versions of m/w or configuration files etc.
 - **any** interventions by on-call teams / service managers
- At CERN, these logs are reviewed daily at 09:00
- Cross-correlation between problems & operations is key to rapid problem identification & resolution
 - And the lack of logging has in the past led to problems that have been extremely costly in time & effort
- For cross-site issues - i.e. Grid issues - UTC is essential



- Graeme
 - close interest and co-operation with Oracle as part of CERN openlab program
 - OEM 10gR3 released
 - improved cluster support, enterprise linux
 - new features coming up in Oracle 11
 - well into beta program



- Streams checklist and tuning need to be applied by all sites
- FTS and LFC should use Oracle services
- More nodes or more CPUs / cores
 - invest in more CPU/cores in particular with 64-bit servers
- T0 to provide
 - archive log/ backup estimates from current production
 - wiki docs on how to add nodes
- OCFS or ASM
 - Most sites prefer ASM
- RMAN installation is required for production
 - all sites but NDGF have RMAN in place
 - NDGF prefers to wait for their DB cluster setup in Oslo
- DBA workshop proposed to exercise joint recovery
 - time scale May? Tbd by Sasha
- Flashback at Tier 1 sites? Not needed.



- Questions collected by Eva and Florbela
- OEM
 - Agreed to put OEM into pure read-only mode
 - reduce security risks, non of the sites use CERN OEM to administer their DBs (only monitoring)
 - group experiment pages to simplify navigation
 - Maybe dashboard with key metrics (tbd by experiments)
- 3D Streams Monitor
 - will be connected now to GGUS
 - request for weekly / monthly reports



- ATLAS scaling test O(100) nodes
- ATLAS and LHCb move to T0 production before end of March
- **LHCb production 1. April**
- ATLAS Tier 1 access test 15. April
- Recovery Exercise (DBA meeting)
 - ATLAS to propose to do this as part of their production
 - Sasha will propose a suitable time slot
- CHEP and WLCG Workshop
 - let us know in case you are there

- Many thanks to Alexander and Dionne for an excellent organisation of the workshop!!