LCG 3D Requirement Update

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Experiment Requirements until January WLCG & 3D workshop

- "Old" Request (unchanged since November '05 GDB)
  - ATLAS T1
    - 3 node db server, 300 GB usable DB space
  - LHCb T1
    - 2 node db server, 100 GB usable DB space
  - CMS T1+2
    - 2 squid server nodes, 100 GB cache space per node
- An updated request for the first half of 2007 month has been collected at the January 3D workshop and presented to the GDB
  - http://indico.cern.ch/conferenceDisplay.py?confId=10132
  - http://indico.cern.ch/conferenceDisplay.py?confId=8469

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Policy Proposals

- Security and Backup/Recovery policy proposals by CERN T0 have been agreed at the last GDB also for database backup at Tier 1 sites

- Main points
  - Sites are responsible for applying security patches in agreement with 3D project
  - RMAN based backup and recovery required as of April at all sites
  - Retention period of at least 30 days for full and incremental backup data

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3D Database Resource Request and Current Predictions

	Dual CPU DB Nodes	DB Storage [TB usable]	
Request	no change wrt GDB Nov'05		
Conditions Challenges (April - Jul)	3 2	0.3 0.1	ATLAS: COOL + TAGs LHCb: COOL+ LFC r/o replica
Predictions	next review after initial CDC phase (eg May)		
Dress Rehearsals (Jul-Nov)	3 2	0.3 0.1	ATLAS: 4GB on 64bit DB server LHCb: 2 LFC r/o servers in place
	expect resource upgrade: double storage and CPU review		
LHC Startup (from Nov)	3+x 2+y	1.0 0.3	ATLAS LHCb
from June 2008 2009 nominal year		0.2 + 1.4 0.5 + 3.7 0.8 + 6.0	ATLAS COOL + TAGs(tbc by ATLAS)

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CMS Request Update

No major Change until August

Rough Estimates of CMS DB Resources

March 2007 through August 2007

Area (CMS contact)	Disk Maximum (GB)	Concurrent Users Peak usage	Transactions Peak usage (Hz)
Online P5	500	20	10
Offline Conditions Tier-0 (CMSR)	500 (DB) 100 (per Squid) 2-3 Squids	10 (DB)* 10 (Squid) * Incl. On2off Xfer	10 (DB)* 10 (Squid) * Incl. On2off Xfer
Offline Conditions Tier-1 (each site)	100 (per Squid) 2-3 Squids/site	10(per Squid) >100 Σ all sites	10 per (Squid) >100 Σ all sites
Offline DBS Tier-0 (CMSR)	20	10 (currently ~2)	10 (currently ~5)

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Implementation status at Tier 1

- All phase 1 sites in ATLAS and LHCb tests
  - ASGC, BNL, CNAF, GridKA, IN2P3 and RAL
- Also TRIUMF and SARA (phase 2) have finished their clusters and are joined to streams setup
  - PIC has hired a DBA and setup one two node cluster
  - NDGF have setup a single node DB and is acquiring the h/w for a cluster
- Expect all 10 database tier 1 sites to be available for experiment production in April
  - Some of the sites do not yet have the final number of nodes / experiment splitting implemented
- Experiments need to be prepared to distribute DB load according to the available resources
- Sites should be prepared to add additional nodes, storage and server splitting to fulfil the request from November '05

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Summary

- Expect all 10 Database Tier 1 sites to be available for ATLAS & LHCb conditions test in April
- Experiments s/w ready for accessing Tier 1 replicas from experiment jobs submitted via the grid
- Database Administrator Workshop @ SARA (March 20-21) to finalise configuration, monitoring and deployment procedures
- No major resource upgrade requested by the experiments until August
  - but sites should be prepared to fully implement the request from Nov '05
- First realistic workload against the Tier 1 servers will soon arrive
- Input for next resource review in May to finalise request for November setup

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