

Tier0 DB Service Status

Maria Girone, IT-DM

CCRC'08 F2F – April 1st 2008



- Migration of services to 2008 h/w
- Oracle version(s) for 2008 and readiness for May challenge
- Summary

- New hardware arrived January (RAC5 & 6)
 - Dual-CPU quad-core 2950 DELL servers, 16GB memory
 - Intel **5400-series “Harpertown”**; **2.33GHz clock**
- Some installation delays due to availability of “rails” – now solved...
- Hardware acceptance tests Feb / March
- O/S installed and Oracle RAC s/w (10.2.0.3)
 - ✓ WLCG, LHCb, CMS clusters on RAC6
 - ATLAS cluster on RAC5 (in progress)
 - downstream capture on RAC5 (next week)

DM

Current set-up

CERN IT
Department

RAC1



RAC2



RAC3



RAC4



DM

New hardware: RAC5 and RAC6

CERN IT
Department

RAC5



RAC6



- ½ of Servers + all storage Installed in Critical Power area: battery UPS and diesel backup

Experiment	# servers	# arrays	Data volume
ATLAS	4	7	10TB
CMS	4	7	10TB
LHCb	3	5	7.2TB
WLCG	4	5	7.2TB

- 1 disk array ~ 6.4 TB raw space
~25% effective space (mirroring and on-disk backups)

- Would like an extended test period for key applications on quad-core hardware
 - Address performance & scalability
- Retain existing hardware for experiment validation RACs
 - Reminder: dual-CPU servers, with 4GB memory, clock-speed 3GHz
- Schedule tight prior to May challenge (CCRC'08) – essential that testing is performed in time to allow the migration!
 - CMS test migration 1st week April
 - ATLAS, LHCb and WLCG test migrations 2nd week April
 - Downstream capture set-up 2nd week April
 - Final migrations 3rd week of April
 - Need to schedule 4 hours down-time per RAC

- Oracle have recently delivered 10.2.0.4
- This includes numerous fixes:
 - Numerous library cache bugs
 - Several streams related bugs
 - All 10.2.0.3 patches (we had to apply a few)
- Can still expect some surprises – extensive testing is important, but unlikely to catch all issues without realistic production load
- Deployment on validation RACs has started and is planned to finish by 7th April
- Need to work together on testing and building a deployment plan

- Hardware upgrade – important to get this in place prior to CCRC'08 to be consistent with setup for this summer's LHC data taking
- 64bit Oracle has been on the validation RACs since December 2007 and will be used for the new hardware
- Oracle 10.2.0.4 deployment – on validation RACs this week
- Schedule looks too tight for use in May – need joint decision on whether to postpone until after 2008 data taking or not...