



## biomed VO Life Science Grid Con ongoing operational issues

EGI Technical Forum 2012 Franck Michel, Tristan Glatard CNRS



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Computing resources usage and priority issues

• Average waiting jobs/running jobs = 3.5

(source Gstat2)

- Possible causes?
- 2012 In higher prime

  - Variability in utilization rate of resources centres?

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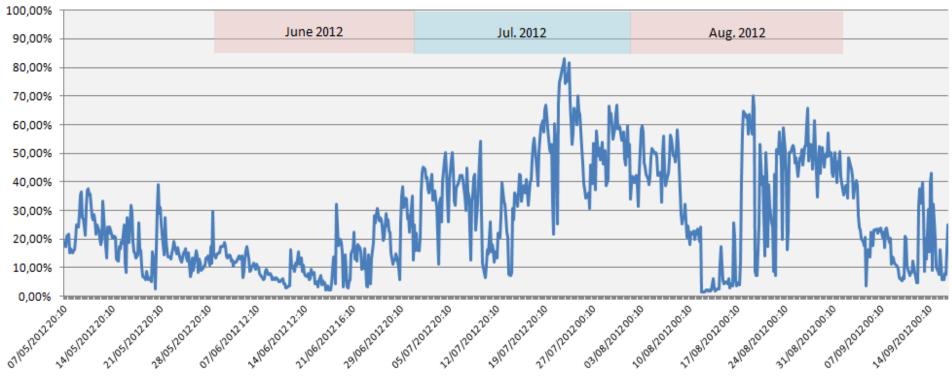
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- Better usage of resources
  - Analysis of Waiting/Running jobs continues
  - Promote the use of a DIRAC multi-VO instance (provided by french NGI)
  - Replanning functionality of WMS
  - VO-wide white list of resources
  - Inefficient applications: contacted users
- Increasing resources
  - EDGI has open 1 CE for biomed (3K to 4K cores)
  - 1 biomed-dedicated site being certified



- Analysis of the evolution of Waiting vs. Running jobs on all CE queues supporting biomed
- Average W/R=3.9 over last 12 months (GStat2)



Ratio R/(R+W)

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## Jobs scheduling, priorities...

- Ongoing work, need for per-CE measures
- Preliminary results:
  - 42% of queues with ratio < 50% (W>R)
  - 35% of queues with ratio >= 50% (R>=W)
- Outlined particular cases:
  - 22% of queues not used at all (W~0, R~0)
    - CE not working, does not fit with users' requirements, wrong capabilities published, black listed...
  - 24% of queues with jobs waiting forever (W>0, R~0)
    - Starvation in the queues, due to low priority?
- Realistic/feasible to give opportunistic VOs a minimum priority?



- User groups implement strategies to build white list of CEs that feed their job submission system
- GOCDB vs. BDII CE status: ongoing discussions to figure out if inconsistency between both is actually a problem
- 2 approaches:
  - Optimistic: assume that on most sites the BDII status can be reliably trusted, with the risk that a few jobs will fail when the status is wrong (considering this should be rare)
  - Pessimistic: VO-level approach, take into account any available information to build up a white list of CEs, with the risk of ignoring working CEs
- Decision still requires more inputs



- Ongoing discussion on how to deal with LFC/SE inconsistencies
  - Problems: zombies (aka. dark data), ghosts
  - SYNCAT (synchronization LFC/SE)
    - Prevents the creation of inconsistencies but not appropriate for curative solutions
    - No background research of inconsistencies
  - Investigation of LHC VOs existing solutions (LFC dumps, compare...)
- VO requirement to supporting sites: min. 1TB SEs
  - Dealing with full SEs = high operational cost
  - When a close SE is full, jobs efficiency will decrease



- LFC: WLCG plans to stop usage in 2013
  - LFC key component for LSGC VOs
  - LSGC willing to contribute to a join DPM/LFC community driven project
- Migration to EMI WNs
  - Test LSGC apps on EMI to be done: install of an EMI UI unsuccessful for now
  - Schedule for the migration of WNs to EMI: when? To which version?





LSGC wiki	http://lsgc.org/en/LSGC:home
Support team email	biomed-technical-support [at] googlegroups [dot] com
VO Manager email	biomed-vo-managers [at] googlegroups [dot] com
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