

CMS requirements on job priorities

Andrea Sciabà

Priorities WG meeting

March 22, 2006



CMS requirements

➤ From Computing TDR

- need for O(10) VOMS groups/roles to begin, more later
- group control can be delegated to a group member
- users with the same group/role have the same relative share
- a user can modify the priority of his submitted jobs
- the VO manager and the site manager can adjust relative priorities of different groups/roles at the site
 - the site manager has precedence
 - example: 30% share controlled by site manager, 70% by VO manager
- any change in policies/priorities must be effective in < 1 day

➤ Other requirements

- Job preemption is not allowed
- it must be possible to send high priority jobs (e.g. test jobs)
- job starving must not happen



Implementations

- Using VOMS from the start is essential
- Preferable to use priorities based on GID where the users keep their UID all the time (what changes is the primary GID)
- Having instead many queues is not attractive; acceptable with 2-3 queues/VO if the previous option is not feasible
- To modify priorities, asking the site admin to modify by hand the LCMAPS configuration is ok, in the short term
- In the medium-long term, something more convenient should be used (G-PBox or similar)
- A global fair share is not essential

How to do next?

- Test actual batch system configurations.
 - Example:
 - CMS: 30% resource share
 - 50% production, 40% analysis, 10% given user
 - Other VOs: 70% resource share
 - LSF: D. Salomoni, A. Italiano, R. Turrisi?, E. Ferro?
 - MAUI/Torque: J. Templon
 - Always same UID, primary GID changes
- Make the RB “VOView-enabled”
 - not necessarily with G-PBox, to accommodate with the mechanism “email to site admin”
- Unexpected problems will probably be found...

