



Enabling Grids for E-scienceE

## Report for Job Management meeting

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- ***Introduction***
- ***Job Cancellation Management***
- ***Wider LBproxy exploitation***
- ***LB and CREAM Integration***
- ***Purging the LBProxy DB***
- ***AOB***

- **January the 17th / 18th, Rome (Elsag Datamat)**
- <http://trinity.datamat.it/projects/EGEE/Meeting/index.htm>
- **Improve (technical) communication WMS/LB people**
- **Mainly BrainStorming Activity**
  - Not possible at AH – too technical
  - Not possible via mail – needs interactivity

- **Problem: Sometimes difficult to know what component is responsible for cancellation**
  - It depends on “where” the job is at the moment
  - May be affected by race conditions
- **Check Job state machine for possible issues on race conditions:**
  - E.g. Job cancellation request while registering/submitting
  - Possible solutions:
    - Lock on each job information
    - Return code (backward compatible) by LB logging calls

- **Scope: Reducing Persistent information stored by WMS components during their lifecycle by logging to LBProxy**
  - 100% secure – logging call corresponds to actual DB update
  - No significant latency – comparable to file writing
- **Filelist / Jobdir approach:**
  - Used by: **WMPProxy & WM**
    - Job Management Requests
    - E.g.: Submission, list-match, cancel, ...
  - Used by: **JC & LM**
    - Active jobs (non-terminated)
    - Timers (manage condor events)
  - Proposal:
    - First Phase: storing Filelist/Jobdir info *ALSO* to LBProxy for recovery operations
    - Further investigation on possible race conditions will be needed

- **Berkley DB approach**
  - used by ICE
    - Storage of Job cache information
    - E.g. active/non-terminated jobs
  - Could be switched to LBProxy logging but:
    - *System currently stable*
    - *Stressfull tests survived*
    - *Manpower needed*

- **Objectives**
  - Access the Job State uniformly
  - Provide logging-info, L&B notifications
  - Export to JP
  - Help Job Traceability
- **Proposal**
  - Install LBProxy on CREAM node
- **Tasks**
  - CREAM Events and Job state machine
    - Definition & Implementation
  - LB producer Library
    - Preferred language: JAVA
  - Extension of LBproxy
    - i.e. JobId mapping, new (possibly) events

- **Current LBProxy Policy**
  - Purge the job as soon as it is cleared
    - Cleared events logged by purger activity
- **Proposal**
  - Purge inactive jobs
    - Query LBProxy for **forgotten** Jobs
      - *“forgotten” criteria has to be carefully evaluated*
        - What status - for how long
        - timeout needed
  - Ensemble “purgers”
    - Various purger daemons on WMS can be embedded in single component
      - *Wms.purger, Proxy-cache-purger, JC/LM purgers, ...*



- **Userinterface can query JP**
  - Information on purged jobs can still be achieved by further query on JP
  - Implementation: Simple WS interface call performed upon “no results” returned by LB
- **Job Status Notification**
  - Users want job output files
  - They keep asking LB status until “DONE”
  - Worse approach – performances killer
  - On output request, Client may subscribe for status notification on LB server

- **As soon as we have collected a reasonable issues to be discussed**
  - Where? When? May be agreed in Amsterdam
  - Probably Bologna/Milan/CERN around May/June, 2008