egee

Enabling Grids for E-sciencE

The LCG interface

Stefano BAGNASCO

INFN Torino

bagnasco@to.infn.it

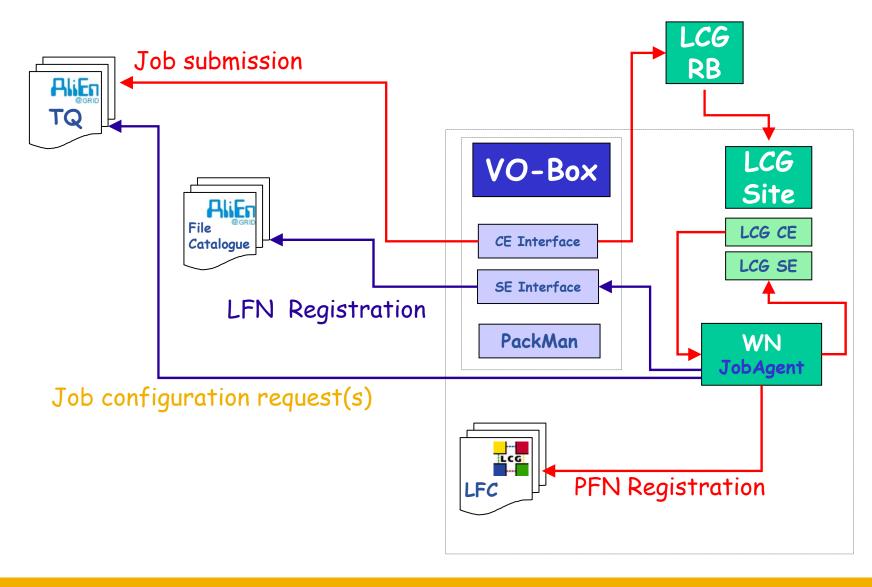Job submission

AliEn @GRID
TQ

AliEn @GRID
File Catalogue

LFN Registration

VO-Box

CE Interface

SE Interface

PackMan

Job configuration request(s)

LCG RB

LCG Site

LCG CE

LCG SE

WN JobAgent

LFC

PFN Registration

- **Implement as much as possible thin interface services**
  - To (stable) LCG standard services

- **Use the VO-Box to send Jobs to the LCG RB**
  - Telling it where to send them
  - Still have the RB take care of L&B, LCG-side accounting, etc.
  - Be "good citizens" of the Grid – no backdoors

- **Send JobAgents instead of real jobs**
  - Aka "pilot jobs", "joblets", "clever little tricks",…

- **Use the VO-Box manager's certificate**
  - All jobs in a site share the same LCG user
    - Don't rip DVD's on the Grid, lest Patricia, Mikalai or myself be sued…
    - AliEn Knows who did what, though…

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- **Current submission strategy: keep constant number of queued jobs**
  - Hardcoded in LDAP
  - Plus safety catch to prevent flooding

- **Not many major changes since several months**
  - No important performance issues in job submission
    - *But still we can't get easily a hold on pledged resources*
  - Job Agent model circumvents LCG inefficiencies
  - VO-Box concept allows thin interface

- **Focus is on operations**
  - See Patricia's talk

- **Inclusion of xrootd server in LCG SE configuration**
  - No special code on the VO-Box

- **Integration into the three storage managers in different stages of completion**
  - CASTOR-2
  - dCache
  - DPM

- **Not yet used/tested at Tier-2s**
  - But integration into standard packages would ease deployment
    - Site managers use LCG-provided tools to install

- **Standard LFC as Local File Catalogue**

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Multi-RB submission

- Glite-job-submit configuration is awkward, and does not allow for failover
- Originally a wrapper script by Patricia
- Now integrated as a replacement for glite-job-submit
- Can be configured both from LDAP and from local file\

• Multi-CE submission

- Still to be improved (double-counting of CPUs)
- Auto-detection of VO-Box available

• (Slightly) better proxy management

- But still source of most VO-Box problems

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- **LCG VO-Box installation HowTo**

  https://alien.cern.ch:8443/twiki/bin/view/AliEn/HowToInstallLcgVoBox

- **VO-Box Proxy Management HowTo**

  https://alien.cern.ch:8443/twiki/bin/view/AliEn/HowToManageVOBoxProxies

- **VO-Box Debugging & Troubleshooting**

  https://alien.cern.ch:8443/twiki/bin/view/AliEn/HowToDebugLcgVoBox

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- **Move all configuration to LDAP**
  - Still some entries that are not covered by LDAP schema
  - Plan is to add a generic 'Environment' entry in LDAP
  - But still retain local configuration mode (*really* useful for debugging)

- **Get a handle to manage end-of-jobAgent from the VO-Box**
  - Need to download logs from the RB

- **Pipe information from LCG IS to MonaLisa**
  - Code available, to be integrated
  - Will help keeping track of number of JobAgents reported (but see also Pablo's talk)
  - Mostly duplicate information, but useful for debugging

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- **Experiment with gLite new features**
  - Use 'bulk submission' to submit a batch of nearly-identical JobAgents

- **Make use of glexec on Worker Nodes**

    https://savannah.cern.ch/task/?func=detailitem&item_id=3285

  - Will allow jobs to run under real user certificate instead of VO-Box manager's one
  - But some site managers don't like it
  - Will also need to be integrated with existing middleware
    - Accounting, L&B,…