Pilot Jobs + glexec

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MB Policy

- WLCG sites must allow job submission by the LHC VOs using *pilot jobs* that submit work on behalf of other users. It is mandatory to change the job identity to that of the real user to avoid the security exposure of a job submitted by one user running under the credentials of the pilot job user.

- Implementation of this policy is subject to the following pre-requisites:
    - The identity change and sub-job management must be executed by a commonly agreed mechanism that has been reviewed by a recognized group of security experts. At present the only candidate is *glexec*, and a positive review by the security teams of each of the grid infrastructures (OSG, EGEE) would be sufficient.
    - All experiments wishing to use this service must publish a description of the distributed parts of their pilot job frameworks. A positive recommendation to the MB on the security aspects of the framework by a team of experts with representatives of OSG and EGEE is required. The frameworks should be compatible with the draft JSPG *Grid Multi-User Pilot Jobs Policy* document.
    - *glexec* testing: *glexec* must be integrated and successfully tested with the commonly used batch systems (BQS, PBS, PBS pro, Condor, LSF, SGE).
    - *LCAS/LCMAPS*: the server version of LCAS/LCMAPS must be completed, certified and deployed.

- The policy will come into effect when the MB agrees that all of the above pre-requisites have been met.

Slight revision at MB 27/11 GDB Summary More Information
http://indico.cern.ch/conferenceDisplay.py?confId=22188

Multi-User Pilot Job Policy

- Draft 0.3 https://edms.cern.ch/document/855383/1
- Should be completed
- But the ideas in it can be used to help review the experiment frameworks.

- EGEE OSCT has Operational Security Notices
- http://osct.web.cern.ch/osct/n/op-notices.html
- May be a relevant way of defining policy in the short-term

Review glexec

- The identity change and sub-job management must be executed by a commonly agreed mechanism that has been reviewed by a recognized group of security experts.

- At present the only candidate is *glexec*, and a positive review by the security teams of each of the grid infrastructures (OSG, EGEE) would be sufficient.

- Reviewed by EGEE – see November GDB

- Now being tested,.

Batch testing

- CERN LSF
  https://twiki.cern.ch/twiki/bin/view/FIOgroup/FsLSFGridgl
  Exec
- NIKHEF PBS
- CC-IN2P3 BQS
- LAL PBS
- CESGA SGE
- Others?

- CERN Tests are a good example. NIKHEF will publish a generic set soon.

Experiment Frameworks

- All experiments wishing to use Pilot Jobs must publish a description of the **distributed parts** of their pilot job frameworks. A positive recommendation to the MB on the security aspects of the framework by a team of experts with representatives of OSG and EGEE is required.

- The frameworks should be compatible with the draft JSPG *Grid Multi-User Pilot Jobs Policy* document.

- Team formed Maarten Litmaath, (EGEE2), Eileen Berman, Mina Altunay, Alice, ATLAS (Torre Wenaus), CMS (Igor Sifiligol), LHCb(Andrei Tsaregorodtsev)

Review Mandate

- To review the Multi-User Pilot Job Frameworks of the LHC Experiments
- To produce a report to the Management Board about the safety and effects of the framework.
- This review to consider at least:-
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- 1. the handling of user proxies from user client, through to running job, via any intermediate storage;
- 2. identity change.
- 3. auditability of running processes.
- 4. the interaction with the local batch system
- 5. the creation and destruction of jobs within a pilot job.

- The LHC experiments should provide sufficient documentation for the review. Having the experiment framework people present to give a verbal account is insufficient.
- Timescale to be determined/agreed.

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Further Notes (JCG)

1. The inclusion of experiment framework people in the team is because of their experience and to expose them to the practices of the other experiments. If this leads to any common code, so much the better.

2. When each experiment is being considered, the relevant experiment person answers questions rather than be a reviewer. They can be joined by other people from their experiment. Neither do they have to agree to the team's report on their experiment.

3. I suggest a questionnaire to each framework, a review of the answers by the team then a session with each framework - Face to face and/or video/phone. The team should only have to resort to code reviews if they are unhappy with the experiment's explanation on any points.

LCAS/LCMAPS

- *Local mode LCAS/LCMAPS does not scale to large sites*
  - *Client-server version required*
- *OSG uses GUMS – they have a common API*
  - *Only one version of glexec required*
- *LCAS/LCMAPS*: the server version of LCAS/LCMAPS must be completed, certified and deployed.
- Progress?

- JRA1
- SA3
- SA1

Timescales

- glexec review – done

- Glexec testing - started

- Framework Review
  - Team formed.
  - Mandate defined (confirm with MB next week)

- Batch system testing
  - Started but not yet full coverage

- Glexec certification and deployment
  - Once testing

- LCAS/LCMAPS service
  - Still in development due now

Any Other Issues?

Summary

- The MB Policy aims to break the current deadlock
  - One way or another
- Still much work to do before the policy becomes effective
  - Timescale