eGee

Enabling Grids for E-sciencE

Job Priorities: status

Simone Campana (CERN)

www.eu-egee.org
www.glite.org

Information Society
and Media

Job Priority Mechanism

- **Several layers involved**
  - VOMS
  - Batch system configuration
  - Information System
  - Workload Management System

- **User gets a VOMS proxy with some group/role**
  - i.e. /atlas/Role=production

- **The VOMS proxy gets delegated UI->WMS->CE**

- **At the site (CE), LCAS/LCMAPS translates the user FQAN into a local user depending on a configuration file**
  - the first rule in the LCMAPS configuration file that matches the FQAN is used to do the mapping
  - Mapping of VOMS credentials to scheduler credentials

- **The LRMS is configured to grant different priorities/shares to different users/groups**
  - Assignment of scheduler share to these credentials

- **VOViews provide a way for publicizing the relevant characteristics of a CE on a FQAN-based way**
  - # of batch slots, # of waiting jobs, etc... published independently for different FQAN
  - The WMS considers the VOViews matching the VOMS FQAN for the matchmaking

```
(1)  dn:GlueCEUniqueID=ce01.ific.uv.es:2119/jobmanager-pbs-short,mds-vo-name=local,o=grid
     GlueCEAccessControlBaseRule: VO:atlas
     GlueCEAccessControlBaseRule: VO:cms
     GlueCEAccessControlBaseRule: VOMS:/cms/Higgs
     GlueCEAccessControlBaseRule: VOMS:/atlas/Role=production
     GlueCEStateWaitingJobs: 1251


(2)  dn:GlueVOViewLocalID=atlas,GlueCEUniqueID=ce01.ific.uv.es:2119/jobmanager-pbs-short,mds-vo-
     name=local,o=grid
     GlueCEAccessControlBaseRule: VO:atlas
     GlueCEStateWaitingJobs: 0


(3)  dn:GlueVOViewLocalID=atlas_role_production,GlueCEUniqueID=ce01.ific.uv.es:2119/jobmanager-
     pbs-short,mds-vo-name=local,o=grid
     GlueCEAccessControlBaseRule: VOMS:/atlas/Role=production
     GlueCEStateWaitingJobs: 1000
```

- **Result of the list-match (`Rank = -other.GlueCEStateWaitingJobs;`):**

```
              *CEId*                                              *Rank
(3)    - ce01.ific.uv.es:2119/jobmanager-pbs-short         -1000
(2)    - ce01.ific.uv.es:2119/jobmanager-pbs-short            0
```

- *A VOMS with /atlas/Role=production matches both (2) and (3), LCMAPS will map the FQAN to the ACBR VOMS:/atlas/Role=production (3) only*

- **The FQAN VOViews should disappear from the information system.**
  - The VO:atlas view will then show inclusive information for ATLAS jobs submitted with any role
  - Very Short Term means **no more** than 2 weeks

- **Status: DONE but…**
  - The situation prior to FQAN VOViews has been restored but left some dirty
  - The "dirty" is in the configuration of the information provider. Example: ce02.marie.hellasgrid.gr:2119/jobmanager-pbs-atlas
    - Publishes 4 running jobs in the inclusive view (ALL VOs)
    - Publishes 1 running job in the VO:atlas view
  - But this CE ONLY accepts the ATLAS VO!! (i.e. ALL Vos = ATLAS)

- **Being followed up by EGEE operations. Some progress but a bit slow (still 60 queues have problems, they were 200)**

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- **<u>Make the VOViews mutually exclusive</u>**

  - on a CE not more than one VOView can match a FQAN
  - Introduce a DENY rule on the Information system:

```
GlueVOViewLocalID: atlas
GlueCEAccessControlBaseRule: DENY:/atlas/Role=production
GlueCEAccessControlBaseRule: VO:atlas
[...]
GlueVOViewLocalID: /atlas/Role=production
GlueCEAccessControlBaseRule: VOMS:/atlas/Role=production
```

- **Required simple changes in the WMS**

- **Required careful publication of the rule on in the GIP**

- **The *FULL* stack has been tested in the SA3 certification testbed.**
  - Log of the test has been distributed to the TCG

- **Results of the test are positive:**
  - The WMS understands the DENY tags.
  - The queue is matched only once
  - The information used for the matchmaking are the correct ones, based on the VOMS FQAN

- **What has not been tested**
  - That priorities at the batch system level are respected
  - What happens with more than 2 FQANs (different roles/groups/VOs).
  - Other batch systems rather than Torque+Maui

- **We decided to consider the test on the certification testbed successful and test the remaining points in the PPS**
  - Larger scale
  - Different Batch system

- **Next actions:**
  - The version of YAIM configuring the JP should remain a branch
    - Not the official version
  - PPS coordinator should deliver as soon as possible 3 PPS sites configured with the JP mechanism, installed using the branched YAIM version
    - Please report any difficulty
  - CERN should be delivered by the end of today (but only with PBS)
    - Remember we need LSF somewhere
  - No timescale for the other two volunteering sites (not identified yet).

- **Tests should be EXTENSIVELY carried on in PPS. In case of success, YAIM branch will be re-merged in the main branch and certified.**
  - And re-deployed in PPS, but this time testing should be straightforward

- **Then we have to deploy. Carefully.**