VOMS DEPLOYMENT FOR SMALL NATIONAL VOS AND LOCAL GROUPS

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Abstract

With the development of the grid and the acquisition of large clusters to support major HEP experiments on the grid. Has triggered different requests One is from local physicist from the major VOs to have privileged access to their resources and the second is to support smaller groups that will never have access to this amount of resources. Unfortunately both these categories of users up don't even have the resources to maintain VO servers needed to access the grid. The use of a centralised VOMS server at least at national level as part of the grid infrastructure can resolve the problem. In the following there is a description of the deployment of such a VOMS server and the VOs administration for this purpose.

BACKGROUND

In the particle physics environment it was always understood that each HEP experiment was a Virtual Organization. Each experiment would get access to its resources and share their spare cycles on the grid when available. This is not as clean-cut as it seems at first sight. There are different use cases, distinct from the case of a VO without national boundaries and an enormous amount of human and hardware resources as a major league experiment.

Local Use cases

- A VO might be small, local and with limited resources.
- Small experiment like MINOS and CEDAR
- A local group of a bigger VO might want to access Tier3 resources from the grid without sharing them.
- BaBar grid test machines
- Different grids might want to cooperate to support each other resources.
- GridPP and NGS
- The local funding situation imposes to share resources with groups not belonging to any VO, however they might be willing to access their portion of resources through the grid.
- Manchester engineers got 100 hundred nodes in exchange of power and cooling but were convinced to use the grid in exchange of software and hardware support
- Distributed Tier2s might want to unify certain categories of users in one VO.
- London Tier2 lecturers and students
- A site might want to give temporary access to its resources to local groups.
- RALPP site to internal.

SITUATION IN THE UK

In UK two different national grid organizations GridPP and NGS (National Grid Service) have decided jointly support glite VOMS [3] servers.

- Common infrastructure to maintain the VOMS servers
- Common VOs support
- Common distribution of information
- Enable each other VOs on each other systems

The pool consists of two front end servers one for NGS and one for GridPP, two backup servers and a test server. The servers are hosted at the in Manchester as part of the Tier2 infrastructure. They have been running since January 2006 and they now host 6 national VOs.

VO Enabling

A formal request has to be made to the ROC. The following information about the VO has to be supplied in the request.

- VO name. This should be reasonably short, distinctive, and must not clash with any existing VO. A lower-case name is recommended, and generally no more than five or six characters (letters and numbers are allowed in the name, but most other characters are not).
- VO support contacts - both specific responsible people and various experiment mailing lists.
- Security contacts - ideally at least two people who can respond quickly in the event of a security incident relating to a member of the VO, or to the VO as a whole.
- VO/VOMS server, file catalogue etc. end-points (see below).
- Hardware requirements - memory size, disk space etc.

- Software requirements - any software beyond the basic Linux tools/libraries, including things which are part of standard distributions as they may not be installed by default.
- Typical usage pattern - expected job frequency and variation over time, job length, data read and written per job etc.
- Glue schema fields used - this would give an idea of what is really used in the information system and needs to be ensured to be properly set and maintained.
- General procedures - for example if the site has to request the installation of VO software.
- Size of the VO (i.e how many users), to give a guide to how many pool accounts to create.

The request has to be approved by the GridPP/NGS management. After approval the VO gets created on the VOMS server and the VO manager enabled to add users. Sometimes the VO is too small and then the VO administration is done by the VOMS server administrator under request. The information to enable the VO at sites will be then downloadable from the GridPP/NGS WEB sites. This might change in the future if the CIC portal will be used instead. VOs will be responsible to maintain the information up-to-date.

REFERENCES

[1] http://www.gridpp.ac.uk.
[2] http://www.ngs.ac.uk.
[3] https://edms.cern.ch/file/487004/1.1/EGEE-JRA3-TEC-487004-DJRA3.1-1.1.pdf.