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Integration of the ATLAS VOMS system with the ATLAS Metadata Interface

Wednesday 9 May 2007 17:30 (20 minutes)

Describe the scientific/technical community and the scientific/technical activity using (planning to use) the EGEE infrastructure. A high-level description is needed (neither a detailed specialist report nor a list of references).

The ATLAS collaboration has 1700 members from 144 institutions
and 33 countries.
Authorisation plays a key role in the process of gaining access
to resources in a
computational grid. AMI is an application which stores and
allows access to dataset
metadata for the ATLAS experiment. This abstract will summarise
how the relationship
between the ATLAS VOMS system and AMI was defined and implemented.

Report on the experience (or the proposed activity). It would be very important to mention key services which are essential for the success of your activity on the EGEE infrastructure.

ATLAS uses the EGEE infrastructure. The wider ATLAS grid activity
with regards
authorisation is
towards the use of VOMS. Currently all ATLAS VO users have the
same rights and
capabilities. The fully deployed VOMS system will give additional
capabilities to the
management of VOs and users. This transition depends on users
being divided in
groups inside the VO and holding different roles. In this way,
some users will be
able to access resources and perform actions that others will
not. The success of the
AMI-VOMS solution therefore depends on the VOMS system being
fully deployed within ATLAS.
In the future the method used within the solution may become
obsolete if either VOMS
servers are redesigned to administer VOMS credentials in a
different manner, or
browser support for proxy certificates improves; both of which
are quite likely.

With a forward look to future evolution, discuss the issues you have encountered (or that you expect) in using the EGEE infrastructure. Wherever possible, point out the experience limitations (both in terms of existing services or missing functionality)

The AMI-VOMS solution, solves two problems for Grid Applications

that are browser
based, namely delegation and authorisation of VOMS proxy
certificates. This is not
currently handled in the EGEE infrastructure. It is natural
therefore for this
solution to, due to its generic nature, extend its applicability
to the field of
industrial (browser-based) Grid applications whenever the access
to resources is
governed by VOMS authorisation.

Describe the added value of the Grid for the scientific/technical activity you (plan to) do on the Grid. This should include the scale of the activity and of the potential user community and the relevance for other scientific or business applications

The key to success of Grid computing is the development of the
'middleware', the
software that organises and integrates the disparate
computational facilities
belonging to the Grid. Its main role is to automate all the
machine-to-machine
negotiations required to interlace the computing and storage
resources and the
network into a single, seamless computational fabric.

A suite of tools are available to assist with authorisation on
the grid and VOMS
authorisation in particular. The AMI-VOMS solution which is the
focus of this
abstract provides a generic solution for the delegation of a VOMS
proxy certificate
from any VOMS server to a web-based Grid application. It solves
the current problem
that browsers cannot handle proxy certificates and therefore
provides a mechanism for
any Grid application that uses a browser client to be capable of
VOMS authorisation.
This delegation mechanism also allows the Grid application to
access other external
Grid applications on behalf of the user.

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