Across Grids Conference

Santiago de la Compostela

13-14th Feb 2003

Linda Cornwall

Framework Policy 6 (FP6) (Mario Campolargo)

- Favour:--
  - Re-engineering to build on the work that has already been done to provide a stable service and move towards industrial strength software
  - Cooperation with international organisations (esp GGF) to find solutions to e.g.security.
  - Open standards, building a stable service with steady improvements.
- Will consider funding for
  - Network related – up to 100%
  - Service Specification – up to 100%
  - Joint Research Activities – up to 50%
- 1st call for proposals 6th May 2003

Other Plenaries

- HEP applications in DataGrid.
  - Mainly described LHC problem
- DataTAG project
  - uses DataGrid middleware – talked about using VOMS
- GridLab Portals – aimed at Computational Physics.
  - (GSI build in – providing credential management).
  - Using info services from Lecce?
- Grid related R&D at HP Europe
  - Globus for HP machines.
  - A lot of interest from customers – to deal with peak time computing needs.

Modelling and Simulation of Grids

- Several presentations modelling behaviour – but not the middleware to bring things about
- Decentralized vs centralized economic model
  - Based on Market Economy and self interest
  - Works well for a large system
- Job Scheduling and Resource Management
  - Proposed an extension of GSI schema to include economic info
  - Tried basing decisions on CPU price, min exec time
  - Very crude, didn't take account of speed of CPU.

Information and Monitoring

- Heard a lot of 'don't like MDS' type comments.
- Search Engines for the Grid
  - Showed a diagram of the Google search engine
  - Imagine Grid to be Chaotic – like the internet is now, therefore take a similar approach to finding info on the grid as searching the web.
  - Talked about a need for a common global naming scheme
  - Developing a Grid Search Engine `GRISEN'

Information and Monitoring (2)

- Grid Enabled OMIS compliant Monitoring system
  - Claims equivalent to GMA
  - Query – unconditional requests and subscription requests.
  - Talked a lot about security, but on questioning, none in place yet. Plan to integrate GSI
- Also poster presented by Gabor Gomas and Zoltan Balaton on "A flexible multi-level Grid Monitoring Architecture"
- MapCenter – currently uses LDAP – plan to use R-GMA, OGSA

Dynamic Grid Catalogue Information System

- Being developed by the University of Lecce
- Based on a Relational Model (said why better than LDAP)
- However, doesn't look like the architecture is GMA based – no registry
  - LDGC, GDGC
  - GDGC gathers info from set of resources.
  - When it receives a query – forwards to nearby resources. (LAC - So why would anyone forward to other resources if they want a customer). Has system to make sure info not repeated.

Network

- TCP and transatlantic grids . Conventional TCP doesn't cope with limiting factors in optical connections.
  - 1 bit failure in at least 10^13
  - When 1 bit lost halves rate and then increases by 1 pkt per round trip – thus in a transatlantic link takes ages to ramp back up.
  - Other more aggressive versions TCP exist
- Others have been experimenting with network performance with a view to moving ALTAS processing outside CERN immediately. (CERN/Poland connection)

Stream Oriented Grid Database Manager

- Distributed radio telescope consisting of thousands of antennas each producing 1GB/s before processing, 2GB/s after processing.
- Streaming data – rather than using TCP-IP.
- Looking at using DataGrid S/W?

Security

- Few seems to have got beyond adding GSI to their tools – most hadn't done that.
- 1 presentation "An Advanced Security Infrastructure for Heterogeneous Relational Grid Data Sources"
  - Most of the talk was an intro to grids –didn't say much.
  - From a quick look at the abstract – it seems to be about Authorization for replica manager in DataGrid (would never have guessed from the talk!)
  - It was in parallel to the VOMS session.

GT3 Tutorial

- A large number of versions are planned for 2003.
  - Alpha 1-4 between January and March
  - Beta 1 30th April
  - Beta 2 30th May – which will include CAS
  - Released Version 30th June
- Should not use any version before the released version to provide a service
- Experience in Web services will be needed to be a grid service developer, each application is a collection of services.

GT3 – migration from GT2

- GT2 will be supported at least until end 2003
- Plan for ease of Migration from GT2 to GT3
- All functionality in GT2 should be in GT3
- Where possible, backward compatibility will be provided – including support for GT2 API's
- Should have a GT3 testbed prior to deploying GT3 for services

GT3 - various

- MDS mapped into the infrastructure. Functionality appears throughout GT3.
  - (whatever this means?)
- X509 certs still used for security – proxy according to latest IETF draft. GT3 certs not supported in GT2. (GT3 supports GT2 certs)
- Lots of functionality described

CAS

- CAS is being re-written in Java. Any version prior to that released on 30th May should be considered to be a prototype
- CAS is now a service to
  - Enrol users and resources
  - Manage groups
  - Issue signed policy statements
- OGSI compliant
- The possibility of interoperability between VOMS and CAS was discussed off record.

Overall Impression

- There's a move towards web-like, evolutionary approach to the Grid, rather than a planned structure (especially in Spain and Italy).
- Most people are developing ideas, some developing middleware, and thinking about security later.
- Often when people made presentations, when pressed some of the stuff they presented was planned/in work rather than completed.
- DataGrid is still in the lead on actual middleware and deployment

And finally

- Talks don't seem to be available on website. Only some of the abstracts are available.
- Timetable not wonderful – often similar themes in parallel – e.g. CrossGrids, Security.
- A pity we didn't do an R-GMA poster – our poster was of much higher standard than most presented.
- Across Grids rather over priced – 265 euros for less than 2 days conference – 3 coffee breaks, 1 lunch, 1 evening buffet.