

# Mains points discussed during the meeting with the AMGA developers and conclusions/actions.

- Maintenance of AMGA
  - Both modules, the server and the client are maintained by ARDA-GLITE
  - In the unlucky event that the maintenance will not be provided anymore the modules are composed by few thousands lines of code and it should not be very difficult to take over by ourselves
- Services or feature provided by AMGA
  - Security
  - DB replication between different db (?).
  - DB distribution (?).
- **Scalability!!!**
- Minor point: whether using Tomcat or Apache for web browsing the Bookkeeping, etc.

# Scalability

The scalability of the system is the mayor concern of the experiment. All the functionality of AMGA are very welcome but we really want to know how the system will scale against the grow of the DB size and the frequency of query submitted to the bookkeeping.

The size of the DB are foreseen to grow of an order of magnitude and the query probably are going to be submitted by job and not anymore by the physicists. If the jobs will contact the bookkeeping directly clearly the number of query submitted per second can be very high.

The recreation of the views is an other important aspect that need to be analysed since it is known that will not scale. This is a problem that comes with our design of the bookkeeping and is not resolved with AMGA. AMGA just provides a coherent mean to organise the data in a tree like structure, so it is up to us to think a DB schema that will make the view recreation scalable. The main problem of the views is that they are updated once per day and if something goes wrong in the updating process all the files generated during the day are not visible; the only way to recover from this situation is to recreate the views from scratch which means elaborate all the bookkeeping data.

# Actions

- Increase the dimension of the bookkeeping of a factor 10 with fake data and see how the system scale with the actual design. If it does not scale properly find a better DB schema design.
- Find a way to update the views in real time. As soon as all the information about a files or a job are available the views should be updated. This is the most challenging action. The information about files and jobs are inserted with many asynchronous transactions so a lot of checks are needed to be taken every time a transaction complete to be sure that all the needed information are available. This can take a lot of time but never a real quantification of such time has been done so the idea is to estimate such time and see if the real time updating can be implemented.
- Submit query to the bookkeeping from jobs to analyse the system and change the design if this is seen as week point in the scalability or blame AMGA.