

Bookkeeping and Replica Catalog

Alessandra Forti

BaBarGrid workshop

03/04/03

Bookkeeping

- Bookkeeping is being redesigned
- Currently we are concentrating only on the data set and task management part
- Bookkeeping is also concerned with job splitting, submission, monitoring and management.
- In the grid context job split is based on resource matching and in particular data location.

Current scheme

- Currently only SLAC metadata catalog is updated even when the production happens at remote sites
- Remote sites can mirror the information and use the local catalog for local bookkeeping.
- Each site allows also read access from outside.
- Data location is done through the metadata catalog(s).
- Users can make their own specification for the data.

Current scheme

- provided an ordered list of sites, the system locates the matching data available at the first site querying its catalog. It then enquires the second site for matching the data that wasn't at the first one, and so on through the list.
- The previous method has been improved adding to the metadata catalog the list of sites and the list indexes that uniquely identify in the catalog each collection on disk at each site. The query now is only one on local database.

New Scheme

- In the new scheme all the databases can be updated at TierA as at TierC.
- TierA catalogs synchronised
- TierC catalogs partially replicated
- Users who want their data sets public will have to copy them at a TierA and publish their info in a TierA database. But in general will not have write access to the central production database.
- A more sophisticated mechanism to maintain the synchronisation is needed

New scheme

- It doesn't exist a syncing mechanism that work with different db engines (Oracle and MySQL) and/or can do total and partial synchronisation.
- So the idea is to publish the sql commands used to update each catalog so that the other sites can copy and apply them.

New scheme

- Where the grid fits in all this?
- Data location: we discussed only TierAs not TierCs.
 - although a similar method to the one we have (sites and indexes) could be used
- Grid job submission monitoring and management have been only partially discussed.
- the idea being to concentrate on the data set and local task management and data distribution until August-September. Leaving the door open for other grid tools.

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