BaBar Status

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PPDG Phone Meeting
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Talk Plan

• BaBar’s new computing model

• Globus Client Installation – BBG

• BaBar Compute Elements

• Job Submission

• Replication and SRB

? Wilko Kroeger
New Computing Model

- Result of a detailed examination of BaBar processing and analysis requirements
- Many changes proposed, but of most relevance here:-
- BaBar will phase out the use of Objectivity (for the event store) over the coming year
  - Move to using ROOT files
  - Simplifies data distribution (whether SRB or other tool)
    - In many cases, 1-to-1 mapping between event sample and files
    - No database export/import required at source/destination
  - Still need Objectivity distribution during transition - will deploy SRB [Wilko Kroeger and Adil Hasan, SLAC]
BBG - Globus Installation

- Simplifies Globus client installation at smaller sites (or even personal laptop)
  - RPMs automatically installed and Globus configured
  - Can install in user directory
  - Currently just handles Globus installation - will do EDG next, then SRB

- Not BaBar-specific
  - but does assume BaBar’s accepted CAs

- [Adil Hasan, SLAC; and Alasdair Earl, Edinburgh]

BaBar Compute Elements

• In the past, have tested EDG CE installation at IN2P3, Ferrara, RAL, a number of UK Universities,…
  • Currently have difficulties keeping up with EDG software releases – need to install at many sites to maintain a working system
  • Using Imperial College RB – being upgraded to 1.4.0
  • BaBar VO in Manchester – running smoothly with automatic updates

• SLAC CE now at EDG 1.3.4 [Gilbert Grosdidier, Orsay]
  • gssklog greatly simplifies installation and improves reliability
  • Still need 1.4.0 UI to work with 1.4.0 RB
Job Submission for analysis

- Now have user documentation for submitting BaBar analysis jobs to RAL and IN2P3 (and SLAC) [Dominique Boutigny, Annecy]
  - This is currently the most immediate requirement, helping us move users from SLAC to other Tier A analysis centres
  - Uses EDG 1.2 job submission and sandbox
  - This step assumes user knows where the data is located
- Now recruiting guinea pig users to use this for real analysis

Job Submission for Production

• Working on using EDG job submission for Monte Carlo production [Ferrara group]
  • Production sites require significant BaBar-specific software infrastructure (eg. Objectivity federation)
Job Submission - the next step

• When submitting to smaller sites, cannot assume all the data is at all sites
• Have developed a procedure for splitting the jobs between multiple sites [Alessandra Forti, Manchester; Janusz Martyniak, Imperial College]
  • allocation of jobs between multiple sites with the right data is left to the RB
  • JDL files and EDG submission handled automatically
  • Documentation and user testing still to be done
  • Complicated by the lack of EDG for RH7.2
• Currently based on round-robin query of local SQL databases
  • Next, see whether RLS can simplify this procedure
Data Location and Replication

• Test RC (Replica Catalogue) running at Manchester [Alessandra Forti]

• RLS (Replica Location Service) and Reptor (file replication - replaces GDMP) to be tested 03Q1 [Andrew Hanushevsky, Alessandra Forti, and Gilbert Grosdider]

• SRB

  ? Wilko