APEL: A CPU Accounting Infrastructure for Grids

Presented by Will Rogers

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Contents

• The Role of CPU Accounting
• The APEL System in Detail
• APEL as part of EGI
• APEL in the Future
CPU Accounting and APEL

- Everyone needs to know how many jobs have run on the grid
- This should be filtered by user, VO, region, country, etc
- The APEL tool collects the data
- The information is published through the ‘Accounting Portal’ at CESGA
- APEL deployed on EGEE in late 2005
- 250m records, 91000 CPU years
Publishing Methods

- Records via APEL
  - Most of EGEE
- Records direct
  - IN2P3-CC
- Summaries only
  - Gratia (OSG)
  - SGAS (NorduGrid)
  - DGAS (INFN)
The APEL Client

• APEL client has two components
  – APEL parser (on each CE)
    • Parses batch system log files
    • Reads CE benchmark values from site GIIS
    • Records this information into a local database
  – APEL Publisher (~1 per site)
    • Combines the entries from different log files into a full ‘Accounting Record’
    • Publishes records to a machine (at RAL, UK)
The APEL Server

Sites

Flexible Archiver

Job records

Central Repository

Front End

Summaries

Portal
Region B

- APEL (Parser + Publisher) installed at all sites
- Regional Accounting Server
- Sites publish to Regional Archiver
- Regional Accounting Server publishes summaries to Central Accounting Server

Region A

- APEL (Parser + Publisher) installed at all sites
- No Regional Accounting Server
- Sites publish directly to Central Accounting Server
Region D
- Own accounting tool
- Own accounting system
- Region to publish individual records to the Central Accounting System

Region C
- Own accounting tool
- Own accounting system
- Region to publish summaries to the Central Accounting System

EGI
- CENTRAL ARCHIVER
- CENTRAL DATABASE
- CENTRAL ACCOUNTING PORTAL

REGION C
- REGIONAL DB
- OTHER TOOL

REGION D
- OTHER TOOL
- OTHER TOOL
Roadmap

• Replacement of RGMA with ActiveMQ
  – A more reliable mechanism
  – Network of brokers at CERN
• Redesign of central system
  – Easier to manage
  – Distributable
Roadmap

• Distribution of APEL accounting system to regions
  – Keeping a central accounting repository
  – Working with the Accounting Portal

• Other improvements:
  – Well-defined interface with other accounting tools
  – Standardisation
For more:

• Talk to us!
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APEL Home
http://goc.grid.sinica.edu.tw/gocwiki/ApelHome

Accounting Portal