



#### Enabling Grids for E-sciencE

# APEL (part II)

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www.eu-egee.org



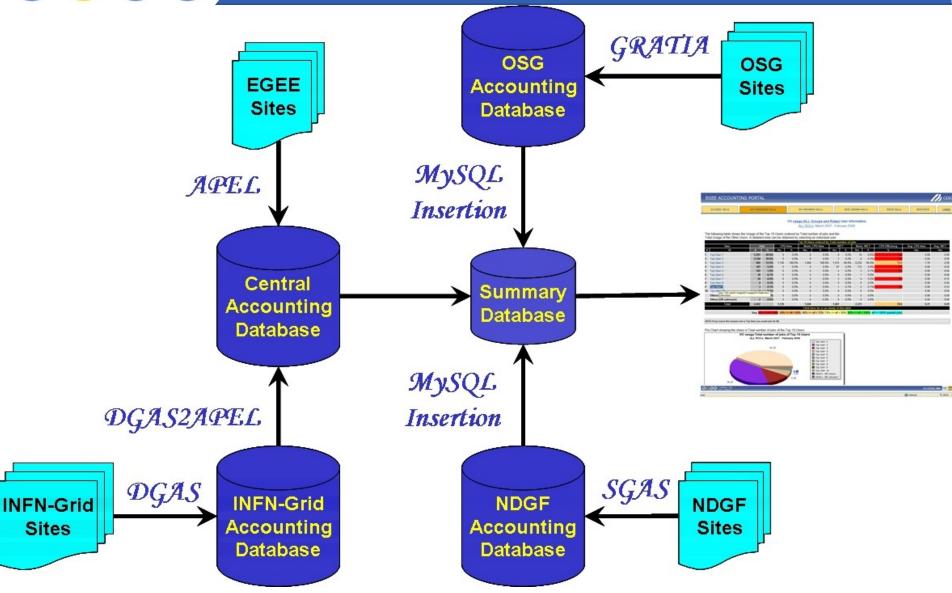




- Accounting Portal
  - Data Collection procedure
  - Views
  - User Level Accounting
- Regional Accounting Portal
- APEL SAM Test
- Accounting Enforcement
- Ideas for the future



#### **Accounting Portal: Data Collection**





## **Accounting Portal: Views**

GLOBAL View

VO MANAGER View

VO MEMBER View

SITE ADMIN View

USER View

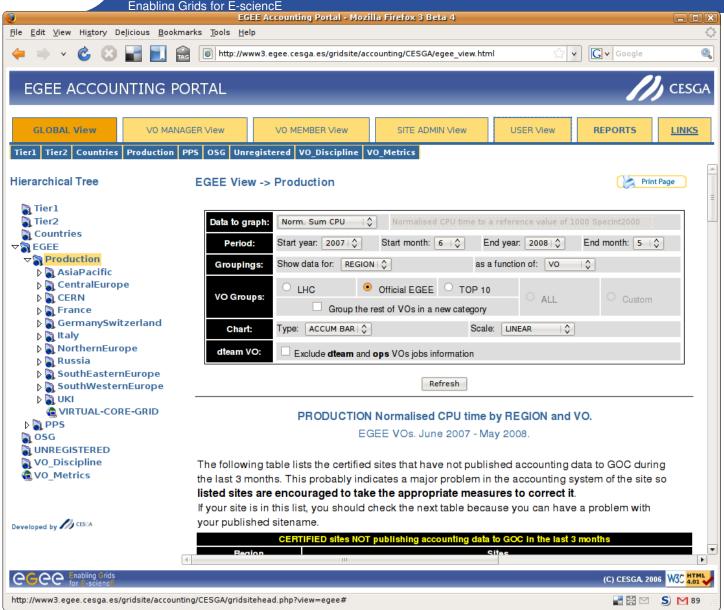
REPORTS

LINKS

- Apart of the Global View and the Reports tab, 4 new views using the UserDN and FQAN information are available in the development portal:
  - User View.
  - Site Admin View.
  - VO Manager View.
  - VO Member View.
- The queries are done dynamically
- Flexibility to choose between diferent parameters and generate your own plots



#### **Global View**





#### **EGEE Hierarchical Tree**

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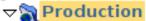
#### Hierarchical Tree











- AsiaPacific
- 🕽 🐚 CentralEurope
- D CERN
- ▶ France
- ▶ GermanySwitzerland
- 🕽 🐧 Italy
- 🕽 🐧 NorthernEurope
- Da Russia
- SouthEasternEurope
- SouthWesternEurope
- D 🐧 UKI
  - **©** VIRTUAL-CORE-GRID
- D RPS
- OSG
- UNREGISTERED
- **VO\_Discipline**
- VO\_Metrics



#### **Selection Frame**

| Data to graph: | Norm. Sum CPU   🗘 Normalised CPU time to a reference value of 1000 SpecInt2000      |
|----------------|---|
| Period:        | Start year: 2007   \$\times\$ End year: 2008   \$\times\$ End month: 5   \$\times\$ |
| Groupings:     | Show data for: REGION   \$\cdot\$ as a function of: VO   \$\cdot\$                  |
| VO Groups:     | O LHC Official EGEE O TOP 10  |
|                | Group the rest of VOs in a new category  O ALL  Custom                              |
| Chart:         | Type: ACCUM BAR   \$ Scale: LINEAR   \$   |
| dteam VO:      | Exclude <b>dteam</b> and <b>ops</b> VOs jobs information                            |

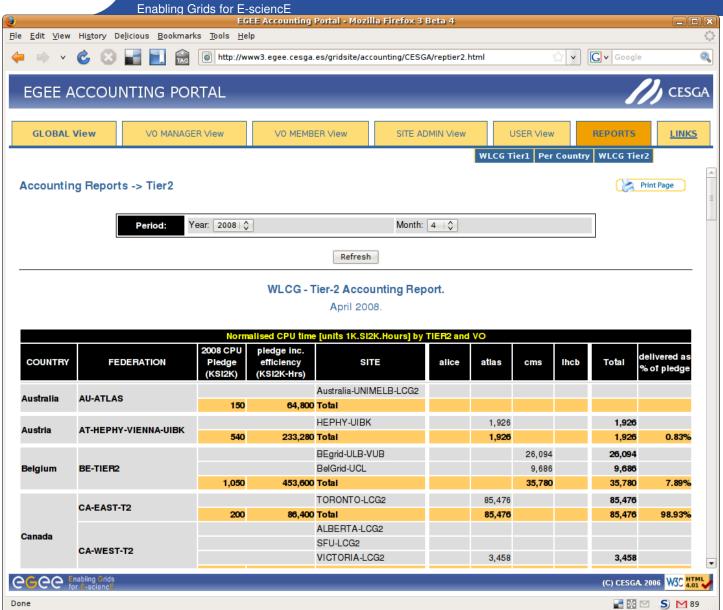


#### Data showed:

- Number of jobs
- Norm. Sum CPU
- Sum CPU
- Sum Elapsed
- Norm. Sum Elapsed
- CPU Efficiency
- Cumulative Charts



## Reports





- Active VO
- Integrated NJobs
- Integrated Norm. CPU
- Integrated CPU
- Integrated Norm. Elapsed
- Integrated Elapsed



## **User Level Accounting**

- UserDN captured from CE log files (grid-jobmap logs)
- APEL uses the data to build accounting records
- Data published to GOC with on-the-fly encryption using APEL public key (1024 bit RSA)
- At the GOC data are extracted from RGMA and stored in a Central Accounting Repository.
- Data decrypted using APEL private key
  - User Level summary table created
  - On-the-fly encryption using EGEE Portal certificate
- Encrypted table pushed to CESGA portal
- Portal decrypts data and provides SSL based access to the summaries.



## **VOMS Groups and Roles**

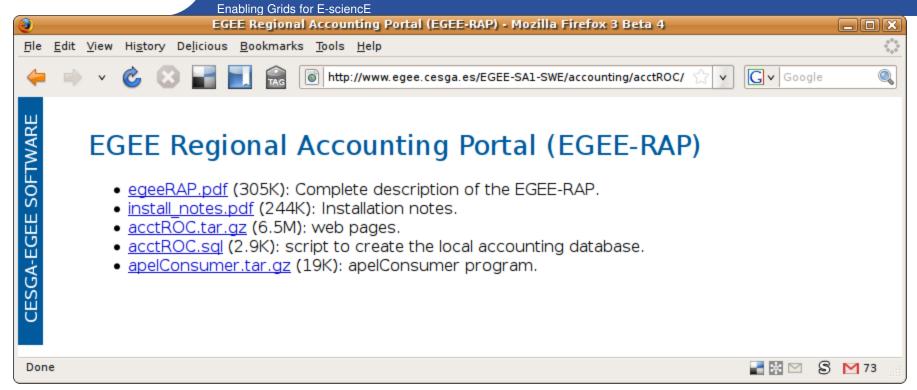
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#### UserFQAN

- Capture UserFQAN from grid-jobmap log on CE
- FQAN chain processed at the GOC to derive Group and Role from the primary part of the chain.
- If UserFQAN present, we can use the Group to derive the VO of the user submitted job (otherwise the local unix group is used).



#### Regional Accounting Portal (RAP)



- Includes a tool to collect accounting data directly (R-GMA)
- Accounting data stored in a local database in the ROC
- First to include user level information
- Development during last year focused on the Global Portal



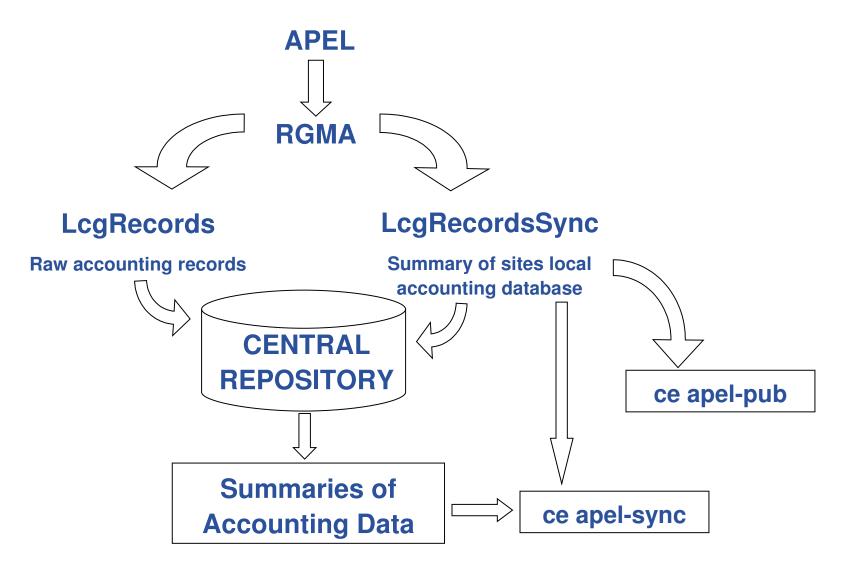


CE SEE SWE Others?



### **APEL SAM Tests**







#### ce apel-pub:

Last time the site published data to the GOC.

#### ce apel-sync:

 Comparison of number of job records between the sites local Apel database and the records published to the GOC.

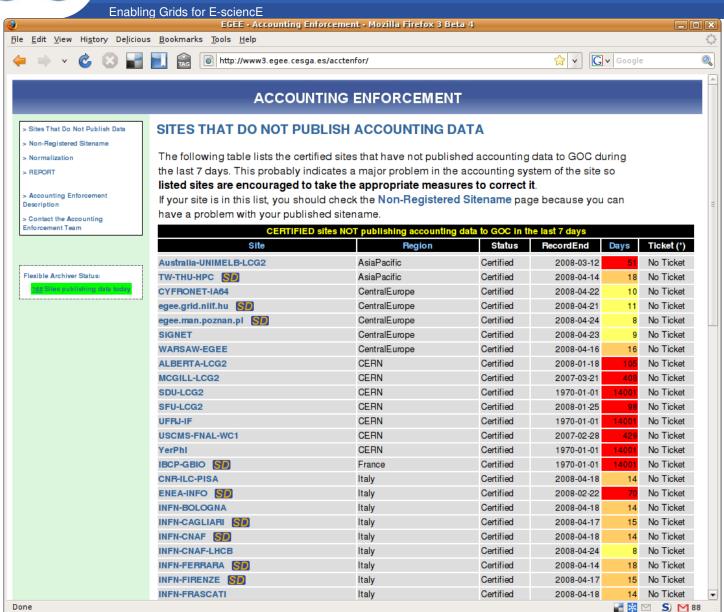


## **Accounting Enforcement**

- Sites that are not publishing accounting data (>7 days)
- Sites using a non-registered GOCDB sitename
- Normalization
  - SpecInt < 150
  - SpecInt > 2500
  - More than 3 different SpecInt values during the last month



## **Accounting Enforcement**



#### Ideas for the future

- Provide an interface in the portal to compare accounting data with SLD/MoU/TA
- Do we go regional?
  - Regional accounting portal: RAP
    - Already available but we focus our work in the Global Portal
    - It allows each ROC to collect, store and display the accounting of their sites
    - Some Federations already use it
  - Regional Accounting Enforcement Web?
- Additional Views: Clouds of Atlas
- WLCG annual reports



## Thank you!