Interoperability between Grids and IVOA

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Information Society and Media

One group two roles

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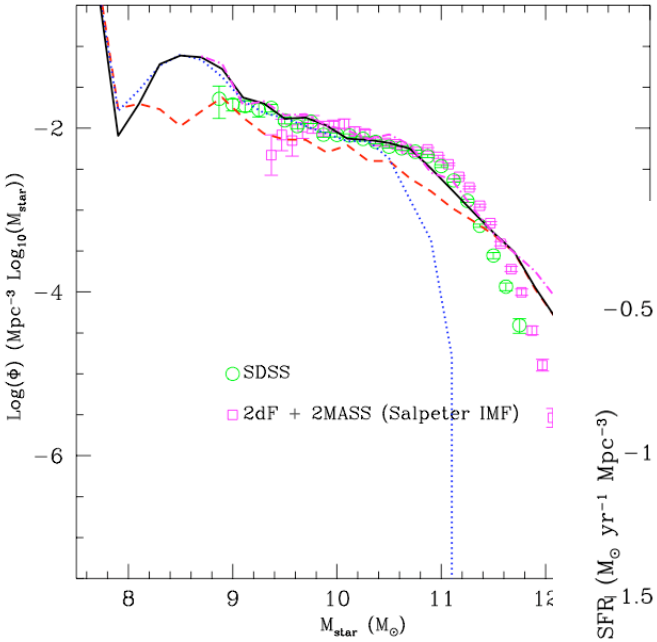
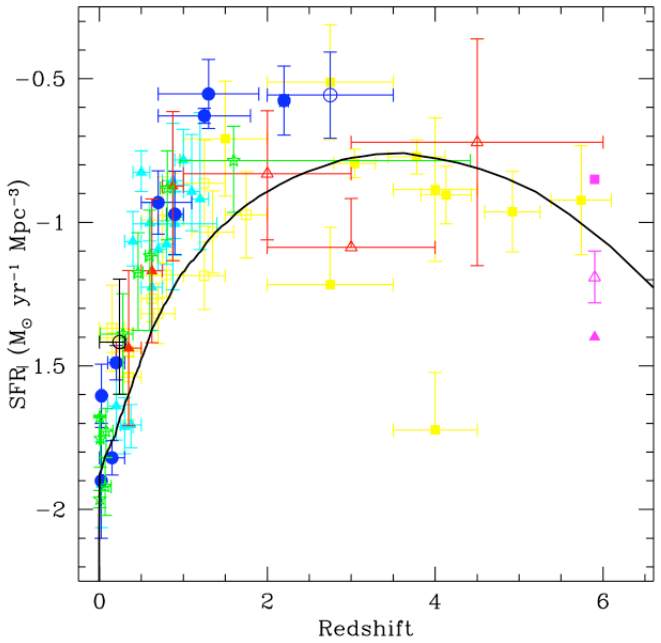
Why?

- **INAF - SI coordinates the Italian IVOA initiatives**
  - Na
  - Wc IAP)
- **INAF**
  astrc
  - Se
  - So





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Interoperability

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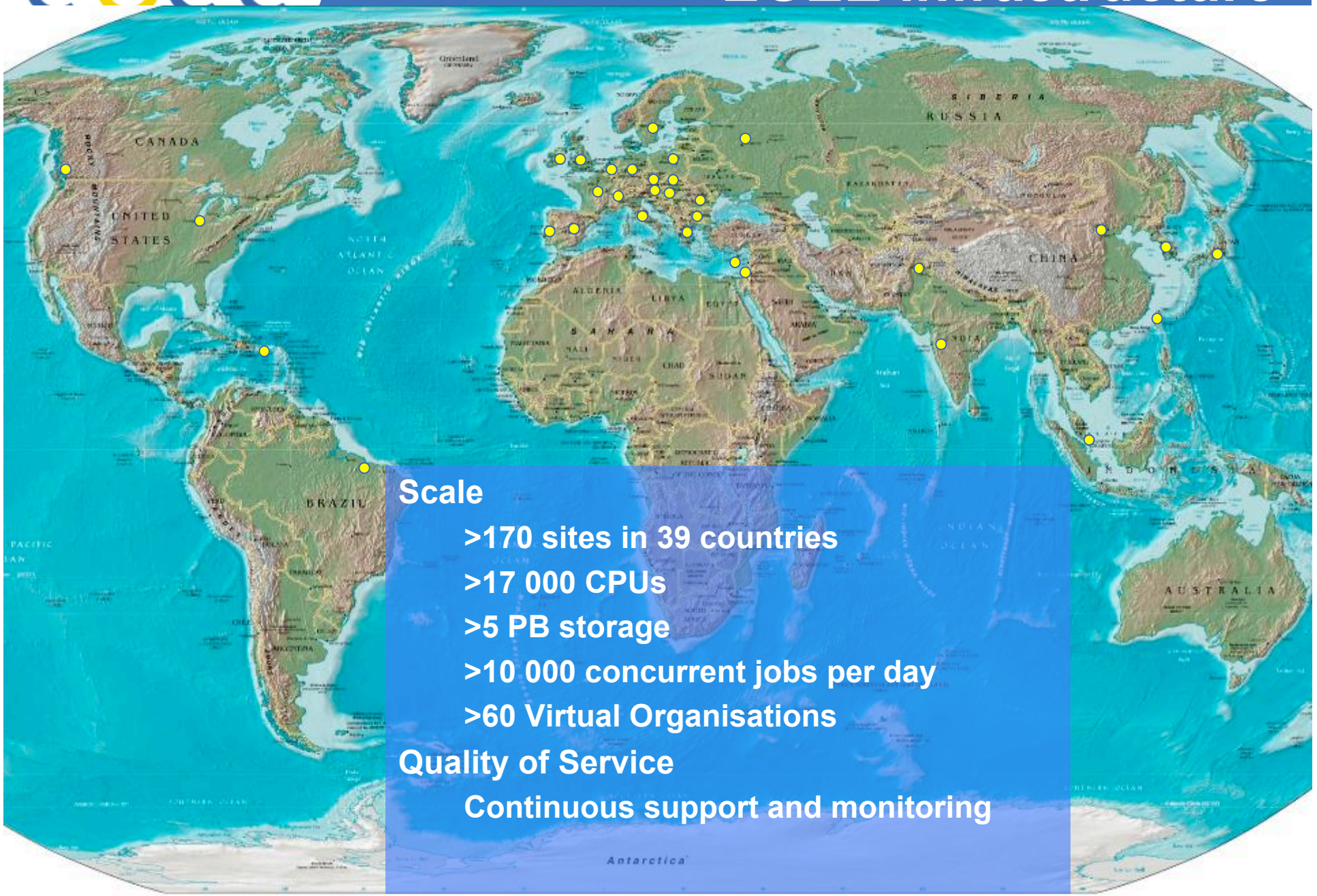
Grid Interoperability

- **We currently see different flavors of Grids deployed worldwide**
  - Because of application needs, legacy constraints, funding, etc.
  - Diversity is essential to find best solutions for standardization
- **Grid computing standards are only being defined**
  - GGF
- **Many applications need to operate on more than one Grid infrastructure**
  - Pragmatic approach to interoperability is key
  - Provides valuable input to standardization process
- **EGEE is highly interested in interoperability**
  - Efforts ongoing with OSG, ARC, NAREGI, and others

EGEE infrastructure



Scale

- >170 sites in 39 countries
- >17 000 CPUs
- >5 PB storage
- >10 000 concurrent jobs per day
- >60 Virtual Organisations

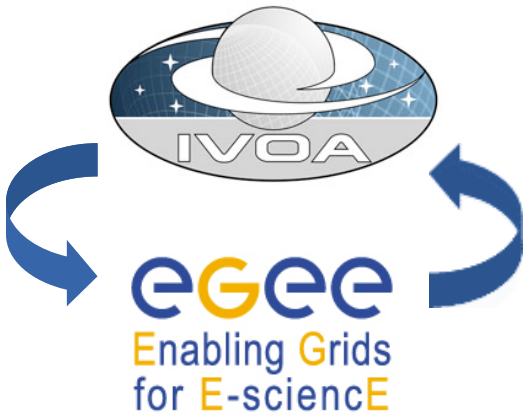
Quality of Service

- Continuous support and monitoring

Interoperability

- **Cross execution of "jobs"**
  - Works in both directions
  - Based on common standards (VDT may be)
  - Authentication and Authorization
  - Small changes to allow correct app environment to be set up
- **Data exchange**
  - Works in both direction
  - Share data from one side to the other
  - Authentication and Authorizations
- **Simplicity!!!**

Not just a one-off demonstration



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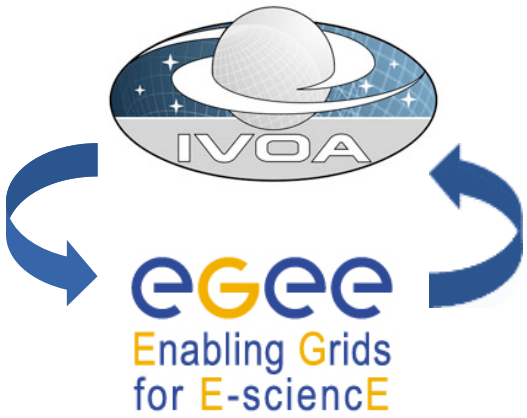
Interoperation

- **Use the best of the two:**
  - EGEE computational resources
  - IVOA data resources
  - Save time and increase the power!
- **Tools**
  - EGEE Glite3.0 WS+VDT oriented (WMS and Cream)
  - EGEE LFC + SRM (Storm)
  - VOStore
  - VOTechBroker
- **Share tools and experience!**



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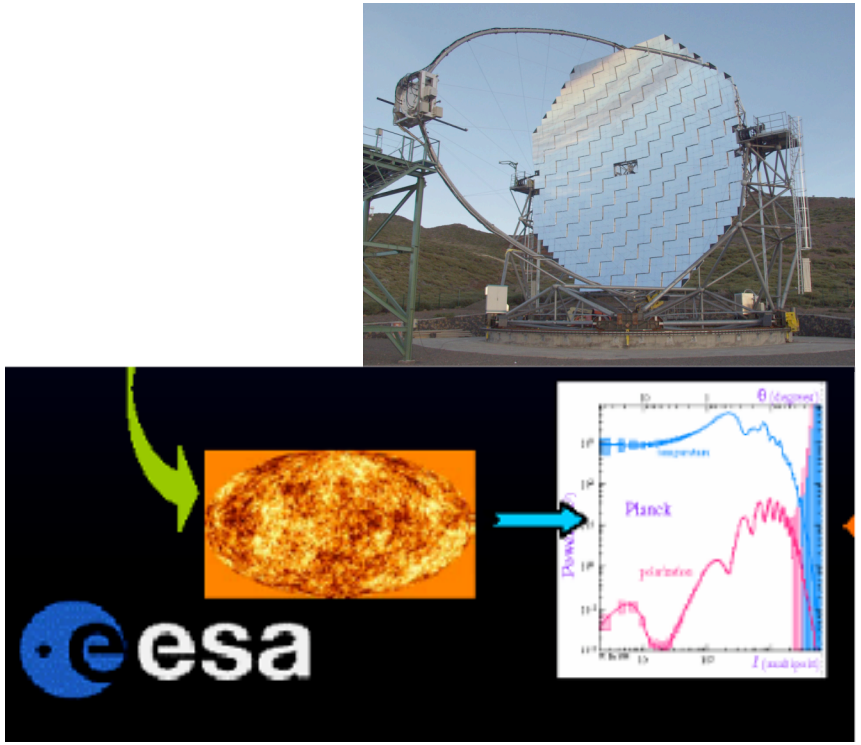
Interoperability : EGEE

- **From EGEE point of view**
  - G-DSE: grid data source engine based on VDT (GT>2.4)
  - R-GMA: GGF standard
  - We port a SkyNode to EGEE grid
  - LFC (SRM v?)
  - GSI (V?)
  - WS
- **Strong interest!**
- **Astrophysical applications:**
  - MAGIC Telescope (2007)
  - PLANCK Satellite (2007)



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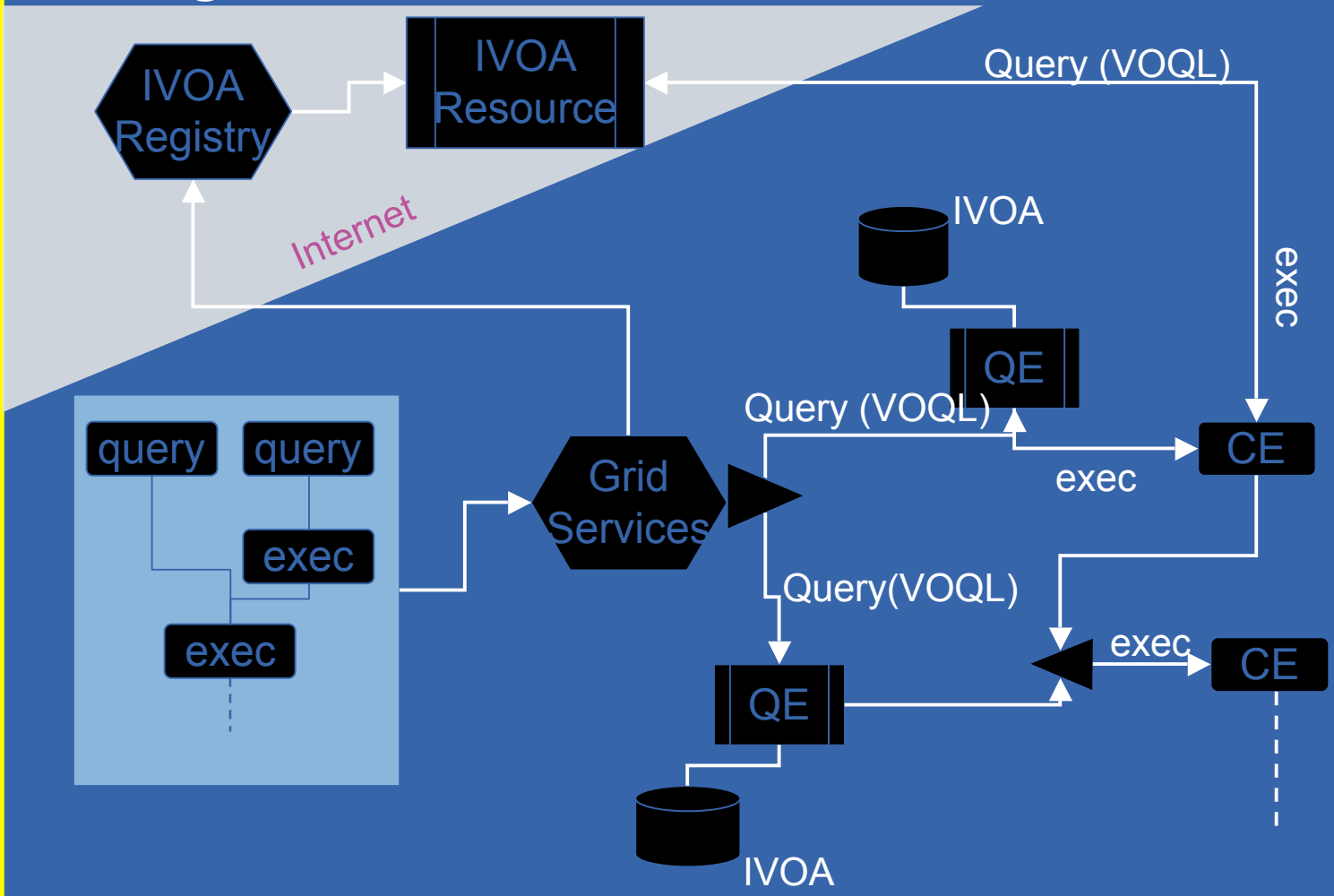
Final Goal

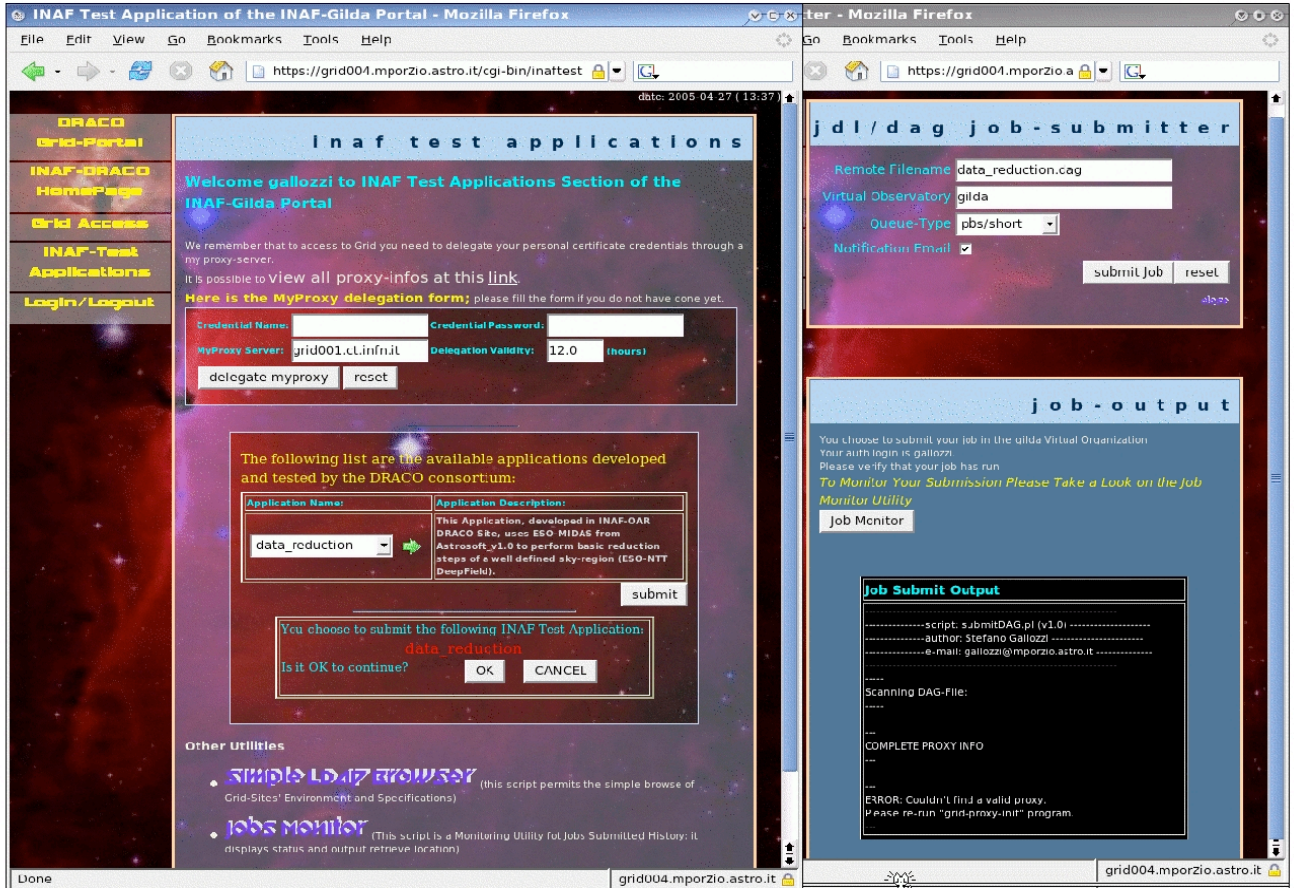
Joining VO and Grid: from the Grid to VO.



API for applications: work in progress.

Grid Portal for Astronomers

Enabling Grids for E-sciencE



- Iraf
- Midas
- IDL
- Claudy
- Eclipse
- Sextractor
- LBC sim.
- Etc.

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The end

Thanks for your attention

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