



Enabling Grids for E-science

# EGEE-III, SEE-GRID-SCI and AEGIS infrastructure and projects

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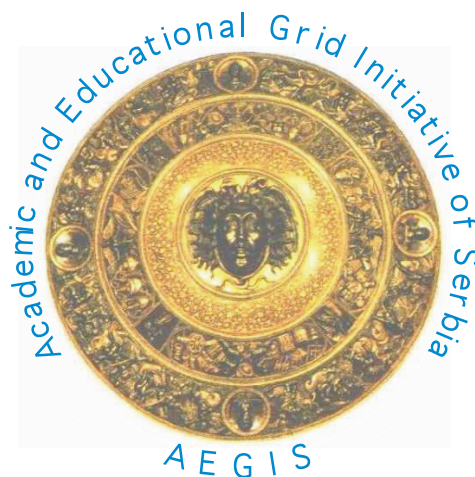
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[www.eu-egee.org](http://www.eu-egee.org)



SEE-GRID-SCI  
SEE-GRID infrastructure for regional eScience



Information Society



- AEGIS = **A**cademic and **E**ducational  
**G**rid Initiative of **S**erbia
- <http://aegis.phy.bg.ac.yu/>
- Founded in April 2005
- Mission:  
to provide Serbian research and development  
community with reliable and sustainable grid  
infrastructure.
- Specific goals:
  - Coordinate efforts
    - to further develop academic and educational high performance computing facilities
    - to help integration into AEGIS infrastructure;
  - Organize dissemination and training activities;
  - Promote development and deployment of applications on AEGIS infrastructure;
  - Coordinate fund raising efforts (NIP) to improve AEGIS infrastructure and human resources;
  - Facilitate wider participation of AEGIS members in FP6, FP7, and other international GRID projects;
  - Create a national GRID development policy;  
Lobby for its position within the national research development policy.

Coordinating institution:

- **Institute of Physics, Belgrade**

University computer centres:

- **AMRES – RCUB - University of Belgrade, NREN of Serbia**
- **ARMUK - University of Kragujevac**
- **ARMUNS - University of Novi Sad**
- **JUNIS - University of Nis**

Public research organisations:

- **Institute of Nuclear Sciences, Belgrade**
- **Institute for Chemistry, Technology and Metallurgy, Belgrade**
- **Institute of Mathematics, Serbian Academy of Sciences and Arts**
- **Astronomical Observatory, Belgrade**
- **Faculty of Electrical Engineering, University of Belgrade**
- **Faculty of Mechanical Engineering, University of Belgrade**
- **Faculty of Organizational Sciences, University of Belgrade**

- **Faculty of Mathematics, University of Belgrade**
- **Faculty of Physics, University of Belgrade**
- **Faculty of Technology and Metallurgy, University of Belgrade**
- **Faculty of Sciences, University of Novi Sad**
- **Faculty of Technical Sciences, University of Novi Sad**
- **Faculty of Agriculture, University of Novi Sad**
- **Faculty of Sciences, University of Nis**
- **Faculty of Electronic Engineering, University of Nis**
- **Faculty of Mechanical Engineering, University of Nis**
- **Faculty of Natural Sciences, University of Kragujevac**

International collaborations

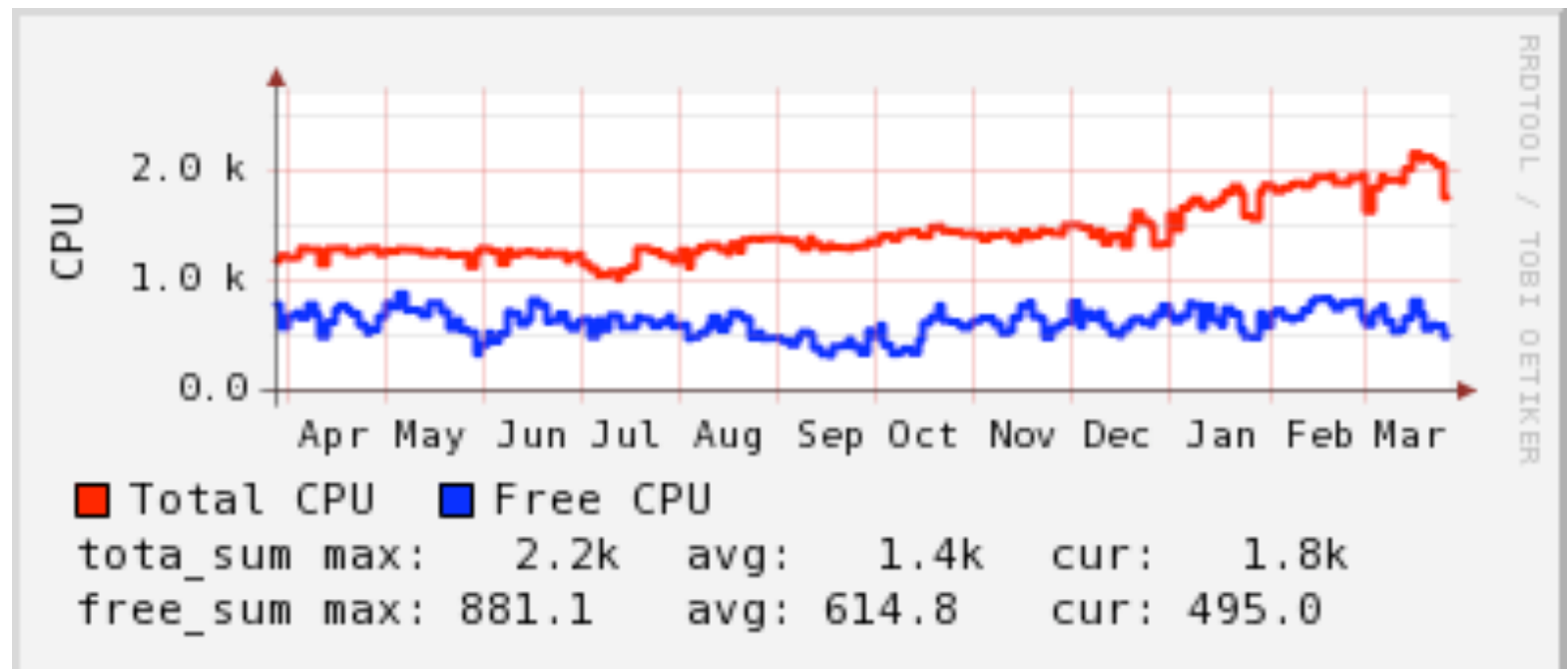
- **ATLAS group in Serbia**
- **CMS group in Serbia**

SMEs:

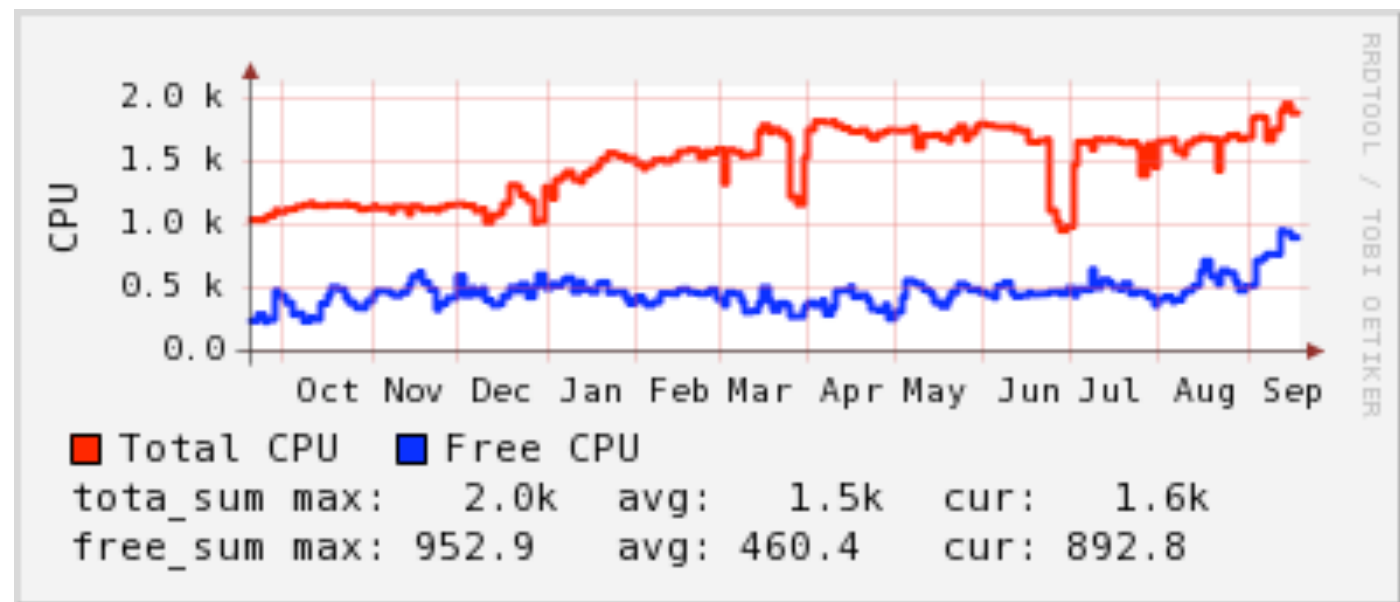
- **Irvias International d. o. o., Nis**
- **South European Weather Agency, Belgrade**

- **AEGIS01-PHY-SCL, Institute of Physics, Belgrade: 704 CPUs, 25 TB**
- **AEGIS02-RCUB: 12 CPUs**
- **AEGIS03-ELEF-LEDA, Faculty of Electronic Engineering, Nis: 4 CPUs**
- **AEGIS04-KG, CSANU & University of Kragujevac: 42 CPUs, 0.85 TB**
- **AEGIS05-ETFBG: 28 CPUs**
- **AEGIS06-AOB, Astronomical Observatory Belgrade (currently off-line)**
- **AEGIS07-PHY-ATLAS, Institute of Physics, Belgrade: 128 CPUs**
- **All core services sufficient for the operation of our national VO AEGIS**

- Two EU FP6 SSA projects
- SEE-GRID: 05/2004 – 04/2006
- SEE-GRID-2: 05/2006 – 04/2008
- SEE-GRID-2 budget: 2 M€
- FP7: SEE-GRID-SCI started on 05/2008, I3 project
- <http://www.see-grid-sci.eu/>
- <http://wiki.see-grid.eu/>



- 33 Grid sites in 3 countries
- Around 1750 CPUs
- Around 55 TB of storage





Enabling Grids for E-science

# SEE-GRID Countries



- SEE-GRID-SCI stimulates widespread eInfrastructure uptake by new user groups extending over the region, fostering collaboration and providing advanced capabilities to more researchers, with an emphasis on strategic groups in seismology, meteorology and environmental protection. The initiative thus aims to have a catalytic and structuring effect on target user communities that currently do not directly benefit from the available infrastructures.
- In parallel, it aims to enlarge the regional eInfrastructure to cater for demands of the communities by increasing the computing and storage resources and involving new partner countries in the region.
- Finally, SEE-GRID-SCI targets to help mature and stabilise the National Grid Initiatives in the region, allowing them to join the new era of longer-term sustainable Grid infrastructure in Europe.

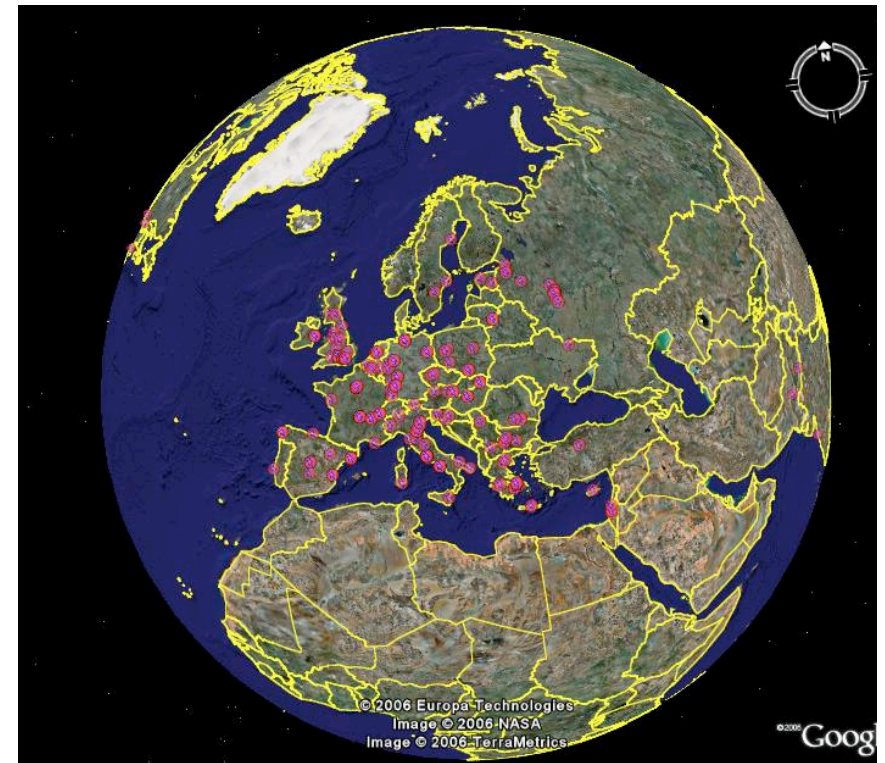


- **NA1** – Project administrative and technical management
- **NA2** – National Grid Initiatives support and international collaboration
- **NA3** – Dissemination and Training
- **NA4** – User communities support
- **SA1** – Infrastructure Operations (IPB)
- **JRA1** - Development of application-level services (UOB-RCUB)

- **Contractor: UOB-RCUB**
- **3<sup>rd</sup> parties:**
  - IPB
  - CSANU
  - UOB-ETFBG
  - ELEF-LEDA, Nis
  - SEWA Weather

- **Approved in the first FP7 call**
- **Two new countries: Armenia and Georgia**
- **Emphasis on scientific use of the regional Grid infrastructure in:**
  - Meteorology
  - Seismology
  - Environmental sciences

- Three EU FP6 and FP7 I3 projects
- EGEE: 04/2004 – 03/2006
- EGEE-II: 04/2006 – 04/2008
- EGEE-II budget: 34 M€
- FP7: EGEE-III started on 05/2008
- Duration: 2 years
- EGI should follow
- <http://www.eu-egee.org/>
- <http://www.egee-see.org/>



- Enabling Grids for E-science (EGEE) is the largest multi-disciplinary grid infrastructure in the world, which brings together more than 140 institutions to produce a reliable and scalable computing resource available to the European and global research community. At present, it consists of approximately 300 sites in 50 countries and gives its 10,000 user's access to 80,000 CPU cores around-the-clock.
- EGEE-III, co-funded by the European Commission, aims to expand and optimise the Grid infrastructure, which currently processes up to 300, 000 jobs per day from scientific domains ranging from biomedicine to fusion science.

- **Networking Activities:**
  - NA1 - Management of the Consortium
  - NA2 - Dissemination, Communication & Outreach
  - NA3 – User Training & Induction
  - NA4 – User Community Support & Expansion
  - NA5 - Policy & International Cooperation
  - NA6 – Technology Transfer & Outreach to Business
- **Specific Support Activities**
  - SA1 - Grid operations
  - SA2 - Networking Support
  - SA3 - Integration, Testing & Certification
- **Joint Research Activities:**
  - JRA1 - Middleware Engineering

- Institute of Physics Belgrade joined EGEE as unfunded effort in May 2005
- IPB officially one of the partners in EGEE-II and EGEE-III
- Part of EGEE-SEE ROC
- Hosts two Grid sites:
  - AEGIS01-PHY-SCL
  - AEGIS07-PHY-ATLAS
- Involved in NA2, NA3, NA4, SA1 activities
- <http://egee.phy.bg.ac.yu/>