



SEE-GRID-SCI Newsletter

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SEE-GRID-SCI empowers National Grid Initiatives for the EGI era

Throughout its duration, and also supported by previous phases of the SEE-GRID project, SEE-GRID-SCI has successfully established NGIs in all 14 partner countries in the region, as well as Azerbaijan. These 15 NGIs are now mature, well-organized and self-standing entities, with strong governmental support. All the NGIs in the region have successfully joined the European Grid Initiative

and the EGI-Inspire project, the pan-European project taking the Grid operations flag over from EGEE, SEEGRID, and other related European Grid projects. The South-East European partners are thus fully and successfully integrated in the pan-European Grid family, and the SEE-GRID series of projects complete their mission.

JRA1 developments gaining wider recognition

Work Binder application service, which has been developed within the SEE-GRID-SCI Joint Research Activity, was accepted in March 2010 by the RESPECT program (Recommended External Software for EGEE CommuniTies). RESPECT aims to publicize grid software and services that work well in concert with the EGEE gLite software. The RESPECT endorsement implies that a software satisfies functional, security, and audit-

ing requirements, and has appropriate documentation, packaging and support. Software's presence in the RESPECT list also indicates that it expands the functionality of the grid for users and speeds up development and porting of applications. The program and the list are advertised on the primary EGEE web site. The EGEE NA4 Steering Committee is about to make the final decision on the inclusion of ESIP Platform into RESPECT.

Training & new SEE-GRID-SCI Grid site installation in Georgia

While the SEE-GRID-SCI project rapidly approaches its end, operational developments are going a little bit faster than usual and the community is giving its best effort to accomplish as much as possible within the framework of the project. A key example of this effort is the initiative of the Georgian SEE-GRID-SCI colleagues for the installation of a new Grid, the deployment of new core services, and the establishment of the Georgian Grid Certification Authority. As numerous times until now, such a spirit is recognized and supported by the SEE-GRID-SCI community. In order to provide support to the Georgian Research and Educational Networking Association (GRENA) and High Energy Physics Institute (HEPI) Grid operation teams and users, a two-day training on 1 & 2

April 2010 was organized in Tbilisi, jointly by the project's NA3 and SA1 activity leaders. The training sessions were delivered by Miklos Kozlovsky, Antun Balaz, Dusan Vudragovic and the Armenian Grid team led by Hrachya Astsatryan.

Numerous presentations and hands-on sessions on Grid operations, deployment and maintenance were given in two days to highly motivated trainees, who participated actively by raising questions. The detailed agenda and all the presented material (available at the SEE-GRID-SCI Training Portal), resulted in a new SEE-GRID-SCI Grid site installation (GE-02-HEPI) at HEPI and a set of new core services configured at GRENA site (GE-01-GRENA).

Inside this issue:

SEE-GRID-SCI empowers National Grid Initiatives for EGI era	1
JRA1 Developments gaining recognition	1
Training & new SEE-GRID-SCI Grid site installation in Georgia	1
SEE-GRID-SCI User Forum 2009	2
SEE-GRID-SCI at 5th EGEE User Forum	3
News from partners	3
In memoriam	4



SEE-GRID-SCI User Forum 2009

The SEE-GRID-SCI User Forum 2009 was organized by TUBITAK ULAKBIM, Bogazici University and Middle East Technical University on December 9-10, 2009, in Istanbul, Turkey. The User Forum provided important opportunities for researchers, collaborating projects and developers. This regional event was dedicated to parallel and distributed computing with a main focus on Seismology, Meteorology, Environmental Protection and other research fields of Earth Science.

The topics that were presented during the User Forum were:

- Featured topic: Earth Sciences and the Grid, with a main focus on Grid applications related to Seismology, Meteorology and Environmental Protection
- Cluster and Grid systems
- Distributed and Grid middleware
- Parallel and distributed programming languages and algorithms
- Formal models for parallel and distributed computing
- Software engineering and development tools
- Problem solving environments\
- Grid architectures
- Grid resource management
- Grid workflow
- Grid application support tools
- Distributed information management
- Distributed storage systems
- Advanced cluster/grid applications

SEE-GRID-SCI User Forum 2009 was highly contributed by the participation of valuable invited speakers;

- Torild van Eck, *“European Seismological Waveform Data Exchange and Access; ORFEUS, NERIES and EPOS”*

- Simon Lin, *“E-Science for Disaster Mitigation on Earthquake in EUAsia-Grid”*
- Stefano Cozzini, *“User Communities in EUIndiaGrid Projects: Past Activities and Future Perspectives (Video Talk)”*
- Sami And Kilic, *“High-fidelity Parallel Computing Simulations for Multi-Disciplinary Engineering Problems”*
- Bernard Marechal, *“Applications in EELA-2”*
- Luigi Fusco, *“GENESI-DR: Discovery, Access and Processing of Federated Earth Science Data for New Approach to Science (Video Talk)”*
- Horst Schwichtenberg, *“EGEE-III Earth Science Cluster, applications, tools and service and possible follow-ups as a virtual research community in EGI era”*

During the two days of the User Forum; 2 sessions for “Seismology Applications on the Grid”, 1 session for “Meteorology and the Grid”, 1 session for “Environmental Applications”, 2 sessions for “Tools and Services”, 1 session for “Advanced Applications and Algorithms” were performed with 22 presentations and 71 registered participants.

As the scientific product of SEE-GRID-SCI project, SEE-GRID-SCI User Forum 2009 Conference Proceeding (ISBN: 978-975-403-510-0) was published including 32 full text application papers.

SEE-GRID-SCI grid training for Earth Science was held in 11 December 2009, following the SEE-GRID-SCI User Forum, in Istanbul with the collaboration of SEE-GRID-SCI Virtual Organizations. Grid for Earth Science Training included 3 parallel sessions as “Grid for Seismology”, “Grid for Meteorology” and “Grid for Environment” to enable SEE-GRID VOs and applications for local and regional grid users.



SEE-GRID-SCI at 5th EGEE User Forum

ESIP application and ESIP Platform application service were presented at the 5th EGEE User Forum before the Earth Science cluster leaders. The ESIP application was demonstrated as an integral part of eGLE eLearning Environment developed through the GiSHEO project, funded by the European Space Agency. An overall presentation of SEE-GRID-SCI JRA1 was

also delivered, highlighting the improvements of the grid infrastructure and services made by JRA1, as well as individual operational tools and application services. Additionally, the possibility of a cooperation of the developments emerging from SEE-GRID-SCI JRA1 and EGEE Grid Observatory was discussed.

News from partners

New HPC Grid Cluster for Advanced Scientific Applications at IPP-BAS

A new High Performance Computing Grid cluster targeted to fostering the development of advanced interdisciplinary grid applications was established at IPP-BAS and started operations in April 2010. The new cluster has advanced hardware architecture, based on HP Cluster platform c7000 blade enclosures with 48 TB of SAN storage, interconnected with high performance infiniband fabrics, controlled from a Voltaire Grid Director switch 2004.

The cluster consists of 3 blade enclosures with a total of 36 blades BL 280c with dual Intel X5560 CPUs at 2.8 GHz (total 576 cores), 24 GB RAM, interconnected with DDR Infiniband cards.

The cluster storage is connected with 8 controlling nodes HP DL 380 G6 with dual Intel X5560 CPUs at 2.8 GHz (total 128 cores), 32 GB RAM, via two SAN switches.

The initial tests of the cluster showed excellent parallel capabilities with ping-pong latency of less than 2.5 microseconds and bandwidth more than 1700 Mbytes/s between two nodes. This new cluster can interoperate within the pan-European and regional e-Infrastructure, using the high-speed (>1 Gbps) GEANT network.

In parallel with the delivery of the hard-

ware a training course "Training for HPC Grid Applications Developers" was held on 16.02.2010 at IPP-BAS. Some of the advanced interdisciplinary HPC Grid applications that will be run on the cluster were presented at a Workshop held on 17.02.2010 at IPP-BAS with presentations from several partner institutions, members of the Bulgarian Grid Consortium: Institute for Parallel Processing, Institute of Astronomy, Geophysical Institute, Institute of Mathematics and Informatics and Institute of Mechanics (all of them are from the Bulgarian Academy of Sciences).

Hungarian Seismo and Env VO specific user/developer training

The Hungarian Seismo and Env VO specific user/developer training took place in Veszprem (Hungary) on Monday 12 April 2010 at the Pannon University. 24 people were attending on the training course, which focused mainly on the Seismology and Environmental Protection VOs and their key applications.

The second half of the training event contained hands-on training on how to create and port applications to grid infrastructure, and how to monitor and optimize applications on grid infrastructure.



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SEE-GRID-SCI (SEE-GRID eInfrastructure for regional eScience) is a 2 year project co-funded by the European Commission, starting on 01/05/2008.

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 stabilize the National Grid Initiatives in the region, allowing them to join the new era of longer-term sustainable Grid infrastructure in Europe.



In memoriam



On March 16, 2010 our excellent friend and colleague Veaceslav Siodorencu, eminent personality who contributed to development of the information technologies on both national and international levels, passed away. Being the Academician of the International Academy of Informatization, Leading Researcher in RENAM Association, associated professor in the Technical University of Moldova, mem-

ber of SEE-GRID-SCI project steering committee, Veaceslav has always proven himself as a highly skilled specialist. He was one of pioneers in new computing technologies, including Grid computing development and practical deployment, he was the first who elaborated and lead new coursers dedicated to scientific and Grid computing in principal universities of Moldova. In the memory of his colleagues and his friends he will always be remembered as a devoted hard-working professional, wise mentor and chief and a true friend.