

eNewsletter 1/2008

EGI -Towards a sustainable long-term grid infrastructure in Europe

The EGI Design Study project was initiated in September 2007. According to plan, the future EGI Organization will begin operations in 2010. The EGI Design Study is directed by Dieter Kranzlmüller from Austria who considers the project to be of essential importance for European science and research.

– Over recent years, Europe has made strong investments in the development of grid infrastructures. It is important to guarantee that these investments will bring benefits. The purpose of the European Grid Initiative, or EGI, is to guarantee this by creating a sustainable grid infrastructure in Europe. The current project-based funding is limiting the activities and development of the grid infrastructures. One of the main objectives of EGI is to guarantee sustainable funding independent of project schedules, so that continuation and cooperation in the field will be assured, says Kranzlmüller.

An extensive European initiative

The EGI Design Study defines the future operating model for the EGI. The project partners are nine leading European organizations.

– Several countries have already launched, or are about to launch their National Grid Initiatives (NGI). The NGIs will be responsible for ac-

tivities at the national level, mobilizing resources and integrating the international norms into the national legislation of each country.

Kranzlmüller explains: The role of the EGI is to harmonize the national initiatives at the European level and to create a uniform grid infrastructure to support science and research. Later on, the NGIs are planned to be the pillars of the EGI.

– In the future, it will be interesting to see how the responsibilities between the NGIs and the EGI are divided. Which items should be combined to the European level and which ones should be maintained at the national level, Kranzlmüller ponders

International and industrial relations

The implementation of EGI will benefit all European grid projects, because through EGI they will be able either to be integrated into a permanent organization or to have an effect on the general development and activities of the infrastructure in other ways. In connection with this, international networking is a key issue for science and research.

– EGI will start to coordinate and develop global collaboration. The idea is to link European infrastructures to other similar infrastructures in the world, says Kranzlmüller.

Industry is one of the key target groups in the EGI Design Study. The project will conduct extensive surveys to map the needs and expectations by the different industrial fields, technology service suppliers, and grid users. It is hoped that the different fields will become aware of the comprehensive opportunities for collaboration offered by the grid infrastructure; the aim is extensive collaboration to support effective absorption of grid technology into European industry.

At the moment, grid technology is being utilized, for example, in the pharmaceutical and chemical industries.



Dr. Dieter Kranzlmüller holding a speech at the EGI workshop in 2007.

LITGRID: PARALLEL CONSTRUCTION OF SUCCESSFUL E-INFRASTRUCTURES

The Lithuanian long term research service infrastructure programme, LitGrid, started its operations in 2007. The programme is financed by the Ministry of Education and Science and covers numerous research fields from universities and research institutes. The establishment process of LitGrid is an excellent example of combining national and European forces together in order to develop a multidisciplinary e-infrastructure at both the National and European levels.

The BalticGrid, financed by the 6th Framework Programme of the European Commission and launched in 2005, involves research institutions from Estonia, Latvia, Lithuania, Poland, Sweden and the European Organization for Nuclear Research, CERN. The project facilitates formation of effective research collaborations, develops infrastructure solutions and organizes training for providers, administrators and grid users in the Baltic States.

The strong push for the development of the Lithuanian grid infrastructure came from the BalticGrid project, as the Lithuanian researchers concurred with the need for similar activities at the national level.

The objectives were set to develop a

national e-infrastructure in Lithuania, to elevate the infrastructure to the same level as in other EU member states and to integrate it into the European and Baltic Grid infrastructures.

By combining national and European efforts, the LitGrid programme was officially launched in 2007 with ten partner institutions, which makes it a strong National Grid Initiative at the European level.

LitGrid collaboration partners

LitGrid has managed to develop and install an extensive e-infrastructure in the country in close collaboration with BalticGrid. The network includes a large number of clusters. The user certification is implemented via the BalticGrid infrastructure with more than 150 certified users and 70 direct participants. The LCG/gLite system is installed and used as the middleware. LitGrid has also a system for user management and provides information to users about events, applications and statistics.

LitGrid has managed to attract industrial and IT partners involved into the process. For example, Software and IT solutions providers IBM-Lithuania

and BGM are among the GridTechno project partners for grid computing, and the Teltonika Company has cooperative programmes with Vilnius University.

LitGrid project partners

- Vilnius University (coordinator)
- Kaunas University of Technology
 - Institute of Physics
- Vytautas Magnus University
 - Institute of Biotechnology
- Klaipeda University
- Siauliai University
- Vilnius Gediminas Technical Univ.
- Institute of Theoretical Physics and Astronomy
- Institute of Psychophysiology and Rehabilitation of KMU
- Institute of Mathematics & Informatics
- B.G.M. company – business partner



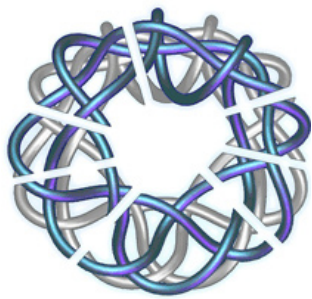
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The EGI Knowledge Base is now online!

The EGI Knowledge Base is set up to provide a "Web 2.0" environment for the European National Grid Initiatives (NGIs) and the EGI Design Study team. Its content reflects in part the work done by the team, from the collection and study of e-Infrastructure-related requirements through use cases, to the increasingly detailed planning of EGI functional implementation models, to the legal status of the NGIs and related options for the future European grid infrastructure.

In addition to showcasing some of the project's work, the EGI Knowledge Base is designed to be a one-stop source for information on the evolving status of individual European NGIs, thanks to the fact that the NGIs themselves are editors, and are thus in full control of their content.



The Knowledge Base also provides discussion pages for each "article" in the site – a little detail that can spare users a certain amount of inbox chaos, and keep topical communications in easy to find locations.

The collaborative nature of this site is enabled by the powerful Media Wiki tool, widely known as the foundation on which the enormously successful Wikipedia is constructed. The

popularity of this tool entails a wealth of extensions that can be added to increase the functionality and user-friendliness of the site.

Hence a "wikified" image map was added to allow users to access the individual NGI articles with one click, while another extension provides the means to conduct surveys – and keep them up to date! – simply by asking the NGIs to add certain bits of information in their main page.

<http://knowledge.eu-egi.org>

Events

1st HellasGrid User Forum 10-11 January, 2008

HellasGrid is the Greek Grid Infrastructure, run by GRNET for the benefit of the Greek research and education communities. The User Forum attracted more than 30 Greek scientific and education communities that are already using, or are planning to use, the HellasGrid infrastructure to present the results of their activities in various scientific fields, such as seismology, meteorology, physics, computational chemistry, finance, video processing, biomedicine and grid technologies.

Grid users highlighted the key role that HellasGrid and the wider EGEE infrastructure play in their work, as this infrastructure enables them to store, compute, and share scientific data at a scale that would not be achievable in their research labs. It

was demonstrated that a great variety of scientific domains can benefit from the use of the HellasGrid infrastructure through the collaboration between research and academic groups.



EGI Design Study at Supercomputing 2007

The EGI Design Study was present with a booth in the International Conference for High Performance Computing, Networking, Storage and Analysis event in Reno (US) on 10-16 November 2007.

The project received a warm welcome from the mainly American audience that was positively surprised of the large number of National Grid Initiatives supporting the EGI Design Study. The other questions asked concerned the connections of the coming European sustainable grid infrastructure with the corresponding infrastructures elsewhere in the world and the relations and differences of EGI with other European Grid projects such as EGEE.

EGI Design Study will be also present in the Supercomputing'08 orga-

Events Coming soon...

3rd EGEE User Forum

11-14 February, 2008 - Clermont-Ferrand, France.

The EGI Design study will attend in the event with a special EGI booth (number: S11). EGI Design Study Project Director, Dr Dieter Kranzlmüller will give a talk in the event on 11 February 2008.

EGI Workshop

13-14 March, 2008 - Roma, Italy.

The First Model of EGI Functional Implementation, The workshop will present some of the key results achieved by the EGI Design Study project so far. In particular, the first draft model of the functional implementation of the future EGI organisation will be presented in detail for the representatives of the involved parties.

Please note that the participation in the workshop is limited to a maximum of two experts per National Grid Initiative and after nomination by the corresponding member of the EGI Advisory Board.

More information:

www.eu-egi.org/workshop/mar08



EGI Design Study Partner Institutions

CERN, European Organization for Nuclear Research
<http://www.cern.ch>

CESNET, z.s.p.o. Czech Republic
<http://www.cesnet.cz>

CSC, the Finnish IT center for Science, Finland
<http://www.csc.fi>

DFN, Verein zur Förderung eines Deutschen Forschungsnetzes, Germany
<http://www.dfn.de>

GRNET, Greek Research and Technology Network S.A., Greece
<http://www.grnet.gr>

GUP, Institut für Graphische und Parallele Datenverarbeitung
Johannes Kepler Universität Linz, Austria
<http://www.gup.uni-linz.ac.at>

INFN, Istituto Nazionale di Fisica Nucleare Italy
<http://www.infn.it>

STFC, Science and Technology Facilities Council UK
<http://www.stfc.ac.uk>

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