

EGI eNewsletter 3/2008

EGI GENEVA Workshop: Discussion of the EGI Blueprint (1/2)

The Third European Grid Initiative (EGI) workshop was organised at CERN on 30 June, and followed by the EGI Policy Board meeting on the 1st of July. More than 100 attendees took part in the Geneva workshop and discussed the EGI Blueprint proposal prepared by the EGI Design Study.

The purpose of this draft EGI Blueprint is to assess a possible model for the future sustainable grid infrastructure in Europe and to get feedback leading to the final Blueprint that should be produced by September 2008.

The Director General of CERN, Dr. Robert Aymar, welcomed the participants emphasizing the increasingly important role of Grids for science in Europe in many domains and in particular for CERN and its community. He underlined the importance of the ongoing and exceptional support given by the European Commission to European Grid projects. He wished success to the EGI project in building on these achievements by establishing a sustainable Grid infrastructure.

The workshop chairman Jürgen Knobloch (CERN) expected as outcome of the workshop feedback and critical questions from the national representatives and from grid users allowing to arrive at the final blueprint in time for the next workshop in September 2008 during the EGEE'08 conference in Istanbul (Turkey).

EGI Blueprint

The draft EGI Blueprint was presented for the audience by different members of the EGI Design Study team. Dieter Kranzlmüller (GUP) stressed in his overview the need for a sustainable European grid infrastructure. Grid users need to be assured that their investment in grids and long-term perspectives in the field will be protected. The EGI grid infrastructure should be a large-scale production grid infrastructure built on national grids that interoperate seamlessly at many levels. The infrastructure should offer reliable and predictable services to a wide range of applications. Kranzlmüller also named the key players. The EGI will include

both the EGI organization (EGI.org) and National Grid Initiatives (NGIs) which are recognized national bodies that ensure operations of the grid infrastructure in each country. Representation will include that the requirements of the scientific community and the resource providers are met.

The role of the EGI organization will be to facilitate interaction and collaboration between the NGIs and to provide a common managerial framework for the pan-European grid infrastructure. The future EGI Council, consisting of NGI representatives, would be the sole governing and decision making body of EGI.

Operations, Middleware and User Support

The EGI operations and Middleware and user support questions awoke vivid discussions. Tiziana Ferrari (INFN) introduced the EGI operations. They will include a set of services, such as coordination of resource allocation, central repositories and ticketing, security and Middleware rollout. These services are needed to ensure optimal functionality of the pan-European grid infrastructure and overall seamless effective interoperation of national and regional grids.

Ludek Matyska (CESNET) concentrated on the Middleware evolution. He stated that the Middleware is considered an essential part of EGI, and its existence and further development are of utmost importance for EGI Grid.



Jürgen Knobloch (CERN) in the EGI CERN Workshop



EGI CERN Workshop: Discussion of the EGI Blueprint (2/2)

The EGI Blueprint proposes a common middleware solution based on the Universal Middleware Toolkit (UMT) with common policies, rules, quality and standard compliance criteria for UMT components.

Patricia Mendez Lorenzo (CERN) introduced the EGI user support section of the Blueprint. She highlighted the need to ensure a smooth transition to an NGI support infrastructure for users. The goal is to ensure that all current communities will continue to be supported and that the infrastructure will be rapidly ready to admit new communities.

Legal aspects, Finances and Transition

Legal aspects and NGI guidelines for EGI were expanded by Anne-Claire Blanchard (CNRS). She presented plans for the location bidding process that will be launched soon. Michael Wilson (STFC) made a presentation of the plans for EGI Resources and Finances.

It became clear that for the initial period and in order to sustain innovation co-funding by European sources will be crucial.

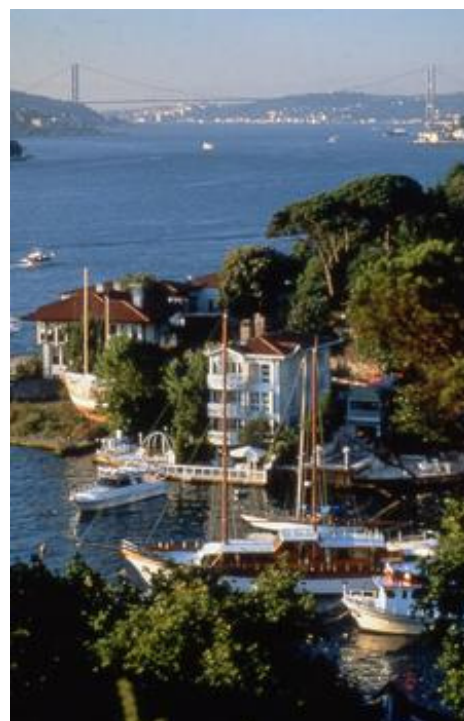
Bob Jones, the EGEE Project Director, presented some key issues for the transition from EGEE (Enabling Grids for E-science) to EGI seen from the EGEE side. He emphasized the need for cooperation with other infrastructure projects. EGI should also take into account the experiences and knowledge gained in the EGEE project.

Policy Board Meeting

The closed Policy Board (PB) meeting-chaired by Gaspar Barreira followed the workshop on Tuesday with participation from the NGI representatives. Kyriakos Baxevanidis presented the European Commission's view on the future of e-Infrastructures in Europe. Otherwise the EGI PB discussion concentrated on the EGI Blueprint proposal, focusing on EGI Functionality, NGI Responsibilities, and the EGI funding model.

Coming EGI Istanbul Workshop

The next EGI workshop will be organized during the EGEE'08 conference in Istanbul (Turkey) on 22 September, 2008. The workshop will concentrate on planning the transition to the future EGI model (EGI Organisation and NGIs). The workshop will be followed by the EGI Policy Board Meeting.



More than 100 people attended at the CERN Workshop.

More information about the EGI Istanbul Workshop:

<http://www.eu-egi.eu/workshop/sep08/>

EGEE'08 conference website:

<http://egee08.eu-egee.org/>



Croatian National Grid Infrastructure - CRO NGI (1/2)

In the early 2000s Croatian scientists and scientific and higher education organizations started a three-year project called CRO-GRID, composed of three project components: Infrastructure, Middleware Systems and Applications.

The project was supported and financed by the Ministry of Science, Education and Sports, and as one of the results of this project, the first country-wide grid infrastructure was built in 2005, connecting five grid nodes in Croatia, with the purpose of serving the project needs. Through active participation in the EGEE project, the Croatian grid infrastructure has been successfully integrated into the European grid infrastructure.

On the foundation of the CRO-GRID project, Croatian scientific and higher education institutions decided to move to the next level – building a nationwide production grid infrastructure.

In April 2007, the University Computing Centre (SRCE) produced a document called “Basic Principles of Croatian National Grid Infrastructure” accepted by the Ministry of Science, Education and Sport and followed by the appointment of the CRO NGI Board in May 2007. This strategic paper proposed an organizational model for the national grid infrastructure. At its first meeting held on 10th July 2007, a small group of experts and government representatives formed the Council of CRO NGI, which accepted the “CRO NGI Rules and Regulations”.

Public inauguration of CRO NGI took place in November 2007, at the same

time as the signing of the contract by all partners involved. The development and maintenance of CRO NGI is currently funded by the state budget, including the resources for regular activities of CRO NGI. The following funding mechanisms are also envisaged: special funds for the development of science and scientific infrastructure in Croatia; additional investments by partners; donations from Croatian companies and funds and donations from international projects.

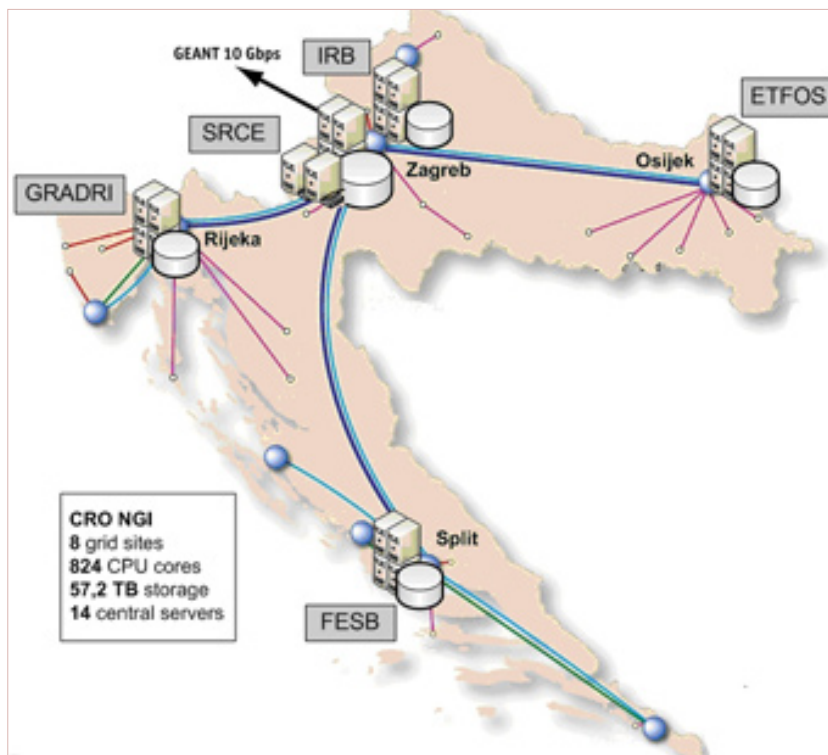
The Croatian National Grid Initiative is an integrated distributed computer environment, consisting primarily of computing and storage resources, which are located in geographically distributed centers within Croatia (see the map of CRO NGI resources).

It is a common resource of the scientific and academic community and represents the fundamental infrastructure for scientific research, application of new technologies and integration of Croatia and Croatian scientists into the European Research and European Higher Education Area.

CRO NGI Partners

CRO NGI is based on the collaboration and partnership between the institutions from the academic and research community of Croatia, which develops, contributes and uses all benefits of CRO NGI. The Coordinator is SRCE, and bodies are: Council of Users, Partners Council and CRO NGI Board.

Resources of the Croatia National Grid Initiative





Croatian National Grid Infrastructure - CRO NGI (2/2)

Current CRO NGI partners:

- University Computing Centre, University of Zagreb (SRCE)
- Rudjer Boskovic Institute (IRB)
- Faculty of Electrical Engineering, University of Osijek (ETFOS)
- Ministry of Science, Education and Sport
- Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split (FESB)
- Faculty of Civil Engineering, University of Rijeka (GRADR)
- Croatian Academic and Research Network CARNet

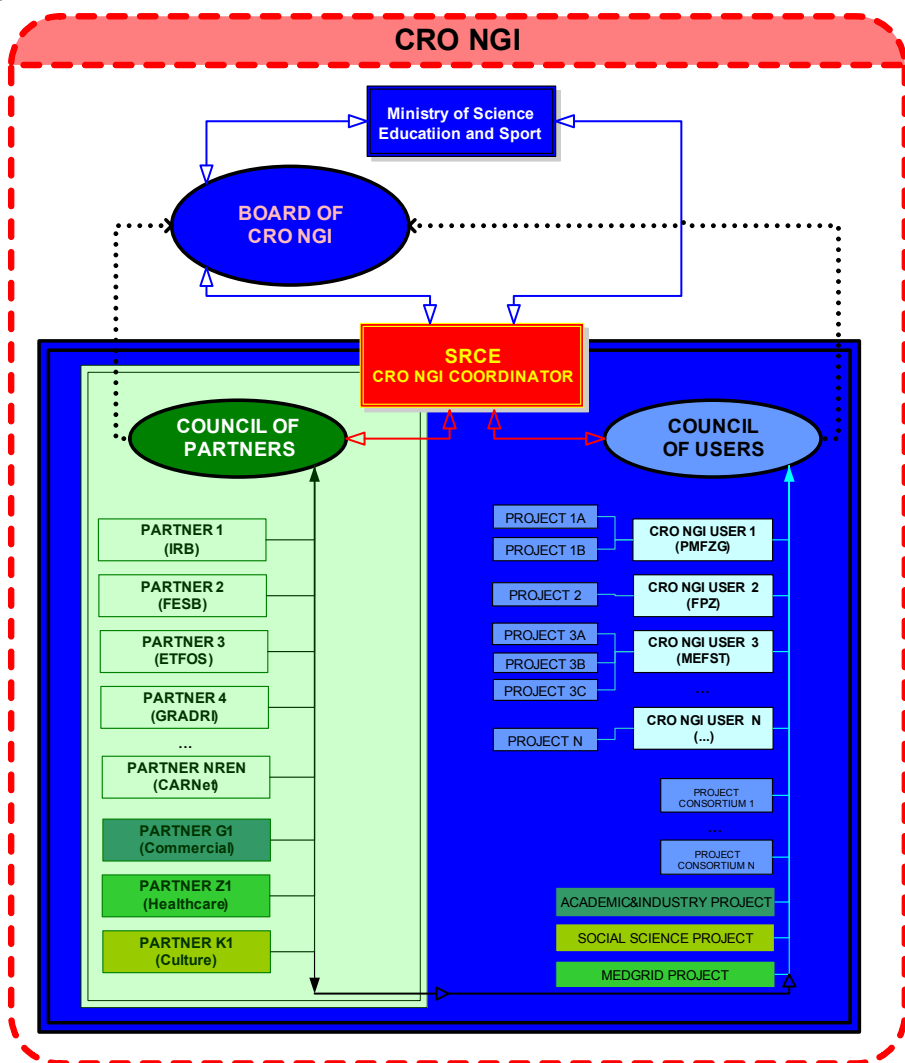
Future objectives

The short-term goal of CRO NGI is already achieved: a core grid infrastructure for the Croatian scientific and education community has been built. Today, the grid infrastructure in Croatia is recognized as one of the basic components of the e-Infrastructure of research and education and, hopefully, of the entire knowledge-based society.

CRO NGI is available for the needs of all scientific and research projects financed by the state budget, as well as for the purpose of higher education.

The next steps will include continuous extension of the grid infrastructure with more resources, further integration of different grid middleware stacks, and design and implementation of grid monitoring systems at various levels, as well as outreach and dissemination of benefits of grid infrastructure and gridification technologies among new groups of users.

While national infrastructure is fundamental in providing local connectivity and resources to Croatian researchers, CRO NGI, through active membership of the EGI Policy Board, recognizes and fully supports the need to be linked seamlessly, at a world-wide level, to enable global scientific collaboration. Thus, we share the vision that a European Infrastructure based on the National Grid Infrastructures and linked to similar infrastructures outside Europe is the correct approach.



MORE INFORMATION

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Basic Principles of CRO NGI:

http://www.cro-ngi.hr/fileadmin/cro-ngi/dokumenti/CRO_NGI_BasicPrinciples.pdf



Austrian Grid Initiative

Being aware of the development of the field, the Austrian Federal Ministry of Science and Research decided to invest in grid technology by funding the Austrian Grid Initiative. Austrian Grid was launched in April 2004, and at the moment already 21 university departments are involved in the initiative. The main objective of the project is to pioneer Grid computing in Austria.

During the first three years of the project, the research activities were conducted only by academic institutions. Today the project is also opening up to commercial partners.

The first steps were to install a test bed grid infrastructure to support the development of grid applications and to validate the developed software. The Austrian infrastructure operates on top of ACONet, which is the Austrian high-speed network for research and education.

Research

Research has been conducted mainly in two fields: grid tools and applications. Applications had to be adapted to utilise the grid, and several grid tools have been developed as extensions to existing grid middleware making added functionality available to the applications.

Additionally, Austrian grid researchers have developed several applications for medical science, high-energy physics, applied numerics, astrophysics, astronomy, meteorology, geophysics, environmental science, and biology.

Examples of developed or adapted applications:

- simulation of coronary blood flow
- numerical weather simulations including automatic tuning of the model set-up
- robust solvers for 3D Navier-Stokes systems
- transfer-function search for galaxy cluster visualisations
- biomechanical 3D simulation of the human eye and its muscles
- molecular dynamics simulations of immune system molecules

Grid middleware research includes the following activities:

- interactivity support for grids
- uniform access to and representation of distributed heterogeneous data
- scientific workflows in grid environments
- tools for performance evaluation as well as for debugging grid applications

Future perspectives

Until today, the Austrian Grid Initiative has collaborated mainly with the research community. However, its objective is to intensify interaction with potential commercial partners.

A good example of these efforts is the establishing of a dedicated development centre. This centre will act as an interface between the research teams and industry by disseminating the results of the project, collecting requirements, and increasing awareness of grid computing.

The work of the Austrian Grid Initiative is continuously improving the middleware extensions and grid tools by taking into consideration the requirements coming from the grid applications. Ongoing research work will provide improvements for grid users, resource providers, and grid software developers alike.

It is clear that the support for short-deadline jobs and advanced interactive remote visualisation will increase the usability of grid infrastructures, while grid-aware debugging and performance analysis tools will help software developers. Also improvements in the accounting of grid jobs will support future commercialisation of grids.



MORE INFORMATION

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Past Events

OGF23 OPEN GRID FORUM Barcelona 2-6 June 2008



EGI_DS participated in the OGF23 event organized in Barcelona. Dieter Kranzlmüller held a presentation about EGI and its latest status as well as the role of middleware and standardization in EGI on 3rd of June during the morning plenary. Dieter Kranzlmüller was also one of the invited bloggers for the GridTalk OGF23 blog and participated in the press conference of the OGF23.

Additionally, members of the EGI_DS project team were present during the whole event at an information stand for discussions and material distribution.

ISC 2008 International Supercomputing Conference 17-20 June 2008, Dresden

The International Supercomputing Conference is Europe's leading conference and exhibition on supercomputing, networking and storage.

The EGI_DS project was also presented during the whole exhibition at an information stand.

Also Dieter Kranzlmüller held a session with the Dissemination advisor of DEISA Wolfgang Gentzsch asking "Supercomputers or Grids: That is the Question" on Friday 20 June.



Coming soon

EGI ISTANBUL WORKSHOP 22 September, 2008, HARBIYE ASKERI MUSEUM, ISTANBUL (TURKEY)

The EGI Istanbul Workshop concentrates on planning the transition to the future EGI model (EGI.org + NGIs). The Workshop will be organised during the EGEE'08 conference. The EGI Policy Board Meeting, closed only for NGI representatives, will be held after the Workshop.

More information and registration

<http://www.eu-egi.eu/workshop/sep08>



NSS-MIC 2008 (Nuclear Science Symposium, Medical Imaging Conference), 19 - 25 October 2008, Dresden - Germany

Jürgen Knobloch (CERN) will hold a presentation about European Grid Initiative at the NSS-08 event.

More information: <http://www.nss-mic.org/>



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e-infrastructure



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Partners: CESNET, CERN, CNRS, CSC, DFN, GRNET, GUP, INFN and STFC

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