PRESS RELEASE

September 2011

Sailing Mediterranean ICT seas
Boosting high-speed ICT infrastructures across Europe and Mediterranean

With the Arab spring high on the international agenda, international cooperation with the Mediterranean Basin is becoming more and more crucial for Europe. Sectors like research and education are particularly important to facilitate socio-economic and political reform and stimulate growth in those countries so close to Europe, and whose population is young compared to the Old Continent, and strengthen cooperative relationships.
EUMEDGRID-Support is a frontrunner of cooperation with the region having built strong relations and shared its know-how on e-Infrastructures for several years now. The User Forum, which will be held in Lyon, France, on 22 and 23 September, offers a key opportunity to showcase scientific applications that have benefitted from the Euro-Mediterranean grid environment and the tangible benefits it has brought.

"Building an eInfrastructure in the Mediterranean and Middle-East area is of fundamental importance for the countries involved" explains Federico Ruggieri, EUMEDGRID-Support co-*ordinator. "Nowadays high-quality and high-speed ICT infrastructures are responsible for a measurable part of the GDP increase of a country. Research and Education are forerunners of this process with eInfrastructures playing a key role in transforming the landscape by removing barriers, giving access to scientific data and providing resources to scientists, researchers, professors and, most importantly of all, to students".*

Like a phoenix from the flames
The EUMEDGRID infrastructure has risen from the flames of the initiatives EUMEDCONNECT2, MIRA, CHAIN, SESAME, LinkSCEEM2, whose engagement towards a joint cooperation has been rekindled under the EUMEDGRID-Support umbrella. A new actor, ASREN (The Arab States Research and Education Network) was launched on December 2010, marking a new era for eInfrastructures in the South-Mediterranean area. Old websites were re-established, additional help service tools were restored – i.e. xGUS, NAGIOS, wiki guides and technical specifications – and cross-checking activities were performed to ensure the correct working of the infrastructure and the access to resources.
EUMEDGRID-Support and its infrastructure has successfully achieved a number of technical goals.

Thanks to the valuable effort of EUMEDGRID-Support consortium and stakeholders' network, Certification Authorities have been set-up in countries where one and a half years ago, it would have been impossible to do so. In particular the project has very significantly contributed to the establishment of both the Africa ROC regional operation centre and new Certification Authorities in Syria, Tunisia, United Arab Emirates, Jordan, Algeria and Egypt, with two of them already accredited, and three in the progress of being accredited. This has been supported by a number of side events to ensure establish trust between the actors involved.

Figure 1 Algeria Grid School, July 2010

An easier gateway to science
While the infrastructure is being consolidated, building the community is a must. EUMEDGRID-Support training tools and schools, such as the EPIKH Application Porting Grid schools, shaped a new generation of EUMEDGRID users. The next step will be to introduce a Science Gateway, i.e. a community-developed set of tools, applications, and data integrated via a user-friendly portal or a suite of applications, to replace old training tools (gLite, command line and UI shell script). Users will not have to use personal certificates to access the Grid making it easier for users to access the grid environment and port applications and the

development of new Virtual Research Communities.

Figure 2: Morocco Grid School, June 2011

Last but not least, thanks to cooperation with the EPIKH training events and the Karlsruher Institut für Technologie (KIT) GGUS Team, the EUMEDGRID-Support project can rely on a support centre that actually maintains a ticketing system relying on xGUS. This is managed in collaboration with other international projects such as SAGrid (The South African National Grid) and CHAIN (which coordinates international e-Infrastructure initiatives) which are involved in the Africa ROC initiative. This is an important target for the long-term sustainability of the Mediterranean e-Infrastructure.

Twenty applications are currently supported by the EUMEDGRID-Support project covering a broad spectrum of domains such as Computer Science and Mathematics, Earth Science, Life Science and Physics, Culture, arts and humanities, Biomedicine, Engineering. Some of them are being used for radiotherapy experiments (GATE application, USTHB, Algeria) or Sequence Alignment (as the one managed by Cairo University). Others deal with environmental early warning activities ("Fuzzy clustering of large satellite images", Ain Shams University, Egypt) or 3D face modelling (as in an experiment led by UTIC, Tunisia). The support provided by EUMEDGRID-Support initiative turned out to be fundamental for several research groups.

"EUMEDGRID-Support managed to resume, upgrade and extend the EUMEDGRID infrastructure, which has now achieved high level of reliability and efficiency" confirmed Mario

Reale, EUMEDGRID-Support Technical Manager, GARR, Italy. *"We have worked on the technical level to get the new infrastructure operational as quickly as possible, taking care of the immediate needs of scientists in the Mediterranean region, and ensuring sustainability to the newly re-established infrastructure in the long-term. We have also addressed the provisioning of support for parallel jobs within the MPI framework, to enable advanced computation on the infrastructure. The User Forum represents the climax of EUMEDGRID-Support, showcasing scientific achievements reached thanks to the active involvement of project partners and all those who believed in its potential."*

When science meets policy

eInfrastructures demand high bandwidth, large computing resources and high quality services that can be beneficial for other sectors, too, such as Government and Industry. Access to trans-national resources is fundamental, too. The role played by EUMEDGRID-Support is thus valuable not only from a scientific point of view, but even in the international political theatre and for Europe's role in the region.

"EUMEDGRID-Support had an impact on a policy level through the newly formed regional entity ASREN – explains Federico Ruggieri - and the interest solicited in other non-beneficiary countries (Lebanon, UAE, South Africa). Of course there is still a long way to go, and many opportunities to be explored through very high bandwidth networks, High Performance Computing, Scientific Gateways for Health and Climate Change applications and the establishment of a federation of National Certification Authorities. The more we explore the deployment of eInfrastructures the larger the horizon of opportunities and possible applications becomes."

Federico Ruggieri, EUMEDGRID-Support Project Co-ordinator, INFN, Italy