

## The EGI-InSPIRE project

The EGI-InSPIRE project (Integrated Sustainable Pan-European Infrastructure for Researchers in Europe) started on 1 May 2010, co-funded by the European Commission (contract number: RI-261323) for four years, as a collaborative effort involving more than 50 institutions in over 40 countries. Its mission is to establish a sustainable European Grid Infrastructure (EGI).

EGI-InSPIRE is ideally placed to join together the new Distributed Computing Infrastructures (DCIs) such as clouds, supercomputing networks and desktop grids, for the benefit of user communities within the European Research Area. EGI-Inspire Objectives

The ultimate goal of EGI-InSPIRE is to provide European scientists and their international partners with a sustainable, reliable e-Infrastructure that can support their needs for large-scale data analysis. This is essential in order to solve the big questions facing science today, and in the decades to come.

EGI-InSPIRE will coordinate the transition from a project-based system (the EGEE series) to a sustainable pan-European e-Infrastructure. The four-year project will support grids of high-performance computing (HPC) and high-throughput computing (HTC) resources.

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EGI-InSPIRE will collect user requirements and provide support for the current and potential new user communities, for example the ESFRI projects. The project will also support the current heavy users of the infrastructure, such as high energy physics, computational chemistry and life sciences, as they move their critical services and tools from a centralised support model to one driven by their own individual communities.

EGI-InSPIRE is a consortium of 50 partners, including 37 National Grid Initiatives (NGIs), two European International Research Organisations and eight partners from the Asia Pacific region. EGI-InSPIRE partners

| Country                               | Partner Institution   | Acronym  |
|---------------------------------------|---|--|
| Belgium                               | Stichting European Grid Initiative  | EGI.eu   |
| Netherlands                           | Institute for Informatics and Automation  | IIAP NAS RA  |
| Armenia                               | Problems of the National Academy of Sciences of the Republic of Armenia             | IPP-BAS  |
| Bulgaria                              | Institute for Parallel Processing of the Bulgarian Academy of Sciences              | UIIP NASB  |
| Belarus                               | United Institute of Informatics Problems of National Academy of Sciences of Belarus | SWITCH   |
| Switzerland                           | Teleinformatikdienste fr Lehre und Forschung                                       | Cesnet, Zajmove Sdruzeni Pravnickych   |
| Cyprus                                | University of Cyprus  | Kit-G  |
| Czech Republic                        | UCY   | UOBL-ETF   |
| Germany                               | Cesnet  | Bosnia and Herzegovina   |
| France                                | Czech Republic  | CSIC   |
| Finland                               | Univerzitet u Banjoj Luci Elektrotehnicki Fakultet                                  | Centre   |
| Georgia                               | Agencia Estatal Consejo Superior de Investigaciones Cientificas                     | Georgian Research and  |
| Greece                                | Csc-Tieteen Tietotekniikan Keskus Oy  | Greek Research and Technology  |
| Croatia                               | GRNET   | Sveuciliste U Zagrebu Sveucilisni Racunski Centar  |
| Hungary                               | SRCE  | MTA Kfki Reszecske-Es Magfizikai Kutatointezet   |
| Ireland                               | Hungary   | MTA KFKI   |
| Italy                                 | Israel  | The Provost, Fellows & Scholars of the College of the Holy and Undivided Trinity of Queen Elizabeth, near Dublin |
| Lithuania                             | Istituto Nazionale di Fisica Nucleare   | TCD  |
| Moldova                               | INFN  | Ireland  |
| Montenegro                            | Italy   | Inter University Computation Centre  |
| Former Yugoslav Republic of Macedonia | Vilniaus  | Israel   |
| Netherlands                           | Research and Educational Networking Association of                                  | Universitetas VU   |
| Poland                                | Javna Ustanova Univerzitet Crne Gore Podgorica                                      | RENAM  |
| Portugal                              | UOM   | Montenegro   |
| Slovenia                              | Ss. Cyril and Methodius University in Skopje  | UOM  |
| Slovakia                              | Stichting Nationale Computerfaciliteiten  | Yugoslav Republic of Macedonia   |
| Sweden                                | NCF   | Netherlands  |
| Latvia                                | Akademia Gorniczohutnicza Im. Stanislawas Staszica w Krakowie                       | Uninett Sigma As   |
| Denmark                               | ACK CYFRONET AGH  | SIGMA  |
| Latvijas Universitates                | Poland  | Norway   |
| E-Arena                               | Laboratrio de Instrumentao e Fsica Experimental de Partculas                    | Poland   |
|                                       | Institut za Fiziku  | LIP  |
|                                       | IPB   | Portugal   |
|                                       | Serbia  | Arnes  |
|                                       | Arnes   | Slovenia   |
|                                       | Ustav Informatiky, Slovenska Akademia Vied  | Arnes  |
|                                       | UI SAV  | Slovakia   |
|                                       | Slovakia  | Tubitak Ulusal   |
|                                       | Akademik Ag Ve Bilgi Merkezi  | Turkey   |
|                                       | TUBITAK ULAKBIM   | Science and Technology   |
|                                       | United Kingdom  | UKIM   |
|                                       | United Kingdom  | Former   |
|                                       | VR-SNIC   | Denmark  |
|                                       | Sweden  | Denmark  |
|                                       | Latvijas Universitates  | Latvijas Universitates   |
|                                       | IMCS-UL   | National Association of  |
|                                       | Latvia  | Research and Educational E-Infrastructures "E-Arena" Autonomous Non-Commercial Organization                      |
|                                       | Latvia  | E-Arena  |
|                                       | Nordunet A/S  | Russian Federation   |
|                                       | Denmark   | Russian Federation   |
|                                       | Denmark   | Russian Federation   |

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| Institutul National de Cercetare-dezvoltare In Informatica           | ICI Bucuresti                              | Romania                   |
| European International Research Organisations                        | Partner Institution                        | Acronym                   |
| HQ   | European Organization for Nuclear Research | CERN Switzerland          |
| European Molecular Biology Laboratory                                | EMBL                                       | Germany                   |
|  | Partner                                    | Acronym                   |
| Taiwan   | Advanced Science and Technology Institute  | ASTI Philippines          |
| Institut Teknologi Bandung Bhm                                       | ITB  | Indonesia                 |
| Institute Corporation, High Energy Accelerator Research Organisation | KEK  | Japan                     |
| Korea Institute of Science and Technology Information                | KISTI                                      | Republic of Korea         |
| University of Melbourne  | UNIMELB                                    | Australia                 |
| NUS  | Singapore                                  | Universiti Putra Malaysia |
| National Science & Technology Development Agency                     | NSTDA                                      | Thailand                  |

#### Â Project Participants from Moldova.

Moldova participates in the project as MD-Grid JRU Consortium with RENAM as Contractor and following third parties - JRU members:

- FRT-TUM - Faculty of Radioelectronics and Telecommunications of Technical University of Moldova
- IGS ASM - Institute of Geology and Seismology of the Academy of Sciences of Moldova
- SHMS State Hydrometeorological Service of Moldova.

RENAM is responsible for NGI development and its sustainable operation, extension of the National Grid infrastructure by installation of new clusters and their inclusion into common Grid segment of Moldova and into the Pan-European EGI.eu infrastructure. RENAM assures operation of Grid sites, support of development and functioning of applications in the fields of seismology, climate modeling, ecology and mathematics. RENAM is responsible for users and Grid sites engineers training and takes part in dissemination and public relations activities.

FRT-TUM cooperates with a significant number of universities and centres from different countries, participate in project as a third party behind RENAM Association. The grid node installed at the faculty together with its grid infrastructure and specialists participate in the EGI-Inspire project offering resources for weather environment and earthquake monitoring applications development and use support in collaboration with regional neighbors from Romania, Bulgaria and Turkey.

IGS ASM provides contributions on real-time monitoring of earthquakes and development of regional monitoring capacities, implementation of real-time seismic data processing and real-time data exchange at regional and international level. Despite the territory having high earthquake hazard and risk, its seismic activity remains poorly monitored. Moreover, cross-border data exchange and regional applications for data accumulating and processing, which are essential for good quality monitoring, are very limited. As a consequence, it is constraining ability to cooperate with the international research and engineering community.

SHMS contributes by testing and deployment of a pilot application. The service infrastructure and specialists are involved into MD-Grid JRU scientific research and production grid activities in requirements definition, input data provision and interpretation of results on national, regional and international levels.