

Memorandum of Understanding

for High-Performance Computing resource sharing in the region of
South Eastern Europe

This Memorandum of Understanding (MoU) is made on November XXth
2011 hereinafter referred to as the "effective date"

BETWEEN

As both Resource Coordinators and Beneficiaries:

- (1) For Greece: GREEK RESEARCH AND TECHNOLOGY NETWORK S.A.
- (2) For Bulgaria: INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGIES
- (3) For Romania: INSTITUTUL NATIONAL DE CERCETARE - DEZVOLTARE PENTRU FIZICA SI INGINERIE NUCLEARA "HORIA HULUBEI" (IFIN-HH)
- (4) For Hungary: NEMZETI INFORMACIOS INFRASTRUKTURA FEJLESZTESI IRODA
- (5) For Serbia: INSTITUT ZA FIZIKU
- (6) For Former Yugoslav Republic of Macedonia: Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE

As beneficiaries:

- (7) For Albania: UNIVERSITETI POLITEKNIK I TIRANES
- (8) For Bosnia & Herzegovina: UNIVERZITET U BANJOJ LUCI ELEKTROTEHNICKI FAKULTET
- (9) For Montenegro: JAVNA USTANOVA UNIVERZITET CRNE GORE PODGORICA
- (10) For Moldova: RESEARCH AND EDUCATIONAL NETWORKING ASSOCIATION OF MOLDOVA
- (11) For Armenia: INSTITUTE FOR INFORMATICS AND AUTOMATION PROBLEMS OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF ARMENIA

- (12) For Georgia: GEORGIAN RESEARCH AND EDUCATIONAL NETWORKING ASSOCIATION
- (13) For Azerbaijan: AZERBAIJAN RESEARCH AND EDUCATIONAL NETWORKS ASSOCIATION

hereinafter, jointly or individually, referred to as "parties" or "party"

WHEREAS:

1. Definitions

- A **Resource coordinator**: Is the status of a party to this MoU, coordinator of HPC activities related the South Eastern Europe regional collaboration, of a country owning HPC resources to be made available for usage by the beneficiaries to this MoU.
- B **Beneficiary**: Is the status of a party to this MoU, coordinator of HPC activities related the South Eastern Europe regional collaboration, in their country, that is willing to collaborate with the other parties for achieving the aims of this MoU and make use of the HPC resources offered by the Resource Coordinators under the terms specified in this MoU.

2. Preamble

eInfrastructures are one of the key enablers of scientific research and of the development of Information Society in Europe. eInfrastructures effectively consist of networking and Distributed Computing Infrastructures (DCIs). Enabling large-scale innovative research to be conducted through collaboration of distributed teams of scientists across the European Research Area (ERA) paves the way towards a long-term vision of a sustainable, transparent, ubiquitous electronic infrastructure open to a wide range of scientific user communities.

In the field of High Performance Computing (HPC), installations are available in several countries of the South-East European region while several of those countries already participate in PRACE. Moreover, there is a variety of user communities in the region that require HPC resources to perform advanced research in their scientific fields.

The regional vision of establishing an eInfrastructure compatible with European developments, and empowering the scientists in the region in equal participation in the use of pan-European infrastructures, requires a set of coordinated actions in the area of HPC and application fields making use of HPC initiatives. The regional scientists and engineers must be provided with

access to capability computers of leadership-class to remain competitive and the European and international level, thus overcoming fragmentation in Europe.

3. Objective

The Parties, which act as the country-level representatives for the South Eastern European HPC collaboration, in 13 countries of the region, recognize the significance of High Performance Computing and related services as a fundamental element for carrying out national and international collaborative research. The parties also recognise as important the directions of PRACE and of the Framework Programmes of the EU regarding research infrastructures. Taking this into account, the parties strive to work together along several strategic lines of interest:

- A Stimulating the creation or strengthening the National HPC Initiatives within their countries, and exchanging the organizational, operational and sustainability know-how regarding these.
- B Organising joint workshops, establishing joint training activities for students and researchers.
- C Sharing of HPC related resources for the benefit of the scientific communities of the region – the communities of those countries that have HPC resources and those who do not.
- D Cooperating on the sharing and interoperation of computer resources and services building on relevant existing experience, know-how and technology.
- E Support and stimulate collaboration between user communities of the signatory countries.
- F Cooperation on definition of standards for application programming, data interchange or interoperability.
- G Taking part in selected eInfrastructure projects and programmes.
- H Stimulating the fostering of the relations between relevant funding agencies including potential joint activities and programmes.

4. Resource Sharing Model

Partners that have/coordinate national HPC systems agree to allocate an amount of resources per year for regional use. This amount of resources will be offered to use to the scientific communities of non-home countries.

The following principles will be followed within this resource sharing model:

- A Partners should allocate as a minimum 5% of the total core hours of their HPC systems offered for resource sharing, per year for regional use.
- B Cycles are allocated to users via the peer review system.
- C Calls for access can be either continuous or are announced periodically (yearly or twice a year), based on the demand and the capacity of the peer review system.

The implementation details of the above-mentioned principles will be specified by the managerial body specified in this MoU (Section 10).

5. Resources

Each Party will bear its own reasonable costs and provide its own reasonable resources in implementing and fulfilling its obligations under this MoU. The resources that each Party brings in the collaboration will be shared in order to fulfill the MoU objective.

6. Entry into force

This MoU shall have effect from the Effective Date. This MoU is open for participation of new parties – Resource Coordinators or Beneficiary partners. A new party enters the MoU upon signature by the new party subject to a prior written approval by all partners.

7. Change of status of a party

As a result of internal priorities a party might decide to change its status in relation to this MoU becoming a Resources Coordinator. Change of status of a party shall be done under the following rule.

- A A party may become a Resource Coordinator by offering HPC resources to the beneficiaries of this MoU based on the terms of this MoU after approval of the MoU Committee.

8. Duration and termination

- A This MoU is intended to remain into effect for at least 3 years from the effective date.
- B The duration of the MoU is automatically extended for one year after the end of the initial 3 years period or after the end of each yearly extension.
- C This Memorandum is modified only after a written agreement of the Parties and is placed in force with the signature of their representatives.

- D This MoU may be terminated by mutual consent of all the Parties after 60 days written notice.

9. Withdrawal

Any Party may decide to withdraw from this MoU with 3 months' written notice. Unless specifically agreed, rights to use the knowledge, and Intellectual Property Rights developed in the performance of this MoU, shall be granted at no charge to the remaining parties.

10. Management Structure

- A Each Party will appoint one person and deputy to act as its representative within the MoU Committee. Any person so appointed by a Party will be of a sufficiently senior management level to enable him/her to make decisions and to vote on behalf of his/her appointing Party.
- B The MoU Committee will hold its meetings quarterly at the premises of one of the MoU parties and/or may be held via a videoconference link or telephone communication.
- C The MoU Committee will be responsible for:
- co-ordinating the interests of its Members;
 - looking for and identifying opportunities to achieve the goals of the MoU;
 - co-ordinating activities for specific aims of the MoU;
 - deciding whether new parties may join the MoU and on what basis.
 - deciding whether a party might change his status from Beneficiary only to Resource Coordinator
- D The MoU Co-ordinator is Greek Research and Technology Network.
- E The MoU Committee is composed of Resource Coordinator parties and Beneficiary parties. Each party has one voting right for all matters apart from the ones related to the resources operation and resource sharing, and all related common policies. For the later only the Resource Coordinators have the vote.

11. CONFIDENTIALITY

- A Each Party will ensure that any information disclosed by one organisation to the other for the purpose of the MoU and identified in writing and accepted by the recipient as being confidential before or at the time of disclosure will be treated in strict confidence.
- B Nothing in this MoU prevents any Party from disclosing or retaining the other party's information designated as confidential in order to comply

with the law or any regulation, or the order of any court or authority of competent jurisdiction.

12. FORCE MAJEURE

A Party will not be liable for any breach of this MoU caused by circumstances beyond its control such as industrial disputes, acts of god, or acts or omissions of persons or bodies for whom it is not responsible. In such circumstances each Party will advise the others, through the MoU Coordinator, of the problems.

13. GENERAL

- A Notices: Any notice to be given under this MoU must be in writing to the MoU Coordinator.
- B Assignment: A Party may not assign or transfer this MoU as a whole, or any of its rights or obligations under it, without first obtaining the written consent of the other Parties, that consent may not be unreasonably withheld or delayed.
- C Amendments: No variation or amendment of this MoU will be effective unless it is made in writing and signed by each Party's authorised representative.
- D No agency: None of the Parties has any authority to make any representation or commitment, or to incur any liability, on behalf of another Party.
- E Liability: Each Party agrees that there is no warranty provided, express or implied, for the use of any information or materials provided under this MoU. While nothing in this MoU limits or excludes any party's liability for death or personal injury caused by its negligence or for fraud, a Party will not be liable to another Party for any consequential or incidental damages or injuries in any event from use of such information or, materials.
- F Law: This Memorandum of Understanding will be governed by and interpreted in accordance with Greek law.

GREEK RESEARCH AND TECHNOLOGY NETWORK S.A.

Address:

GREEK RESEARCH AND TECHNOLOGY NETWORK S.A.

MESOGION AV. 56

11527 ATHINA

GREECE

Signed at : _____,
