

MEMORANDUM OF UNDERSTANDING

Between

EGI Foundation

and

Computer Network Information Center,

Chinese Academy of Sciences

TABLE OF CONTENTS

ARTICLE 1. PARTIES3

ARTICLE 2. PURPOSE AND SCOPE3

ARTICLE 3. COMMUNICATIONS.....4

ARTICLE 4. RIGHTS AND RESPONSIBILITIES.....5

ARTICLE 5. FUNDING7

ARTICLE 6. ENTRY INTO FORCE, DURATION AND TERMINATION7

ARTICLE 7. AMENDMENTS.....7

ARTICLE 8. ANNEXES7

ARTICLE 9. MISCELLANEA.....8

ANNEX 1. EGI FOUNDATION 10

ANNEX 2. CAS AND CNIC..... 11

ANNEX 3. JOINT WORK PLAN..... 12



This Memorandum of Understanding (“MoU”) is made between:

EGI Foundation, a not-for-profit foundation established under the Dutch law to coordinate the EGI federation (abbreviated as “EGI”)

and

Computer Network Information Center of the Chinese Academy of Sciences, an institute of informatization affiliated to the national science academy under the law of the People’s Republic of China (“CNIC”).

EGI and CNIC shall hereinafter be referred to individually as a “Party” and collectively as the “Parties.”

The MoU is composed of:

- Article 1. Parties
- Article 2. Purpose and Scope
- Article 3. Communications
- Article 4. Rights and Responsibilities
- Article 5. Funding
- Article 6. Entry into Force, Duration and Termination
- Article 7. Amendments
- Article 8. Annexes
- Article 9. Miscellanea
- Annex 1. EGI Foundation
- Annex 2. CAS and CNIC
- Annex 3. Joint Work Plan



ARTICLE 1. PARTIES

(a) EGI Foundation

The EGI Foundation is a not-for-profit foundation established under the Dutch law to coordinate the EGI federation (abbreviated as “EGI”), an international collaboration that federates the digital capabilities, resources and expertise of national and international research communities in Europe and worldwide. The main goal is to empower researchers from all disciplines to collaborate and to carry out data- and compute-intensive science and innovation.

The EGI Foundation has participants and associated participants drawn from representatives of national e-infrastructure consortiums (NGIs), EIROs, ERICs, and other legal entities. These entities provide the physical resources and shared services that enable EGI to deliver, improve and innovate services for communities.

A more detailed description of EGI Foundation is attached as Annex 1.

(b) Computer Network Information Center, Chinese Academy of Sciences

Computer Network Information Center (CNIC) of the Chinese Academy of Sciences (CAS) is an institute of informatization affiliated to the national science academy under the law of the People’s Republic of China (hereinafter, “CNIC”). As an important contributor to the birth of China’s Internet, CNIC provides network, computing and data services to the Chinese research community.

CNIC’s mission is to build itself into a first-rate information Center for cyberinfrastructure construction, system integration, operation management and service performance through concrete actions to fully harness the strength of ICT to support scientific innovations and management activities, promote the R&D of information technology and application demonstrations, integrate e-science and e-management resources, enhance research paradigm shift and the spread of scientific ideas, and cultivate leading informatization professionals across disciplinary boundaries.

Funded by Chinese Academy of Sciences and operated by CNIC, CSTCloud aims to take the lead for the development of cutting-edge national infrastructure of data and computation for accelerating science discovery. CSTCloud provides CAS-level public cloud services in supports of open science research. Representing CSTCloud, CNIC will sign the MoU, and will fully support the cooperation.

A more detailed description of CAS/CNIC and CSTCloud is attached as Annex 2.

ARTICLE 2. PURPOSE AND SCOPE

(1) The purpose of this Memorandum of Understanding (MoU) is to define a framework of long-term collaboration between the Parties to enable the vision of jointly providing sustainable e-Infrastructure services for European and Chinese scientists and supporting international scientific research activities.

(2) The parties will continue exploring collaboration opportunities to:

- Enhance the capacities of both Parties by exchanging solutions and good practices for federating resources across countries, by collaborating on pilots and experimental activities to support the need of research communities of interest to the Parties, and by developing and integrating advanced information technologies and applications to ensure cross-infrastructure interoperability.
- Establish a governance framework defining policies, procedures, operational tools and Operation Level Agreements (OLA) that ensure interoperability of federated e-infrastructure service management across the infrastructures operates by the Parties.



- Strengthen the collaboration by establishing working groups on technical, policy and operational topics of joint interest, by exchanging expertise and staff members as necessary and by coordinating support activities towards research communities of common relevance.
- Jointly coordinate user communities support activities, including, outreach, training, coordinated expert support, coordinated infrastructure provisioning, for example through the organization of jointly supported open calls and the organization of international support teams.

A detailed collaboration plan (the “Joint Work Plan”) is defined in Annex 3.

ARTICLE 3. COMMUNICATIONS

(1) The Parties shall keep each other informed on all their respective activities and on their progress and shall consult regularly on areas offering potential cooperation. Joint working groups may be established to examine in detail proposals in areas assigned to them by the Parties referred to in Annex 3 (Joint Work Plan) and to make recommendations to the Parties.

(2) The Parties acknowledge their obligations taken by this MoU and by the Joint Activity Plan (Annex 3) to disseminate their results, and the task to support and promote the coherent and coordinated dissemination of information on activities such as joint events and workshops.

The Parties shall support efforts by providing relevant inputs and ensuring attendance at events.

(3) No Party is allowed to publish or allow the publishing of the other Party’s results unless the owner Party agrees to the publication.

(4) Each Party shall designate a “point of contact” that shall be responsible for monitoring the implementation of this MoU and for taking measures to assist in the further development of cooperative activities. Such points of contact shall be the ordinary channel for the Parties’ communication of proposals for cooperation.

Any approvals, notices, and other communications between the Parties under this MoU shall be sent to the applicable Party as follows:

EGI Foundation Liaison:

Yin Chen
EGI Foundation
Science Park 140.
Amsterdam 1098XG
yin.chen@egi.eu
+31 630 373 096

CNIC Liaison:

Jianhui Li
Computer Network Information Center, Chinese
Academy of Sciences
Rm 110, Building 2, 4 Zhongguancun Nansijie,
Haidian District, Beijing 100190, China
lijh@cnic.cn
+86 10 58812518

Questions of principles or problems that cannot be solved at primary contact level are escalated to the director of two parties *or Highest Role applicable*.



ARTICLE 4. RIGHTS AND RESPONSIBILITIES

A. GENERAL

1. Each Party agrees to adhere to applicable policies and procedures relating to the use of the production infrastructure.
2. A Party which makes material, equipment or components available to the other Party, for the purposes of activities under this MoU, shall remain the proprietor of such material, equipment or components.
3. Each Party shall remain fully responsible for its own activities, including the fulfilment of its obligations.

B. PERSONNEL

1. Each Party shall be solely responsible for any personnel hired to carry out work under this MoU.
2. In case personnel employed by one Party temporarily carry out work under this MoU on the premises of another (hereafter referred to as “secondment”), the following provisions shall apply:
 - a. The personnel seconded shall be subject to all regulations, including, in particular, safety regulations, applicable on the site of the Party they are seconded to.
 - b. The personnel seconded by a Party to another shall remain employees of the Party having seconded them and such Party, as employer, shall bear exclusive responsibility for the payment of salary and for the procurement of adequate social security and insurance, including third-party liability insurance and health insurance.
 - c. Unless otherwise agreed by the Parties concerned, Intellectual Property Rights generated by personnel seconded by a Party to another shall be owned by the Party having seconded such personnel.

C. INTELLECTUAL PROPERTY RIGHTS AND LICENCE

1. “Intellectual Property Rights” shall mean all intellectual creations including but not limited to inventions, know-how, layouts, drawings, designs, specifications, computer programs, reports, processes, protocols, calculations and any other matter and protected by intellectual property rights, whether registered or not, including patents, registered designs, copyrights, design rights and all similar proprietary rights and applications for protection thereof.
2. Intellectual property rights generated by a Party under this MoU shall be the property of that Party who shall be free to protect, transfer and use such Intellectual Property Rights as it deems fit.
3. Notwithstanding the foregoing, each Party shall grant the other a non-exclusive royalty-free, licence to use the Intellectual Property Rights generated by the Party under this MoU for the implementation of the Joint Work Plan (Annex 3). Such licence shall include the right to sublicense the entities involved in the Joint Activity Plan.

D. OWNERSHIP OF RESULTS

1. Results are owned by the Party that generates them.
2. The Parties give each other – under fair and reasonable conditions – access to results of this MoU needed for exploiting their own results.
3. Results that were jointly generated by both Parties will be jointly owned by the Parties, hereinafter referred to as (“Jointly Owned Results”) and each of the Parties shall be free to use these Jointly Owned Results for non-commercial research activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s).



4. Each of the joint owners shall be entitled to otherwise commercially exploit the jointly owned Results and to grant non-exclusive licenses to third parties (without any right to sub-license), if the other joint owners are given: (a) at least 45 calendar days advance notice; and (b) Fair and Reasonable compensation. Each Party shall be entitled to disclose such Jointly Owned Results without restrictions unless such Jointly Owned Results are confidential information or contain a Joint Invention in which case no disclosure must be made prior to the filing of a priority application.
5. With respect to any Joint Invention resulting from this MoU (i.e. any invention jointly made by employees of both Parties), the features of which cannot be separately applied for as Intellectual Property Rights and which are eligible for statutory protection requiring an application or registration (herein referred to as "Joint Invention"), the Parties shall agree on which Party will carry out any filing as well as any further details with regard to persecuting and maintaining relevant patent applications.

E. PUBLIC RELATIONS

1. Any publication by a Party resulting from the activities carried out under this MoU shall be subject to prior agreement of the other Party which should not be unreasonably withheld.
2. The Parties may each release information to the public, provided it is not confidential and related only to its own part of the activities under this MoU. In cases where the activities of the other Party are concerned, prior consultation shall be sought. In all relevant public relations activities, the contribution of each Party related to activities covered by this MoU shall be duly acknowledged.

F. CONFIDENTIALITY OF INFORMATION

1. The Parties may disclose to each other information that the disclosing Party deems confidential and which is (i) in writing and marked "confidential", or (ii) disclosed orally, and identified as confidential when disclosed, and reduced in writing and marked "confidential" within fifteen (15) days of the oral disclosure (hereafter referred to as "Confidential Information"). Confidential Information shall be held in confidence and shall not be disclosed by the receiving Party to any third party without the prior written consent of the disclosing Party.
2. Notwithstanding the foregoing, a Party is entitled to disclose Confidential Information which it is required by law to disclose or which, in a lawful manner, it has obtained from a third party without any obligation of confidentiality, or which it has developed independently from any Confidential Information received under this MoU, or which has become public knowledge other than as a result of a breach on its part of these confidentiality provisions.

G. LIABILITY

1. Each Party shall use reasonable endeavours to ensure the accuracy of any information or materials it supplies to the other Party and of any other contribution it makes hereunder and promptly to correct any error therein of which it is notified. The supplying Party shall be under no obligation or liability other than as stated above and no warranty or representation of any kind is made, given or to be implied as to the sufficiency, accuracy or fitness for a particular purpose of such information, materials or other contribution or as to the absence of any infringement of any proprietary rights of third parties through the possession or use of such information, materials or other contribution. The recipient Party shall be entirely responsible for its use of such information, materials or other contribution and shall hold the other Party free and harmless and indemnify it for any loss or damage with regard thereto.
2. Except in case of gross negligence or wilful misconduct, neither Party shall be liable for any indirect or consequential damages of the other Party, including loss of profit or interest, under any legal cause whatsoever and on account of whatsoever reason.



H. PARTICIPATION IN SIMILAR ACTIVITIES

1. Parties are not prevented by this MoU from participating in activities similar to those described in this document with third parties. There is no obligation to disclose any similar activity to the other Party. However, when considered of mutual benefit, both Parties are encouraged to involve the other Party in similar activities to the goal of disseminating the knowledge about both Parties.

ARTICLE 5. FUNDING

Each Party shall bear the costs of discharging its respective responsibilities under this MoU, including travel and subsistence of its own personnel and transportation of goods and equipment and associated documentation, unless otherwise agreed in this MoU or by the parties on a case-by-case basis.

Each Party shall make available free of charge to the other Party any office space or meeting facility needed for the joint activities.

The Parties' obligations hereunder are subject to their respective funding procedures and the availability of appropriate funds. Should either Party encounter budgetary problems in the course of its respective internal procedures that may affect the activities carried out under this MoU, the Party shall notify and consult with the other Party in a timely manner in order to minimise the negative impact of such problems on the cooperation. The Parties shall jointly look for mutually agreeable solutions.

In order to reduce the impact on travel costs, face-to-face meetings should be co-located with other events that participants are likely to attend. Meeting via teleconferences should be considered when the nature of the discussion does not strictly require a face-to-face presence.

ARTICLE 6. ENTRY INTO FORCE, DURATION AND TERMINATION

This MoU will enter into force when signed by the authorised representatives of the Parties.

Either Party may terminate this MoU for any reason upon 30 days written notice to the other Party.

In the event of termination, the Parties shall endeavour to reach agreement on terms and conditions to minimise negative impacts on the other Party. In the event of the continuation of the present cooperation, the MoU may be extended and/or amended by mutual agreement in writing.

ARTICLE 7. AMENDMENTS

The MoU may be amended only by written agreement of the Parties. Amendments shall be valid only if signed by the authorised representatives of the Parties.

ARTICLE 8. ANNEXES

Annexes 1, 2, 3 attached hereto, have the same validity as this MoU and together constitute the entire understanding and rights and obligations covering the cooperation accepted by the Parties under this MoU. Annexes may be amended following the provisions of Article 7. Amendments.

ARTICLE 9. MISCELLANEA

- 1) Notwithstanding anything in this MoU to the contrary, neither Party shall have any legally binding obligation to the other Party as a result of the execution of this MoU, or otherwise relating to this MoU or the subject matter hereof. Although the Parties will try to reach one or more future agreements as to the matters described herein, this MoU shall not require the Parties to reach any future agreement, and, notwithstanding anything in this MoU to the contrary, neither Party shall have any liability to the other Party as a result of the Parties' failure to reach one or more future agreements.
- 2) Neither Party shall reassign this MoU or any of its responsibilities without the other Party's prior written consent.
- 3) The failure of either Party to enforce any term hereof shall not be deemed a waiver of any rights contained herein.
- 4) If any provision of this MoU is determined to be invalid or unenforceable under any controlling law, the invalidity or unenforceability of that provision shall not affect the validity or enforceability of the remaining provisions of this MoU.

**Memorandum of Understanding between EGI Foundation and
Computer Network Information Center of Chinese Academy of Sciences**

IN WITNESS WHEREOF, the Parties have caused their duly authorised representatives to sign two originals of this Memorandum of Understanding.

The following agree to the terms and conditions of this MoU:

DocuSigned by:
Tiziana Ferrari
465881FE0D144C8...



Tiziana Ferrari
Director
EGI Foundation

Fangyu Liao
Director General
Computer Network Information Center,
Chinese Academy of Sciences

Jun 9, 2020 | 18:10 CEST

Jun 10, 2020 | 11:10 CST

Date

Date

ANNEX 1. EGI FOUNDATION

The Stichting EGI (also known as the EGI Foundation and abbreviated as EGI.eu) is a not-for-profit foundation established under the Dutch law to coordinate the EGI federation (abbreviated as EGI), an international collaboration that federates the digital capabilities, resources and expertise of national and international research communities in Europe and worldwide. The main goal is to empower researchers from all disciplines to collaborate and to carry out data- and compute-intensive science and innovation.

The EGI Foundation has participants and associated participants drawn from representatives of national e-infrastructure consortiums (NGIs), EIROs, ERICs, and other legal entities. These entities provide the physical resources and shared services that enable EGI to deliver, improve and innovate services for communities. The EGI Foundation coordinates areas such as overseeing infrastructure operations, user community support, contact with technology providers, strategy and policy development, flagship events and dissemination of news and achievements.

The EGI Federation – coordinated by EGI.eu – is one of the largest distributed computing infrastructure for researchers. It leverages the local investments of national research funding agencies by bringing together hundreds of data centres worldwide. It also includes the largest research cloud federation in operations in Europe with tens of participating cloud providers across most of the European countries offering IaaS cloud and storage services.

The EGI offering includes a federated IaaS cloud to run compute- or data-intensive tasks and host online services in virtual machines or docker containers on IT resources accessible via a uniform interface; high-throughput data analysis to run compute-intensive tasks for producing and analysing large datasets and store/retrieve research data efficiently across multiple service providers; federated operations to manage service access and operations from heterogeneous distributed infrastructures and integrate resources from multiple independent providers with technologies, processes and expertise offered by EGI; consultancy for user-driven innovation to assess research computing needs and provide tailored solutions for advanced computing.

The EGI Cloud Federation aggregates resources by defining a set of standard open-source interfaces and protocols to access the different cloud functions - such as resource discovery, user authentication, compute and data access services - in a uniform way at all the sites, enabling workloads to span and seamlessly migrate across resource centers. Through the EGI Virtual Machine image library – the Application Database – EGI offers the possibility to share and reuse virtual appliances and to dynamically deploy them in a federated cloud infrastructure. Besides cloud compute and storage services, the cloud will offer the capability of accessing open datasets of public and commercial relevance for scalable access to big research data, fostering a culture and environment for sharing and reuse of open research data. EGI supports the implementation and adoption of cloud open standards.

The EGI technical platforms are co-developed with research communities and technology providers. In order to do so, EGI has established processes and technical infrastructures for requirements gathering, software validation, verification and distribution through the Unified Middleware Distribution.

Over the last decade, EGI has built a federation of long-term distributed compute and storage infrastructure that has delivered unprecedented data analysis capabilities to tens of thousands of researchers from many disciplines (e.g., Medical and Health Sciences, Natural Sciences, Engineering and Technology, Agricultural Sciences, and Art and Humanities).

Examples of the supported research include the search for the Higgs boson at the Large Hadron Collider particle accelerator at CERN; the search for gravitational waves of the LIGO-VIRGO collaboration, finding new tools to diagnose and monitor diseases such as Alzheimer's, or the development of complex simulations to model climate change.

Further information (e.g. governance; services) can be found at: www.egi.eu/about/

ANNEX 2. CAS AND CNIC

Comprising a comprehensive research and development network, Chinese Academy of Sciences brings together scientists and engineers from China and around the world to address both theoretical and applied problems using world-class scientific and management approaches.

Under the umbrella of CAS, CNIC is an institute of informatization affiliated to the national science academy under the law of the People's Republic of China. CNIC has established itself as an important member of the international academic network and achieved high-speed connections with Internet backbones at home and abroad. CNIC is also a domestically important force in frontier fields such as future network, cloud computing and big data.

As China's earliest provider of supercomputing service, CNIC plays a key role as the operation management center and the main northern node of China National Grid. As the constructor, operator and service provider of the scientific database of the CAS, CNIC has established the largest research data storage facility and the basic data resource covering the broadest range of academic disciplines. In addition, CNIC serves as the constructor, operator and service provider of various important national systems such as China Science and Technology Cloud, National Data Sharing Service Platform for Basic Science, National Internet of Things Name Service Platform and Virtual Science Museums of China.

Funded by CAS and held by CNIC, CSTCloud takes the responsibilities to integrate the cyberinfrastructure in and out of the academy using the cloud computing technology and to construct and operate the cloud infrastructure monitoring platform and moderately develop the remote monitoring of the basic resources at research institutions. Besides, CSTCloud is also obliged to construct, operate and maintain the cloud service platform and to develop and maintain various services based on cloud resources such as the email system service, video conferencing service, passport service of CSTCloud, document archiving service for working groups and conference organization platform.

Further info could be accessed via www.cnic.cn and www.cstcloud.cn.

ANNEX 3. JOINT WORK PLAN

To support the collaboration objectives defined in article Article 2 (“Purpose and scope”), a joint work plan is defined and will be regularly reviewed and updated at least annually.

The Parties will jointly deliver e-infrastructure services and support the needs of global scientific communities. The cooperation is focused, but not limited to the following areas:

- 1) Develop and adopt interoperable e-infrastructure services and federation resources.
- 2) Define a governance framework and align access policies, rules for participation, Operation Level Agreements and mechanisms that facilitate joint e-infrastructure federations.
- 3) Explore the development of an open science cloud with a global scope, mobilize and Co-sponsored the Global Open Science Cloud Initiative.
- 4) Show case demonstrated approaches, services and tools for open science.

Joint Activity 1. MoU definition

The two parties aim to have an official MoU (this MoU) prepared and signed by Q2 2020. A joint permanent working group (the “Working Group”) of experts from the Parties will be established to define, implement, maintain, and review this joint work plan over time.

Task duration: 2 months.

Joint Activity 2. Integration testbeds

The Working Group will analyse the feasibility of a joint compute and storage integration testbed, federating data centre facilities from the EGI Federation and the CNIC infrastructure, and will analyse and implement mechanisms for the interoperable access to the services of the federation.

Task duration: 6 – 8 months.

Joint Activity 3. Use Cases and Research Collaborations

The Working Group will identify use cases from research communities of joint interest. These will be used to show case solutions for infrastructure integration.

Examples of scientific disciplines include structural biology (the WeNMR community of practice - <https://wenmr.science.uu.nl/>), atmospheric research (the EISCAT research infrastructure), astronomy (LSST), disaster mitigation, environmental science, ecology, and high energy physics.

A group of target research communities will be identified and involved in demonstrations by Q4 2020. The Working Group will define the organization of annual open calls to coordinate joint support activities and expand the group of jointly supported research collaborations.

The parties agree to implement disciplinary cooperation and relevant use cases in accordance with the rules and regulations of the Parties’ governance boards, the European Union and China. Each Party will seek for internal formal approval as necessary, and the Parties shall not disclose information and allocate resources to joint activities until the collaboration is formally approved by both Parties.

Task duration: MoU Duration

Joint Activity 4. Governance and interoperability framework

The Working Group will establish and maintain a technical and governance framework that includes a set of policy and interoperability recommendations to facilitate cross-infrastructure data processing and analytics workflows.

This framework will include policies and procedures for cross-infrastructure access, user support, trust and identity management, security incident management and co-provisioning of infrastructure capacity. It will also include technical interoperability guidelines.

Task duration: MoU Duration

Joint Activity 5. Joint Events and Training

The Working Group will seek at promoting the results of the collaboration in conferences, symposia, and workshops, and at coordinating efforts in training towards user communities. A joint event programme will be defined annually, including the annual EGI Conference and CNIC events and workshop.

Task duration: MoU Duration