



**MEMORANDUM OF UNDERSTANDING  
BETWEEN**

**EGI.EU AND CLOUDSME UG**

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## BACKGROUND

### EGI.eu

Stichting EGI<sup>1</sup> (abbreviated and hereafter referred to as “EGI.eu”) is a not-for-profit foundation established under the Dutch law to coordinate EGI. EGI is 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.

EGI.eu 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.eu is attached as 0.

### CloudSME UG

CloudSME UG<sup>2</sup> (hereafter referred to as CloudSME) is a private SME founded in January 2016 to deliver a Cloud-based Simulation platform for Manufacturing and Engineering. CloudSME UG is a result of an EC funded R&D project “CloudSME” to extend the partnership to the future. CloudSME UG is registered and administrated in Duisburg, Germany. Due its structure, CloudSME has contact, action points and references for customers in several European countries: Great Britain, Spain, Italy, Hungary, Germany and associated countries like Switzerland and Turkey.

A summary of CloudSME UG is attached as 0.

### EGI Resource Providers

Several EGI Resource Providers will be contributing to the activities and objectives of this MoU comprising:

- The Institute for Biocomputation and Physics of Complex Systems (BIFI) - Spain<sup>3</sup>
- Centro de Supercomputación de Galicia (CESGA) - Spain<sup>4</sup>
- Greek Research and Technology Network (GRNET) - Greece<sup>5</sup>
- Instituto de Física de Cantabria (IFCA) - Spain<sup>6</sup>
- Scientific and Technological Research Council of Turkey (TUBITAK) - Turkey<sup>7</sup>
- 100%IT (SME ISP) - UK<sup>8</sup>
- Chemistry, Molecular & Materials Science and Technology (CMMST) Virtual Research Community (represented via University of Perugia) - Italy<sup>9</sup>

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<sup>1</sup> [www.egi.eu](http://www.egi.eu)

<sup>2</sup> <http://www.cloudsme-apps.com/>

<sup>3</sup> <http://bifi.es/en/>

<sup>4</sup> <http://www.cesga.es/>

<sup>5</sup> <https://www.grnet.gr/en>

<sup>6</sup> <http://www.ifca.unican.es/en/>

<sup>7</sup> <http://www.tubitak.gov.tr/en>

<sup>8</sup> <http://100percentit.com/>

<sup>9</sup> [https://wiki.egi.eu/wiki/VT\\_Towards\\_a\\_CMMST\\_VRC](https://wiki.egi.eu/wiki/VT_Towards_a_CMMST_VRC)

## ARTICLE 1: PURPOSE

The purpose of this Memorandum of Understanding (MoU) is to define a framework of collaboration between EGI.eu and CloudSME (hereafter also referred to as “the Party” or the “Parties”) for delivering the activities outlined within the Joint Work Plan (Article 2). The Parties recognise, by this MoU, the opening of a wider and longer-term cooperation in activities, which will bring visible benefits to everyone involved.

## ARTICLE 1: DEFINITIONS

For the purpose of this MoU, the following definitions are relevant:

- The terms defined in the EGI glossary ([https://wiki.egi.eu/wiki/Glossary\\_V2](https://wiki.egi.eu/wiki/Glossary_V2))

## ARTICLE 2: JOINT WORK PLAN

The parties contribute to enable the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work.

In this broad context, the specific goals of the collaborations are to:

- Integrate the EGI FedCloud within the CloudSME platform (e.g. via OpenStack, OpenNebula).
- Leverage the EGI Business Engagement Programme to support CloudSME customers in research, investigation, and development phases.
- Establish potential longer-term business relationships based on initial proof of concepts and clarify/define QoS requirements and assurances.
- Conduct joint and individual promotion of each Party and agreement activities and objectives.

The specific activities to be carried out in the framework of the collaboration are<sup>10</sup>:

### WP1 Technical Integration

**Parties Involved:** EGI.eu, Resource Providers, CloudSME

**Description of work:** Integrate the EGI FedCloud within the CloudSME platform via supported interfaces such as OpenStack and/or OpenNebula.

**Expected outcome:**

- A1.1 (04/2016) - Select at least 2 EGI sites (CESGA, TUBITAK): 1.) OpenStack 1.) OpenNebula and set up credentials for CloudSME
- A1.2 (04/2016) - CloudSME to use an existing applications to access the sites as a demonstrator
- A1.2 (05/2016) – Expand integration to all participating EGI resource providers
- A1.3 (09/2016) – Evaluate effort for full EGI AAI

### WP2 Pilots

**Parties Involved:** EGI.eu, Resource Providers, CloudSME

**Description of work:** Run pilots with selected SMEs for supporting application porting and technical support.

**Expected outcome:**

- A2.1 (09/2016) – Identified SMEs to run first pilot
- A2.3 (11/2016) – Analysis of pilots for technical and operation improvements (initial test of business model scenario – See A3.1 and A3.2)

<sup>10</sup> Party leading the activity is underlined.

### **WP3 Business Development**

**Parties Involved:** EGI.eu, Resource Providers, CloudSME

**Description of work:** Define business models for long-term service delivery and support

**Expected outcome:**

- A3.1 (12/2016) – Analysis of Quality of Service (QoS) requirements for commercial offerings
- A3.2 (01/2017) – Defined business model for continuous operations

### **WP4 Marketing**

**Parties Involved:** EGI.eu, CloudSME

**Description of work:** Ensure visibility of both parties via networks for marketing and communication opportunities.

**Expected outcome:**

- A4.1 (04/2016) – Joint announcement of MoU
- A4.2 (05/2016) – Dedicated mention of the other Party on own website
- A4.2 (10/2016) – Written use case on pilot for publication
- A4.3 (02/2017) – Publication of results (e.g. article, news item)

The EGI.eu Strategy and Policy Team (SPT) will coordinate the periodic review of the progress of the activities defined in the table above, follow-up the milestones and distribute reports to both Parties. Special meetings between the points of contact designated under 4 (Communication) shall be held, as often as necessary, to examine the progress in the implementing of this Agreement.

## **ARTICLE 4: COMMUNICATION**

The Parties shall keep each other informed on all their respective activities and on their progress and shall consult regularly on areas offering potential for cooperation.

CloudSME will accept and comply with EGI.eu's policies and procedures that apply to the users of EGI ([http://go.egi.eu/policies\\_and\\_procedures](http://go.egi.eu/policies_and_procedures)).

Joint working groups may be established to examine in detail proposals in areas assigned to them by the Parties referred to in Article 2 (Joint Work Plan) and to make recommendations to the Parties.

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.

The primary point of contact for each Party is:

EGI.eu: Sy Holsinger <sy.holsinger@egi.eu>

CloudSME: Andreas Ocklenburg <ocklenburg@cloudsme.eu>

Questions of principle or problems that cannot be solved at primary contact level are escalated to the EGI.eu Director and the CloudSME CEO Andreas Ocklenburg.

## **ARTICLE 5: RIGHTS AND RESPONSIBILITIES**

The procedure is set out in 0.

## **ARTICLE 6: 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.

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

The Parties' obligations hereunder are subject to their respective funding procedures and the availability of appropriated 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, that 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 where 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 7: ENTRY INTO FORCE, DURATION AND TERMINATION**

This MoU will enter into force when signed by the authorised representatives of the Parties and shall remain in force until completion of the activities identified in Article 2 (Joint Work Plan), or upon termination of the projects in which the Parties participate, or upon three (3) months prior written notice by one Party to the other. 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 Agreement may be extended and/or amended by mutual agreement in writing.

## **ARTICLE 8: AMENDMENTS**

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

## **ARTICLE 9: ANNEXES**

Annexes 0, 0, 0, 0 and **Error! Reference source not found.** 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 8: Amendments.

## **ARTICLE 10: LANGUAGE**

The language for this MoU, its interpretation and all cooperative activities foreseen for its implementation, is English.

## **ARTICLE 11: GOVERNING LAW – DISPUTE RESOLUTION**

The terms of this MoU shall be interpreted in accordance with their true meaning and effect independently of national and local law. Provided that if and insofar as this MoU does not stipulate, or any of its terms are ambiguous or unclear reference shall be made to the substantive laws of Belgium. Disputes shall be resolved by amicable settlement or failing which by mediation in accordance with the procedure set out in 0.

## Memorandum of Understanding between EGI.eu and CloudSME

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

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

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Yannick Legré  
EGI.eu Director

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Andreas Ocklenburg  
CEO CloudSME UG

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Date

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Date

## ANNEX 1 – EGI.EU DESCRIPTION

Stichting EGI (abbreviated EGI.eu) is a not-for-profit foundation established under the Dutch law to coordinate EGI. EGI is 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.

EGI.eu 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.

EGI is supporting 'grids' of high-performance computing (HPC) and high-throughput computing (HTC) resources and is also ideally placed to integrate new Distributed Computing Infrastructures (DCIs) such as clouds, supercomputing networks and desktop grids.

EGI.eu 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 brings together more than 350 data centres worldwide and also includes the largest community cloud federation in Europe with 21 cloud providers across 12 European countries offering IaaS cloud and storage services.

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.

Over the last decade, EGI has built a federation of long-term distributed compute and storage infrastructures that has delivered unprecedented data analysis capabilities to more than 45,000 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; finding new tools to diagnose and monitor diseases such as Alzheimer's, or the development of complex simulations to model climate change.

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.

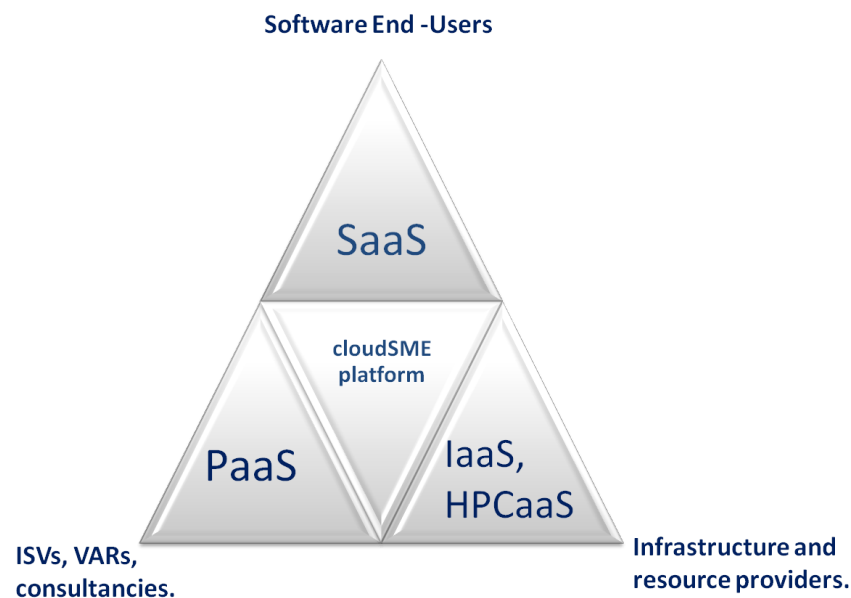
Through its solutions for High Throughput Computing, Cloud, Federated Operations and Community-driven innovation and support, EGI is contributing to the Open Science Commons vision (<http://go.egi.eu/osc>) according to which Researchers from all disciplines have easy, integrated and open access to the advanced digital services, scientific instruments, data, knowledge and expertise they need to collaborate to achieve excellence in science, research and innovation.



## ANNEX 2 – CLOUDSME DESCRIPTION

cloudSME U.G. ([www.cloudsme-apps.com](http://www.cloudsme-apps.com)) so far is a small company with two permanent employees, but a big intellectual consortium in the background. It is a spin-off of the cloudSME project (FP7/H2020) and was founded recently in the city of Duisburg, Germany. Shareholders are 10 companies and individuals, former participants of the CloudSME project ([www.cloudsme.eu](http://www.cloudsme.eu)). Moreover, CloudSME UG enjoys support in the form of professional and technical advice and expertise from leading academics, who are members of the CloudSME UG advisory board.

CloudSME platform was designed in the cloudSME project to help small and medium sized enterprises to access the power of simulations built by experts in manufacturing and engineering. It does this by lowering the high entry barriers such as hardware and license costs, and access to expertise by developing a cloud-based, one-stop-shop simulation software platform solution, thus enabling much wider take-up of simulation software technologies by engineering and manufacturing SMEs.



**Figure 1 - cloudSME multisided platform**

For technology providers cloudSME will enable new business model opportunities, offering their software or infrastructure through a secure European platform with powerful capabilities.

### cloudSME Benefits

- Provides software products in the form of a Software as a Service provision (SaaS), that can be published and directly executed from the cloudSME App Center.
- Fast-track deployment & a great variety of cloud integration methods (various APIs, PaaS) that will enable great flexibility for you.
- Seamlessly access heterogeneous commercial and private cloud resources (IaaS) as well as European supercomputing centres (i.e. HLRS (DE), Cineca (IT), ROMEO (FR))
- Possibility to choose the right cloud, data shall be processed in.
- Awarded platform technology with powerful capabilities that smoothly enables computationally intensive Computational Fluid Dynamics Simulations (MPI support).
- Advanced and proven technology to model workflow solutions.

- Consulting services from experts at each step of software integration (for ISVs).

## **ANNEX 3 – RIGHTS AND RESPONSIBILITIES**

### **A. GENERAL**

1. Parties agree to adhere to applicable policies and procedures relating to the use of the production infrastructure and/or platform.
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 under any grant agreement with the European Commission or under any consortium agreement related thereto.

### **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 carries out work under this MoU on the premises of another (hereafter referred to as “secondment”), the following provisions shall apply:
  - (a) The persons 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 LICENSE**

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, perpetual license to use the Intellectual Property Rights generated by it under this MoU for use within its project or for the exploitation the results thereof. Such license shall include the right to sublicense the entities involved in the project.

### **D. JOINTLY OWNED RESULTS**

1. 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 as it sees fit without owing the other Party any compensation or requiring the consent of the other Party. Each Party, therefore, for example and without limitation, has the transferable right to grant non-exclusive, further transferable licenses under such Jointly Owned Results to third parties. Each Party shall be entitled to disclose such Jointly Owned Results without restrictions unless such Jointly Owned Results contain a Joint Invention in which case no disclosure must be made prior to the filing of a priority application.

2. 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 of 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 not be unreasonably withheld.

2. The Parties may each release information to the public, provided it is 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 and 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 EGI.eu.

## **ANNEX 4 – SETTLEMENT OF DISPUTES**

1. Any dispute, controversy or claim arising under, out of or relating to this MoU and any subsequent amendments of this MoU, including, without limitation, its formation, validity, binding effect, interpretation, performance, breach or termination, as well as non-contractual claims, will try to be solved through mediation, according to the rules of bMediation, Brussels.
2. The Parties undertake not to put an end to the mediation before the introductory statement made by each Party in joint session.
3. Should the mediation fail to bring about a full agreement between the Parties putting an end to the dispute, sole competent courts will be the courts of Brussels.
4. The costs including all reasonable fees expended by the Parties to any mediation hereunder shall be shared equally between the Parties.