MEMORANDUM OF UNDERSTANDING

BETWEEN

FP7 VENUS-C PROJECT & FP7 STRATUSLAB PROJECT

I. PARTIES

This non-binding Memorandum of Understanding is entered into 15.06.2011 by and between FP7 VENUS-C project ("VENUS-C") and FP7 STRATUSLAB project ("StratusLab"), hereafter jointly referred to as the "PARTIES".

II. PURPOSE

A. Background

Call 7 (FP7-Infrastructures-2010-2) under the e-Infrastructures topic of the FP7 "Capacities" Specific Programme that closed in November 2009 called for proposals under the topic of 'Distributed Computing Infrastructures'. As a result of this call, six projects were funded, with an expected total EC contribution of nearly €50M, that together are referred to as the 'Distributed Computing Infrastructure Projects' or 'DCI Projects'. Together the projects fund different activities in the area of distributed computing infrastructures ranging from the provision of production environments, the development, maintenance and support of the middleware used in Europe, and the exploration of the provision and use of virtualised computing resources.

Due to the competitive nature of the funding model, many of these projects were developed in isolation in order to maintain confidentiality during the proposal phase and the European Commission required that each project has to establish how they plan to collaborate with each other (if at all) and what the results of those collaborations may be within the scope of the project, and the impact that there may be long-term within the community. In a first step, a JOINT COOPERATION REPORT (The "JCR")¹, was prepared and endorsed by all six DCI projects identifying possible interactions and areas of joint interest. In the report, it was stated that many of the projects expect to further define or formalize these interactions through a Memorandum of Understanding.

B. Purpose

S. Newhouse, A. di Meglio, A. Papaspyrou, D. O'Callaghan, J. Kovacs, and A. Manieri. Distributed Computing Infrastructure (DCI) Collaborative Roadmap. online at: https://documents.egi.eu/public/ShowDocument?docid=172, September 2010.

This MoU promotes the stability of the collaboration between the parties. It is meant as a follow-up of the JCR to further define joint actions and potential shared initiatives.

The MoU and collaboration is explicitly done in a non-exclusive basis, so the freedom of the parties is not limited. The collaboration is done in good faith and both parties will try to maximize the stability and collaborative possibilities. Both Parties will make sure that the mutual collaboration follows each party's rules and regulations as specified in their respective consortium agreements.

III. UNDERSTANDING

A MUTUAL INTERESTS AND PLANNED ROLES OF PARTIES

Both PARTIES have a mutual interest in supporting each other in their goal to deploy cloud computing services for European user communities related to their project specific environments.

StratusLab and VENUS-C share a common interest in cloud computing. As stated in the JCR, the PARTIES will collaborate on exchanging user and development experiences between the two projects. In particular,

1. VENUS-C aims to deploy scientific workloads both on IaaS and PaaS offerings and StratusLab is interested in the usage requirements and user experience on the IaaS approach. VENUS-C will encourage its users and administrators to provide feedback to StratusLab.

Contact persons:

• VENUS-C: Gian Uberto Lauri, gianuberto.lauri@eng.it

• StratusLab: Marc-Elian Begin, meb@sixsq.com

Rafael Moreno, rmoreno@dacya.ucm.es

2. Some partners of VENUS-C plan to evaluate and install OpenNebula as an IaaS solution and OpenNebula is one of the core components of the StratusLab project. Therefore, the PARTIES will share their experiences related to installation, performance and use of OpenNebula.

Contact persons:

• VENUS-C: Gian Uberto Lauri, gianuberto.lauri@eng.it

Zeeshan Ali Shah, zashah@pdc.kth.se

• StratusLab: Javier Fontan, ifontan@fdi.ucm.es

Ignacio M. Llorente <u>llorente@dacya.ucm.es</u>

3. VENUS-C is planning to develop a data management solution for the VENUS-C that is SNIA CDMI compliant. CDMI standard is nicely complementing the OCCI. Having the infrastructures of both projects inter-operable on the interface level would allow StratusLab infrastructure to get more application scenarios and provide VENUS-C users with access to more back-ends.

Contact persons:

VENUS-C: Ilja Livenson, <u>ilja.livenson@gmail.com</u>

Hakan Soncu, Hakan.Soncu@microsoft.com

• StratusLab: Charles Loomis, loomis@lal.in2p3.fr

4. Some partners of VENUS-C plan to develop storage services on the IaaS approach and StratusLab is interested in the storage service solutions which can be interoperable with StratusLab distribution. StratusLab will investigate the solution provided by VENUS-C and VENUS-C will share its experiences regarding to storage services with StratusLab.

Contact persons:

VENUS-C: Zeeshan Ali Shah, <u>zashah@pdc.kth.se</u>
StratusLab: Charles Loomis, <u>loomis@lal.in2p3.fr</u>
Eduardo Huedo enuedo@fdi.ucm.es

 Some of StratusLab's benchmarks are deployments of full systems (like workflow and MPI) and may be of interest also at a PaaS-level. VENUS-C will investigate these to decide whether they are good candidates for higher-level APIs in the VENUS-C system.

Contact persons:

• VENUS-C: Gian Uberto Lauri, gianuberto.lauri@eng.it

Zeeshan Ali Shah, zashah@pdc.kth.se

• StratusLab: Mohammed Airaj, airaj@lalin2p3.fr

6. VENUS-C and StratusLab has been developing solutions for the accounting according to their own needs and their solutions are both based on OGF's UR and RUS. The PARTIES can share their experiences and solutions in that area.

Contact persons:

VENUS-C: Paolo Fabriani, <u>paolo.fabriani@eng.it</u>
StratusLab: Vangelis Floros, <u>efloros@grnet.gr</u>

B General

- 1. This MoU sets forth the current intentions of the parties with respect to the activities described herein, but in no way gives rise to any legal obligations and does not create legally enforceable rights or obligations for any Party, other than the obligations set forth in this Section B.
- 2. The MoU is established between VENUS-C and StratusLab on a consortium level, so it is not limited to any single consortium member nor does it impose any specific action to any single consortium member
- 3. There will be named liaison persons from each party to allow coordination and planning of the further steps.

- 4. It is agreed between parties that Press Releases related to the collaboration will be handled together in the collaborative and suitable manner for both parties benefit.
- 5. Both parties are willing to make this MoU public.
- 6. This MoU expires at the end of the support period for StratusLab or VENUS-C whichever comes first. The foreseen date for the end of both projects is May 31, 2012. This MoU may be terminated earlier by either party for any reason, subject to a 30 day notice, which may be through email to the appropriate consortium coordinator of the other party.

This MoU has been signed by the PARTIES in two identical copies of which each party has taken one.

September 20, 2011

Andrea Manieri

(VENUS-S Project Director)

Allouien-

Charles Loomis

Cloud & To

(Stratuslab Project Director)