

Helix Nebula Initiative & PICSE: Enabling a Dynamic Cloud Ecosystem in Europe

Over 50 managers, cloud providers, policy makers, procurers and researchers dealing with the adoption of cloud computing gathered recently for the workshop “Enabling a Dynamic Cloud Ecosystem”. The event was hosted by the European Space Agency, ESA ESRIN in Frascati, Italy and organized by the *Helix Nebula Initiative* - HNI (www.helix-nebula.eu) and the newly-launched project, *Procurement Innovation for Cloud Services in Europe* - PICSE (www.picse.eu), both supporting the uptake of cloud computing in Europe.

Bob Jones, of CERN and co-/coordinator of the Helix Nebula Initiative and of the PICSE project, opened the event highlighting the achievements of HNI towards enabling a cloud productive environment in Europe. Given the end of the HNI pilot phase, he stressed the importance of ensuring that the original objectives can be met. The progress towards meeting those objectives was summarized in the recently-published *Strategic Plan for a Scientific Cloud Computing Infrastructure for Europe: Three years on* stating that:

“The Helix Nebula consortium’s enthusiasm and motivation have facilitated the shift from a ‘cloud active’ to ‘a cloud productive’ phase, to seize new opportunities and challenges. The partnership continues its commitment to offer an open, secure and trusted Cloud Computing Infrastructure for European science, businesses and society, and to become a leader in a highly competitive global market.”

It was further highlighted that, moving forward, one important priority for HNI is to open up the European federated cloud marketplace to a wider number of suppliers – currently around 30 commercial and publicly funded cloud service providers are part of it – such that demand-side organizations in future can benefit from an even broader portfolio of cloud services. A marketplace needs to guarantee transparency. To achieve this, Helix Nebula has set up several task forces which are identifying ways to accelerate take-up criteria and selecting candidates for an independent, neutral broker. The event was also the opportunity to illustrate the new governance rules of the initiative to stimulate the engagement of new members. In the last six months four new members have joined the initiative (three cloud service providers from the supply-side and one public research organization from the demand-side):

- DataCentred: A UK-based Cloud and data centre provider using Open Source (OpenStack/Ceph), providing cloud resources to support the research community, government and commercial customers in Europe (<http://datacentred.co.uk/>);
- DEAC: A leading full-service data center and cloud computing operator located in the Baltics. It provides a full range of managed IT, data center and cloud computing services, tailor-made IT solutions, as well as a communications and infrastructure platform on Eurasia scale. DEAC owns two data centers in Latvia, has points of presence in major cities of Europe – Frankfurt, London, Amsterdam and Moscow - and its operations are run according to ISO 9001 and ISO 27001 quality standards (<http://www.deac.eu>);
- Prologue: A software editor and service provider in the fields of cloud computing, dematerialization, IP communications, virtualization, and application engineering. Mainly present in France, Spain, and North America, Prologue has a long-established history as a supplier of business application development tools and platforms for various market segments (administration, health, finance, real estate, banking,...), as well as significant experience in the development of cloud computing brokerage tools as defined by the NIST reference architecture (<http://www.prologue.fr/en/>);
- The European Synchrotron Radiation Facility (ESRF): One of the most powerful synchrotron radiation source in Europe. A synchrotron is a machine the size of a stadium that produces beams

of bright X-ray light. Only four synchrotrons worldwide are similar in design and power to the ESRF (<http://www.esrf.eu/>).

With the PICSE project holding its launch event, a topic on everyone's lips was the procurement of cloud services. PICSE has come about thanks to work carried out during the HNI pilot phase, which demonstrated that cloud services are suitable for many scientific workloads performed by public research organizations which are thus now prepared to consider procuring commercial cloud services on a significant scale.

Funded by the European Commission's Horizon 2020 programme, PICSE will set up a European Procurers' Platform, capable of raising the level of understanding of the issues surrounding procurement of cloud services, based on a set of procurement use cases from the science domain. PICSE will develop a simpler innovative procurement model for public national and international research organizations, and will set out a realistic roadmap for cloud procurement over the next five years. PICSE aims to become the Central Point for the Public Sector Pre Commercial Procurement (PCP) and Public Procurement of Innovation (PPI) community. The project started at the beginning of October 2014 and is run by three Helix Nebula members (CERN, CSA and Trust-IT services).

During the event, an example of a Pre-Commercial Procurement initiative was presented by Linda Strick, of Fraunhofer FOKUS and coordinator of the EC-funded Cloud for Europe project (www.cloudforeurope.eu). Linda explained that Cloud for Europe can be considered an instrument to boost cloud adoption in the public sector. Pre-commercial procurement, that is the procurement performed by the public sector of Research and Development from several suppliers in parallel to develop new solutions, can be a way to simplify the adoption of cloud computing by the public sector. The public sector can define the specifications together with the suppliers, performing a pre-procurement market consultation, and then buy the services they need in an easy way.

The event closed with a panel discussion involving members of the supply side, the demand side and the European Commission and resulted in the following recommendations:

- In approaching the procurement of cloud services, a good practice for organizations new to this kind of activity is to start with a pilot scheme. This pilot scheme could be a pre-commercial procurement action or a procurement of a representative amount of cloud services.
- Administrative barriers to procurement of cloud services still remain, with a very fragmented legal framework existing. "Nations still build their own cloud instead of looking for an existing compliant solution, due to the different country regulations", says Linda Strick.
- Procurers, and all actors involved in the procurement of cloud services, need to be educated on the procurement best practices and on the different opportunities available to start procuring cloud services (e.g. the next ICT 8 call Boosting public sector productivity and innovation through cloud computing services).

Relevant Links:

www.helix-nebula.eu

www.picse.eu

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/9081-ict-08-2015.html>