

Towards Pan-European Cloud Services

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1. Summary

Cloud services really make users the choosers by using the services they want, in easy and often economically attractive manner. European NRENs (National Research and Educational Network) have recognized the need for a common, systematic approach to cloud services, and have joined forces in the GÉANT4 Clouds activity. This paper gives an overview of the challenges and possibilities associated with cloud services in research and education, and how the European NREN community is responding to these. It outlines the result of the NREN collaboration through GÉANT so far, specifically addressing the ongoing procurements and its implications and benefits for a wide number of European R&E institutions.

2. Working together empowers our position toward vendors

Cloud services really make users choosers. They empower users to select and use the services they want, in an easy and often economically attractive manner. Research and education organizations can become more agile and provide their users with a wider range of relevant IT services. Cloud services offer great potential but also pose challenges. Research and education institutions as a rule need to know that their data are secure. Procurement regulations and billing are factors that complicate the use of commercial cloud services as well as the growth of “shadow IT” where the IT department is bypassed by users.

European NRENs have recognized the need for a common, systematic approach to cloud services, and have joined forces in the GÉANT4 Clouds activity. The NRENs are working together to aggregate demand and work with vendors in a community effort to bring cloud services to European research and higher education. The goal is ambitious; to deliver cloud services that meet the requirements of the sector to institutions across Europe, and to establish a delivery ecosystem for such services that can keep feeding new services to the community in the years to come.

The initial work was done in previous project (GÉANT3plus) where the team has worked with the NRENs to set common set of goals to be achieved through negotiation process with the commercial vendors. A number of documents were prepared and released and one of the most important is the *Indicative list of requirements for CSPs* (Cloud Service Providers) that on one side harmonizes the list of requirements between the NRENs, and on the other side shows a baseline of joint requirements to the vendors. This step resulted in a number of vendors applying for the self-assessment based of this document that shows their commitment toward community needs and lists that clearly in the now published GÉANT Cloud catalogue.

Following this achievement the team decided to move to the next step: to make a joint procurement for the cloud services. The first area of cloud services to be handled by the activity is Infrastructure as a Service (IaaS). Six of the NRENs are working specifically to do a European tender for IaaS services that will make the procurement of cloud services easier for institutions. Major international IaaS providers have been approached and have expressed their interest. Now the tender is in progress, and NRENs and universities can expect to benefit from the results in the summer/autumn of 2016.

During this year GÉANT Clouds team will continue work together with interested institutions and all major cloud vendors from Europe and beyond to prepare new services beyond IaaS tender. This

approach opens possibility to work on to work on other services to provide direct discounted access for research and education users all across Europe without need to do formal procurements, but also to investigate which services are most attractive to our potential users on a larger scale and to prepare future procurements for those services.

The benefits of the joint approach are numerous, but one of the most important is the ability to share knowledge between members of the European NRENs family, which generally lacks experts in the procurement field. And the possibility to approach commercial vendors together already showed its strength, since it was already possible to achieve agreements that a single NREN or a smaller group of NRENs could not achieve. The work in that direction is continuing and it looks very promising.

3. AUTHORS' BIOGRAPHIES

Branko Radojević has worked as Deputy CEO at CARNet since 2005, and is leading the computer & data infrastructure team in CARNet. He has more than 20 years of experience in managing information systems in academic, research and education area. Since 2007 he gained a lot of international experience through the work in GÉANT 2, 3, 3plus and now in GÉANT 4. He is currently leading the Service delivery efforts that includes vendor management and cloud brokerage though the work in GÉANT 4.

Andres Staijert is a Program Manager at SURFnet since 2001, and a initiator and member of the SURF-taskforce Cloud where he coordinates and contributes to the SURF cloud first strategy and support higher education and research organizations in their joint adoption of the cloud. Since 2013 he is leading the GÉANT Cloud team with primary objective of ensuring that the research and higher education community in Europe is optimally positioned to benefit from cloud computing and cloud services. GÉANT Cloud team works on cloud strategy, standards, interoperability, cloud brokerage, vendor management and cloud integration.

Lars Fuglevaag has worked as Head of Communications at UNINETT since 2008, and is leading the team for communications and customer relations in the service department of UNINETT. He has close to 30 years' experience within marketing and communications in both the public and private sector. He has substantial international experience through the NORDUnet communications group, the TF-CPR task force and the GÉANT PR Network, and is currently work package leader for communications and NREN support in the GÉANT Clouds Activity (GN4 SA7 Task 4).