

Insideview

Frankfurt Cloud

INTERVIEW WITH ROLF RIEMENSCHNITTER (DEUTSCHE BANK AG) AND PROF. DR. CLEMENS JOCHUM (GOETHE UNIVERSITY FRANKFURT)



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The Frankfurt Cloud went live in October 2010. Since then, multiple projects have been initialized to leverage the resources of the Cloud. What is the purpose of the initiative?

Riemenschmitter: Cloud concepts such as standardization, virtualization and automation are already used successfully by companies to optimize internal IT infrastructures, up to the development of internal clouds. The expansion of this concept beyond the company boundaries, however, is found very rarely. The objective of the Frankfurt Cloud Research Community is to test the concept under real conditions and explore solutions for the various unsolved questions currently limiting a broader expansion of Cloud computing. This includes security, legal and

regulatory issues, technical aspects such as capacity management and load balancing, as well as commercial questions as, e.g., charging and pricing models.

The Frankfurt Cloud community covers multiple research domains. Could you give examples of typical research use cases being supported by the Cloud?

Jochum: In business economics, typical use cases are computing intensive simulations of mathematical and statistical models, e.g., for the evaluation of price preferences of clients and the definition of optimal pricing structures. Other use cases enabled by the Frankfurt Cloud include the analysis of extensive data volumes from social networks and model simulations to better understand climate change processes.

What is the technical setup of the Frankfurt Cloud and how will it evolve meeting the requirements of the Cloud user community at Frankfurt University?

Jochum: We have started with an initial infrastructure consisting of 8 blades with 48 GB RAM and 2 CPUs per blade. This setup has turned out to be extremely stable, serving a heterogeneous application environment. The Cloud offering is very well received with increasing demands from our user community, which con-

sists of different research projects across the Frankfurt University. To enable the on-boarding of further users as well as the introduction of additional Cloud services, e.g., web and database services, we will double the cloud capacity by the end of the 1st quarter 2011.

The university data center already provides a large amount of computing power. What is the additional advantage of having the Frankfurt Cloud?

Jochum: The Frankfurt Cloud provides additional computing resources which can be quickly allocated and scaled up and down in line with actual user requirements. As resources are shared, users need not invest in additional hardware anymore in order to ensure they have enough capacity for load peaks. Due to the easy access via an online self service portal, the Cloud is open to a wide user community – no special IT expert knowledge is required to become a Cloud user.

From an individual researcher's point of view: What is the advantage of having access to the Frankfurt Cloud?

Jochum: The allocation process of computing resources required for specific research projects gets shortened from months to minutes. In the traditional model, a researcher first needs

to ensure the funding, e.g., via an institution like the Deutsche Forschungsgemeinschaft (DFG). Then the researcher has to order the hardware, have it installed in the university's data center and finally needs to install the software. In the Frankfurt Cloud, he or she just needs to get access to the Cloud via the Cloud controller self service portal – including a short instruction via phone – and then will be able to allocate a virtual machine within 10 minutes.

In general, how do you expect Cloud computing to develop in the future and how can the Frankfurt Cloud contribute?

Riemenschmitter: In the next years, the promised benefits of Cloud computing will become more and more tangible. However, the success of the concept is highly dependent on how Cloud providers and users work together to create and promote standards, common approaches, as well as develop solutions for known issues such as security and data privacy. In this process, initiatives like the Frankfurt Cloud play an important role. Here, we can test and explore the opportunities as well as limitations of the concept under real conditions and develop solutions for open issues.

Thank you for this interesting conversation.

Further information on the Frankfurt Cloud can be found at: www.frankfurt-cloud.com