

Program

5th Cloud Control Workshop

Mölle, Sweden
August 20 – 22, 2014

The program includes 5 discussion sessions planned for discussing different topics in parallel. Whenever we find additional topics that would be of interest to include or when there is an interest to extend a discussion topic with another session, please contact Erik Elmroth.

We also remark that the place in the agenda for some discussion sessions are still only preliminary and depend on when some key people are available.

Finally, appointed discussion leaders are encouraged to read the “Instructions to discussion leaders” at the workshop web-site.

Wednesday August 20

10.30 – 12.00 Session 1: Workshop opening

Chair: Erik Elmroth

Workshop background and objectives & Program

Round-table presentation of participants

Local hosts' welcome & practicalities

Maria Kihl & Karl-Erik Årzén

Warm-up discussion: *What are the key research challenges in Cloud Control?*

12.00 – 13.00 Lunch

13.00 – 15.15 Session 2

Chair: Maria Kihl

Linking HPC, Cloud and Data-analytics Workload in a Federated Infrastructure (30)

Ramin Yahyapour, Georg-August University of Göttingen, Germany

BwMan: Bandwidth Manager for Elastic Services in the Cloud (30)

Vladimir Vlassov, Royal Institute of Technology, Stockholm, Sweden

Experimental Performance Evaluation of Cloud Autoscaling Systems (15)

Ahmed Ali-EIDin, Umeå University, Sweden

Discussions (60 min) in parallel sessions:

- Managing distributed cloud applications (Calin Curescu)
- Capacity autoscaling – what are the real future challenges? (Ahmed Ali-EIDin)

15.15 – 15.45 Coffee

15.45 – 17.30 Session 3

Chair: Geir Horn

Clouds and big data: between efficient datacentres and demanding users (30)

Alexandru Iosup, TU Delft, Netherlands

On the Convergence of Scheduling for Cloud Datacenters and Academic Compute Resources (15)

Gonzalo Rodrigo, Umeå University, Sweden

Discussions (60 min) in parallel sessions:

- Software Defined Networks (SDNs) in the cloud context (Ramin Yahyapour)
- Service differentiation and SLA/SLO management for clouds (Johan Eker)
- Continued discussions from other sessions or other proposed topics

19.00 Dinner

Thursday August 21

8.00 – 9.30 Session 4

Chair: Tor Skeie

How Should Next Generation Utility Computing Infrastructures Be Designed to Solve Sustainability and Efficiency Challenges? (20)

Jonathan Rouzaud-Cornabas, INRIA, Lyon, France

Energy Efficient Software Design (20)

Django Armstrong, University of Leeds, UK

Energy-aware Cloud Management through Progressive SLA Specification (20)

Dražen Lučanin, Vienna University of Technology, Austria

Contextual Communication (20)

Johan Kristiansson, Ericsson Research, Luleå, Sweden

9.30 – 10.00 Coffee

10.30 – 12.30 Session 5

Chair: Karl-Erik Årzén

Constrained programming for mapping and allocation problems (30)

Krzysztof Kuchcinski, Lund University, Sweden

Scenario Theory (15)

Alessandro Papadopoulos, Lund University, Sweden

Discussions (75 min) in parallel sessions:

- Constraint programming for resource allocation problems in clouds (Krzysztof Kuchcinski)
- Power-aware techniques for optimizing cloud management (Django Armstrong)

12.30 – 13.30 Lunch

13.30 – Flexible ending

Social activities (presented during workshop)

19.00 Dinner

Friday August 22

8.00 – 9.30 Session 6

Chair: Johan Eker

Mobility Management in Mobile Cloud Computing Systems (30)

Christer Åhlund, Luleå University of Technology, Sweden

Simulating the Omnipresent Cloud (15)

William Tärneberg, Lund University, Sweden

Discussions (45 min) in parallel sessions:

- Data mining, big data and statistics. Applications to Dynamic Data. (Oleg Seleznev)
- Brainstorming about future grant proposals topics
- Continued discussions from other sessions or other proposed topics

9.30 – 10.00 Coffee

10.00 – 12.00 Session 7

Chair: Per-Olov Östberg

Divide the Task, Multiply the Outcome: Cooperative VM Consolidation (15)

Mina Sedaghat, Umeå University, Sweden

Performance-Based Service Differentiation in Clouds (15)

Ewnetu Bayuh Lakew, Umeå University, Sweden

Early Detection of Workload Spikes (15)

Amardeep Mehta, Umeå University, Sweden

Discussions (75 min) in parallel sessions:

- Decentralized approaches to cloud datacenter management (Vladimir Vlassov)
- Simulators for the (Infinite/omnipresent/telco/mobile) cloud (William Tärneberg & Jakub Krzywda)
- Continued discussions from other sessions or other proposed topics

12.00 – 13.00 Lunch

13.00 – 14.30 Session 8: Workshop closing

Chair: Erik Elmroth

Summary and opportunity for decisions regarding any follow-up activities.

Short information and discussion about upcoming workshop.