



Action IC0804

Energy Efficiency in Large Scale Distributed Systems
Thessaloniki, Greece
7th-8th November 2011

Monday, November 7th, 2011

8:45 Welcome to participants / Registration

9:00 Introduction by Jean-Marc Pierson, Chair of the Action (10mn)

9:10 Working Group 2: Characterization of energy consumption and energy efficiency

- Introduction, Alberto E. Garcia, Karin A. Hummel, WG2 Chairs (5mn)

9:15 - 'Smart I.H.U-Towards energy management of data networks and networks of things'

, Dr. G. Koutitas*, Mr. Ath. Stavropoulos, Dr. A. Tsioliariidou, , prof. A. Vakali, prof. I. Vlahavas, Dr. D. Vrakas.

09:45 - "Privacy Risks for Virtual Machines in a Cloud using DVFS" , Helmut Hlavacs, Thomas Treutner*; University of Vienna

10:15 - "Characterization of hardware and software energetic behavior using vector algebra, and expressing complexity of a software as a vector-valued function", Davide Morelli* (and Paolo Ferragina), Computer Science in Pisa (Univ. of Pisa)

10:45 Break

11:15 - "Characterizing applications from power consumption", Georges Da Costa, Jean-Marc Pierson, IRIT, France

11:45 - "CoolEmAll - modeling and simulation of data center energy-efficiency" - Ariel Oleksiak

12:15 Lunch

13:45 Working Group 1: State of the art and continuous learning of hardware adaptation possibilities

13:45 Presentation of the WG1 Brochure on "Hardware Leverages for Energy Efficiency in Large Scale Distributed Systems", Georges Da Costa, Davide Careglio, WG1 Chairs (5mn)

13:50: Presentation of Sergio Ricciardi: "Energy-oriented networking devices and protocols"

14:00 : Brainstorming on the Future of the Brochure

14:15: Working Group 3: Adaptive actions for distributed systems

- Introduction, Laurent Lefèvre, Hermann deMeer, WG3 Chairs (5mn)

14:20 - "Energy Efficient Task Allocation over Mobile Networks", Carmela Comito, Deborah Falcone,



Domenico Talia, Paolo Trunfio, Italy

14:50 : - "Optimal Tradeoff Between Energy Consumption and Response Time in Large-scale MapReduce Clusters", Anastasios Gounaris, faculty with the Aristotle University of Thessaloniki, Greece

15:20 - "Reserved or On-Demand Instances? A Revenue Maximization Model for Cloud Providers", Michele, Mazucco, Estonia

15:50 – (10mn) "Review of Energy-Electricity Cost Reduction Approaches in Distributed Data Centers" Huseyin Guler* (Koc University, Istanbul, Turkey), B. Barla Cambazoglu (Yahoo! Research, Barcelona, Spain), Ozgur Ozkasap (Koc University, Istanbul, Turkey)

16:00: Invited COST Action (15mn) : Michael Salampasis: COST Action - IC1002 Multilingual and multifaceted interactive information access (MUMIA)

16:15 Break

16:30 – 19:00: Management Committee meeting

Tuesday, November 8th, 2011

09:00: Working Group 3: Continuation - Adaptive actions for distributed systems

09:00: "Performance Tradeoffs of Energy-Aware Resource Allocation", Andreas Berl , Univ Passau, Germany

09:30 - "Co-scheduling CPU/GPU", Georges Da Costa, IRIT, France

10:00 - Break

10:30 - "Towards Increasing Energy Efficiency by Incorporating VM Resource Allocation and VM Placement on Cloud Computing Infrastructures", Michael Maurer, Vienna, Austria

11:00 - "Saving Energy by Powering Down Links", Fernández Anta Antonio Institute IMDEA Networks, Madrid, Spain

11:30 Focus Group on Green Wireless

Introduction to the FG : Karin A. Hummel and Rastin Pries

11:30 - "The effects of WiFi off-loading access on energy consumption and emissions in 3G / LTE wireless networks, and derived "green tariff" issues", L-F Pau, Prof. Mobile business, Copenhagen Business School, and Rotterdam school of management, and Vodacom chair professor, GIBS,

12:00 - "Reliable and Energy-Efficient Data Delivery in Sparse WSNs with Multiple Mobile Sinks", Giuseppe Anastasi, University of Pisa, Italy

12:30 - Discussions

13:00 Lunch

14:00 Focus Group on Energy and QoS-aware Workload Management in Clouds

Introduction to the FG : Ivona Brandic and Eugen Feller.

14:00: "Application based cloud monitoring", Toni Mastelic

14:30: "Energy-aware ant colony based workload placement in clouds", Eugen Feller

15:00: "Self-management of applications QoS for energy optimization", Frederico Alvares

15:30: "Autonomic computing to manage green core networks with quality of service: first results", Rémi Sharrock

16:00: Demonstration: Rémi Sharrock: "btrCloud"

16:30: Closure of meeting