

Preface

This volume contains the technical papers presented in the four high-quality workshops associated with ESOCC 2014 (European Conference on Service-Oriented and Cloud Computing, held in Manchester, UK, on September 2–4, 2014), focusing on specific topics in domains related to service-oriented and cloud computing: 4th International Workshop on Adaptive Services for the Future Internet (WAS4FI 2014), 2nd International Workshop on Cloud for IoT (CLIoT 2014), 2nd International Workshop on Cloud Service Brokerage (CSB 2014), and Seamless Adaptive Multi-cloud Management of Service-based Applications (SeaCloudS Workshop). There were a total of 39 submissions, from which 22 papers were accepted giving an acceptance rate of 56 %. The review and selection process was performed rigorously, with each paper being reviewed by at least three Program Committee (PC) members. Here, a brief description of each workshop is given.

WAS4FI aims to address different aspects of adaptive Future Internet applications, emphasizing the importance of governing the convergence of contents, services, things, and networks in order to achieve building platforms for efficiency, scalability, security, and flexible adaptation. The Future Internet has emerged as a new initiative to pave a novel infrastructure linked to objects (things) of the real world to meet the changing global needs of business and society. It offers Internet users a standardized, secure, efficient, and trustable environment, which allows open and distributed access to global networks, services, and information. To be consistently adopted, the Future Internet will be enabled through standards-based notations for messaging, semantics, process, and state, enabling distributed systems and entities to be described in a scalable and flexible robust dynamic environment. Future Internet applications will have to support the interoperability between many diverse stakeholders by governing the convergence and life cycle of Internet of Contents (IoC), Services (IoS), Things (IoT), and Networks (IoN). These applications should handle dynamic and continuous change and they should also bear in mind that the Future Internet should provide a better experience for the user journey, with personalized and context-aware contents, adapted to their preferences, and where users also play an active part in creating or sharing services. The first part of this volume comprises all the technical papers of WAS4FI 2014.

CLIoT focuses on the limits and advantages of existing cloud solutions for IoT, proposing original and innovative contributions for enhancing real-world resources over cloud environments. The Internet of Things (IoT) aims to represent the physical world through uniquely identifiable and interconnected objects (things), allowing interactions or generating events about them. Thus, information travels along heterogeneous systems, such as routers, databases, information systems, and the Internet. In turn, this leads to the generation and movement of enormous amounts of data which have to be stored, processed, and presented in a seamless, efficient, and easily interpretable form. In this regard, cloud computing represents a very flexible technology, able to offer theoretically unlimited computing and storage capabilities, and efficient

communication services for transferring terabyte flows between data centers. All these features make cloud computing a promising choice for supporting IoT services: the cloud allows to access IoT-based resources and capabilities, to process and manage IoT environments and to deliver on-demand utility IoT services such as sensing/actuation as a service. CLIoT also enjoyed an additional keynote talk by Orazio Tomarchio (University of Catania) entitled “A semantic framework for matching business requirements in cloud markets.” The second part of this volume comprises all the technical papers of CLIoT 2014.

CSB looks to a future in which a multi-cloud ecosystem exists, within which many cloud providers and consumers interact to create, discover, negotiate, and use software services. Supporting this ecosystem are cloud brokers, whose role is to bring together providers and consumers, by offering service portals with added value for all parties. A central feature of the brokers, role will be to assist with software service generation (from abstract models to platform-specific deployments), multi-cloud translation (model-driven adaptation and deployment of services), and assure quality control (governance; functional testing and monitoring), service continuity (failure prevention and recovery; service substitution), and market competition (arbitrage; service optimization; service customization). To promote the creation of this kind of ecosystem, it is necessary to develop common standards, methods, and mechanisms that will operate across a wide variety of platforms and infrastructure, and across disparate service protocols, which currently include: WSDL/SOAP-based services, RESTful services, and Rich Client/AJAX applications. The third part of this volume comprises all the technical papers of CSB 2014.

The objective of the SeaCloudS workshop is to discuss problems, solutions, and perspectives of the ongoing research activities aimed at enabling an efficient and adaptive management of service-based applications across multiple clouds. Deploying and managing in an efficient and adaptive way complex service-based applications across multiple heterogeneous clouds is one of the problems that has emerged with the cloud revolution. The current lack of universally accepted standards supporting cloud interoperability is severely affecting the portability of cloud-based applications across different platforms. SeaClouds also enjoyed an invited talk by Alex Heneveld (Cloudsoft) entitled “Going to CAMP via Apache Brooklyn,” a round table on multi-cloud interoperability, and a session devoted to presentations of ongoing EU research projects. The fourth part of this volume comprises all the technical papers of SeaCloudS workshop.

The program also included the shared opening keynote by Simon Moser (IBM) entitled “From TOSCA landscapes to the Foundry - A walkthrough.”

Special thanks go to the workshop organizers, as well as to the authors, keynote speakers, and participants. We also want to thank the main conference organizers for their support all along the process.

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