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Dependable Networks and Services

6th IFIP WG 6.6 International Conference
on Autonomous Infrastructure,
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Proceedings

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Preface

The International Conference on Autonomous Infrastructure, Management and Security (AIMS 2012) is a single-track meeting integrating conference paper sessions, tutorials, keynotes, and a PhD student workshop into a highly interactive event. The main goal of AIMS is to look beyond borders of current thinking and to stimulate the exchange of ideas across different communities and among PhD students.

AIMS 2012 took place during June 4–8, 2012, in Luxembourg, hosted by the Inter-disciplinary Center on Security and Trust (SnT), University of Luxembourg, and constituted the sixth edition of this conference series on management and security aspects of distributed and autonomous systems, after successful instantiations in Oslo, Norway, 2007, Bremen, Germany, 2008, Enschede, The Netherlands, 2008, Zürich, Switzerland, 2010, and Nancy, France, 2011. This year, AIMS 2012 focussed mainly on the topic of dependable networks and services, with particular attention to security and monitoring aspects.

This year, the single-track and five-day program proved especially suitable for stimulating the interaction with and the active participation of the conference's audience. The conference started with two days of tutorials, which offered hands-on learning experience in network and service management topics, especially on "Introduction to Content Centric Networking and the CCNx Framework," "Running a Cloud Computing Infrastructure with OpenStack," and "Using NfSen/NFDUMP Tools with Extension Plugins for Network Security Monitoring." The objective of the first tutorial was to introduce into key elements for better understanding of Content Centric Networks by means of practical exercises with the CCNx framework. The second tutorial demonstrated how to set up an OpenStack compute cloud and to work with it using the euca-tools package. Finally, the third tutorial explained how to use NetFlow tools to identify and analyze security threats by applying NfSen plugins for an advanced network data analysis.

Furthermore, AIMS continued with a keynote presentation delivered by Corrado Leita on challenges in critical infrastructure security. The second keynote presentation was given by Jiří Tobola and described the story of an academic R&D group from its foundations to the establishment of an IT spin-off being successful on the market for now and at least five years.

Four technical sessions of AIMS 2012, covering autonomic and distributed management, network security, network monitoring, and special environments and Internet of Things, included a total of ten full papers, which were selected after a thorough reviewing process out of a total number of 23 submissions, where the majority of papers received four independent reviews.

Furthermore, the AIMS PhD workshop was a venue for doctoral students to present and discuss their research ideas as well as, most importantly, to

obtain feedback from the AIMS audience about their planned PhD research work. This year, the workshop was organized into three technical sessions covering, high-speed networks and network management, intrusion detection, and network monitoring and security. Respective PhD papers included in this volume describe the current state of these investigations, including their research problem statements, investigation approaches, and an outline of results achieved so far. A total of nine PhD papers were presented and discussed, for each of which three independent reviewers per paper were used for the final selection out of 18 submissions.

The present volume of the *Lecture Notes in Computer Science* series includes the papers presented at AIMS 2012 and the overall resulting final program of AIMS 2012, demonstrating again the European scope of this conference series.

Therefore, the editors would like to thank those many people who helped to make AIMS 2012 such a high-quality and successful event. Firstly, the great review work performed by all members of the AIMS TPC and the PhD Workshop TPC as well as additional reviewers is highly acknowledged. Many thanks also go to the tutorial and keynote speakers, namely, Thibault Cholez, Anuj Sehgal, Pavel Čeleda, Corrado Leita, and Jiří Tobola. Furthermore, many thanks are expressed to the local organizers Magali Martin, Jérôme François, and Thomas Engel for their support. Additionally, the editors would like to address their thanks to Springer for a very smooth cooperation on finalizing these proceedings.

Quiet thanks go in memoriam to our highly valued colleague, friend, and research partner Ing. Jiří Novotný, who started with us careful preparations for AIMS 2012, plans for AIMS 2013—ideally in Brno—and who worked with the AIMS team for a great event to come. However, he was not given the chance to be with us for neither the proceedings preparations nor the event as such. Thank you for everything, we will never forget, and God bless you.

April 2012

Ramin Sadre
 Jiří Novotný † in memoriam
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