

Daphne Tuncer · Robert Koch
Rémi Badonnel · Burkhard Stiller (Eds.)

Security of Networks and Services in an All-Connected World

11th IFIP WG 6.6 International Conference
on Autonomous Infrastructure, Management, and Security, AIMS 2017
Zurich, Switzerland, July 10–13, 2017
Proceedings

Contents

Security Management

- Making Flow-Based Security Detection Parallel 3
Marek Švepeš and Tomáš Čejka
- A Blockchain-Based Architecture for Collaborative DDoS Mitigation
with Smart Contracts 16
*Bruno Rodrigues, Thomas Bocek, Andri Lareida, David Hausheer,
Sina Rafati, and Burkhard Stiller*
- Achieving Reproducible Network Environments with INSALATA 30
*Nadine Herold, Matthias Wachs, Marko Dorfhuber, Christoph Rudolf,
Stefan Liebald, and Georg Carle*

Management of Cloud Environments and Services

- Towards a Software-Defined Security Framework for Supporting
Distributed Cloud 47
*Maxime Compastié, Rémi Badonnel, Olivier Festor, Ruan He,
and Mohamed Kassi-Lahlou*
- Optimal Service Function Chain Composition in Network
Functions Virtualization 62
*Andrés F. Ocampo, Juliver Gil-Herrera, Pedro H. Isolani,
Miguel C. Neves, Juan F. Botero, Steven Latré, Lisandro Zambenedetti,
Marinho P. Barcellos, and Luciano P. Gaspary*

Evaluation and Experimental Study of Rich Network Services

- An Optimized Resilient Advance Bandwidth Scheduling for Media
Delivery Services 79
Maryam Barshan, Hendrik Moens, Bruno Volckaert, and Filip De Turck
- The Evaluation of the V2VUNet Concept to Improve
Inter-vehicle Communications. 94
Lisa Kristiana, Corinna Schmitt, and Burkhard Stiller
- Towards Internet Scale Quality-of-Experience Measurement with Twitter. . . . 108
Dennis Kergl, Robert Roedler, and Gabi Dreo Rodosek

Short Papers: Security, Intrusion Detection, and Configuration

Hunting SIP Authentication Attacks Efficiently.	125
<i>Tomáš Jansky, Tomáš Čejka, and Václav Bartoš</i>	
MoDeNA: Enhancing User Security for Devices in Wireless Personal and Local Area Networks.	131
<i>Robert Müller, Marcel Waldvogel, and Corinna Schmitt</i>	
Flow-Based Detection of IPv6-specific Network Layer Attacks.	137
<i>Luuk Hendriks, Petr Velan, Ricardo de O. Schmidt, Pieter-Tjerk de Boer, and Aiko Pras</i>	
Towards a Hybrid Cloud Platform Using Apache Mesos	143
<i>Noha Xue, Hårek Haugerud, and Anis Yazidi</i>	
Visual Analytics for Network Security and Critical Infrastructures.	149
<i>Karolína Burská and Radek Ošlejšek</i>	
Preserving Relations in Parallel Flow Data Processing	153
<i>Tomáš Čejka and Martin Žádník</i>	

Ph.D. Track: Autonomic and Self-Management Solutions

SmartDEMAP: A Smart Contract Deployment and Management Platform . . .	159
<i>Markus Knecht and Burkhard Stiller</i>	
Optimizing the Integration of Agent-Based Cloud Orchestrators and Higher-Level Workloads	165
<i>Merlijn Sebrechts, Gregory Van Seghbroeck, and Filip De Turck</i>	

Ph.D. Track: Methods for the Protection of Infrastructure and Services

Situational Awareness: Detecting Critical Dependencies and Devices in a Network	173
<i>Martin Laštovička and Pavel Čeleda</i>	
A Framework for SFC Integrity in NFV Environments	179
<i>Lucas Bondan, Tim Wauters, Bruno Volckaert, Filip De Turck, and Lisandro Zambenedetti Granville</i>	
Multi-domain DDoS Mitigation Based on Blockchains	185
<i>Bruno Rodrigues, Thomas Bocek, and Burkhard Stiller</i>	
Author Index	191