

CALL FOR PAPERS

Special Issue of the International Journal on Network Management (IJNM) on

Software-Defined Operations

Publication: March-April 2016

Scope of the Special Issue

Software-defined infrastructure is revolutionizing the way telecommunication networks and large-scale data centers are built and operated. This revolution is driven by the fast-paced improvements of virtualization technologies and programmability interfaces addressing both network and compute resources. On the operations side, the patchwork of command-line interface (CLI) scripts is being replaced by complex configuration and performance management tools that expose application programming interfaces (APIs) for popular programming languages. This complements the admittedly slow development of standardized interfaces. This enables personnel that until now focused solely on development to be empowered to perform testing and operations tasks, giving birth to the DevOps movement. However, a significant number of research challenges remain to be addressed in order to enable wide-scale adoption and efficient operations of a software-defined infrastructure.

This special issue particularly welcomes papers that address research challenges spanning topics such as programmability of management tools, new operational models centered on agile development techniques, and generating and handling big data in a programmable manner for operations. Topics of interest include but are not limited to:

•Software-defined solutions for configuration, performance, fault and security management	•DevOps in software-defined infrastructure: scalability, usability, reliability challenges
•Languages, APIs and frameworks for programming combined resources (processing, network storage) in the infrastructure	•Real-time analytics and data-centric management of virtualized infrastructure
• Automated testing and verification, including automatic generation of test cases and support for infrastructure migration	•Business aspects of operating software-defined infrastructure: business modeling, OPEX and CAPEX evaluations
•Implementation, experimentation and deployment experiences from software-defined operations	• Evolution of the programmability of management functionality
•Large-scale continuous service delivery models	•Influence of software-defined operations on customer Quality of Experience
•Performance comparisons between different virtualization management solutions	•Evaluation of recursive architecture designs for network operations
•Analysis of performance impacts of virtualization overheads for both Virtual Network Functions and measurement tools	•Evaluation of new processes and models for operations (e.g. service reliability engineering, DevOps compared to traditional ITIL and eTOM)

Submission Guidelines

Authors should submit their papers in PDF format only to <http://mc.manuscriptcentral.com/nem>

Paper submissions should not exceed 20 pages. Author instructions are available at

[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1099-1190/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1190/homepage/ForAuthors.html)

and the respective LaTeX template can be found at

[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1099-1190/homepage/latex_class_file.htm](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1190/homepage/latex_class_file.htm)

All submissions will be peer-reviewed. In case of acceptance, the final and camera-ready version has to take into account comments of reviewers and needs to follow the template's requirements.

Important Deadlines

Submission Deadline: Aug. 31, 2015

Notification of Acceptance: Oct. 31, 2015

Final Version: Dec. 31, 2015

Publication: Mar.-Apr. 2016 Issue

Submissions in PDF format only to

<http://mc.manuscriptcentral.com/nem>

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