

# CALL FOR PAPERS

## *Special Issue of the International Journal on Network Management (IJNM) on “Flow-based Approaches in Network Management: Recent Advances and Future Trends”*

Publication: June, 2014

### Scope of the Special Issue

The continuous increase of line speeds and loads in modern computer networks has considerably stimulated the usage of aggregation-based monitoring techniques for network management in the past years. Amongst those, flow-based approaches have become extremely popular among researchers and operators due to the wide availability of hardware and software flow exporters and their quasi-standardized exporting formats, such as Netflow or IPFIX. While flow-based monitoring was originally used in simple diagnosing and accounting tasks, researchers are now proposing flow-based approaches for a wide range of application fields, such as intrusion detection, traffic classification, and resource management. New environments, such as Clouds or Software Defined Networks, demand for new flow-based solutions for their monitoring and management. Furthermore, we observe more and more attempts to close the gap between packet-based and flow-based monitoring. As the latter was originally proposed as an efficient and feasible alternative to deep packet inspection in high-speed networks, the most recent flow exporters allow enriching the exported flow data with application-layer information. It can be expected that this will lead to new approaches and solutions for network management problems.

The goal of this Special Issue is to present innovative flow-based approaches and solutions for network management tasks as well as new methods and technologies for the generation, processing and analysis of flow information. Therefore, this Special Issue of the International Journal on Network Management covers ongoing research on the usage of flow-based approaches, on the design and implementation of flow monitoring devices and infrastructures, and on the emerging trends in flow-based technologies and applications. Tutorial-style articles in these fields are also solicited, if they provide a structured introduction and a clear overview of state-of-the-art technologies, mechanisms, or architectures, and newly emerging challenges as well as problems.

Contributions in the following areas are of specific interest, but are not limited to:

- Flow-Based Accounting
- Flow-Based Intrusion and Anomaly Detection
- Flow-Based Problem Diagnosis
- Flow-Based Traffic Classification
- Flow-Based Monitoring of Applications and Services
- Usage of Flow Monitoring in Cloud Environments
- Flow-based Monitoring for Bandwidth Allocation
- Visualization of Flow Data
- Characterization of Network Traffic on Flow Level
- Hybrid Packet-Flow-Based Approaches
- Efficient Storage and Analysis of Flow Data
- Design and Implementation of Flow Monitoring Equipment and Infrastructures
- Future Trends in Flow Monitoring
- Interaction between IPFIX and SDN
- Special-purpose management scenarios

### Submission Guidelines

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

The paper submission should not exceed 20 pages (double-space). Author instructions are available at <http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291099-1190/homepage/ForAuthors.html>

and the respective LaTeX template can be found at

[http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291099-1190/homepage/latex\\_class\\_file.htm](http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291099-1190/homepage/latex_class_file.htm)

All submissions will be peer-reviewed. In case of an 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: October 31, 2013 (extended)

Notification of Acceptance: February 15, 2014

Final Version: March 15, 2014

Publication: June 1, 2014

Submissions in PDF format only to

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

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