Call for Papers

IEEE International Workshop on NEtwork Accelerated FunctIOns (NEAF-IO 2017)
(website: http://neaf-io17.neclab.eu/)

in conjunction with the 3rd IEEE Conference on Network Softwarization (NetSoft 2017)
July 3-7, 2017 Bologna, Italy

Scope

The IEEE International Workshop on NEtwork Accelerated FunctIOns (NEAF-IO'17) will be held on July 3-7, 2017 in Bologna, Italy along with the 3rd IEEE International Conference on Network Softwarization (NetSoft 2017, http://neaf-io17.neclab.eu/). Virtual software network functions (VNFs) enable easy scaling and on-demand provisioning. However, meeting the performance requirements of modern networks is hard when using (virtualized) software only. New VNFs could leverage the network itself to scale their designs to the required performance and reliability levels. For instance, load balancers could offload forwarding decisions to SDN devices based on OpenFlow. Novel technologies based on reconfigurable hardware, such as P4-based switches, can implement stateful forwarding algorithms, delegating to the switch functions that could not be programmed on legacy devices. Furthermore, a new generation of smart network interface cards (NICs) promise to introduce programmability also at the NIC level.

Topics of Interest

Given the above considerations, this workshop has the aim of openly discussing novel design methods and future trends that blur the demarcation line between the functions provided by the network and those provided by VNFs. The topics of interest include, but are not limited to:

- Extended interfaces for network programmability (both NBI and SBI)
- New approaches on which (control) functions to delegate to HW
- VNF design abstractions, methods and tools
- SmartNIC's interfaces and role in VNF design
- Switches and SmartNIC control and programming abstractions
- Coordinated management of network and VNFs
- Evaluation of benefits of delegating (control) functions to HW
- Performance measurements of VNFs
- Use cases and experiences in VNFs deployments

Special Workshop Format:

The goal is to allow an active discussion of the presented material. To achieve this, the authors of accepted papers are expected to present their work in a 20min talk which is then followed by a 25min discussion phase. In order to kick-start the discussion the authors are required to provide one or two slides with questions/statements on open issues, future work, validation of results, etc.

Paper Submission Guideline:

Authors are invited to submit only original papers (written in English) not published or submitted for publication elsewhere. Papers can be up to 4 pages. Papers should be in IEEE 2-column US-Letter style using IEEE Conference templates and submitted in PDF format via JEMS at: https://submissoes.sbc.org.br/home.cgi?c=2761. Papers exceeding these limits, multiple submissions, and self-plagiarized papers will be rejected without further review. All submitted papers will be subject to a peer-review process. The accepted papers will be published in the NEAF-IO Workshop 2017 Proceedings and appear in IEEE Xplore®.
Important Dates:

- Paper registration: March 20, 2017 (Firm deadline)
- Paper Submission: March 27, 2017 (Firm deadline)
- Notification of Acceptance: April 25, 2017
- Camera Ready Papers: May 8, 2017

Workshop Co-Chairs:

- Roberto Bifulco, NEC Labs Europe, Germany
- Fabian Schneider, NEC Labs Europe, Germany

Technical Program Committee:

- Gianni Antichi, Univ. Cambridge, UK
- Marco Bonola, Univ. Roma “Tor Vergata”, Italy
- Mathieu Bouet, Thales, France
- Carmelo Cascone, Politecnico Milano, Italy
- Dirk Kutscher, Huawei German Research Center, Germany
- Viktor Pus, CESNET, Czech Rep.
- Hans-Joerg Kolbe, DT, Germany
- Georgios Katsikas, KTH, Sweden
- Quentin Monnet, 6WIND, France
- Salvatore Pontarelli, CNIT, Italy
- Giuseppe Siracusano, Univ. Roma “Tor Vergata”, Italy