

Hot Topics in Middleboxes and Network Function Virtualization (HotMiddlebox 2016) in conjunction with Sigcomm 2016, Salvador, Brazil

Scope and topics of interest

Modern networks heavily rely on advanced in network processing for a wide spectrum of crucial functions ranging from security through traffic management, all the way to Voice over IP (just to name few). Until recently, these network functions were implemented in dedicated hardware “middleboxes” spread within the network. However, the strive to reduce cost and increase agility is motivating a major shift to a paradigm where software-based processing is done over virtualized, shared platforms built on commodity hardware servers, switches, and storage.

This trend towards virtualized middleboxes, called Network Function Virtualization, NFV, with the use of Software Defined Networks, SDN to control the network flows is gaining popularity in the telecommunication industry as well as in academia. Yet, this paradigm shift is at a very early stage and many interesting questions remain open in this regard. The HotMiddlebox workshop will serve as an avenue to showcase and discuss ongoing work in this space from both academia and industry and to identify key challenges and potential solutions, with the ultimate goal of providing a roadmap for practical deployment in operational networks.

We encourage the submission of work-in-progress papers in the area of (virtualized) middlebox design, implementation, measurement, management, deployment, as well as Internet architecture implications of middleboxes. We look for submissions of previously unpublished work on topics including, but not limited to, the following:

- Performance optimizations of network stacks on virtualized systems
- Verification of unknown code running on shared middlebox platforms
- Security issues regarding middleboxes
- Extensible software stacks for rapid implementation of new middlebox functions
- Mechanisms for migration of stateful middleboxes
- Resource allocation mechanisms for shared/virtualized middlebox platforms
- Integrating new software middleboxes into legacy networks
- Backend storage/memory architectures for middleboxes
- Management abstractions and policy language frameworks for middleboxes
- Experiences and best-practices in deploying software-based middleboxes in operational networks
- Deployment and use of middleboxes in the cloud
- Measurements of middleboxes in enterprise, ISP, and data center networks.
- Novel security, performance, and monitoring applications atop middleboxes
- Challenges for policy verification in the context of middlebox services.
- Internet architecture implications of middleboxes.

Submission Instructions

Submissions must be original, unpublished work, not under consideration at another venue. Each submission must be a single PDF file no longer than six (6) pages in length (in two-column, 10-point format) including references, following the provided [LaTeX style file](#). Papers should be submitted electronically via the submission site. Papers must include the author name and affiliation for single-blind peer reviewing by the program committee. Please upload your submissions to [the workshop submission page](#).

Accepted papers will be published in the ACM Digital Library. Publication at HotMiddlebox is not intended to preclude later publication. Authors of accepted papers are expected to present their papers at the workshop.

Important Dates

Abstract registration:	March 18
Submission:	March 25
Notification:	April 30
Camera ready:	May 15
Workshop Date:	Aug 22/26 (Salvador, ACM SIGCOMM)

Workshop Co-Chairs:

Dongsu Han, KAIST, Korea
Danny Raz, Bell Labs & Technion, Israel

Steering Committee:

Bob Briscoe, BT, UK
Christos Koliadis, Orange, USA
Sylvia Ratnasamy, Univ of California, Berkeley, USA
Vyas Sekar, CMU, USA

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