

Proposal to Speak at ONS 2016
Developer Stream
*End-to-End Orchestration of Multitier Clouds based on
Software-Defined Infrastructure*

Abstract: We propose to speak on how end-to-end orchestration is supported in the SAVI application platform testbed. SAVI has deployed a national testbed in Canada that explores the delivery of applications across a multitier cloud that spans core datacenters, a smart edge, and virtualized customer premise edges. The SAVI management system operates over OpenStack, OpenFlow, and other resource controllers to provide IAAS in support of applications. We will describe how to use the networking services provided in SAVI (including pro-active path setup, flow store, and tunneling for legacy networks) as well as its service chaining capability to enable end-to-end deployment of applications across a three-tier cloud. We will describe applications that have been deployed and briefly demo a couple of applications.

Target Audience: This talk is intended for developers and system designers who are involved in the design and deployment of orchestration in environments that involve cloud computing and SDN. We will share our approach and our experience in deploying and operating a testbed that includes OpenStack and OpenFlow.

Betterment of LINUX and Open Source Ecosystem:

We will present a novel open-source and Linux-based SDI Management system that is deployed on a national Testbed in Canada to allow deep software programmability of different type of resources in such a system.

Dr. Hadi Bannazadeh
SAVI Chief Testbed Architect,
University of Toronto

Hadi Bannazadeh received his PhD in 2010 from the University of Toronto's Department of Electrical & Computer Engineering. After graduating, he worked at Cisco Systems as a Senior Network Software Engineer. In 2011, he returned to the University of Toronto to lead the efforts towards the creation of Canadian national testbed as part of the Smart Applications on Virtual Infrastructure (SAVI) research project. Since then, he has been the Chief Testbed Architect for the SAVI project. Hadi's main research interest is in the field of Software Defined Infrastructure (SDI) including Software Defined Networking (SDN) and Cloud Computing.

Prior to beginning the University of Toronto's PhD program, Hadi was first employed as a Software Engineer and then as a Software Architect for Iran Telecomm Research Center and Iran Communications Industries Inc. where he contributed to the design and development of a large scale telecomm switching system. Dr. Bannazadeh received his MASc and BAsC from Amir Kabir University of Technology (Tehran Polytechnic), Tehran, Iran in 2001 and 1998 respectively.