

## **Title: Self-Generated Intent-Based System**

### **Abstract:**

Recently, intent and Intent-Based Networking (IBN) concepts have created enormous interest in academia and industry, although the idea is not original at all. In fact, in 2015, the concept of IBN has been presented in RFC 7575 and proposed as a new network management framework in OpenDaylight Network Intent Composition. The idea behind these concepts is to allow the user and the operator to express their intentions (i.e., a desired state or behavior) without the need to specify every technical detail of the process and operations to achieve it. The IETF Network Management Research Group (NMRG) has already submitted three "work in progress" Internet-Drafts about the topic. In their active work, they define the concept and they give an overview of Intent-based networking, a classification of different intents, and they propose a framework of intents.

In this demo, we present a new approach where the intent is not only generated by the end-user, the application, or the operator but also by the system itself. In fact, for Quality of Service (QoS) purposes, the system can itself detect network improvements and expresses them through intents. We demonstrate the feasibility of such an approach under a flexible testbed based on mininet, OVS switches, and the ONOS OpenFlow controller.