Kytos SDN Platform

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Kytos SDN Platform is the fastest way to deploy an SDN Network. With this you can deploy a basic OpenFlow controller or your own controller. Kytos was designed to be easy to install, use, develop and share Network Apps (NApps). Kytos is incredibly powerful and easy, its modular design makes Kytos a lightweight SDN Platform. Moreover, it has strong tights with a community view, so it is centered on the development of applications by its users. Thus, our intention is not only to build a new SDN solution, but also to build a community of developers around it, creating new applications that benefit from the SDN paradigm.

The Kytos project works as an umbrella for a multi-component architecture, in which any of the component is interchangeable. That means that adopters of this project are free to replace any of its components with a customized version or a whole new component.

The core components inside this architecture are: (a) a library for parsing OpenFlow messages; (b) a controller to provide a state machine which implements the OpenFlow protocol, and also delivers a communication mechanism that allows apps to communicate with each other; and (c) a set of core applications that allows any systems administrator to deploy a (basic) SDN based infrastructure, providing communication between nodes, monitoring capability and an administrative interface that allows one to visualize the network topology and to deploy flows.

The goal of this Lightning Talk is to present the recent developments on the Kytos Project as a base for the deployment and usage this new SDN Platform.

NOTE: We also accept to make a poster from this presentation, if the organization asks.

Short Bio (Beraldo Leal):

I have over 15 years of experience working in software development and UNIX like systems. Currently, I work as a DevOPS Engineer with a great team at Sao Paulo State University (Unesp). We work in close partnership with Caltech and the Large Hadron Collider (LHC), the world's largest and most powerful particle collider, and is the most complex experimental facility ever built, and the largest single machine in the world. The LHC remains the latest addition to CERN’s accelerator complex.

During my Master's degree studies at USP I worked on a Pseudo File System inside Linux Kernel for network packets debugging. With this tool the system administrator it would be able to sniffer network packets and statistics without using libpcap or any user space tool other than cat, grep and tail.

Currently I'm more involved with the Software Defined Network (SDN) team, building software stack for high speed data transfers (~ 1 Tbps).