Data plane performance measurements

Software-Defined Networking (SDN) is a network paradigm where control and data planes are decoupled. The control plane consists on a controller, which manages network functionality and can be deployed in one or multiple servers. The data plane consists on forwarding devices which are instructed by the controller on how to forward traffic.

P4 is a domain-specific programming language, which can be used to define the functionality of forwarding devices as virtual or hardware switches and SmartNICs.

This work consists on performing measurements for a given P4 code on different devices. For that, an small P4-enabled virtual network will be used to perform some measurements. Later, data will be also collected from hardware devices as switches and SmartNICs. Measurement should be depicted in a GUI for its subsequent analysis.

Prerequisites

Basic knowledge on the following:

- Linux
- Networking/SDN
- Python/C
- Web programming (GUI).

Please send your CV and transcript of records.

Contact

cristian.bermudez-serna@tum.de

Advisors

Cristian Bermudez Serna