Chair of Network Architectures and Services
Department of Informatics
Technical University of Munich

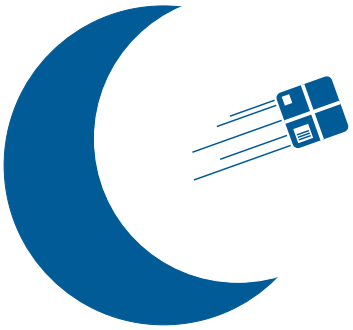
Thesis B.Sc. Thesis M.Sc. Guided Research

Traffic shaping and policing with DPDK

Motivation

Traffic shaping and policing are important parts of network devices like firewalls or routers. Applications include reserving bandwidth for important flows and protecting against denial of service attacks. Different applications and different flows require optimization for different performance goals, e.g., bandwidth or latency.

The goal of this thesis is to build a traffic shaping module for libmoon, a framework for efficient packet processing in Lua that is developed at the Chair of Network Architectures and Services.



Your task

Implement a lightweight traffic shaping module for libmoon in C or C++. The main requirements are:

- High performance: $>$ 10 million packets per second
- Scalability to multiple cores, CPUs or servers
- Low memory footprint: $>$ 1 million shapers need to be instantiated

Experience with C, C++, Lua, and DPDK are helpful but not required.

Contact

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