Implementation and Evaluation of NIC Offloading for the Click Software Router

With the move towards NFV, network functions such as firewalls, load-balancers, NAT etc. are increasingly deployed as software. On the other hand the capabilities of networking hardware is not fully utilized in this architecture.

In this work the popular NFV framework click shall be enhanced with offloading capabilities to NICs. More specifically the NICs’ matching capabilities shall be utilized.

For the work the following steps shall be completed:

- Implementation of an offloading module in the Click Framework
- Evaluation using functional and performance tests

Prerequisites

- Basic networking knowledge (TCP/IP, etc)
- Programming in C and C++

Advisors

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