You are interested in the internal workings of a data-center? You want to get a head-start in programmable data-planes? You want to work on an actual problem? Then this is your chance!

Load balancing and traffic engineering within data-centers is still an open problem (belief it or not). Programmable data-planes offer new possibilities in tackling those problems. However, the topic is new and not well understood yet. Check out the publication "HULA: Scalable load balancing using programmable data planes" to get an idea of what is awaiting you.

Your job in this project is the re-implementation and evaluation of an in-data-plane load-balancing algorithm. You will obtain a deep understanding of the fundamental problems in data-center networking and novel technologies such as P4 and SDN.

You also want to do a Forschungspraxis or Master Thesis? No problem! This project allows you to continue by bringing machine learning into play. Our goal is a network that learns traffic engineering by itself without human intervention. Just let us now.

Prerequisites

- C++
- Discrete Event Simulation
- Python

Advisors

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