

Thesis
B.Sc.

Thesis
M.Sc.

A Fully Automated Analysis Pipeline for Long-term Inter- net Traffic Analysis

Motivation

Analyzing network traffic characteristics allows to survey the impact of ongoing evolution of technologies and network services.

In previous projects we worked on the analysis of large network traffic captures in order to study the characteristics of Internet traffic and IP prefixes in particular. So far, there exists a highly scalable traffic analysis tool written in Go that already enables to import measurement results to a database back-end (ElasticSearch). Related work proposes numerous approaches to characterize and interpret traffic characteristics.

However, analyzing large numbers of traffic captures taken over several years suggests the automation of the entire analysis process: from captured traffic to the representation of sophisticated analysis results.

Your Task

- Get familiar with the existing toolchain
- Determine appropriate analysis approaches and representations
- Implement a framework to automatically...
 - ... analyze PCAPS
 - ... aggregate results
 - ... represent results
- Analyze Internet traffic of the last few years!

What you should bring

- Interest in working with different tools and libraries (analyzer, database, aggregation of results, representation)
- Programming skills, preferably Python

Contact

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