

Thesis
B.Sc.

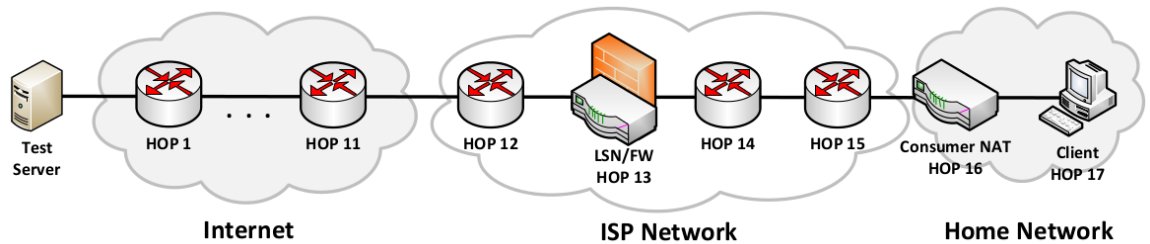
Thesis
M.Sc.

IDP, HiWi,
Guided
Research

Performance Analysis of Middlebox Functionality

Motivation

End-user Internet Service Providers often deploy middleboxes that cache and/or modify their users' traffic. Network Address Translation (NAT) is one of the most common middleboxes deployed by both home-users and ISPs.



We operate a testbed to measure the performance of packet processing in network nodes and localize the performance bottlenecks of packet processing tasks. This thesis focuses on the performance of NAT implementations as a simple and widespread example of middleboxes.

Your Task

- Setup one or more NAT implementations in our testbed
- Derive meaningful measurement scenarios (network traffic, NAT state, logging, etc.)
- Measure and analyze the performance of your selected implementation in our testbed
- Report your experiments, results and implications

Prerequisites

- Networking basics, Scripting Language (e.g. Python)
- Problem-solving thinking and ability to work on your own

Contact

Florian Wohlfart wohlfart@in.tum.de

<https://net.in.tum.de/~wohlfart>

