

Thesis
B.Sc.

Thesis
M.Sc.

Guided
Research

Evaluating Client Discrimination in Anonymization Networks Using Active Network Scans

Motivation

Servers in the Internet offer their clients a variety of services. These services, however, might differ with respect to quality depending on the client's "appearance". Some Internet services discriminate against a certain group of clients, e.g. by treating traffic from the Tor network^a differently. This difference in treatment could range from forcing users to solve a CAPTCHA, delay packets, serving a different website or denying the service altogether.

The goal of this thesis is to evaluate discrimination of clients accessing the services through anonymizing networks using active network scans. These scans can be used to compare various differences in service between a *direct connection* to the service and an *anonymized connection* to the service.



^a<https://torproject.org/>

Your Task

- Research previous work on client discrimination and active network scans in anonymizing networks (e.g. Tor, I2P)
- Determine who can discriminate (e.g. the server, or another node in the anonymizing network) a client's access to the service
- Determine what possibilities exist for a service to discriminate clients depending on the used anonymity network
- Implement or extend scanning tools which access the service directly and also through anonymizing networks
- Conduct scans and evaluate the results

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