Chair of Communication Networks
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Forschungspraxis

Routing methods to maximize availability in multi-domain networks

In this context, a domain is a geographical region. The nodes on the edge of a domain are called border nodes. We assume that there is a controller (like in SDN) to control the interdomain traffic. However, domain operators do not like to share information about their network topologies, node or link characteristics, availabilities, etc. They can only share abstract numbers that can not be reverse-engineered to obtain any useful information. With this restriction, the interdomain controller needs to make routing decisions to route interdomain traffic.

This research internship requires a thorough literature survey of existing techniques in multidomain routing for reliability and understanding the gaps. Furthermore, the student is expected to implement a multi-domain routing strategy and test it with different topologies.

Prerequisites

Python, NetworkX, Gurobi, Knowledge from the COmmunication Network Reliability course

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Advisors

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