HiWi/ Bachelor-/ Masterarbeits-Vorschlag:

Investigation and Evaluation of Multipath QUIC protocol in Heterogeneous Wireless Networks

QUIC (Quick UDP Internet Connections, pronounced quick) is a new transport protocol for the internet, developed by Google. QUIC solves a number of transport-layer and application-layer problems experienced by modern applications of the future Internet. Multipath QUIC is an extension to the QUIC protocol that enables hosts to exchange data over multiple networks over a single connection, allowing them to exchange data via multiple network paths/media simultaneously.

This work investigates the feasibility, as well as advantages of using Multipath QUIC in Heterogeneous Wireless Networks, more specifically in Vehicular Networks with cellular and WLAN inter-networking.

Aufgabenstellung:

- Study (Multipath)QUIC protocol and its applications
- Investigate the use of Multipath-QUIC in Heterogeneous Networks
- Conduct experiments (in network emulator) to evaluate Multipath-QUIC performance, compare to existing multipath transportation protocols (MPTCP, CMT-SCTP)
- Implement multipath scheduling modules (optional)
- Write research paper/thesis.

Anforderungen:

- Excellent knowledge of network protocols.
- Familiar with common network benchmarking tools.
- Good programming skills (C, Python)
- High motivation as well as independent and goal-oriented work

Bei Interesse melden Sie sich bitte bei:

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