MASTER THESIS – DEEP PACKET INSPECTION WITH ENCRYPTED APPLICATION PROTOCOL

Background
Mobile networks are used all over the world and are the cornerstone in the networked society, where everything that benefits from a connection shall be connected. To support the vast amount and diversity of data expected in future networks, Ericsson are developing products to drive and support the networked society. The subjects for Master Thesis are defined to investigate and develop algorithms, architecture, tools etc. to support huge increase of speech, data and massive IoT for Radio Access Networks.

Thesis Description
There is a trend in the industry that application level traffic between the end user’s application and the provided service is encrypted. From a radio network perspective, there is a need to identify and optimize radio network traffic to be able to do optimizations, but encrypted application streams put new challenges in this area. The purpose of this thesis is to study mechanisms and algorithms for identifying application protocols and application behaviors when all traffic is encrypted.

The thesis will be concluded with a result presentation for the Ericsson team.

Qualifications
This project aims at students in electrical engineering, computer science, computer engineering or similar. Background in wireless communication is preferred.

Extent
1-2 students, 30hp each

Location
Ericsson AB Mjärdevi, Linköping

Preferred Starting Date
Spring 2018

Keywords
C++, Mobile Telecommunication, Optimization, Data Encryption, 5G

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