Master Thesis -
Programmable Network Pipelines, LUA, eBPF

**Background**
Mobile networks are used all over the world and are the cornerstone for the networked society, where everything 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**
To enable functional decomposition of high-speed packet processing applications, there seems to be a need to add programmability to the processing pipelines. One possible solution to this is to add the ability to inject dynamic code into static pipelines using solutions like LUA (https://www.lua.org/) or eBPF.

The thesis work is proposed to cover:

- Investigate the properties adding support for one of those technologies to an existing DPDK pipeline.

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.

**Extent**
1-2 students, 30hp each

**Location**
Ericsson AB Mjärdevi, Linköping

**Preferred Starting Date**
Spring 2020

**Contact Persons**
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