Master Thesis –
Constraint Based Scheduling of Containers

Background
Mobile networks are used all over the world and are the corner stone 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
Given a set of applications with resource needs and a pool of resources there are many ways to allocate resources to the applications. In an optimal case there is both resource efficiency and high application performance. This resource scheduling problem can be described using constraints.

A heterogeneous 5G radio network will contain many application containers with varying resource need and a limited amount of resources.

Task
- Evaluate state of the art in constraint-based scheduling and implement a prototype for container scheduling on compute hardware.

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 2019

Contact Persons
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