OpenFlow Rules Aggregation in the Context of Delay-Constrained Routing

Within an SDN network, in order to avoid filling up the flow tables of switches, routing algorithms have to keep track of the amount of rules installed at every switch. When installing a new flow, such algorithms try to minimize the amount of additional rules required. To do so, a solution is to run a flow rules aggregation algorithm for each switch visited by the algorithm. As a result, the routing algorithm is aware of the amount of rules required to embed the new flow and can accordingly optimize its routing decisions.

The goal of the thesis consists in the implementation, evaluation and proposal of flow rules aggregation algorithms to be used within delay-constrained routing algorithms. In such a context, as the algorithm is run each time the routing algorithm visits a node, runtime is a very important dimension.

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