

Flow Conservation Framework for Monitoring Software Defined Networks

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Abstract : New trends on streaming videos such as series or films require a high demand of network resources. This fact results in a huge problem within traditional IP networks due to the rigidity of its architecture. In this way, Software Defined Networks (SDN) is a new concept of network architecture that intends to be more flexible and it simplifies the management in networks with respect to the existing ones. These aspects are possible due to the separation of control plane (controller) and data plane (switches). Taking the advantage of this separated control, it is easy to deploy a monitoring tool independent of device vendors since the existing ones are dependent on the installation of specialized and expensive hardware. In this paper, we propose a framework that optimizes the traffic monitoring in SDN networks that decreases the number of monitoring queries to improve the network traffic and also reduces the overload. The performed experiments (with and without the optimization) using a video streaming delivery between two hosts demonstrate the feasibility of our monitoring proposal.

Keywords : optimization, monitoring, software defined networking, statistics, query

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