

# QoSFlow: Prioritizing Flows in Software-Defined Networking for Enhanced Quality of Service

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**Abstract**— Software-Defined Networking (SDN) represents the next generation of network infrastructure, offering flexibility and the ability to quickly integrate services tailored to specific business applications and use cases. Motivated by the rapid rise of SDN and the increasing focus on Quality of Service (QoS) within SDN networks, this project explores how SDN can replace traditional network architectures and improve QoS management. Specifically, we investigate the role of protocols such as OpenFlow, iPerf, and Open vSwitch Database Protocol, which are pivotal in configuring and managing virtual bridges, ports, tunnels, and queues in SDN environments. The project emphasizes the QoSFlow solution for effectively managing QoS in SDN networks, demonstrating its potential for enhancing flow prioritization and overall network performance.

**Keyword**—IP Network, OpenFlow, QoS, QoSFlow; SDN, Streaming



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**Jean Pierre LENO** is a Telecommunications Design Engineer who graduated from the École Supérieure Multinationale des Télécommunications (ESMT) in 2023. Passionate about new technologies and information security, he has developed a solid expertise in Quality of Service (QoS) management for Software-Defined Networks (SDN), a theme he continues to pursue with passion. Jean Pierre currently works at Sonatel (Orange Senegal) as an agent specializing in the protection of FTTH, ADSL, and fixed 5G networks. He has significant experience in deploying network services such as Internet, VoIP, and IPTV on platforms like Huawei, Nokia, and ZTE.



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