

Abstract

Software-Defined Network (SDN) offers ease in organizing the network device with only set the control plane software so that it is able to reduce the complexity of network configuration. However, the ease which offered is not necessarily followed with an increase in network performance when compared to conventional network architecture that uses the TCP/IP protocol.

In this final project will be conducted a comparative analysis of network performance with the SDN architecture (OpenFlow) and conventional architectures (TCP / IP). Performance testing is done based on the simulation of the network that is still in one subnet using Mininet emulator with some parameters that is throughput, latency, jitter and packet loss.

From the results of tests performed, conventional network architecture that uses the TCP/IP protocol indicates better performance. These results are shown from two QoS parameters namely latency and packet loss with a significant difference values. Where SDN network architecture has a worse performance for both parameters. Whereas, throughput and jitter parameters for both architecture showed equally good results with variatif value without significant differences.

Keywords: SDN, openflow, *control plane*, TCP/IP, QoS.