

ABSTRACT

The rapid development of technology has led to an increasing number of computer users, so computer networks are increasingly widespread and complex. So, the existing Network must be upgraded due to a lack of scalability. Software Defined Network (SDN) is a new paradigm in computer networks that separates the data plane and the control plane. With this separation, the network configuration will be easier to do, and not as complicated as in conventional networks.

In this study, it discussed how to implement the network slicing method using FlowVisor on SDN and POX as controllers. Network slicing allows each network slice to be designed to guarantee different levels of network performance. The emulator used to design the topology as well as the data plane is Mininet. The testing process involves using the parameters for the Quality of Service (QoS) and analyzing them.

The results of this study indicate that FlowVisor can isolate flowspace for each slice on the SDN network based on the TCP port that is traversed when communication occurs between hosts. Comparison of SDN networks without using the network slicing method with SDN networks using the network slicing method produces values that are not much significant, but the QoS parameter values are better on SDN networks without network slicing. In the two topologies tested, namely simple topology and Abilene topology, whether using the network slicing method or not, the throughput, packet loss, delay, and jitter values obtained which meet the ITU-T G.1010 standard.

Keywords: *Software Defined Network, Network Slicing, FlowVisor, Pox Controller, Quality of Services.*