

ABSTRACT

Developments in the network technology sector are currently growing very rapidly so that more and more devices are connected. Due to this development, a new paradigm was created, namely a software-defined network which has the basic concept of separating the data plane and control plane. In a network, especially a software-defined network, it is also inseparable from a disturbance, especially in the link between switch devices. To determine the performance in the state of link failure, an analysis is carried out on the open daylight controller with 2 topologies, namely the abilene topology and the full mesh topology. Using hosts that vary from 11 hosts, 22 hosts, and 33 hosts. From the QOS test which consists of throughput, delay, and overall jitter. The results obtained that the best throughput value is in the abilene 33 host topology at 2-lane termination with a throughput value of 5.83 Mbit/s. The best delay value is in the full mesh 22 host topology at 1 line disconnection with a delay value of 0.112 ms. The best jitter value is in a full mesh 33 host topology at 2-lane disconnection with a jitter value of 0.056 ns with a link failure scenario, the overall QOS value obtained is also in the very good category.

Keyword : *Software Defined Network, link faillure, abilene Topology, full mesh topology, Opendaylight Controller.*