

## **Abstract**

Software Defined Network (SDN) is a network architecture whose network control is separated from its forwarding system. In this research experiments were conducted to analyze the performance of SDN to the use of load balancing with Least Connections (LC) algorithm, Round Robin (RR). With the above algorithm can help SDN performance efficiency by keeping no server that work overload. In this final project, each algorithm has different value according to each characteristic, and will be analyzed with network topology which has been designed in this final project by judging from latency, throughput, and jitter size. So by analyzing the algorithm, can be seen which algorithm can provide better effectiveness for SDN on each existing network topology by using Mininet application.

From the result of tests performed, Round Robin algorithm indicates better performance. These result are shown from QoS parameters namely throughput where in Round Robin get 4% better results than Least Connections, and latency where in Round Robin get 6% better results than Least Connections. While for jitter parameter both alogithm showed equally good results without significant differences.

**Keywords:** load balancing, Software Defined Network, QoS, Round Robin, Least Connections.