

## **ABSTRACT**

The recent development of network technology is highly developed, which facilitated its development make us well in establishing, monitoring or maintaining a computer network. With the rapid development of network technology gave rise to a new paradigm in network technology, namely Software-Defined Network (SDN). SDN is a term that refers to the concept / new paradigm in designing, managing and implementing the network, particularly to support the needs and innovation in this area that are increasingly complex. With the SDN paradigm we can determine perutingan using the algorithm determination in accordance with the path that we ingingkan.

In this riset, the author will implement and analyze the performance of software defined network with the algorithm floyd Warshall for routing with QoS parameters (delay, packet loss), scalability, resource utilities, and overhead traffic. Where later this algorithm will be run on the controller as perutingannya. Floyd-Warshall algorithm is an algorithm determining the pathways by comparing the entire path that allows selected from the starting point to point destinations and choose the path where the fastest.

The simulation results and performance testing algorithm floyd Warshall as determining the best path in the network SDN, getting results that meet stadarisasi. The value of the acquired QoS for delay is still at the value to be standard ITU-T G.1010. Packet loss is generated all kinds of services to meet the standard ITU-T G.1010 is 0% until the given background network traffic exceeds the capacity of the link is the provision of 75 Mbps. In testing the convergence time obtained with a vulnerable time value from 0.295 to 17,750 second. Then for overhead traffic switches addressing the more the number the greater the value of overhead traffic.

**Keyword:** Software-Defined Network, floyd warshall, QoS