ABSTRACT

In the future, necessity of data communication will be more various and will become an IP based network. It also encourages the desire for a network that can guarantee the avaibility of various services with the desired QoS. Various research and technological development carried out in order to create a new technology that is cheap and easy to implement. The technology is called Metro Ethernet Network Technology. Metro Ethernet network technology is a technology that offers applications that a very large bandwidth, such as audio / video streaming, online gaming, as well as distance learning and are able to combine data transmission services, voice and video.

In this final task, analysis and simulation routing in Metro Ethernet Network by using backtracking algorithm. The Simulation is done by using a network simulator (*ns-allinone-2.31*) to test the effect of the use of backtracking algorithms in metro Ethernet networks. And based on the simulation results, the use of algorithms backtracking on metro Ethernet routing can increase the throughput of 2%, lowering the value packet loss of 0.153%, the jitter of 0.001625 ms and the value of routing overhead (44,9 %) compared to the use linkstate algorithm. And in the data transmission, backtracking algorithms provide longer delay time for routing than linkstate algorithm because it requires more time for checking the condition of each node.

Keywords: Metro Ethernet, routing, backtracking algorithm.