ABSTRACT

In the video or online services could also called video streaming service looks much improved audience from many countries. For Indonesia alone can see the improvement in the website www.socialbakers.com, where the increased interaction of 104.2% compared to the previous month in March 2018. The increase in attendance can be associated as well with the addition of internet access users requiring IP address to be able to connect. IP address which berbasikan version 4 already ascertained cannot accommodate an increasingly large user allocation to that IPv6 is necessary in addressing new. On the use of algoritma link state the same in determining the fastest route, routing protocols IS-IS to have better results, so it selected for use in this study than OSPF. The results of this research to show how Quality of Service on a MPLS backbone using routing protocols IS-IS. On the throughput parameter on either the scenario of IPv6 networks have bigger results than IPv4 network, with the difference between one user and two users in the IPv6 network of 989.3 kbit/s and 709.9 kbit/s. visible Delay between network IPv4 and IPv6 indicate the results that the IPv6 network is better, with the difference between one user and two users in the IPv6 network is 12.58 ms and ms 22.03. for jitter parameters there is the striking difference is seen from the shape of the graphics, but the value of jitter most good there in the IPv6 network with the difference between one user and two users is ms and ms 0.14 0.07. Packet loss on QoS in this simulation is worth 0% due to the package that was sent in the form of a TCP packet, which at the time of the existence of a failure then the package they will be sent back. See the results of the analysis that has been done, on the IPv6 network simulation has very good results compared with the use of the IPv4 network. Overall, this research on IPv6 network shows better results compared to the IPv4 network.

Keywords: IPv4, IPv6, IS-IS, Quality of Service (QoS), Transport Control Protocol (TCP), video streaming.