

ABSTRACT

Quality of Service (QoS) is an important thing to consider in a communication system. Many considerations to consider in getting a good quality value on the network. Procurement of a large bandwidth is one alternative, but it is becoming ineffective due to traffic that is passed does not continually have a large traffic values. To improve network performance that can be done, among others, differential service, resource reservation protocol (RSVP), multi-protocol label switching (MPLS), and the use of routing management.

Multi-Protocol Label Switching (MPLS) is a method of forwarding data across a network using the information in the label attached to the IP packet. Examples of services provided by MPLS VPN (Virtual Private Network). This service implements a network on a larger network infrastructure that provides rental services and the addition of security on the network traffic engineering functions can streamline the MPLS VPN.

From the results of testbed in the laboratory found that the use of MPLS-TE can produce that tends to be better QoS compared to VPNs and MPLS VPN MPLS-TE for triple play services. Judging from the results of delay, improved by 4.44 ms for video applications and 3:29 ms for voice applications, as well as throughput, packet loss, jitter obtained from the network using MPLS-TE technology, indicating a better value compared to the MPLS network using VPN.

Keywords: MPLS, MPLS-TE VPN, QOS, Triple Play