ABSTRACT

Multi-Protocol Label Switching (MPLS) is a method of forwarding data over a network using the information in the label attached to the IP packet. With this type of routing is applied to the MPLS network, expected to provide increased value to the network QoS for MPLS traffic-engineering functions offer efficient. In the MPLS network will be tested on live video streaming application is a technique multicast. Multicast distribution of data packets from one to many recipients, where the distribution of video data packets more effectively with manyusers. This research will be done studies on live video streaming applications on the multicast MPLS networks.

At the end of this task will be the implementation of multicast live video streaming applications on MPLS VPN use GNS3 as MPLS Router emulator. As a result of the implementation is expected to provide an overview of MPLS-VPN technology on live video streaming application itself, either in the form of QoS, performance PCs for emulation routers on topology that is used in this study.

On throughput measurements obtained from the measurement results show that the influence of a lost packet throughput, the larger the lost packet throughput decreases. From measurements in the can the value of throughput with bit rate 512 kbps video on MPLS VPN has an average value of 0.44925 Mbit / s with an average of 0.3979% packet lost, while for OSPF be obtained throughput of 0.40275 Mbit / s with a packet lost at 0.471083% . In measurements with video bit rate of 1024 kbps average throughput in MPLS VPN is a 0.829 Mbit / s and 1.92383% packet loss, while the OSPF of 0.814445 Mbit / s and packet loss of 2.070166%.

Keyword : *MPLS, MPLS-VPN, QoS, dan MULTICAST*