

ABSTRACT

The development of Internet technology moves very quickly and also proves that a separate Internet network can be built and connected to each other, so the subscribers can send and receive traffic without having to think that some providers or networks involved in transporting data packets. IPTV is a digital television service that is passed on IP network and one of the real time applications are very sensitive with delay and jitter and also require a large bandwidth.

In this Final Task will be implementated IPTV application on the Inter-AS MPLS VPN Back to Back VRF using a simple topology using the network emulator, GNS3, and made comparisons interior gateway protocol in the MPLS-VPN between EIGRP, OSPF, and RIPv2 by altering the values and parameters of background traffic. Analysis of performance to be seen is delay, throughput, jitter, packet loss.

From the results of testbed obtain from the Inter-AS MPLS VPN Back to Back VRF with EIGRP delay 30.23 ms, throughput 49803.21 Bps, packet loss 18.82% and jitter of up to 16.88 ms, delay of OSPF 33.56 ms, throughput 44687.16 Bps, packet loss 26.28%, and jitter up to 19.43 ms, RIPv2 delay 40.05 ms, throughput 35142.22 Bps, packet loss 33.07% and jitter up to 22,27 ms. This suggests the use of Inter-AS MPLS VPN Back to Back VRF EIGRP has a better performance than the use of OSPF and RIPv2.

Keywords: QoS, MPLS-VPN, Back To Back VRF, EIGRP, OSPF, RIPv2