

ABSTRACT

MPLS is one of NGN backbone network which increase network performance, it can make shortest time in router.

That problem needed a mechanism which can give guarantee of QoS (Quality of Service) for MPLS. Traffic engineering is one of the solutions for MPLS network, by path management for traffic of data to load balancing traffic in the path and node in the network. So it is possible to be reliable and efficient network, also optimizing resources and traffic performance.

Two protocols for QoS (Quality of Service) in traffic engineering are needed for MPLS, RSVP-TE and CR-LDP. Both of protocols is constraint-based in routing calculation and use same Quality of Service (QoS) to make the explicit route on same resources. The main different is on the layer of this signaling protocols work.

This final project analyzes the different between RSVP-TE with CR-LDP. By simulation with software Network Simulator (ns) for network with RSVP-TE signaling protocol and CR-LDP, the result of each signaling processing give are data outcome.

The data is compared and analyzed for Quality of Service (QoS) of network from each signaling protocols according to parameters like delay, packet loss, throughput, and jitter. The result of this experiment showed the RSVP-TE performance is better than CR-LDP for real time application.

Key word: MPLS, Voice over IP (VoIP), Wireless LAN, Resource Reservation Protocol Traffic Engineering (RSVP-TE), Constrained-Based Label Distribution Protocol (CR-LDP)