

ABSTRACT

Applications has different QoS, but at this time internet network use best effort QoS. Best effort QoS consider all packet data as same and will serve for the best. In fact, need better QoS for serve several packet like audio and video. Of course for support that service was needed better mechanism management's bandwidth, so that every service has enough QoS like that it need.

Multi Protocol Label Switching (MPLS) technology was used for increase network performance with decrease forwarding time. The method of MPLS is adding a packet header as identify that will use for switching process. While packet arrive at *Label Switching Router (LSR)*, router will use this label for identify *Flow Error Control (FEC)*. FEC data save as forwarding table at that router.

This final task implemented Integrated service RSVP and IPv6 addressing with MPLS (Multi Protocol Label Switching) for multimedia applications. This applications running under Linux operating system. Linux was chosen because Linux is open source and free for use. Finally, this final task analyzes network perform with network parameter that was determined.

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