

ABSTRACT

Voice communication over IP Network or usually known as VoIP (Voice over Internet Protocol) is the technology that becomes a choice today and future, replacing the conventional voice (Voice over TDM). In its implementation, due to the VoIP is a real-time information that runs over an IP network which is Best Effort, so it tends to require special treatment when compared with the data packets in order to obtain QoS according to the standardization. There are several QoS schemes that are generally applied, such as DiffServ, IntServ, MPLS, and RSVP.

In this final project, it has been conducted an experiment in the laboratory (testbed) to apply one of QoS schemes (with and without QoS Scheme) for VoIP services and providing background traffic. From each scenario it has been measured VoIP QoS parameters that are delay, packet loss, and throughput.

The result of this Final Project implementation, it is known that the most optimum QoS scheme for VoIP services is MPLS QoS Scheme. It can be proved by the decreasing of packet loss and the increasing of throughput of almost all measurement condition.

Keyword : VoIP, MPLS, Diffserv, IntServ, RSVP, QoS