

ABSTRACT

Asosiasi Penyelenggara Jaringan Internet Indonesia (APJII) conducted a survey in 2016 and found that 132.7 million people of Indonesia have been connected with the internet. Telkom University is a college institution using ICT as a base which means, every department has already used the Internet to fulfill business process of the study program information system. Information Systems study program is one of the existing courses in Telkom universities, where there are various business processes one of which is a practicum. Some of the modules are done online. Uploaded files are VoIP and Video Streams sent to the server. Even until now there is no solution for this defect. In this research, it will try to implementing the MPLS technology for this solution.

This research was conducted to measure the quality of VoIP and video streams. Network measurements were performed using Quality of Service parameters, ie throughput, delay, jitter, and packet loss based on ITU-T G.1010 and TIPHON standards. The results of this research on VoIP and Streaming Video services get QoS values that meet from ITU-T and TIPHON measurement standards on QoS parameters.

Keyword: MPLS, QoS, VoIP, Streaming Video, Information System