Abstract

In the current era of technology, the need for improved quality of service will be morerapid and getting more complex. The services provided must be assured their data to perform realtime communication for example, is communication with a VoIP service. Time by time, where data traffic needs to be improved, the performance becomes the primary consideration for selection of network types andprotocols that will be applied

Therefore, there emerged a new type of protocol is MPLS-TE which will beimplemented and analyzed its performance in this final project with the parameters delay,throughput, and packet loss on the the end user side and the recovery time, loadbalance and routing overhead in the core network side. Hopefully, with this comparative performance and testing for on these core network, can know which type of protocol is more appropriate to implement. MPLS-TE have different characteristic with traditional IP network, that there are mechanism for adding label and forwarding the packet on router and pass on the tunnel that has been available, so it will be faster than a traditional IP network, and with a fast reroute mechanism, will minimize the occurrence of packet loss.
Keywords : *real time, VoIP, traffic, performance, MPLS-TE, delay, throughput, packet loss, end user, recovery time, load balance, routing overhead, core network, protocol, OSPF, label, forwarding, tunnel, fast reroute*