ABSTRACT

For supporting their migration to Next Generation Network, PT Telkom has build core network based on IP MPLS. Multi Protocol Label Switching used forwarding method through network, using information label which is assigned to IP packet. IP MPLS enabled data network to do traffic engineering.

This final project analyze long distance PSTN voice traffic that follow toward PT. Telkom's core network based on IP MPLS and implement traffic engineering using explicit LSP tunnels to ensure that subsets of network resources are not over utilized and congested when other subsets along alternate feasible paths remain underutilized. The problem which is observed are how long distance PSTN voice traffic distributed along the network using only OSPF and LDP as control plane. And then explicit LSP tunnels will be implemented.

This research shows if there is no further mechanism and using only OSPF and LDP as control plane, long distance PSTN voice traffic toward PT. Telkom's core network based on IP MPLS will be over utilized and congested, while other subsets along alternate feasible paths remain underutilized.

Key word : mpls, explicit LSP tunnels, traffic engineering