

## ABSTRACT

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*Backbone network owned by PT Telekomunikasi Indonesia (Telkom) has a hierarchy architecture of the core layer to the access layer. Core network layer on Telkom has two parts, the Main and Primary Pop Pop. At the core layer using MPLS to optimize the network.*

*MPLS (Multiprotocol Label Switching) has a working principle labeling MPLS header header layer 2 and layer 3 for the purpose of examination facilitate network label header. With the MPLS network can be simulated in Telkom MPLS network to obtain and QoS results. Tests were conducted in which calculates QoS during a download and upload a file with three skenario .*

*Keywords: Core layer, MPLS, QoS.*