

## ABSTRACT

*Today we have arrived at the era of technology and information, where information is disseminated so easily and quickly. this technology even continues to grow rapidly without stopping both on personal devices to highly scalable devices. Because segmentation is an important part as part of network security, in this case MPLS L3 VPN has become a good trend for large organizations who want to have private lines, but because of the high cost burden, in this case want to compare Non MPLS L3 VPN lines using Vrf-lite or routing segmentation technology that builds simpler, for a new branch company or a university that wants to implement a VPN with a lower cost and still in a stable category, in this final project will perform a simulation using GNS 3 by comparing the Quality values of Service in the form of Throughput, Packet Loss, Delay and Jitter using standards that have been determined by THIPON from all the tested methods, all of which use video streaming traffic loads with variations in sizes of 720p and 360p. From the two methods of MPLS L3 VPN and Non MPLS L3 VPN measured by variations in streaming load, both methods have a QoS parameter value with index category 4, which in this case shows no significant result.*

*Keywords: MPLS L3VPN, VRF-Lite, QoS*