ABSTRACT

Routing implementations that use frame relay, MPLS, and OSPF to exchange information to determine the current network conditions between the File Delivery Process Into Head Office Branch Office. The purpose of this implementation is to analyze and compare the performance and security of the network using frame relay, MPLS, OSPF by simply using OSPF. QoS observed in this final project in the form of throughput, packet loss, and delay in the Company, for menggetahui quality QoS that produced sending 5 files from the central office to the branch office in turn.

From the results of implementation of this obtained value network quality which is derived from a branch office in Bandung, obtained Nila average throughput resulting from pengirian 5 files obtained 18,469 bps which use frame relay, MPLS, and OSPF while only using OSPF in getting the value of 17,458 bps. The average value is the delay in getting 59,90296 ms and 777,32172 ms and packet loss ms average value is 2.01% and 2,56%. The results get from this experiment can be applied to assist small companies in order to optimize the use of the network with low cost, and security can be optimized.

Keywords: frame relay, ospf, dan mpls, Qos, GNS3