ABSTRACT

The development of information technology at the moment is very fast .It is marked with the establishment of a variety of technology .This time are converging performance tissue that leads to one network, where the implementation of one network uses a base of the internet protocol.

The service is based on technology and internet protocol is one voice over internet protocol or VoIP. The implementation of the protocol is that there are a lot of user who needs and access to the bandwidth or bits and large a high rate to take or get that information technology is very difficult. In the course of its network, the internet is as if there were a few large cost.

For that writer of solution these problems by make the simulation packet delivery VoIP use simulator Grafical Network Simulator or GNS3 0.8.6 version. This simulator was is the voice of America network virtual or simulator there is but not seen. Parameter that used in simulator GNS3 equal to the parameters of a network of real. The topology used on a network VoIP gns3 the topology of use was used in the ring with three router in each provider client and three, and examination of the parameters of the network is using trhougphut and a delay. Protocol used in the simulation this is open shortest path first or ospf and router or mpls based multiprotocol a label switching.

In the simulation this writer ran three experiments with using wireshark as capture data. The results of throughput and a delay on three different the experiment as a result. The results of throughput and a delay on trial 1 namely 85,6 packet / sec and 10 ms, the result on experiment 2 at 81.8 packet / sec and 10 ms, and result on experiment 3 at 101,22 packet / sec and 9,8 ms. the results of a delay in all three experiments is said to good, because in accordance with prescribed by TIPHON standardization.

Key words: VoIP, OSPF Protocol, MPLS Router.