ABSTRACT

This final project tries to explain the concept of BGP (Border Gateway Protocol) is an inter-Autonomous System routing protocol and one type of routing protocol that is widely used in large ISPs, the main function of the BGP system is to exchange network information that can be achieved (reachability) by another BGP system. Here the authors compare measurements and analyzes when packets are sent using the intended IP, measuring QoS Throughput, Delay, and Packet Loss using Graphical Simulator Network Simulator 3 (GNS3) and Wireshark. The author compares the first measurement to the fifth, the first QoS measurement results throughput (517.08 Bps), Delay (220.46 ms). Second QoS Measurement Results Throughput (471.20 Bps), Delay (241.93). The results of the third measurement of QoS are Throughput (429.54 Bps), Delay (265.40 ms). The results of the fourth QoS measurement are Throughput (504.81 Bps), Delay (225.82 ms). The results of the fifth measurement of QoS are Throughput (736.31 Bps), Delay (154.82 ms). Average total throughput (531,788 Bps) Very good, Average total delay (221,686 ms) Good. Average Packet Loss is no different from other measurements with the same Packet Loss value of 0% which is in the Very Good category with the TIPHON standard.

Keywords : BGP, Border Gateway Protocol, Throughput, Delay, Packet Loss