ABSTRACT

SNMP or Simple Network Management Protocol is a standard protocol in the internet network that functions as managing TCP / IP networks. There have been many implementations of the SNMP protocol in the world of education, health and others. The author will try to compare SNMP according to the version and parameter, QoS (Quality of Service). To improve the quality of a network, the writer will try a simulation using a virtual machine. The author will try to simulate and analyze SNMP by using the Nagios XI Application. The parameters to be tested are guaranteeing the availability or availability of services and QoS which consists of throughput, delay jitter, and packet loss values. Result of SNMPv1 is availlability : 75,15%, delay average : 268,8 ms, jitter : 0 ms, throughput : 340,237 bps, and packet loss: 0,789%. SNMPv2c is availlability : 75,02%, delay average : 3861,2 ms, jiter : 0 ms, throughput : 79,074 bps, and packet loss : 3,95%. SNMPv3 is availlability : 74,94%, delay average : 2510,9 ms, jitter : 0 ms, throughput : 122,977 bps, and packet loss : 0,14%.

Keywords : management protocol, nagios XI, simple network management protocol, SNMP.