

ABSTRACT

In today's digital era, the Internet has become a primary need in all circles of society. As a result, internet users are increasing year after year, and have an impact on the number of users but the bandwidth provided cannot meet these needs. Metro Ethernet as a technology that can cover the area of one city with various features that also exist in ethernet networks in general. Metro Ethernet can transmit various data such as Ethernet technology such as Image, Voice and Packet data. Metro Ethernet has a Link on its device, and uses SFP as the medium. On that basis, an upgrade of the Link was carried out. This research begins by analyzing the network that has been implemented by going to the direct location and performing the link upgrade procedure on Metro Ethernet devices that previously used a 5X10Gbase SFP module to a 1X100GBase CFP2 module. The parameter results obtained from this research are Packet Loss 0.00%, the highest delay is 0.801ms in sending 10000 packets, Throughput 8.825 Mbps, Bandwidth 100Gbps, and a 30% decrease in traffic during peak hours, these parameters get a very satisfactory index in TIPHON standardization.

Keywords : Metro Ethernet, Link, QoS, Bandwidth, Traffic, TIPHON