

Abstract

Cable UTP (Unshielded Twisted Pair) and STP (Shielded Twisted Pair) is the choice of media that can be used to connect between computers. In theory the use of UTP and STP cable maximum 100 meters, but in this thesis has been obtained that the size of the maximum length of usage of cable UTP Cat 6 Cat 5e STP and in excess of 100 meters i.e. 280-275 metres. The network performance testing process starts from 300-metre cable length, then cut and tested again with a different distance by sending an ICMP packet of 1000 Bytes as much as 50 times. Cables UTP Cat 6 can be used as a medium of transmission of data on the maximum length of 275 metres, the cable Cat 5e STP can be used with a maximum cable length of 280 meters. The results of data obtained from testing the performance of the network include the following 3 parameters, Latency, throughput and Packet loss. From the test results, the acquisition value of the Packet loss, 0% of the use of UTP Cat 6 cable with IPv4 protocol on the length of 255 meters and to the IPv6 protocol on a length of 254 metres. On the use of cable Cat 5e STP retrieved the value of the Packet loss 0% with the IPv4 protocol on 246 metres long and with IPv6 protocol on a length of 245 meters. The difference in the value of the use of UTP cable Latency and STP which is about 0101 Ms. Of this Latency value results obtained results for throughput, i.e. the parameter value of the STP cable uses of throughput is higher than the use of UTP cable.

Key Word : UTP, STP, IPv4, IPv6, Packet loss, Troughput, Latency.

