

ABSTRACT

In network, in order sending data and information process from source to destination to be succeed though in that network it has network or class of IP address which are different, so there is routing process. To choose the best rute to mencaipai that destination used routing algorithm.

In this final task, IP network is modeled based on its real network. Then routing simulation using djikstra algorithm and kruskal algorithm to know value from throughput, delay, jitter, packet loss and routing overhead from IP network. This simulation used 4 scenario, by adding user quantity, adding traffic background, link breaking and replacing destination node.

In this final task, comprehensively throughput is still qualified, except at adding traffic background 80%, throughput achievement using greedy kruskal algorithm for VoIP service is 6.384 Kbps, the highest packet loss is 29.0071% for VoIP service, the highest delay is 78.7165 ms for data service and the highest one way jitter is 13.42137 for video service. Link breaking and destination node replacement are not affected the quality of network.

Key words: IP network, djikstra algorithm, kruskal algorithm