

Abstract

The increase of computer network for communicating utilization causing performance transport protocol must be increased so that every problem in networking system especially transport protocol's problems can be solved and making the system work more effectively. One of the problem that often occurs in tcp protocol is congestion. Congestion became one of the most important issue in tcp network, congestion giving bad effects to the network system and the network applications.

In this final task is implemented and tested the performance of hybrid red algorithm in congestion control case. Also compared between *Hybrid RED* algorithm and *RED* algorithm performance. The performance in tcp network using *Hybrid RED* algorithm is calculated and analyzed using testing parameters such as *packet loss rate*, *throughput*, and *end to end delay*. The analysis of performance was done at simple tcp network with single bottleneck router using network simulator version 2.3.1.

According to the simulation result, the congestion control performance using Hybrid RED algorithm is better than the congestion control performance using RED algorithm based on better *throughput* and better *packet loss rate*.

Keywords : Hybrid RED, RED, *throughput*, *end to end delay*, *packet loss rate*, *congestion control*.