ABSTRACT

Nowdays, the rapid growth of internet as well as the user increase and the applications running on internet. This is creating the problem where the demand by the user is excess the limit capacity of bandwith that could be provided by the network it called congestion that could decrease the network perfomance. Active Queue Management (AQM) is proactive mechanism to signalling TCP sources from router to notify indication of congestion probabilistically based on level congestion. So TCP sources can react to the incipicient congestion with adjust their sending rates to the network so the congestion can be avoided.

RED the most well known AQM is still having a lot of lackness as the perfomance decrease depend of TCP flow level and the parameters difficult to configure. Random Exponential Marking (REM) is a alternative AQM scheme is aims to achieve both high utilization and negligible loss and delay in a simple and scalable menner with maintain price as a congestion measure.

In this final project would be analyzed the perfomance of AQM REM and compare with RED perfomane in simulation with ns-2 simulation software and use ECN as a feedback method to notify the TCP source of congestion. The perfomance metric that tested such as throughput, queue length, link utilization, queue delay, loss rate and indeks fairness. The result of simulation shows the perfomance REM outperform compare to RED in dynamic load condition or with the increase of TCP source

Keywords : Congestion, Perfomance, AQM, REM, RED, Price, ECN.