ABSTRACT

Active Queue Management is a kind of router algorithm that have correlating with congestion control. AQM use loop back system which control dynamic average queue and decide time packet drop. One of the AQM kinds is RED, that remove packet randomly with certain probability. From reference, we get decision, RED performance depend on congestion level and parameter settings. So, is needed the perfect combination of $\max_p$, $\max_{th}$ and $\min_{th}$ parameter to get optimal performance. On the other hand, those parameter are adaptive on network condition at that moment. One of RED variant is ARED that adapt $\max_p$ parameter.

This final project have aim to compare ARED performance with RED performance and the performance are queue length, queue variance, throughput, packet loss rate, fairness, and buffer utility.

From the result of simulation, we get the fact that ARED adaptable with network condition With 53 TCP flow, ARED adaptation time is 15 seconds. ARED adaptation time increase depend on TCP flow quantity in network. Network throughput when use ARED scheme is bigger with average value 0,09267 than when use RED scheme. On the contrary, packet loss rate is smaller with average value 0,623891 than RED scheme.

In fairness, RED scheme is more fair than ARED scheme because RED index fairness is bigger with average difference 0,010711.