ABSTRACT

Growths of communications technology especially at computer network have been increased. Internet is a packet-based-technology which can carry data, voice and video traffic in a packet form. Nowadays, many users get the internet access. It means that traffic intensity becomes high. The demand of bandwidth become larger and could exceed link capacity. This can cause network congestion. Therefore, Internet Engineering Task Force (IETF) developing Active Queue Management (AQM) technique was called Random Early Detection (RED).

RED as one of AQM not well performs when the amount of user increase. To overcome these problems, many variants of AQM developed to handle the congestion. There are SRED (Stabilized RED), FRED (Flow RED) Dan BLUE. BLUE as one of AQM fix the algorithm which RED used by not only count queue length as its method, but also notice link utilization and loss packet. This final project will compare performance between SRED (Stabilized RED), FRED (Flow RED) Dan BLUE in IP network for Internet traffic like voice (VoIP), video(CBR), FTP, web Dan VBR. This AQM apply at router. To evaluate the performance, we use delay, throughput, loss packet and fairness index. The simulation tool used is Network Simulator (NS-2) which is open source program so all occurrences in simulation can be checked.

The simulation result shows that BLUE best perform in throughput comparing with two queue management, SRED and FRED. Consequently, it causes higher queuing delay and end-to-end delay for the traffic.

Keyword: AQM, SRED, FRED, BLUE