Evaluate the Performance of the Router Algorithms in Different Scenarios TCP Newreno and TCP Reno

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Abstract- Nowadays, As the new user applications and Internet traffic are rapid increases in growth, the need for developing the Internet infrastructure that guarantees a good level of quality of service became necessary. Congestion that is caused by the amount of traffic remains steady as a main problem that threatens the Quality of Service (QoS) on the Internet. Queue management mechanisms classified in proactive working in Internet routers help enhance the performance of applications responsive applications such as TCP. Choose Active queue management mechanism plays an important role to lead to good network performance and utilization. In our research this we will evaluate the performance of the router algorithms namely DropTail, REM, and RED proposed for IP routers to achieve performance among competing sources based on different protocols (TCP Newreno and TCP Reno) using (ns2) and operating system Linux. The purpose of this performance checking is to identify the key parameters to improve the fairness and link utilization in TCP/IP networks. Also, this will help obtaining a better understanding of these mechanisms by identifying and clarifying factors that influence their performance in order to improve TCP/IP networks performance overall. After that, we compared the results obtained from the statistical analysis based on the rate of the queue capacity and packet loss and link utilization.

Keywords- NS2; IP; TCP Newreno and TCP Reno; REM; RED; DropTail