Abstract

This paper proposed to investigate and evaluate the performance of one of the algorithm used to provide fair bandwidth allocation to the flows. First In First Out (FIFO) queuing is simple but does not protect responsive flows from unresponsive one, flows that are sending more than their fair share. One of FIFO queuing is Random Early Detection which it can effectively avoid congestion at routers, but it also cannot provide fair bandwidth for the flows. On the other hand, per-flow scheduling mechanisms provide max-min fairness but are more complex, it requires keeping state for all flows going through the router; it's proved that high bandwidth flows at the time of congestion consume most of the bandwidth of the link, so this algorithm (RED-PD) is most candidates to provide fairness to the flows. Simulations with networks demonstrate that there are chances for RED-PD to enhance its work, by means of incorporating the test of
unresponsive flows actively in response to changes in the packet drop rate.

References


Index Terms

Computer Science

Networks

Keywords

RED   High bandwidth flows   Transport Protocols (TCP UDP)   Drop Probability
max-min fairness