Abstract

As the internet is expected to better support many applications such as multimedia with limited bandwidth, new mechanisms are needed to control the congestion in the network. Active Queue Management (AQM) algorithms play an important role to ensure the stability of the Internet. Random Early Detection (RED) is the first active queue management algorithm proposed for deployment in TCP/IP networks. RED has some parameters tuning issues that need to be carefully addressed for it to give good performance under different network scenarios. We propose a new algorithm called Enhanced Random Early Detection (ENRED). ENRED works to improve these parameters to provide better congestion control over the network while remaining the advantage of RED. This paper will introduce ENRED and some features about RED and its variants. We simulate the proposed algorithm (ENRED) using the
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well-known network simulator ns-2, by comparing it to the original RED. Simulation results show that the proposed algorithm achieves better queue size than RED and decreases the delay and losses.

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Enhanced Random Early Detection (ENRED)

December 2008.

Index Terms

Computer Science Networks

Keywords

Active Queue Management Congestion control Queue size RED TCP/IP.