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**Abstract**

Conventional congestion control methods (e.g. DROP TAIL) discards all received packets after the queue is full moreover results in low-network performance. To address this problem, RED was proposed to improve the performance of TCP connections. As a queue management mechanism, it drops packets in the considered router buffer to adjust the network traffic

behavior according to the queue size. In application, TCP Variants (Reno, NewReno, Vegas, Fack and Sack1) show oscillatory curve of packet reception if RED is considered for queuing, besides, some variants out performs in receiving packets over different network parameters that this paper analyzes and finds out. However, an increase in link capacity (with the resulting increase of per-flow bandwidth) will cause significant degradation in TCP's performance, irrespective of the queuing scheme used. Hence the network is prone to instability with the rise in the number of High-bandwidth-delay product that is also attended to in this paper.

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Computer Science

**Index Terms**

Networks

**Key words**

RED

AQM

BW

TCP Variants

NS-2