عنوان مقاله:

A fair Delay-based Congestion Avoidance Scheme Based on TCP-Vegas

محل انتشار:

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خلاصه مقاله:

While the demand for bandwidth increases exponentially with the growing number of internet based devices, traditional TCP algorithms are turning to be sub optimal. Delay-based congestion control algorithms which are designed to overcome this challenge, are proven to be more satisfactory than loss-based congestion algorithms. On the one hand, Loss base congestion detection technique depends solely on packet loss. On the other hand delay-based algorithms have the advantage of proactively detecting congestion occurrences based on packet delays and as a result avoiding unnecessary packet loss. TCP-Vegas as the most referred variant of delay-based algorithms is promised to achieve between 40 and 70 percent better throughput. However there is some problems which are preventing TCP-Vegas to become widespread. One of these problems is lack of fairness in bandwidth allocation while delay and loss-based connection share a link. In this paper we made some modifications on the original TCP-Vegas which enabled the new algorithm to compete fairly with loss-based algorithm.

کلمات کلیدی:

TCP; Congestion control; internet protocol; delay-based congestion control