

A new fair marker algorithm for DiffServ networks

ABSTRACT

Internet Engineering Task Force (IETF) has proposed many new technologies to cover the new real time applications which have become very important in today's Internet demands. One such technology is Differentiated Services (DiffServ). DiffServ routers provide Per Hop Behaviors (PHBs) to aggregate traffic for different level of services. There is an unfairness problem that occur in a DiffServ networks. In this paper an improved version of the time sliding window three color marker is proposed and analyzed. The proposed algorithm is based on the adaptability concept of changing the constant value in the previous version of the algorithm (ItswTCM), in other words, changing the limit for the constant value without affecting the simplicity of the algorithm. The paper design and implement the algorithm with extensive simulations using NS-2 simulator to compare the proposed algorithm with previous algorithms. Results show that our new marker performs better than previous algorithms such as srTCM, trTCM, tswWTCM and ItswTCM in terms of fairness and number of yellow packets injected to the network in proportion to the committed rate.

Keyword: Diffserv Network; Fairness; ItswTCM; Marker; tswTCM