عنوان مقاله:

An Improvement over Random Early Detection Algorithm: ASelf-Tuning Approach

محل انتشار:

مجله نوآوری های مهندسی برق و کامپیوتر, دوره 2, شماره 2 (سال: 1393)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Random Early Detection (RED) is one of the most commonly used ActiveQueue Management (AQM) algorithms that is recommended by IETF fordeployment in the network. Although RED provides low average queuingdelay and high throughput at the same time, but effectiveness of RED ishighly sensitive to the RED parameters setting. As network conditionvaries largely, setting RED's parameters with fixed values is not anefficient solution. We propose a new method to dynamically tuning RED'sparameters. For this purpose, we compute the rate of which the queue isoccupied and consider it as a congestion metric that will be forecastedwhen the queue is overloaded. This meter is used to dynamically settingRED parameters. The simulation results show the effectiveness of theproposed method. According to the results, we achieve a significantlyhigher utilization and less packet loss comparing to original REDalgorithm in dynamic conditions of the network.

کلمات کلیدی:

Internet, Congestion control, Active Queue Management, (AQM)Random Early Detection(RED)Self-Tuning