

The TCP-based new AIMD congestion control algorithm

ABSTRACT

Congestion control is one of the fundamental issues in computer networks. Without proper congestion control mechanisms there is the possibility of inefficient utilization of resources, ultimately leading to network collapse. Hence congestion control is an effort to adapt the performance of a network to changes in the traffic load without adversely affecting users perceived utilities. AIMD (Additive Increase Multiplicative Decrease) is the best algorithm among the set of linear algorithms because it reflects good efficiency as well as good fairness. Our control model is based on the assumption of the original AIMD algorithm; we show that both efficiency and fairness of AIMD can be improved. We call our approach is New AIMD. We present experimental results with TCP that match the expectation of our theoretical analysis.

Keyword: TCP; AIMD; Congestion control