Interaction Studies of Some Recent AQMs with High Speed TCPs through Experimental Evaluation

Abstract

The two approaches of congestion control i.e. source based approach and router based approach have their own limitations. In source based approach, it is difficult to get correct location of congestion and without proper admission control; it would be difficult to effectively manage the congestion problem. So both approaches have to work in coordination for effectively control the congestion problem. In this context, an interaction study plays an important role to verify how an AQM implemented at router end works with TCP at source end. In this paper, the performance of some recent AQM approaches: CoDel and sfqCoDel have been analyzed, in presence of different high speed TCP variants at the source end. The main objective of this work is to obtain the interaction patterns of recently proposed AQMs with
different high speed TCP variants like: HTCP, Compound and Cubic. Simulation results show that if the objective is to achieve a better throughput and improved fairness simultaneously, sfqCoDel may be a good choice of AQM.

References


Index Terms

Computer Science
Information Sciences

Keywords

High Speed Networks  Congestion Control  Active Queue Management  Buffer-bloat