

عنوان مقاله:

A Self-Tuning Controller for AQM Router

محل انتشار:

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نویسندگان:

Y. Nazaripour - Dep. of Electrical Engineering Amirkabir University of Technology. Tehran, Iran

M. Shafiee

S.K. Nikravesh

خلاصه مقاله:

In this paper the pole placement idea is employed to propose a controller for the AQM in a IP router. Our Self-Tuning RED and Proportional-Integral controller based on Pole Placement can assign proper ranges of the damping ratio ξ and the undamped natural frequency ω_n to guarantee the system stability, to achieve a good AQM performance and thereby to make the system adapt to significant load changes very well. We verify the effectiveness of the controller via simulation. Our simulation results show that choosing appropriate value for ξ and ω_n can successfully satisfy the transient response of the system, it also shows when the network load changes, the controller can still stabilize the queue size at the reference value.

کلمات کلیدی:

IP network; congestion control; AQM; pole placement; proportional-integral controller; RED

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