Window Size and Round-Trip-Time in a Network Transmission Session

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Abstract

A transmission session in a network constitutes a period beginning with the transport of data from one communicating node to the other. A transmission session is always set out for end-to-end connection and involves many network resources. Previous research studies on smooth data flow across a network reveals that the maximum number of data in an optimal transmission session is associated with window size. Problems are still encountered when it comes to the rate at which data move in a transmission session and also the required window size. This should be dynamically and automatically controlled. This research investigates the effect of Window Size and Round-Trip Time (RTT) in a transmission session. Packet data are collected for many network transmission sessions. The raw data were normalized, and the Naive Bayes technique was used for the analytical evaluation. The effect of window size and RTT in a transmission session is examined, which reveals that the rate at which data move in a transmission session can be dynamically controlled to a considerably high degree of accuracy. Each network node cannot be overwhelmed when the window size is adjusted to the required size.

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KeyWords Plus: TCP; PACKET; CONGESTION

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