Increase of the Congestion Window when the Sender is Rate-Limited

draft-ietf-ccwg-ratelimited-increase-00

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CCWG
IETF 122

Overview of the draft

maxFS: the largest value of FlightSize since the last time that cwnd was decreased. If cwnd has never been decreased, maxFS is the maximum value of FlightSize since the start of the transfer.

From Section 3:

When FlightSize < cwnd, regardless of the current state of a congestion control algorithm, senders using a congestion controlled transport protocol:

- **MUST** constrain the growth of cwnd
- **SHOULD** cap cwnd to be no larger than limit(maxFS)
- **MAY** restrict maxFS as min(maxFS, pipeACK), using "pipeACK" as defined in [RFC7661]

Changes since IETF 121

- Wording improvements to three rules
- Define a few key variables clearly in the draft (N, SMSS, cwnd)
- An example in Section 3.1 to make it easier to understand
- New author (me)

Next steps

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One question: should we remove rule #1 and make rule #2 a MUST? – addresses Martin Duke's comment and simplifies the text

Next steps

Define the word “rate-limited” in the draft:

- addressing Neal’s comment about rate-limited vs application-limited
- rate-limited word includes: cwnd-limited or receiver-window-limited flows
- application-limited word excludes (?) being limited by the receiver window
- RFC 7661 says “a rate-limited application will experience periods when the sender is either idle or unable to send at the maximum rate permitted by the cwnd.”

Thank you!

Your feedback is very welcome: https://github.com/ietf-wg-ccwg/draft-ietf-ccwg-ratelimited-increase

Questions?