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IETF-69

Quick-Start for DCCP

draft-fairhurst-tsvwg-dccp-qs-01

(Individual Submission)

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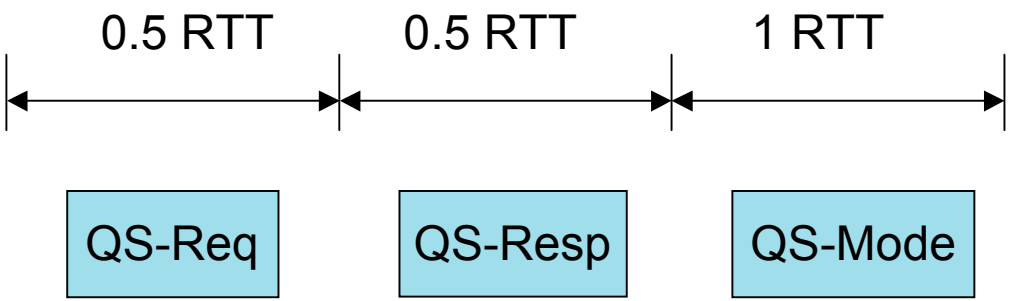
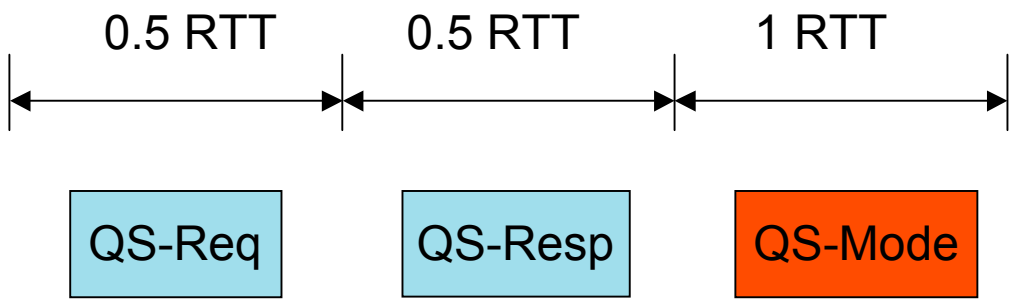
QS for DCCP



- Similar to QS with TCP [RFC 4782]
- Sender MAY use a Quick-Start request:
  - At start of a connection
  - In the middle of a connection
- SHOULD send request on a packet that is acknowledged

New in Revision -01

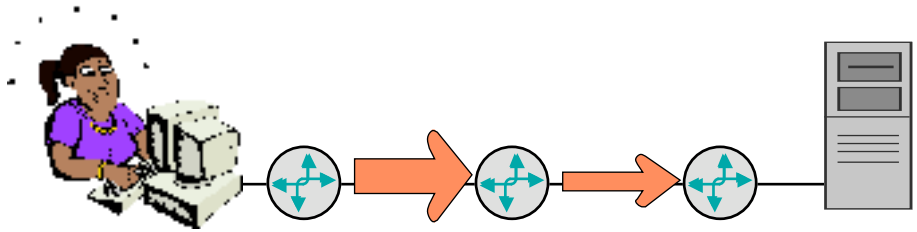
- Added CCID-2 text
- CCID-3 feedback timer
  - Receiver can use window counter or feedback timer expiry
- Added text on choosing the QS_Rate
- Added QS_Interval



- *Resembles TCP…*
- When a ***feedback*** packet arrives
  - Sets cwnd to actual flight size
- If a feedback packet arrives reporting packet ***loss***
  - MUST immediately leave the Quick-Start Mode
  - Cwnd updated

Problem Statement: QS Interval

- DCCP flows have an incentive to use QS during flow
  - Change of codec
  - Restart after “idle”
- What happens if you send a QS-Request too often?
  - Annoy routers (perform work on slow-path)
  - Steal capacity from the QS pool - particularly in multi-hop path



QS Interval

- Initial QS_Interval = Max(4* *current_RTT*,1 sec)
  Reset back to this next time, if successful

- What if you don't get a QS-Approval?
  Exponential Backoff
  QS_Interval = Max(4**current_RTT*,2*previous QS_Int)

Until 64 seconds…
Sender must give-up!

Loss of a QS-Request/Response also terminates QS

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What Next?

- Structure of draft complete
- Next Revision
  - Need to think about implications and issues in deployment
  - Some simulation
  - Other people's comments most welcome
- So…. We think ready to become a WG Draft…