

A Test To Allow TCP Senders to Identify Receiver Non-Compliance



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draft-moncaster-tcpm-rcv-cheat-01.txt

Intended for Standards Track?



Updated Draft

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- Revised Draft: [draft-moncaster-tcpm-rcv-cheat-01.txt](#)
- Intended Status: Standards Track?
- Immediate Intent: Move to WG item

Changes from previous version:

- Broadened scope to include rcvr non-compliance (+cheating)
- Clarified that this could be used as part of a TCP test suite
- Added section on interactions with other TCP variants (TCP-secure, Nagle, delayed ACKs)
- Addressed possible impact of additional packet reordering
- Tightened up rules for segment delay in stage 1 test

Quick reminder of (optional) test process

Stage 1 Test:

To test if a receiver is compliant with TCP's rules on missing segments:-

- Select segment S and displacement D where $2 < D < K-2$, $K =$ current window size. D SHOULD be < 6
- Segment S is transmitted after segment $S+D$
- Receiver should generate D duplicate ACKs

Stage 2 Test:

If a receiver fails the first test we can perform a tougher test:-

- Select a segment, S . Start a congestion response. Don't transmit S until you receive a dup. ACK for segment $S-1$
- If you receive an ACK for a segment between $S-1$ and R , then the receiver fails the test and the connection is closed

Next Steps

- We have responded to all comments received at IETF68 and subsequently on the mailing list
- Still possibility of undesirable interactions with obscure TCP variants – will respond to these as they are suggested
- Would like to propose the draft moves to WG status with new name (dropping the reference to cheating):
draft-ietf-tcpm-rcv-comply-test
- We would welcome offers of assistance from co-authors

Note – this optional test is meant to plug an existing hole – future versions of TCP might fill the hole properly (e.g. transport-layer nonce)

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Questions?

