

# Advice on network buffering

draft-fairhurst-tsvwg-buffers-00

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# Existing buffering advice: § 13 RFC3819 Advice for Internet Subnetwork Designers (BCP)

- Started 1999, published Jul 2004.
- Tentatively recommended RED & ECN
- Recommended large buffers
  - $\text{link\_bandwidth} * \text{link\_delay product} * N$
- At that time
  - L2 equipment had very short buffers
  - research on sizing buffers was immature (just)  
[McKeown Sizing Router Buffers, SIGCOMM' 04]
- We want to fix the advice

# Proposed flow of logic

- A long-running TCP will fill a tail-drop buffer if it is the bottleneck
  - hard to test, because intermittent
  - conditional on coincidence of 4 pathologies
- Therefore *implementers* should use AQM & ECN
  - in every buffer: subnet, router, middlebox or host
  - later section lists candidate AQMs
- If line rate adjusts, buffer should adjust accordingly
- If no AQM in existing buffers
  - advice for *operator* on buffer sizing
- If no auto-adjustment in existing buffers
  - advice for *operator* on static buffer sizing

# enlisting help of ICCRG

- draft is currently a fairly empty vessel
  - individual -00 version
  - intended for IETF tsvwg
  - intended status: best current practice (BCP)
- specific sections on buffer sizing for
  - host, router/switch/middlebox (edge & core)
  - flow isolation
- need consensus on content for these sections