The Impact of Transport Header Confidentiality on Network Operation and Evolution of the Internet

draft-ietf-tsvwg-transport-encrypt-01

Gorry Fairhurst – University of Aberdeen
Colin Perkins – University of Glasgow
History

• The -09 individual draft was presented at IETF 102 in Montréal
• The -10 individual draft was submitted in August, addressing feedback from that meeting
• Adopted as WG item, submitted -00 with no content changes
• The -01 working group draft was submitted for this meeting
Updates since Montréal (1/2)

- Added examples of impact of ossification on transport protocols
  - MP-TCP and middleboxes that track congestion window growth
  - TCP Fast Open and middleboxes that misbehave with unknown options or drop segments with data that have the SYN bit set, etc.
  - TCP SACK disruption by middleboxes that rewrite sequence numbers
  - TCP MSS rewriting middleboxes interfering with path MTU discovery
Updates since Montréal (2/2)

- Revised Introduction to better explain the purpose of the draft
- Revised discussion to better explain the choice of observation point and rationale for on-path measurements
- Reference the IAB wire image draft; update other references
- Editorial fixes throughout
Open Issues

• Review and revise conclusions – currently over-long, and doesn’t make a clear point

• Discussion of metrics derived from network layer headers
  • Some has clear transport relation – ECN code points
  • Some is important operationally or for end-to-end performance, but has less clear transport interaction – IPv6 flow label; DSCP
  • Possible space for discussion of future path layer work
  • Considering whether to expand or remove this discussion

• Otherwise close to complete – looking for your input