Transport Options for UDP

draft-ietf-tsvwg-udp-options-05

IETF 98 – Chicago

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Status

• Major update since last IETF talk
  – 04 adds LITE, alternate checksum
  – 05 adds frag/reassy, TCP-like options

• Important need
  – DNSSEC could use UDP fragmentation to overcome IP path MTU limits

• Implementation progress
  – USC/ISI student project handed off to ?

• Requesting WG adoption
  – We’d like a call ASAP
  – Pref. targeting standards-track
Overview

• **Option space for UDP**
  – Uses difference between IP and UDP lengths
  – Does NOT deliver “out of band” trailer to app.
  – Compatible with legacy (so far)
  – Uses Option Checksum (OCS) for “safety”

• **Useful for**
  – Out-of-band fate-shared signaling
  – Soft-state optimizations
  – Optional optimizations
  – Emerging UDP extensions (GUE, TAPS, etc.)
04/05 additions

- **Alternate checksum**
  - CRC16 to provide stronger protection than IP CS
  - Need to indicate the polynomial (TBD)

- **LITE**
  - Like UDP-Lite

- **Fragmentation/reassembly**
  - Incl. LITE variant silently ignored by legacy
  - Incl. its own reassembly IP checksum
  - Incl. both per-frag/post-reassy UDP options

- **TCP-like features**
  - Timestamps, MSS, AO/AO-encrypt ("AE")