TCP Extended Data Offset Option

draft-ietf-tcpm-tcp-edo-03/04
IETF 94 - Yokohama

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Status

• 04 update issued Nov 2015 (during IETF 94)
  - No changes from -03

• Two Linux implementations underway
  - USC/ISI student project
    • http://www.isi.edu/touch/tools
    • Linux 3.1.3 patches, tech. report available
    • Total of 272B space available
    • Not yet compatible with GRO (suspicious behavior detected)
    • 932 Mbps on 1GE (GROoff/EDOon vs. 940 GROon/EDOoff)
  - Pasi’s code
    • https://github.com/PasiSa/linux
    • Tested using NOPs to exceed DO limit
Current issues

• Detect inappropriate merging (MPTCP)
  – Currently requires length variant for detection
  – Currently silent discard if length is wrong
    • MPTCP wants connection to proceed, but that requires a way to drop a currently active option
    • TCP options are negotiated at connection start
    • Recommend **required** configuration parameter – “silent discard” vs. “fail upon resegmentation” (i.e., drop and send RST -- default to fail?)
Issues...

• Blind echo of unknown options
  – Not currently addressed
  – Costly to fix in each option
  – TCP is not a measurement device (i.e., not clear we need to have an option to address this)

• TSO/LRO
  – In general, these are PART OF A TCP IMPLEMENTATION
  – They MUST NOT process segments with options they don’t understand
Future path

• Wait for implementation results
  – Need to confirm GRO bug
  – Should be resolved this winter

• Proceed as a WG doc
  – After impl. results above