TCP Usage Guidance in the Internet of Things

draft-ietf-lwig-tcp-constrained-node-networks-09

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Status (I/II)

• IETF 104
  – Presented draft-ietf-lwig-tcp-constrained-...-05

• Comments by Stuart Cheshire
  – Led to -06

• Comments by Gorry Fairhurst
  – Led to -07

• WGLC on -07
  – Comments by Ingemar Johansson
  – Comprehensive reviews by Ilpo Järvinen and Markku Kojo
Status (II/II)

• Version -08
  – Aimed to address the WGLC comments
  – Still some remaining points

• Last update is -09
  – Aimed to address the remaining points
Updates in -09 (I/II)

• Ilpo’s comments
  – Replaced “Pure ACK” by “ACK without payload”
  – 4.3.1. Loss recovery
    • Clarified example: segments 1 to 6 will not be outstanding right at the beginning
  – One editorial improvement

• Markku’s comments (I/II)
  – “Single-segment” reverted back to “single-MSS”
  – 4.1.1. MSS
    • “Limit the MTU” to “Limit the IP datagram size”
    • Removed text focusing on IPv4
      – No IPv4 equivalent to the IPv6 MTU requirement
Updates in -09 (II/II)

- Markku’s comments (II/II)
  - 4.2.1. Single-MSS stacks
    - CoAP-level stop-and-wait, single-MSS window sufficient
    - Exception of CSM and first app message
  - 4.2.3. Delayed ACKs for single-MSS stacks
    - Disabling Nagle has no impact if sender can only handle stop-and-wait operation at the TCP level
    - Editorial clarifications
  - 4.2.4. RTO calculation for single-MSS
    - Cited FASOR draft
- 4.3.1. Loss recovery
  - With Limited Transmit, cwnd of 2 segments would be enough to trigger sending segments 1 to 5
  - Sender has to wait for the Delayed ACK for segment 1
Comments/Questions?