New CoAP Block-Wise Transfer Options For Faster Transmission

draft-ietf-core-new-block-02

IETF CoRE Meeting, 20\textsuperscript{th} Nov 2020

Mohamed Boucadair

Jon Shallow
Agenda

• Changes since last interim

• One Pending Question

• Next Steps
Updates in -02 (10/2020) (1 of 2)

• Add a statement that either both or neither options can be supported
• Add an implementation note about how tokens can be handled to reduce number to be tracked
• Add a clarification about the behaviour when multiple instances of Q-Block2 are included
• Remove the "MUST NOT" restriction on 2.31 (Continue)
• Handling of requests that cannot be fulfilled due to packet size limitations now return 4.13
Updates in -02 (10/2020) (2 of 2)

• Update the CDDL and add an implementation note to suggest the use of indefinite-length arrays
• Add a note about the ACK_TIMEOUT delay (2s) after MAX_PAYLOADS
• Not recommended to be used in a NoSec security mode
• Editorial
  – Clarify what is meant by "repeat request“ by updating use of ‘M‘ bit in requests
  – Change the name of the options to Q-Block1 and Q-Block2
Option Naming

• Poll set up for naming: https://doodle.com/poll/2uv4vfez9sq77fa9
  • Quick-Block
  • Q-Block
  • Resilient-Block
  • Fast-Block
  • Robust-Block
  • FLLF-Block
  • LL-Block
  • Tough-Block
  • A-Block (Alternative Block)
Question: Congestion Control (1 of 2)

• Background: MAX_PAYLOADS (default every 10 packets)
  – Default wait of ACK_TIMEOUT before proceeding
  – Use of CON every MAX_PAYLOAD for reduction of turnaround times
  – CON fails if unidirectional traffic loss
  – NON will wait for ACK_TIMEOUT before next packet sent

• How to reduce NON turnaround times if network/peer OK?
  – Signal something in the MAX_PAYLOAD packet to indicate immediate acknowledge response required
  – if response fails to get through there still will be ACK_TIMEOUT wait which is OK
Question: Congestion Control (2 of 2)

• Possibilities: No-Response Option works for Q-Block1
  – ISE, not Standards Track
  – How to handle Q-Block2?
    • May make sense to do the same for Q-Block1

• What about?
  – Update the Q-Block option format to “NUM R M SZX” where R bit set means:
    • Q-Block1: Respond with 2.31
    • Q-Block2: Issue GET for next block

• Is it worth to be solved?
Next Steps

- Prepare -03 with the outcome of the discussion to address the pending question
- Update the implementation
- If no major issue, target a WGLC

- Please review and share comments: https://github.com/core-wg/new-block

Thank You