

Message aggregation

CoAP over Bundle Protocol (BP) draft-gomez-core-coap-bp-03

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Overview

- Aggregate message
 - Currently defined as “Concatenation of Single messages that carry the Payload-length option”
 - draft-gomez-core-coap-bp-03
- Comments received in IETF 122 (Bangkok)
 - Participants not sure about the technical approach for message aggregation
- Aim of this presentation: to discuss the technical approach for message aggregation
 - In preparation for -04

Payload-length option

- Indicates the size of the payload of a CoAP message
 - The option value is an integer number of bytes
 - Allows message aggregation

- Definition:

No.	C	U	N	R	Name	Format	Length	Default
TBD	x				Payload-length	uint	0 or more	(none)

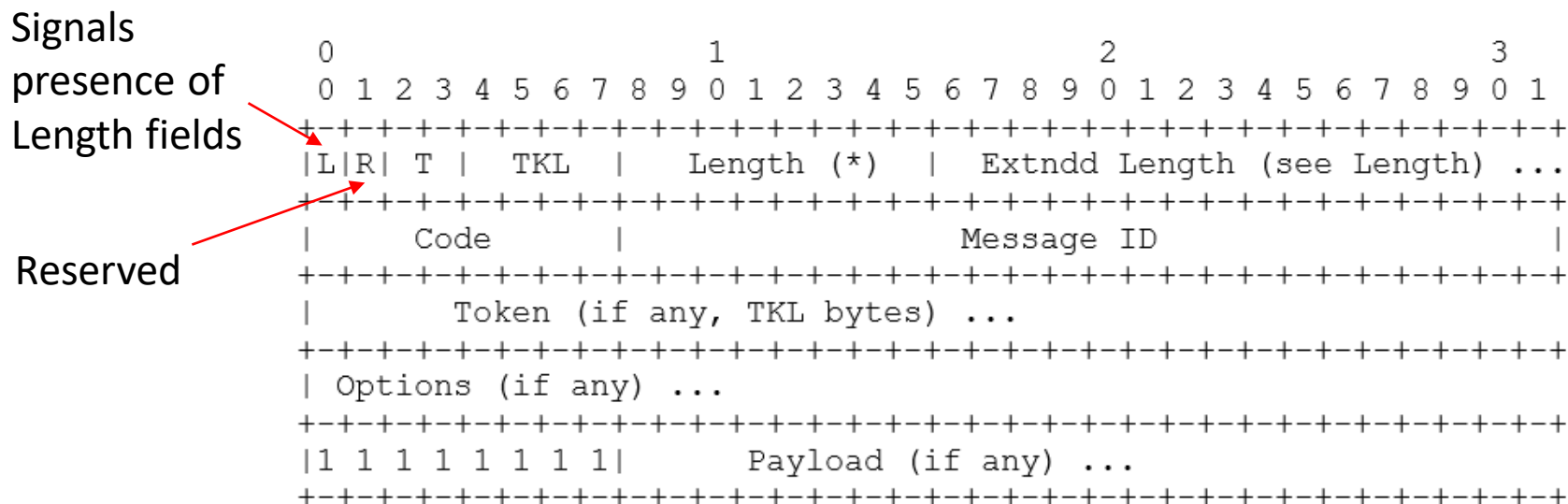
C = Critical, U = Unsafe, N = NoCacheKey, R = Repeatable
(*) See below.

Carsten's comments

- Concern with current approach:
 - Need to parse all the options to determine the size of an individual message within an Aggregate message
- Some alternatives:
 - 1. Length information could be part of the CoAP message header, similar to CoAP over TCP
 - 2. Use, e.g., option number zero

Alternative 1 (I/II)

- Message length information as part of the CoAP message header
 - Was this idea intended only for CoAP over BP ?
 - It would work (for CoAP over BP), but what about CoAP over UDP (assuming there is interest also in supporting CoAP message aggregation over UDP) ?
 - Possible format



Alternative 1 (II/II)

Length: 8-bit unsigned integer. A value between 0 and 252 inclusive indicates the length of the message in bytes, starting with the first bit of the Options field. Three values are reserved for special constructs:

253: An 8-bit unsigned integer (Extended Length) follows the initial byte and indicates the length of options/payload minus 253.

254: A 16-bit unsigned integer (Extended Length) in network byte order follows the initial byte and indicates the length of options/payload minus 509.

255: A 32-bit unsigned integer (Extended Length) in network byte order follows the initial byte and indicates the length of options/payload minus 66405.

Alternative 2

- Option number zero (or another low number?) for the Payload-length option
 - Would work without the need to modify the CoAP header over UDP as well (not only over BP)
 - Currently, option number zero is “Reserved”
 - Would the Payload-length option be relevant enough to deserve the assignment of e.g. number zero?
- Other alternatives?

Thanks!

Questions? Comments?

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