CoAP Request-Timeout Option

draft-li-core-coap-request-timeout-option-00

Request-Timeout option

✓Purpose

✓Indicate the maximum time that a client is prepared to wait for a response

✓ Client knows how long it should wait for the response, and keeps state for the request for the indicated time

✓After the indicated time, client may give up the request

✓Benefit

✓It can avoid that the server wastes resources by sending a response which already exceeds the set timeout of the client.

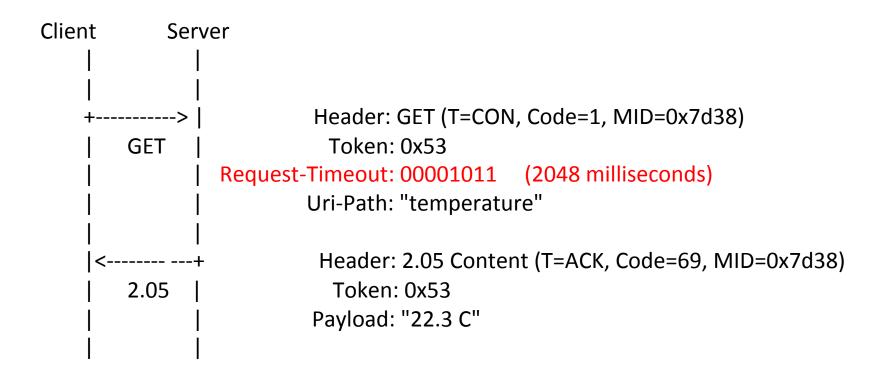✓The transmission resource can be saved to avoid the retransmission of requests.

Request-Timeout Option

✓ Definition

```
+-------+------+-----------------------+-------------+---------+-------------+
| Type  | C/E  |         Name          | Data type   | Length  | Default     |
+-------+------+-----------------------+-------------+---------+-------------+
| 20    | E    | Request-Timeout       | uint        | 0-1 B   |             |
+-------+------+-----------------------+-------------+---------+-------------+
```

```
  0
   0 1 2 3 4 5 6 7
  +-+-+-+-+-+-+-+-+
  |       T       |
  +-+-+-+-+-+-+-+-+
```

Request-Timeout = 2^T milliseconds

Example

```
Client        Server
   |            |
   |            |
   +----------> |          Header: GET (T=CON, Code=1, MID=0x7d38)
   |    GET    |             Token: 0x53
   |           |    Request-Timeout: 00001011    (2048 milliseconds)
   |           |           Uri-Path: "temperature"
   |           |
   |<-------- ---+          Header: 2.05 Content (T=ACK, Code=69, MID=0x7d38)
   |   2.05    |             Token: 0x53
   |           |           Payload: "22.3 C"
   |           |
```

Conclusion

✓ Open Issues from the discussion in the mailing list

    ✓Should we use milliseconds or mibiseconds (1/1024s)?

    ✓Differences between Request-Timeout and Connection-Timeout?

    ✓Need to check implementations about this option

✓Next steps

    ✓Is it OK for the group to accept this as a WG item?