DOTS Signal Channel

https://github.com/boucadair/draft-ietf-dots-signal-channel

DOTS WG Meeting
London, March 2018

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Agenda

• List of changes since the interim
• Next steps
Hop-Limit

• A new CoAP Option is defined to detect and prevent infinite loops
  – The use of an option instead of a parameter in the message body is more adequate to accommodate all request types
  – An IANA request to assign a codepoint for it
  – An IANA request to assign an error code to notify that a hop limit is reached
ack-timeout as a float

• Used to be an integer in -17
• But some implementations define it as a float
• RFC7252 does not provide a hint
  – Checked with the authors of 7252:
    • “RFC 7252 itself never needs to take a position on what data type the ACK_TIMEOUT parameter should be represented in.”
  – Makes sense if the configuration is local
• A clear data type/unit is needed for DOTS because the configuration is negotiated between clients and servers
• Updated to draft to align with existing implementations
  – ack-timeout is defined as a float
Support Multiple Observe Requests

• RFC7252 states:
  – The client SHOULD generate tokens in such a way that tokens currently in use for a given source/destination endpoint pair are unique

• This behavior prevents the support of multiple observe bound to the same DOTS client

• Actions
  – Errata against RFC7252
  – Implemented this change

OLD:
  'cuid' is a mandatory Uri-Query parameter for GET requests.

NEW:
  'cuid' is a mandatory Uri-Path parameter for GET requests.
Max-Age Option

• Used to have ‘config-interval’ to govern how a client can re-contact its server to retrieve configuration changes
• Replaced with Max-Age Option with these recommendations:
  – Servers SHOULD return Max-Age Option
  – Max-Age Option set to 0 is NOT RECOMMENDED
  – Max-Age Option set to 2**32-1 is equivalent to associating an infinite lifetime with a configuration data
  – A misbehaving client MAY be disconnected if it does not proceed with configuration update
  – During attack times:
    • Refresh requests MUST NOT be sent by DOTS clients
    • DOTS servers MUST NOT terminate the (D)TLS session after the expiry of Max-Age
Some Minor Edits

• **Add this text for clarity:**

  Note that 'heartbeat-interval', 'missing-hb-allowed', 'max-retransmit', 'ack-timeout', and 'ack-random-factor', if present, do not need to be provided for both ‘mitigating-config’ and ‘idle-config’ in a PUT request.

• **Add this text for clarity:**

  'cuid', 'cdid', and 'mid' must not appear in the PUT request message body.
Early Port Allocation

• Request for 4646 was handed to the AD
• IANA suggested to apply for permanent allocation
• In progress
Next Steps

• Publish -18
• Issue a WGLC on -18
• Questions?