Clarification Request

References: Specified Tests 18.1 test 14.YY.1.1.12

Date of BTL-WG Response: July 22, 2021

Background: 135-2020 Figure AB-6

1.1.1.1 14.YY.1.1.12 Unknown 'Must Understand' is True Message Test

Reference: YY.2.3, YY.3.1.4

Purpose: To verify that a unicast message is not ignored if the 'Must Understand' flag is set and the option is unknown or not supported.

Test Concept: With the IUT connected to the BACnet/SC network, send a ReadProperty request with a set of header options with one that the IUT does not know marked as 'Must Understand'. Verify that the IUT responds with a NAK and error class of COMMUNICATION and an error code of HEADER_NOT_UNDERSTOOD correctly identifying the option marked as 'Must Understand'. Verify that the IUT does not send a ReadProperty-ACK. Repeat with a globally broadcast Who-Is request.

Test Steps:

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1.      TRANSMIT Encapsulated-NPDU,
            'Message ID' =                              (M1: any valid value),
            'Originating Virtual Address' =          (OVA: any valid value, including absent),
            -- 'Destination Virtual Address' absent
            'Destination Options' =                  ({X'BF0003000012', --proprietary,more,not
M.U.,len=3,ven=0, opt=x12

        X'FF0003000000', --proprietary, more,M.U.,len=3,ven=0, opt=x00

        X'3F0003000034'}), --proprietary,not more,not M.U.,len=3,ven=0,opt=x34
            'Data Options' =                         ({ X'41' }),
            -- Secure Path
            'BACnet NPDU' =
                ReadProperty-Request,
                'Object Identifier' =                (the IUT's Device object),
                'Property Identifier' =              Object_Name
2.      RECEIVE BVLC-Result,
            'Message ID' =                              M1,
            -- 'Originating Virtual Address' absent
            'Destination Virtual Address' =          (OVA),
            'Destination Options' =                  (absent or a valid list of options),
            -- 'Data Options' absent
            'Result for BVLC Function' =             X'01',    -- Encapsulated-NPDU
            'Result Code' =                          X'01',    -- NAK
            'Error Header Marker' =                  X'02FF',-- second header optiontype of
header option, that causes the problem
            'Error Class' =                          COMMUNICATION,
            'Error Code' =                           HEADER_NOT_UNDERSTOOD
3.      CHECK(that the IUT does not send a ReadProperty-ACK)
4.      TRANSMIT Encapsulated-NPDU,
            'Message ID' =                              (M2: any valid value),
            'Originating Virtual Address' =          (OVA: any valid value, including absent),
            'Destination Virtual Address' =          (X'FFFFFFFF', the local broadcast VMAC),
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            'Destination Options' =   ({X'BF0003000012',--proprietary,more,not
M.U.,len=3,ven=0, opt=x12

      X'FF0003000000',   --proprietary, more,M.U.,len=3,ven=0, opt=x00

      X'3F0003000034'}),--proprietary,not more,not M.U.,len=3,ven=0,opt=x34
        'Data Options' =   ({ X'41'}),   --
Secure Path

        'BACnet NPDU' =
            WhoIs-Request
5.   CHECK(that the IUT does not route the message, send a BVLC-Result nor send an IAm-Request)

Problem:

In step 2 the test definition currently expects the Error Header Marker to contain the position of the header option, that causes the problem. But according to 135-2020 Figure AB-6 it should be the type of the header option instead.

Question:
Should the test be corrected as written?

Response:
Yes.