

Clarification Request

References: **Add-BTL-Test-Package-26.0-fix2**

Date of BTL-WG Response: June 19, 2025

Background:

10.7.3 Router Binding via Who-Is-Router-To-Network

Reason for Change: Modify test to allow for the case where IUT is a router that does not support initiating confirmed requests.

Purpose: To verify that the IUT can ~~initiate~~*send* requests to a remote network after the IUT uses the Who-Is-Router-To-Network Network Layer service to discover the MAC address of the router to that remote network.

Test Concept: The IUT broadcasts a Who-Is-Router-To-Network request to discover the router to the desired network. The ~~TD~~*IUT* transmits a request to a device on the remote network without performing any further form of dynamic router binding. *If the IUT does not support Who-Is-Router-To-Network router binding, then this test shall be omitted.* If the IUT cannot initiate a ReadProperty request, then another confirmed service can be substituted. *If the IUT is a router that does not support initiating confirmed service requests then it may forward a confirmed service request from device D4A instead.* The IUT may use either the general query or specific network number query form of the Who-Is-Router-To-Network service.

Note that Clause 6.5.3 specifically mentions router binding via Who-Is-Router-To-Network and does not mention router binding by lurking and noting unsolicited I-Am-Router-To-Network messages.

Test Steps:

1. MAKE (IUT transmit Who-Is-Router-To-Network to discover the router to DNET2)
2. RECEIVE
 - DA = BROADCAST,
 - SA = IUT,
 - Who-Is-Router-To-Network,
 - | (DA = BROADCAST,
 - SA = IUT,
 - Who-Is-Router-To-Network,
 - DNET = DNET2)
3. TRANSMIT
 - DESTINATION = BROADCAST,
 - SOURCE = TD,
 - I-Am-Router-To-Network,
 - Network Numbers = DNET2
4. *IF (the IUT can initiate a ReadProperty request or any other confirmed request) THEN*
45. MAKE (IUT transmit a ReadProperty request to the D2A device on the remote network)
56. RECEIVE
 - DA = TD,
 - SA = IUT,
 - DNET = DNET2,
 - DADR= D2A,
 - Hop Count = 255,
 - BACnet-Confirmed-Request-PDU,
 - 'Service Choice' = ReadProperty-Request,
 - 'Object Identifier' = (O1, any BACnet standard object in D2A),
 - 'Property Identifier' = (P1, any required property of the specified object)
67. TRANSMIT

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    DA = IUT,
    SA = TD,
    SNET = DNET2,
    SADR = D2A,
    BACnet-ComplexACK-PDU,
    'Service ACK Choice' =      ReadProperty-ACK,
    'Object Identifier' =      OI,
    'Property Identifier' = P1,
    'Property Value' =          (any valid value)
ELSE -- (IUT is a router that does not support initiating confirmed service requests)
8.    TRANSMIT
        DA = IUT,
        SA = D4A,
        DNET = DNET2,
        DADR = D2A,
        Hop Count = 255,
        BACnet-Confirmed-Request-PDU,
        'Service Choice' =      ReadProperty-Request,
        'Object Identifier' =    (OI, any BACnet standard object in D2A),
        'Property Identifier' =  (P1, any required property of the specified object)
9.    RECEIVE
        DA = TD,
        SA = IUT,
        DNET = DNET2,
        DADR = D2A,
        SNET = DNET4
        SADR = D4A
        Hop Count = (any integer x: 0 < x < 255),
        BACnet-Confirmed-Request-PDU,
        'Service Choice' =      ReadProperty-Request,
        'Object Identifier' =    OI
        'Property Identifier' =  PI
10.   TRANSMIT
        DA = IUT,
        SA = TD,
        DNET = DNET4,
        DADR = D4A,
        SNET = DNET2,
        SADR = D2A
        Hop Count = 254,
        BACnet-Confirmed-Request-PDU,
        'Service Choice' =      ReadProperty-ACK,
        'Object Identifier' =    OI
        'Property Identifier' =  PI
        'Property Value' =      (any valid value)

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Problem:

Test 7.3.1 currently assumes that the IUT is capable of initiating a ReadProperty request, another confirmed service, or that it functions as a BACnet router.

However, some BACnet devices are not routers and are only capable of initiating unconfirmed requests.

Question:

Should the test be changed to add a condition for device that supports only unconfirmed request?

Response:

Yes