Clarification Request

References: BTL Specified Tests 10.X.2 Router Binding via Application Layer Services

Background / Proposed Solution:

There is a BTL Specified Test 10.X.2 **Router Binding via Application Layer Services** Test, which explicitly requires either a Remote Broadcast or a GLOBAL BROADCAST.

Question:

Should the test be modified as follows, to also allow a Directed Unicast Who-Is in Step 2?

10.X.2 **Router Binding via Application Layer Services**

Purpose: To verify that the IUT can initiate requests to a remote network and respond to requests from a remote network after the IUT uses the Who-Is and I-Am Application Layer services to discover the MAC address of the router to that remote network.

Test Concept: The IUT ~~broadcasts~~ *sends* a Who-Is request to discover device D2A and notes the MAC address of the intervening router in the corresponding I-Am reply. The TD transmits a request to a device on the remote network and responds to a request from the remote network without performing any further form of dynamic router binding. If the IUT does not support application layer router binding or if the IUT cannot initiate a request other than Who-Is, then this test shall be omitted. If the IUT cannot initiate a ReadProperty request then another confirmed service can be substituted. The IUT may use the deviceInstanceRange form of Who-Is.

Note that Clause 6.5.3 specifically mentions router binding via Who-Is, and does not mention router binding by initiating other application layer services (such as Who-Has) or lurking and noting the router MAC addresses for incoming application layer requests.

Test Steps:

1. MAKE (IUT transmit Who-Is to discover the device on the remote network)
2. RECEIVE

D*A*~~ESTINATION~~ =	*LOCAL* BROADCAST,
SOURCE =	IUT,
DNET =	GLOBAL BROADCAST,
Hop Count =	255,
BACnet-Unconfirmed-Request-PDU,	
'Service Choice' =	~~w~~*W*ho-Is
| (RECEIVE	
D*A*~~ESTINATION~~ =	*LOCAL* BROADCAST,
SOURCE =	IUT,
DNET =	DNET2,
DADR=	BROADCAST *or D2A*,
Hop Count =	255,
BACnet-Unconfirmed-Request-PDU,	
'Service Choice' =	~~w~~*W*ho-Is

3. TRANSMIT

DESTINATION = BROADCAST,
SOURCE = TD,
SNET = DNET2,
SADR = D2A,
BACnet-Unconfirmed-Request-PDU,
‘Service Choice’ = I-Am,
'I Am Device Identifier' = (device object, instance number of D2A),
'Max APDU Length Accepted ' = (any valid value),
‘segmentationSupported’ = (any val*id*~~ue~~ value),
'Vendor ID ' = (any valid value)

4. MAKE (IUT transmit a ReadProperty request to the D2A device on the remote network)
5. RECEIVE
   D*A*~~ESTINATION~~ = TD,
   SOURCE = 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)
6. TRANSMIT
   DESTINATION = IUT,
   SOURCE = TD,
   SNET = DNET2,
   SADR = D2A,
   BACnet-Complex-Ack-PDU,
   ‘Service ACK Choice’ = ReadProperty-ACK,
   'Object Identifier' = O1,
   'Property Identifier' = P1,
   'Property Value' = (any valid value)
7. TRANSMIT
   DESTINATION = IUT,
   SOURCE = TD,
   SNET = DNET2,
   SADR = D2A,
   BACnet-Confirmed-Request-PDU,
   'Service Choice' = ReadProperty-Request,
   'Object Identifier' = O2 (any BACnet standard object in IUT),
   'Property Identifier' = P2 (any required property of the specified object)
8. RECEIVE
   D*A*~~ESTINATION~~ = TD,
   SOURCE = IUT,
   DNET = DNET2,
   DADR = D2A,
   Hop Count = 255,
   BACnet-Complex-Ack-PDU,
   ‘Service ACK Choice’ = ReadProperty-ACK,
   'Object Identifier' = O2,
   'Property Identifier' = P2,
   'Property Value' = (any valid value)

Notes to Tester: It is acceptable if the Who-Is request in step 2 contains the 'Device Instance Range Low Limit' and 'Device Instance Range High Limit' service parameters as long as D2A's device instance is within the range.

Response:

Yes.