Clarification Request

References: Specified Tests 20.0.Final

Date of BTL-WG Response: 2022-02-24

Background:

Test 12.X.4.1.5 Distribute-Broadcast-To-Network is meant to test the IUT's ability, as a BBMD, to properly process a Distribute-Broadcast-To-Network message.

The setup has the IUT acting a BBMD, along with 3 other BBMDs and with a foreign device, FD1, attached to the IUT and another, FD2, connected to a different BBMD.

From BTL Specified Tests 20.0-final, the definition of the test:

12.X.4.1.5   Distribute-Broadcast-To-Network

Reason for Change: New to standard.

Purpose: To verify that the IUT, configured as a BBMD, will process a Distribute-Broadcast-To-Network request.

Configuration Requirements: Register FD1 as a foreign device with the IUT. FD2 is a registered foreign device with BBMD1. For purposes of this test, TD is acting as FD1.

Steps 1 6 are the processing of the Distributed-Broadcast-To-Network, Step 7 and on is the processing of the APDU service by the IUT.

Notes to Tester: The order of the messages transmitted by the IUT is not significant.

Test Steps:

1.   TRANSMIT
        DA = IUT,
        SA = FD1,
        Distribute-Broadcast-To-Network,
        Who-Is-Request
2.   ReCEIVE
        DA = B/IPv6 Link Local Multicast Address,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = FD1,
        Original-Source-Virtual-Address = FD1,
        Who-Is-Request
3.   RECEIVE
        DA = BBMD1,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = FD1,
        Original-Source-Virtual-Address = FD1,
        Who-Is-Request
4.   RECEIVE
        DA = BBMD2,

        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = FD1,
        Original-Source-Virtual-Address = FD1,
        Who-Is-Request

5.   RECEIVE
        DA = BBMD3,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = FD1,
        Original-Source-Virtual-Address = FD1,
        Who-Is-Request

6.   RECEIVE
        DA = FD2,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = FD1,
        Original-Source-Virtual-Address = FD1,
        Who-Is-Request

7.   ReCEIVE
        DA = B/IPv6 Link Local Multicast Address,
        SA = IUT,
        Original-Broadcast-NPDU,
        Original-Source-Virtual-Address = IUT,
        I-Am-Request

8.   RECEIVE
        DA = BBMD1,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = IUT,
        Original-Source-Virtual-Address = IUT,
        I-Am-Request

9.   RECEIVE DA = BBMD2,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = IUT,
        Original-Source-Virtual-Address = IUT,
        I-Am-Request

10. RECEIVE DA = BBMD3,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = IUT,
        Original-Source-Virtual-Address = IUT,
        I-Am-Request

11. RECEIVE
        DA = FD1,
        SA = IUT,
        Forwarded-NPDU,
        Source-Virtual-Address = IUT,
        Original-Source-Virtual-Address = IUT,
        I-Am-Request

12. RECEIVE
        DA = FD2,
        SA = IUT
        Forwarded-NPDU,

              Source-Virtual-Address = IUT,
              Original-Source-Virtual-Address = IUT,
              I-Am-Request

From 135-2020, the definition of the Forwarded-NPDU BVLL message:

U.2.9.1 Forwarded-NPDU: Format

The Forwarded-NPDU message consists of six fields:

BVLC Type:	1-octet	X'82'	BVLL for BACnet/IPv6
BVLC Function:	1-octet	X'08'	Forwarded-NPDU
BVLC Length:	2-octets	L	Length L, in octets, of the BVLL message
Original-Source-Virtual-Address:	3-octets		
Original-Source-B/IPv6-Address:	18-octets		
BACnet NPDU from Originating Device:	Variable length		

Problem:

1) In all of the Forwarded-NPDU messages, the field Source-Virtual-Address is instead of the field Original-Source-B/IPv6-Address.

2) In step 6, the IUT is expected to forward the WhoIs to FD2, but FD2 is not registered with the IUT.

3) In step 7, the IUT is expected to generate a local broadcast I-Am response, but the standard allows unicast and global broadcast I-Am responses.

Question:

Are we correct in the identification of the above 3 issues as actual errors in the test specification?

RESPONSE
Yes. These issues are errors, and the Test Package will be fixed.