

Clarification Request

References: BTL Specified Test 7.3.2.21.3.X (now renumbered 7.3.2.20.3.X)

Date of BTL-WG Response: __24-May-2011__

Background / Proposed Solution:

There was a request BTL-CRR-0141_7.3.2.21.3.X_DDB_without_range.doc
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References: BTL Specified Test 7.3.2.21.3.X

There is a BTL Specified Test **7.3.2.21.3.X Recipient_List Property Supports Device Identifier Recipients** which has overly restrictive expression in its Steps, Passing Result requirements without basis in the standard, and many typos.

The test specification requires a certain form of Device Address Binding resolution. Other forms, e.g. immediate address resolution after adding the recipient does not work and would require a special implementation.

We investigated a device in a pre-testing phase, which failed this test, because the Who-Is request was sent immediately after adding the recipient to the recipient-list of the notification-class object and not later after detecting an alarm as required by the actual form of this test.

Another question is if the Who-Is request is required to support the instance ranges or not. A global broadcast without instance range is far from ideal, but may additionally be allowed by the standard.

Another issue: The test requires a Global Broadcast only, what about Local or Remote Broadcasts? They might lead to the same result depending on the project implementation.

Proposal:

As far as I can see at least the RECEIVE statement for a Who-Is must additionally be allowed directly after test Step 1, to match what the Passing Result already explicitly states.

And (if agreed by the BTL-WG) it may be possible to allow other forms of the Who-Is requests as mentioned above.

At the moment it is unclear to me, how this test can be modified (including consideration of Notification Fail Time). A possible solution could be to add another test specification and make one of the two required if the IUT supports Device Identifier Recipients but this is sub-optimal.

We need to discuss this test within the BTL-WG to find a solution, at the moment I would declare this specification to be broken, which would result in a manual test at the lab.

These typo corrections to Existing **7.3.2.21.3.X Recipient_List Property Supports Device Identifier Recipients**

Purpose: To verify that the Recipient_List property of the Notification Class object supports entries with a rRecipient portions that contains a Device Identifiers and that the IUT is able to associate a MAC achieve a device-address binding with the Device Identifier using the WhoIs service. The intent is to ensure that the IUT is able to locate the specified alarm recipient and send notification to the specified recipient.

Test Concept: The tester shall select a single event generating object E in the IUT that references Notification Class object N. The tester shall add an entry into the Recipient_List of the associated

Notification Class object which specifies a device identifier I D of a device that the IUT is not already aware of.

Test Steps:

1. WRITE N.RecipientList = ({all days, all times, D, any process ID, FALSE, all transitions})
2. MAKE (the event generating object, E, transition)
3. BEFORE **Notification Fail Time**
 - RECEIVE
 - DESTINATION = GLOBAL BROADCAST
 - SOURCE = IUT
 - Who-Is-Request
 - 'Device Instance Range Low Limit' =(D's instance),
 - 'Device Instance Range High Limit' =(D's instance)
 - TRANSMIT I-Am-Request
 - I-Am-Request,
 - 'I Am Device Identifier' = f(D),
 - 'Max APDU Length Accepted' = (any valid value),
 - 'Segmentation Supported' = (any valid value),
 - 'Vendor Identifier' = (any valid value)
 - RECEIVE UnconfirmedEventNotification-Request,
 - 'Process Identifier' = (the valid process ID from step 1),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = E,
 - 'Time Stamp' = (the current local time),
 - 'Notification Class' = (N's instance),
 - 'Priority' = (any valid priority),
 - 'Event Type' = (any valid event type),
 - 'Notify Type' = ALARM | EVENT,
 - 'AckRequired' = TRUE | FALSE,
 - 'From State' = (any valid event state),
 - 'To State' = (any valid event state),
 - 'Event Values' = (values appropriate to the event type)

Passing Result: The IUT may transmit the Who-Is request before the event is transitioned. The IUT may specify a larger range than is shown in step 3, although the range shown in step 3 is the preferred range assuming that the IUT is not also looking for other devices. The IUT shall not leave the range out of the Who-Is request.

135.1-2009g-6 version of test (renumbered to 7.3.2.20.3.X) repaired the grammar in the first sentence of the Purpose, and added sentence:

“This test shall be run if the IUT's Notification Class object's Recipient_List property supports the BACnet object identifier form of BACnetRecipient.”

to the end of the Purpose. Also added sentence:

“The TD shall be located on a different network than the IUT to ensure that the IUT is capable of binding to recipients located on any network.”

to the end of the Test Concept.

“Configuration Requirements: The TD shall be configured to not execute WhoHas.”

was also added. Other changes relative to BTL – 7.3.2.21.3.X were made, relaxing the ‘Time Stamp’ specification to: (any valid time stamp), entirely dropping the explicit RECEIVE Who-Is and the TRANSMIT I-Am, and entirely dropping the explicit Passing Result.

Response Was:

Changes to this test are currently undergoing public review in 135.1-2009g-6. The BTL-WG will review and consider. when the Public Review is complete, and then make a response addressing all of these concerns.

The New Clause 7.3.2.20.3.X Recipient_List Property Supports Device Identifier Recipients

Purpose: To verify that the Recipient_List property of the Notification Class object supports the device form of the Recipient component and that the IUT is able to associate a MAC address with the Device Identifier. The intent is to ensure that the IUT is able to locate the specified alarm recipient and send notification to the specified recipient. This test shall be run if the IUT's Notification Class object's Recipient_List property supports the BACnet object identifier form of BACnetRecipient.

Test Concept: The tester shall select a single event generating object E in the IUT that references Notification Class object N. The tester shall add an entry into the Recipient_List of the associated Notification Class object which specifies a Device Identifier for a device that the IUT is not already aware of. The TD shall be located on a different network than the IUT to ensure that the IUT is capable of binding to recipients located on any network.

Configuration Requirements: The TD shall be configured to not execute WhoHas.

Test Steps:

1. WRITE N.RecipientList = ({all days, all times, D, any process ID, FALSE, all transitions})
2. MAKE (the event generating object, E, transition)
3. BEFORE Notification Fail Time
 - RECEIVE UnconfirmedEventNotification-Request,
 - 'Process Identifier' = (the valid process ID from step 1),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = E,
 - 'Time Stamp' = (any valid time stamp),
 - 'Notification Class' = (N's instance),
 - 'Priority' = (any valid priority),
 - 'Event Type' = (any valid event type),
 - 'Notify Type' = ALARM | EVENT,
 - 'AckRequired' = TRUE | FALSE,
 - 'From State' = (any valid event state),
 - 'To State' = (any valid event state),
 - 'Event Values' = (values appropriate to the event type)

Note: that did not preserve any aspect of the former requirement of the Passing Result: which specified: ... The IUT shall not leave the range out of the Who-Is request.

Question:

Is there still any requirement, in the BTL Test Plan, that the IUT shall not leave the range out of the Who-Is request?

Response:

Yes. Though unrestricted Who-Is can be used in network mapping, the BTL will be reviewing what the correct restrictions are in all other cases.