

## Clarification Request

**References:** Test 135.1-2013 - 10.2.3.6.2 vs 135.1-2013 - 10.2.3.6.1

**Date of BTL-WG Response:** February 1, 2018

☒ All Actions Necessitated have been Completed

### Background:

Tests 10.2.3.6.2 expects that a router which is targeted by a confirmed request to a device in a destination network, that the router does not know about, will first try to figure out a router to that destination network and then act on the original request by either forwarding to the found router or by rejecting.

### Problem:

Since router discovery can take more time than the unspecified amount of time that an implementer of routing deems most appropriate to hold an unrouted request, for a response that might never be coming, it is possible during what would seem to be test 10.2.3.6.2, to actually be performing test 10.2.3.6.1, since the TD didn't return the I-Am-Router-To-Network before the amount of time had elapsed when the router discards the unrouted request to free its buffer, and sends the Reject-Message-to-Network as in step 3 of test 10.2.3.6.1

The test plan should allow that IUT behavior, by modifying test 10.2.3.6.2 or its directives.

### 10.2.3.6.1 Failed Attempt to Locate Router

Purpose: To verify that the IUT will attempt to locate a router to an unknown network. Upon failing to locate such a router the IUT will transmit a Reject-Message-To-Network to the source device.

Test Steps:

1. TRANSMIT PORT A,  
DA = IUT,  
SA = R1-5,  
DNET = 3,  
DADR = D3D,  
SNET = 5,  
SADR = D5F,  
Hop Count = 254,  
BACnet-Confirmed-Request-PDU,  
'Service Choice' = ReadProperty-Request,  
'Object Identifier' = (any object identifier),  
'Property Identifier' = (any property of the specified object)
2. RECEIVE PORT B,  
DESTINATION = LOCAL BROADCAST,  
SOURCE = IUT,  
Who-Is-Router-To-Network,  
Network Number = 3
3. RECEIVE PORT A,  
DA = R1-5,  
SOURCE = IUT,  
DNET = 5,  
DADR = D5F,

Hop Count = 255,  
 Reject-Message-To-Network,  
 Reject Reason = 1 (unknown destination network),  
 DNET = 3

#### 10.2.3.6.2 Successful Attempt to Locate Router

Purpose: To verify that the IUT will attempt to locate a router to an unknown network. When successful it forwards the message to the next router on the path.

Test Steps:

1. TRANSMIT PORT A,  
     DA = IUT,  
     SA = R1-5,  
     DNET = 3,  
     DADR = D3D,  
     SNET = 5,  
     SADR = D5F,  
     Hop Count = 254,  
     BACnet-Confirmed-Request-PDU,  
     'Service Choice' = ReadProperty-Request,  
     'Object Identifier' = (any object identifier),  
     'Property Identifier' = (any property of the specified object)
2. RECEIVE PORT B,  
     DESTINATION = LOCAL BROADCAST,  
     SOURCE = IUT,  
     Who-Is-Router-To-Network,  
     Network Number = 3
3. TRANSMIT PORT B,  
     DESTINATION = LOCAL BROADCAST,  
     SOURCE = R2-3,  
     I-Am-Router-To-Network,  
     Network Numbers = 3
4. RECEIVE PORT B,  
     SA = R2-3,  
     SA = IUT,  
     DNET = 3,  
     DADR = D3D,  
     SNET = 5,  
     SADR = D5F,  
     Hop Count = (any integer x:  $0 < x < 254$ ),  
     BACnet-Confirmed-Request-PDU,  
     'Service Choice' = ReadProperty-Request,  
     'Object Identifier' = (the object identifier used in step 1),  
     'Property Identifier' = (the property identifier used in step 1)

#### Question:

- 1) should that behavior be allowed?
- 2) are changes to the tests or to the testplan/checklist required?

**Response:**

- 1) No. Routers are expected to make a reasonable effort to find the next router. A timeout on the order of APDU\_Timeout or APDU\_Segment\_Timeout is appropriate.**
- 2) Yes. The BTL-WG will review these tests and develop appropriate improvements.**