

Clarification Request

References: BACnet 135-2012 clause 6.6.3.1, 135.1-2013 - 10.2.3.6.1

Date of BTL-WG Response: __05-Feb-2015__

☒ All actions necessitated have been completed

Background:

From 135-2012

6.6.3.1 BACnet NPDUs - General

If a BACnet NPDU is received with NPCI indicating that the message should be relayed by virtue of the presence of a non-broadcast DNET, the router shall search its routing table for the indicated network number. Normal routing procedures are described in 6.5. If, however, the network number cannot be found in the routing table or through the use of the Who-Is-Router-To-Network message, the router shall generate a Reject-Message-To-Network message and send it to the node that originated the BACnet NPDU. If the NPCI indicates either a remote or global broadcast, the message shall be processed as described in 6.3.2.

From 135.1-2013

10.2.3.6 Attempt to Locate Downstream Routers

This clause tests the ability of the IUT to search for routers to an unknown destination network.

Configuration Requirements: The IUT shall be configured to know only about the directly-connected networks.

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

Question:

The way that this was taken into account in IUT was to wait for a time for a response after step 2. (Duh!)

What does BTL-WG want to require of IUT, as far as constraining how long or what to wait for? The IUT was observed to issue the packet there described in step 3, when the TD repeats the request at timeout/retry. Is that sufficient?

Response:

There should be a vendor specified route finding timeout, between steps 2 and 3. There shall be a Reject-Message-To-Network sent after every request that arrives with that DNET.