

Clarification Request

Request from: Lori Tribble (btl-manager@bacnetinternational.org)

References: BTL Test Plan 3.0, BTL Specified Tests 3.0

Stage: ☒Request, ☒Listed, ☒Analysis, ☒Resolved

Background / Proposed Solution:

This clarification is similar to BTL-CR-0063 however this clarification deals with network messages sent directly to a non-router.

The BTL Test 10.X.7 Ignore Router Commands specifies that a non-router device shall accept and quietly discard network layer router services.

A BACnet implementer indicates that their device answers with a reject message so that the requester does not need to wait for a timeout. The device response with a Network Layer message 03: "Reject Message to Network", Reason: 03: "Unknown Message Type".

Question:

Is this correct behavior?

Response:

Yes. The specification is not clear what the behavior should be for a non-router device when it receives a unicast network layer router service message. In section 6.5.2.2, the statement '... shall attempt to interpret the network layer message'. Then later in this section it says 'If the message cannot be interpreted, a Reject-Message-To-Network shall be returned to the device that sent the message.'

The BTL-WG will modify this test to allow the IUT to respond with a Reject Message to Network.

Proposed test change:

10.X.7 Ignore Router Commands

Reason for Change: The standard is not clear on the behavior of a non-router when faced with a router service command. The test is changed to accept an IUT that quietly ignores packets or response with a 'reject-message-to-network' message.

Reason for Change: No relevant test exists in 135.1. This change is in CN-092.

BACnet Reference Clause: 6.6, 6.6.3.8, 6.6.3.10, 6.6.3.11

Purpose: This test case verifies that the non-router IUT will *either* quietly accept and discard network layer router services *or respond with a Reject-Message-To-Network*.

Test Concept: The TD transmits the Initialize-Routing-Table, Establish-Connection-To-Network, and Disconnect-Connection-To-Network services. ~~The IUT is required to silently drop the requests because it is not a router.~~

Test Steps:

1. TRANSMIT
 DESTINATION = IUT,
 SOURCE = TD,
 Initialize-Routing-Table
 Number of Ports = 0
2. WAIT **Internal Processing Fail Time**
3. RECEIVE
 DESTINATION = TD,
 SOURCE = IUT,
 Reject-Message-To-Network
 Rejection-Reason = 3: "Unknown network layer message type". /
 CHECK(that the IUT did not reset and that the IUT did not send any packets)
4. TRANSMIT
 DESTINATION = IUT,
 SOURCE = TD,
 Establish-Connection-To-Network
 DNET = DNET3
 Termination Time Value = 0
5. WAIT **Internal Processing Fail Time**
6. RECEIVE
 DESTINATION = TD,
 SOURCE = IUT,
 Reject-Message-To-Network
 Rejection-Reason = 3: "Unknown network layer message type". /
 CHECK(that the IUT did not reset and that the IUT did not send any packets)
7. TRANSMIT
 DESTINATION = IUT,
 SOURCE = TD,
 Disconnect-Connection-To-Network
 DNET = DNET3
8. WAIT **Internal Processing Fail Time**
9. RECEIVE
 DESTINATION = TD,
 SOURCE = IUT,
 Reject-Message-To-Network
 Rejection-Reason = 3: "Unknown network layer message type". /
 CHECK(that the IUT did not reset and that the IUT did not send any packets)