Clarification Request

References: 135-1-2019.pdf

Date of BTL-WG Response: <u>October 7, 2021</u>

Background: This is regarding the Test ID: **135.1-2019 - 8.4.4** having Test Title:
'**COMMAND_FAILURE Tests (ConfirmedEventNotification)**' and clause **12.12.20 and 13.3**
mentioned in BACnet Standard.
Purpose: To verify the correct operation of the COMMAND_FAILURE algorithm

As per test steps 7 and 14 we have to verify pStatusFlags :
5. BEFORE Notification Fail Time
      RECEIVE ConfirmedEventNotification-Request,
         'Process Identifier' = (any valid process ID),
         'Initiating Device Identifier' = IUT,
         'Event Object Identifier' = (the object being tested),
         'Time Stamp' = (any valid time stamp),
         'Notification Class' = (the configured notification class),
         'Priority' = (the value configured to correspond to a TO-OFFNORMAL transition),
         'Event Type' = COMMAND_FAILURE,
         'Message Text' = (optional, any valid message text),
         'Notify Type' = EVENT | ALARM,
         'AckRequired' = TRUE | FALSE,
         'From State' = NORMAL,
         'To State' = OFFNORMAL,
         'Event Values' = pMonitoredValue, pStatusFlags, pFeedbackValue
6. TRANSMIT BACnet-SimpleACK-PDU
7. IF (Protocol_Revision is present AND Protocol_Revision e 13) THEN
      VERIFY pStatusFlags = (TRUE, FALSE, ?, ?)
8. VERIFY pCurrentState = OFFNORMAL
9. IF (Protocol_Revision is present AND Protocol_Revision ≥ 1) THEN
      VERIFY Event_Time_Stamps = (the timestamp in step 5, *, *)
10. IF (pFeedbackValue is writable) THEN
      WRITE pFeedbackValue = (a value consistent with pMonitoredValue)
ELSE
      MAKE (pFeedbackValue take on a value consistent with pMonitoredValue)
11. WAIT (pTimeDelayNormal)
12. BEFORE Notification Fail Time
      RECEIVE ConfirmedEventNotification-Request,
         'Process Identifier' = (any valid process ID),
         'Initiating Device Identifier' = IUT,
         'Event Object Identifier' = (the object being tested),
         'Time Stamp' = (any valid time stamp),
         'Notification Class' = (the configured notification class),
         'Priority' = (the value configured to correspond to a TO-NORMAL transition),
         'Event Type' = COMMAND_FAILURE,
         'Message Text' = (optional, any valid message text),
         'Notify Type' = EVENT | ALARM,
         'AckRequired' = TRUE | FALSE,
         'From State' = OFFNORMAL,
      'To State' = NORMAL,
      'Event Values' = pMonitoredValue, pStatusFlags, pFeedbackValue

13. TRANSMIT BACnet-SimpleACK-PDU
14. IF (Protocol_Revision is present AND Protocol_Revision e 13) THEN
        VERIFY pStatusFlags = (FALSE, FALSE, ?, ?)

Our Understanding: Now, in this case whenever there is change in pMonitoredValue with respective to pFeedbackValue, OFFNORMAL alarm is generated.
Accordingly, the Status_Flags property of EE Object will only be changed to {T,F,?,?}.
But there will be no change in the Status_Flags property of Referenced Object and it will remain as {F,F,?,?}.

Here, as pStatusFlags is of Referenced Object, then in such cases, in step 5(ConfirmedEventNotification-Request) the To_State and pStatusFlags will contradict with each other.
(i.e : To_State will have value as Offnormal and Status_Flags(of referenced Object) = {F,F,?,?})
In such cases it is predicted that Alarm for OFFNORMAL state was generated but still
Status_Flags(F,F,?,?) conveyed in notification shows In-alarm bit as FALSE.

Question:

1. Now as mentioned in step 7 pStatusFlags = (FALSE, FALSE, ?, ?), here Status_Flags of Referenced Object will remain {F,F,F,F} only. So does this step needs to be changed as:
VERIFY pStatusFlags = (~~TRUE~~FALSE, FALSE, ?, ?)

2. If not then, for Algorithmic and External Alarms when generated by EE Object, shall the **pStatusFlags should be of EE Object instead of Referenced Object in test steps 5, 7, 13 and 14.** (i.e : To_State will have value as Offnormal and Status_Flags(of EE Object) = {T,F,F,F} in 'Event Values' parameter of ConfirmedEventNotification-Request)

3. Or, is there need to change step 7 and 14 where, we will verify StatusFlags property of EE object and not that of Referenced Object:
For step 7:
VERIFY ~~p~~StatusFlags = (TRUE, FALSE, ?, ?)

For Step 14:
VERIFY ~~p~~StatusFlags = (FALSE, FALSE, ?, ?)

Proposed Response:

1. **no**

2. **no**

3. **Yes. The test will be updated to allow Status_Flags property of the Event Enrollment object to be referenced in steps 7 and 14.**