

Clarification Request

Request from: BTL Manager (btl-manager@bacnetinternational.org)

Reference: "BTL Specified Tests 3.0.final.doc", "ASHRAE 135.1 2003"

Background:

BTL - 9.1.1.1 - Successful Alarm Acknowledgment of Confirmed Event Notifications Using the Time Form of the 'Time of Acknowledgment' Parameter

Purpose: To verify the successful acknowledgment of an alarm signaled by a ConfirmedEventNotification, including notification of other workstations and updating of the Acked_Transitions status. The Time form of the 'Time of Acknowledgment' parameter is used.

Test Concept: An alarm is triggered that causes the IUT to notify the TD and at least one other device. The TD acknowledges the alarm and verifies that the acknowledgment is properly noted by the IUT. The IUT notifies all other recipients that the alarm has been acknowledged.

Configuration Requirements: The IUT shall be configured with at least one object that can detect alarm conditions and send confirmed notifications. The Acked_Transitions property shall have the value B'111' indicating that all transitions have been acknowledged. The TD and at least one other BACnet device shall be recipients of the alarm notification.

Test Steps:

1. MAKE (a change that triggers the detection of an alarm event in the IUT)
2. RECEIVE ConfirmedEventNotification-Request,

'Process Identifier' =	(the process identifier configured for this event),
'Initiating Device Identifier' =	IUT,
'Event Object Identifier' =	(the object detecting the alarm),
'Time Stamp' =	(the current time or sequence number),
'Notification Class' =	(the notification class configured for this event),
'Priority' =	(the priority configured for this event),
'Event Type' =	(any valid event type),
'Notify Type' =	ALARM,
'AckRequired' =	TRUE,
'From State' =	NORMAL,
'To State' =	(any appropriate non-normal event state),
'Event Values' =	(the values appropriate to the event type)
3. RECEIVE

DESTINATION =	(at least one device other than the TD),
SOURCE =	IUT,

 ConfirmedEventNotification-Request,

'Process Identifier' =	(the process identifier configured for this event),
'Initiating Device Identifier' =	IUT,
'Event Object Identifier' =	(the object detecting the alarm),
'Time Stamp' =	(the current time or sequence number),
'Notification Class' =	(the notification class configured for this event),
'Priority' =	(the priority configured for this event),
'Event Type' =	(any valid event type),
'Notify Type' =	ALARM,
'AckRequired' =	TRUE,
'From State' =	NORMAL,
'To State' =	(any appropriate non-normal event state),
'Event Values' =	(the values appropriate to the event type)
4. VERIFY (the 'Event Object Identifier' from the event notification), Acked_Transitions = B'011'
5. TRANSMIT AcknowledgeAlarm-Request,

'Acknowledging Process Identifier' =	(the value of the 'Process Identifier' parameter in the event notification),
'Event Object Identifier' =	(the 'Event Object Identifier' from the event notification),
'Event State Acknowledged' =	(the state specified in the 'To State' parameter of the notification),
'Time Stamp' =	(the time stamp conveyed in the notification),
'Time of Acknowledgment' =	(the TD's current time using a Time format)

6. RECEIVE BACnet-Simple-ACK-PDU
7. IF (Protocol_Revision is present and Protocol_Revision \geq 1) THEN
 - RECEIVE ConfirmedEventNotification-Request,
 - 'Process Identifier' = (the process identifier configured for this event),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = (the object detecting the alarm),
 - 'Time Stamp' = (the current time or sequence number),
 - 'Notification Class' = (the notification class configured for this event),
 - 'Priority' = (the priority configured for this event),
 - 'Event Type' = (the event type included in step 2),
 - 'Notify Type' = ACK_NOTIFICATION,
 - 'To State' = (the 'To State' used in step 3)
 - ELSE
 - RECEIVE ConfirmedEventNotification-Request,
 - 'Process Identifier' = (the process identifier configured for this event),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = (the object detecting the alarm),
 - 'Time Stamp' = (the current time or sequence number),
 - 'Notification Class' = (the notification class configured for this event),
 - 'Priority' = (the priority configured for this event),
 - 'Event Type' = (the event type included in step 2),
 - 'Notify Type' = ACK_NOTIFICATION
 - 8. IF (Protocol_Revision is present and Protocol_Revision \geq 1) THEN
 - RECEIVE
 - DESTINATION = (at least one device other than the TD),
 - SOURCE = IUT,
 - ConfirmedEventNotification-Request,
 - 'Process Identifier' = (the process identifier configured for this event),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = (the object detecting the alarm),
 - 'Time Stamp' = (the current time or sequence number),
 - 'Notification Class' = (the notification class configured for this event),
 - 'Priority' = (the priority configured for this event),
 - 'Event Type' = (the event type included in step 2),
 - 'Notify Type' = ACK_NOTIFICATION,
 - 'To State' = (the 'To State' used in step 3)
 - ELSE
 - RECEIVE
 - DESTINATION = (at least one device other than the TD),
 - SOURCE = IUT,
 - ConfirmedEventNotification-Request,
 - 'Process Identifier' = (the process identifier configured for this event),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = (the object detecting the alarm),
 - 'Time Stamp' = (the current time or sequence number),
 - 'Notification Class' = (the notification class configured for this event),
 - 'Priority' = (the priority configured for this event),
 - 'Event Type' = (the event type included in step 2),
 - 'Notify Type' = ACK_NOTIFICATION
 - 9. VERIFY (the 'Event Object Identifier' from the event notification), Acked_Transitions = B'111'

Notes to Tester: The destination address used for the acknowledgment notification in step 8 shall be the same address used in step 3. Inclusion of the 'To State' parameter in acknowledgement notifications was added in protocol version 1, protocol revision 1. Implementations that precede this version will not include this parameter. When multiple event notifications are expected for a specific event, the order that the IUT transmits them in is irrelevant.

In the spec 135.2004 the time stamp parameter is defined as "This parameter, of type BACnetTimeStamp, shall convey the current time as determined by the clock in the device issuing the service request." .

Question:

If steps 2 and 3 represent two notifications of the same event, should the 'timestamp' parameter of both be equal?

Response:

Yes. The above test will be modified to make this more clear.