

Clarification Request

References: BTL Specified Tests-20.0.Final.pdf

Date of BTL-WG Response: June 23, 2022

Background:

Following is the snapshot of 7.2.X7 BACnetDateRange Non-Pattern Properties Test form BTL Specified Tests-20.0.Final.pdf

7.2.X7 BACnetDateRange Non-Pattern Properties Test

Reason for Change: Addendum 135-2008ac-1 clarifies in the clause 12 preamble, when wildcards are allowed in BACnetDateRange. Allow for non-configurable Date_List properties.

Purpose: To verify that the property being tested does not accept special date field values.

Test Concept: A BACnetDateRange property, or property that is a complex datatype containing a BACnetDateRange, P₁ is written with each of the special date field values to ensure that the property does not accept them. Each half of the dateRange DR₁ is selected so it is within the range that the IUT will accept for the property. The value, V₁, written to the property is the dateRange DR₁ with one of its fields replaced with one of the date special values. If the property is a complex datatype such as a BACnetCalendarEntry, the other fields in the value shall be set within the range accepted by the IUT.

Configuration Requirements: This test shall only be applied to devices claiming Protocol_Revision 11 or higher. The IUT shall be configured with a Calendar object that contains a Date_List with a single BACnetCalendarEntry in the form of a BACnetDateRange. If Date_List property cannot be configured with a BACnetCalendarEntry in the form of a BACnetDateRange, then this test shall be skipped.

Notes to Tester: if P₁ is an array, then an array index shall be provided in the TRANSMIT portion of step 1.

Test Steps:

1. REPEAT SV = (year unspecified, month unspecified, day of month unspecified, odd months, even months, last day of month, even days, odd days) DO {
 - TRANSMIT WriteProperty-Request
 - 'Object Identifier' = O₁,
 - 'Property Identifier' = P₁,
 - 'Property Value' = (DR₁ with startDate updated with the special value SV)
 - RECEIVE BACnet-Error-PDU
 - 'Error Class' = PROPERTY,
 - 'Error Code' = VALUE_OUT_OF_RANGE
 - TRANSMIT WriteProperty-Request
 - 'Object Identifier' = O₁,
 - 'Property Identifier' = P₁,
 - 'Property Value' = (DR₁ with endDate updated with the special value SV)
 - Receive BACnet-Error-PDU
 - 'Error Class' = PROPERTY,
 - 'Error Code' = VALUE_OUT_OF_RANGE

Following is the snapshot of BACnetDateRange Non-Pattern Properties Test using WritePropertyMultiple Service form BTL Specified Tests-20.0.Final.pdf

9.23.2.X12 BACnetDateRange Non-Pattern Properties Test using WritePropertyMultiple Service

Reason for Change: No test exists for this functionality. This test is not in any SSPC proposal.

Purpose: To verify that the property being tested does not accept special date field values, except for fully unspecified start of the range or fully unspecified end of the range, or both.

Test Concept: A BACnetDateRange property, or property that is a complex datatype containing BACnetDateRange P1 is written with each of the special field values to ensure that the property does not accept them. Each half of the dateRange DR1 is selected so it is within the range that the IUT will accept for the property. The value, V1 written to the property is the dateRange DR1 with one of its fields replaced with one of the date special values. If the property is a complex datatype, the other fields in the value shall be set within the range accepted by the IUT. This test shall only be applied to devices claiming Protocol_Revision 11 or higher.

Notes to Tester: if P1 is an array, then a non-zero array index may be provided in the TRANSMIT and the same array index observed in the WritePropertyMultiple-Error.

Test Steps:

1. REPEAT SV = (year unspecified, month unspecified, day of month unspecified, day of week unspecified, odd months, even months, last day of month, even days, odd days) DO {
2. TRANSMIT WritePropertyMultiple-Request,
'Object Identifier' = O1,
'Property Identifier' = P1,
'Property Value' = (DR1 with startDate updated with special value SV)
3. RECEIVE WritePropertyMultiple-Error,
'Error Class' = PROPERTY,
'Error Code' = VALUE_OUT_OF_RANGE,
'Object Identifier' = Object1,
'Property Identifier' = P1
(BACnet-Reject-PDU
'Reject Reason' = INVALID_PARAMETER_DATATYPE)
(BACnet-Reject-PDU
'Reject Reason' = INVALID_TAG)
4. TRANSMIT WritePropertyMultiple-Request,
'Object Identifier' = O1,
'Property Identifier' = P1,

'Property Value' = (DR1 with endDate updated with special value SV)
5. RECEIVE WritePropertyMultiple-Error,
'Error Class' = PROPERTY,
'Error Code' = VALUE_OUT_OF_RANGE,
'Object Identifier' = Object1,
'Property Identifier' = P1)
(BACnet-Reject-PDU
'Reject Reason' = INVALID_PARAMETER_DATATYPE)
(BACnet-Reject-PDU
'Reject Reason' = INVALID_TAG)

Purpose of both test cases is to validate that the BACnetDateRange Non-Pattern Properties does not accept special date fields. However, using WritePropertyMultiple also accepts other optional responses like Reject reason and tests with "day of week" unspecified field. Refer yellow highlighted words.

Question:

1. Can IUT response "BACnet-Reject-PDU, Reject Reason: INVALID_TAG / INVALID_PARAMETER_DATATYPE" for WriteProperty-Request?
2. Is Day of week unspecified field the optional field in both WP and WPM requests?

Response:

1. **No.**
The test's allowance for returning a Reject-PDU with INVALID_TAG or INVALID_PARAMETER_DATATYPE is incorrect. The issue is solely that the value is outside the allowed range for the property.
2. **All of the tests in the BTL Test Package which test non-pattern date/datetime/daterange properties shall be adjusted to test that date values with only an unspecified day-of-week to ensure that the value is not accepted.**