

### Clarification Request

**Request from:** BTL Manager <btl-manager@bacnetinternational.org>

**References:** BTL Test Plan 9.0.final, 135.1-2009g-10 test 7.3.1.1

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

**Actions necessitated:** ☐ Checklist/Test Plan change, ☒ BTL Specified Tests change,  
☐ SSPC Interpretation required, ☐ Implementation Guidelines change,

**Date of BTL-WG Response:** \_\_\_\_\_  
☐ All actions necessitated have been completed

### Background:

Section 3.13.2 in the Test Plan extrapolates to expect all of test 7.3.1.1 to apply to Loop, if the Out\_Of\_Service property is writable. Further, in the test 7.3.1.1 "Out\_Of\_Service, Status\_Flags, and Reliability Tests", in the Purpose section, the statement is made that the test for writability of Present\_Value when Out\_Of\_Service is TRUE applies to the Loop object.

#### 7.3.1.1 Out\_Of\_Service, Status\_Flags, and Reliability Tests

Dependencies: ReadProperty Service Execution Tests, 9.18; WriteProperty Service Execution Tests, 9.22.

BACnet Reference Clauses: 12.1.7, 12.1.9, 12.1.10, 12.2.7, 12.2.9, 12.2.10, 12.3.7, 12.3.9, 12.3.10, 12.4.6, 12.4.8, 12.4.9, -12.6.7, 12.6.9, 12.6.10, 12.7.7, 12.7.9, 12.7.10, 12.8.6, 12.8.8, 12.8.9, 12.15.8, 12.15.10, 12.15.11, 12.16.8, 12.16.10, 12.16.11, 12.17.6, 12.17.8, 12.17.9, 12.18.7, 12.18.9, 12.18.10, 12.19.7, 12.19.9, 12.19.10, 12.20.6, 12.20.8, 12.20.9, 12.23.7, 12.23.9, and 12.23.10.

Purpose: This test case verifies that Present\_Value is writable when Out\_Of\_Service is TRUE. It also verifies the interrelationship between the Out\_Of\_Service, Status\_Flags, and Reliability properties. If the PICS indicates that the Out\_Of\_Service property of the object under test is not writable, and if the value of the property cannot be changed by other means, then this test shall be omitted. This test applies to Accumulator, Analog Input, Analog Output, Analog Value, Binary Input, Binary Output, Binary Value, Life Safety Point, Life Safety Zone, Multi-state Input, Multi-state Output, Multi-state Value, Loop and Pulse Converter objects.

Test Concept: The IUT will select one instance of each appropriate object type and test it as described. If the Reliability property is not supported then ~~step 4~~ step 5 shall be omitted.

#### Test Steps:

1. IF (Out\_Of\_Service is writable) THEN  
     WRITE Out\_Of\_Service = TRUE  
   ELSE  
     MAKE (Out\_Of\_Service TRUE)
2. VERIFY Out\_Of\_Service = TRUE
3. VERIFY Status\_Flags = (?, ~~FALSE~~?, ?, TRUE)
4. REPEAT X = (all values meeting the functional range requirements of 7.2.1) DO {  
     WRITE Present\_Value = X

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        VERIFY Present_Value = X
    }
5. WRITE Present_Value = (any value that corresponds to an Event_State of NORMAL)
6.5. IF (Reliability is present and writable) THEN
    REPEAT X = (all values of the Reliability enumeration appropriate to the object
type except
        NO_FAULT_DETECTED) DO {
        WRITE Reliability = X
        VERIFY Reliability = X
        VERIFY Status_Flags = (?, TRUE, ?, TRUE)
        WRITE Reliability = NO_FAULT_DETECTED
        VERIFY Reliability = NO_FAULT_DETECTED
        VERIFY Status_Flags = (?, FALSE, ?, TRUE)
    }
7.6. IF (Out_Of_Service is writable) THEN
    WRITE Out_Of_Service = FALSE
ELSE
    MAKE (Out_Of_Service FALSE)
7.  VERIFY Out_Of_Service = FALSE
8.  VERIFY Status_Flags = (?, ?, ?, FALSE)

```

Notes to Tester: If the object being tested is commandable and there is an internal process writing to the Present\_Value property each WriteProperty request shall contain a priority sufficient to override the internal process. After step 4 the priority array slot shall be relinquished.

But language that would suggest or mandate that as expected behavior in test 7.3.1.1 does not appear in section 12.17 regarding Loop anywhere. It seems this behavior is not mandated by the BACnet standard, in 135-2008 nor in 135-2010 (same language in both versions). In clause 12.17.4 "Present\_Value" and 12.17.9 "Out\_Of\_Service", there is no mention of any required behavior when Out\_Of\_Service is TRUE.

In every other object where this behavior is required, there is specific mention of this behavior. For example, in 12.18, "Multi-state Input Object Type", there is a footnote in the table (Table 12-21), indicating that "this property shall be writable when Out\_Of\_Service is TRUE". In 12.18.4 "Present\_Value", the last sentence states "The Present\_Value property shall be writable when Out\_Of\_Service is TRUE." Also, in 12.18.10 "Out\_Of\_Service", there appears the familiar language about decoupling the Present\_Value property from the physical point and no longer tracking changes, etc.

**Question:**

Is the inclusion of the Loop Object in 7.3.1.1 an error in the test standard?

**Response:**

Yes, Test 7.3.1.1 should no longer be applied to the Loop object.