

## Clarification Request

**References:** 135.1-2013 7.3.1.1 7.3.1.1 Out\_Of\_Service, Status\_Flags, and Reliability Tests

**Date of BTL-WG Response:** 09-Sept-2019

☒ All Actions Necessitated have been Completed

### Background:

IC135-2010-14 clarifies Out\_Of\_Service for Value objects. Test 7.3.1.1 appears to not properly test Value objects.

### Interpretation #2 states:

**Interpretation No.2:** BACnet objects within the local device are considered to be local programming and as such cannot write / command the Present\_Value of an object in which Out\_Of\_Service is TRUE.

**Question No.2:** Is this interpretation correct?

**Answer No.2:** Yes.

### 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 shall be omitted.

**Test Steps:**

1. IF (Out\_Of\_Service is writable) THEN

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    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
      VERIFY Present_Value = X
    }
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)
      }
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, then each WriteProperty request shall contain a priority sufficient to override the internal process. After step 4 the priority array slot shall be relinquished.

**Problem:**

With respect to value objects, the Notes to Tester in 7.3.1.1 allows internal operations to continue to write to the Present\_Value/Priority\_Array when Out\_Of\_Service is TRUE.

**Question:**

Should the test be modified to ensure Out\_Of\_Service is tested correctly based on the type of object?

**Response:**

**Yes. For Value Objects, the highlighted portion of *Notes to Tester* should be ignored.**