

## Clarification Request

**References:** BTL testplan 5.0 final, test 7.2.2 will not succeed due to side-effects.

### Background:

The test specification 7.2.2 is written without taking care of side-effects. This causes WP/WPM requests to fail due to the modified device database, while they would pass under the conditions specified originally in the EPICS.

The key problem is the modification of properties while the test runs, which could cause trouble in subsequent tests with other objects or even with the same object or property.

A few examples:

- 1) WriteProperty to the PresentValue of a Command-Object will cause the device to perform some action. A next write of another value in the allowed range for this property may fail, because only Internal\_Processing\_FailTime is taken into consideration but not the in\_process-flag, so the device may still be busy. Though a few seconds later it may be accepting WP/WPM requests again.
- 2) A WriteProperty to NumberofStates might cause the State-Text Property grow as well. The values written to the Property State-Text may be less than the expected, because the database does not match the original content of the EPICS anymore.
- 3) A Schedule-object modifies a property in another object, e.g. an Analog-Output, PV with a high priority. When the tests comes to test the Analog-Output it may fail, because the database is not the same as it was in the EPICS, so writing with a lower priority will fail the test.
- 4) Properties which are not accessible through services like WP/WPM and RP like Log-Buffer of a Trendlog-Object will fail the test as well.
- 5) Binary Minimum\_On/Off\_Times are not taken into consideration at all, writing without waiting the appropriate time fails the test.
- 6) Manipulating an object to contain a FAULT-state will likely cause the object to reject a WriteProperty to Reliability=NO\_FAULT\_DETECTED, while under normal conditions this will pass.

The list above is only a list of a few examples, there are probably a lot more side-effects and conditions under which this test fails, while it would not if the database is exactly the same as described in the EPICS.

In the BACnet Test Framework we already included a flag "RestoreEPICS-Value = FALSE/TRUE" to the test 7.2.2, but this does not help in all cases.

At the moment the only solution to pass this test 100% is to perform most of the WP/WPM command using the software and the Properties where it fails need to be retested manually.

### Proposed Solution:

We think, this test has to completely be reworked, clear rules need to be specified to assure that side-effects do not fail this test.

**Response:**

BTL-WG agrees that the test cannot be automated as written. Rather than rewriting the entire test, we will be issuing property-specific directions that indicate how to deal with particular problems as we learn of them.