

Application Notes Affected: None

but affects:

WITS PSA Test Specification

Bulletin Reference: TB0055 Iss 3

Bulletin Type: Correction

Status: ~~Circulated for comment~~ / ~~Rejected~~ / Accepted

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1 Overview

Two errors have been identified with the latest release of the Test Specification (Revision 3 dated February 2015):

1. Section 2.12.2 tests that the Field Device correctly challenges any requests that are deemed as “critical”. DNP3 Secure Authentication V2 defined the criticality of file functions *close* and *abort* as being optional. DNP3 Secure Authentication V5 defined their criticality as being mandatory. The current version of the test specification tests that the *abort* function is considered as critical in all versions of the WITS-DNP3 protocol. The test specifications does not define any expected results for tests involving the *close* function.

The test specifications needs to be updated to reflect that the tests should expect the criticality of *close* and *abort* to be optional with WITS-DNP3 protocol versions 1.x and mandatory for protocol versions 2.x

2. Technical Bulletin #46, issue 7, identified a new section (2.5.11) for the test specification. When TB#46.7 was incorporated into the test specification itself an error was introduced. Section 2.5.11 tests the behaviour of the Field Device when being configured with “actions” to be taken for state changes on the different point types assigned to different DNP3 classes. Test 2.5.11.13 configures the Field Device for action=1 (log the change) for points assigned to DNP3 class 0. The test says that the Field Device should reject the configuration.

The test specification needs to be corrected, in line with TB#46.7, to state that the configuration should be accepted by the Field device.

NB. In section 2 onwards, text that is shown in **red** represents words to be removed from the application notes and text in **blue** represents words to be inserted into the notes. Table boxes highlighted in red are showing formatting details and have no relevance for text changes.

2 Changes to the Test Specification

2.1 Changes to title pages

Change the first page:

Revision 3.1

FebruaryJuly 2015

Add a new entry at the end of the change history table:

July 2015	3.1	All	Correct the expected result of test 2.5.11.13 to show that the Field Device accepts the configuration. Correct test 2.12.2.2 to show that the “abort” function is optional with WITS-DNP3 protocol versions 1.x. Add to test results in 2.12.2 to show that the “close” function is optionally critical and thus may be challenged with WITS-DNP3 protocol versions 1.x..
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Change the document footers:

WITS Test Specification
FebruaryJuly 2015, Revision 3.1

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2.2 Changes to section 2.5.11

Make the following change to the expected results of this test:

2.5.11.13	From the Master Station, use incremental configuration to modify the DNP3 Object Flag Actions of point ‘x’. To do so, download and activate an incremental configuration file containing a DNP3 Object Flags Actions record (record type 1009). In this record, set all “action” elements to 1. Ensure that the details will not be the same as any existing details in the Field Device. Perform this for each of the supported point types.	The IC changes are rejected by the Field Device. The IC log file shows the record has been rejected with error code 26. The IC changes are successfully activated by the Field Device.		
			Binary input:	
			Double-bit binary input:	
			Binary output:	
			Counter input:	
			Analogue input:	
			Analogue output:	

2.3 Changes to section 2.12

Make the following change to the “Purpose of tests”:

25	0x19	Open File	2.12.2.1
26	0x1A	Close File ⁽⁵⁾	2.12.2.1
27	0x1B	Delete File	2.12.2.2
28	0x1C	Get File Information	2.12.2.1
29	0x1D	Authenticate File ⁽³⁾	
30	0x1E	Abort File ⁽⁵⁾	2.12.2.2
31	0x1F	Activate Configuration	2.12.2.1

Notes:

- (1) WITS Application Note AN2005-005 includes the warning “**WARNING:** The use of Assign Class (Function Code 22) with a WITS Field Device is undefined and may have adverse effects”.
- (2) The WITS Application Manager data set described in AN2005-005 section 2.7 WITS Applications Manager Data Set describes the application management functionality to be used on WITS devices instead of these DNP3 Function Codes.
- (3) These function codes are not used with WITS protocol devices.
- (4) Confirm may not be considered critical by devices that only support DNP3 Secure Authentication V2.
- (5) These functions are optionally critical when using DNP3 Secure Authentication V2 and mandatory critical in DNP3 Secure Authentication V5.

Amend test 2.12.2.1 as shown:

2.12.2.1	File Function Tests (1) Initiate a communications session between the Field Device and Master Station. From the Master Station: <ul style="list-style-type: none"> Send a new Incremental Configuration (IC) file to the Field Device. Activate the new IC file. 	Authentication should have been exchanged for each of the following functions: Open File (Function 25) Write (Function 2) Activate Configuration (Function 31) Close File (Function 26): WITS versions 1.x (optional) WITS versions 2.x (mandatory)		

Amend test 2.12.2.2 as shown:

2.12.2.2	File Function Tests (2) Initiate a communications session between the Field Device and Master Station. From the Master Station: <ul style="list-style-type: none"> Send a new Incremental Configuration file to the Field Device. During transfer abort the file operation (if possible). Delete the file. 	Authentication should have been exchanged for each of the following additional functions: Delete File (Function 27) Abort File (Function 30): WITS versions 1.x (optional) WITS versions 2.x (mandatory)		