



**BACnet<sup>®</sup> TESTING LABORATORIES  
ADDENDA**

**Addendum Errata to  
BTL Test Package 20.0**

**Revision v5  
Revised 4/7/2022**

**June 16, 2022.**

**[This foreword and the “Overview” on the following pages are not part of this Test Package. They are merely informative and do not contain requirements necessary for conformance to the Test Package.]**

## FOREWORD

The purpose of this addendum is to present current changes being made to the BTL Test Package. These modifications are the result of change proposals made pursuant to the continuous maintenance procedures and of deliberations within the BTL-WG Committee. The changes are summarized below.

BTL-20.0 Errata-1: Update Test Reference for 9.20.1.9 in BTL Test Plan [BTLWG-1233] .....	2
BTL-20.0 Errata-2: Update Test Reference and name for 8.20.5.2 in BTL Test Plan [BTLWG-1233].....	3
BTL-20.0 Errata-3: Update Test Conditionality for BTL-9.20.1.X3 in section 3.56.1 in BTL Test Plan [BTLWG-1234] .....	4
BTL-20.0 Errata-4: Test 7.3.2.X66.11 incorrectly expects staging object behavior [BTLWG-1224].....	5
BTL-20.0 Errata-5: Test 7.3.2.15.X7 Incorrectly Specifies Initiating Device as TD [BTLWG-1223] .....	7
BTL-20.0 Errata-6: Update Test Conditionality for BTL-13.10.X8 in section 6.1.1 in BTL Test Plan [BTLWG-1194] .....	8
BTL-20.0 Errata-7: Incorrect Test Names in References to 135.1-2019 [BTLWG-1244] .....	9
BTL-20.0 Errata-8: Language of 14.1.X12 is Grammatically Incorrect [BTLWG-1243].....	10
BTL-20.0 Errata-9: Numerous Errata in Test References in BTL Test Plan [BTLWG-1242].....	11
BTL-20.0 Errata-10: Numerous Tests use Test Configuration instead of Configuration Requirements [BTLWG-1241] .....	18
BTL-20.0 Errata-11: Test 9.21.1.10 Has Inconsistent Reference in Test Plan [BTLWG-1236] .....	19
BTL-20.0 Errata-12: Test 7.3.2.15.X9 Steps 1 and 2 Conflict [BTLWG-1225] .....	20
BTL-20.0 Errata-13: Section 5.25.6 Supports DM-LM-B for Recipient_List Property Clarification [BTLWG-1213].....	21
BTL-20.0 Errata-14: Remove unused Tests from BTL Specified Tests [BTLWG-323].....	22
BTL-20.0 Errata-15: Various TI-WG noted issues [BTLWG-1247].....	23

In the following document, language to be added to existing clauses within the BTL Test Package 20.0 is indicated through the use of *italics*, while deletions are indicated by ~~strike through~~. Where entirely new subclauses are proposed to be added, plain type is used throughout

In contrast, changes to BTL Specified Tests also contain a **yellow** highlight to indicate the changes made by this addendum. When this addendum is applied, all highlighting will be removed. Change markings on tests will remain to indicate the difference between the new test and an existing 135.1 test. If a test being modified has never existed in 135.1, the applied result should not contain any change markings. When this is the case, square brackets will be used to describe the changes required for this test.

Each addendum can stand independently unless specifically noted via dependency within the addendum. If multiple addenda change the same test or section, each future released addendum that changes the same test or section will note in square brackets whether or not those changes are reflected.

**BTL-20.0 Errata-1: Update Test Reference for 9.20.1.9 in BTL Test Plan [BTLWG-1233]**

**Overview:**

Test reference for test 9.20.1.9 Reading REQUIRED Properties is incorrect. It shows 135.1-2019 reference and it should show BTL.

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

---

[Update test reference]

**4.4 Data Sharing - ReadPropertyMultiple - B**

**4.4.1 Base Requirements**

Base requirements must be met by any IUT claiming conformance to this BIBB.

...	
<b>BTL<del>135.1-2019</del> - 9.20.1.9 - Reading REQUIRED Properties</b>	
<b>Test Conditionality</b>	Must be executed. This test shall be skipped for any object type whose set of optional properties cannot be transmitted in the largest supported response message based on the IUT's APDU and segmentation limitations.
<b>Test Directives</b>	
<b>Testing Hints</b>	The pre-tester should apply this test to every object type. If the set of properties differs between instances of the same object type in the IUT, each form of the object type should be tested.
...	

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**Specified Test Changes**

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None

**BTL-20.0 Errata-2: Update Test Reference and name for 8.20.5.2 in BTL Test Plan [BTLWG-1233]**

**Overview:**

Test reference and name for test 8.20.5.2 The IUT Automatically Sends ReadProperty Requests when the TD Returns a Reject - UNRECOGNIZED\_SERVICE Response is incorrect. It shows 135.1-2019 reference and it should show BTL.

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

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[Update test reference]

**4.3.10 Can fallback to ReadProperty upon receipt of UNRECOGNIZED\_SERVICE**

The IUT is able to read property values with the ReadProperty service when it receives a Reject-PDU with a Reject Reason of UNRECOGNIZED\_SERVICE in response to a ReadPropertyMultiple request.

<b><del>BTL135.1-2019 - 8.20.5.2 - The IUT Automatically Sends ReadProperty Requests when the TD Returns a</del> <b>Fallback to ReadProperty on Reject - UNRECOGNIZED_SERVICE Response</b></b>	
<b>Test Conditionality</b>	Must be executed.
<b>Test Directives</b>	
<b>Testing Hints</b>	

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**Specified Test Changes**

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None

**BTL-20.0 Errata-3: Update Test Conditionality for BTL-9.20.1.X3 in section 3.56.1 in BTL Test Plan [BTLWG-1234]**

**Overview:**

Test conditionality for test 9.20.1.X3 ReadPropertyMultiple of the Network Port Object using the Unknown Instance, of "Must be executed" is incorrect and should be "If the IUT does not support execution of ReadPropertyMultiple this test shall be skipped."

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

---

[Update test conditionality]

**3.56.1 Base Requirements**

Base requirements must be met by any IUT that can contain Network Port objects.

...	
<b>BTL - 9.20.1.X3 - ReadPropertyMultiple of the Network Port Object using the Unknown Instance</b>	
<b>Test Conditionality</b>	<del>Must be executed.</del> <i>If the IUT does not support execution of ReadPropertyMultiple this test shall be skipped.</i>
<b>Test Directives</b>	
<b>Testing Hints</b>	
...	

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**Specified Test Changes**

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None

## BTL-20.0 Errata-4: Test 7.3.2.X66.11 incorrectly expects staging object behavior [BTLWG-1224]

### Overview:

Test 7.3.2.X66.11 incorrectly expects staging object target to change when staging out of service. The target reference checked in step 12 should remain V1 as the staging object is out-of-service when Present\_Value is written.

### Changes:

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## Checklist Changes

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None

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## Test Plan Changes

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None

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## Specified Test Changes

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[Modify test step 12 as shown below.]

### 7.3.2.X66.11 Out\_Of\_Service, Status\_Flags, and Reliability for Staging Object

Reason for Change: No test exists for this functionality.

Purpose: To verify that Present\_Value and Reliability are writable when Out\_Of\_Service is TRUE, to verify the relationship between Out\_Of\_Service, Status\_Flags, and Reliability, and to verify that writes to Target\_References only occur when Out\_Of\_Service is FALSE.

Test Concept: The Out\_Of\_Service property is set to TRUE and the value of the Status\_Flags property is validated. Present\_Value is modified to verify that Present\_Stage evaluates but writes to Target\_References do not occur. If the IUT supports Reliability values other than NO\_FAULT\_DETECTED, writability for that property is tested and the value of the Status\_Flags property is validated. The Out\_Of\_Service property is set to FALSE and the value of the Status\_Flags property is validated. The Present\_Value for one of the Target\_References is checked to verify that it has the correct value, indicative of a write that occurred when transitioning Out\_Of\_Service from TRUE to FALSE.

Configuration Requirements: The Staging object used for this test shall be configured with at least one object in the Target\_References property. The Stages property shall be configured with two stages such that Stages[S].Values = {V1...} and Stages[S+1].Values = {V2...} where  $V1 \diamond V2$ . At the start of the test, the Staging object is properly configured such that Reliability = NO\_FAULT\_DETECTED and Present\_Stage = S.

Test Steps:

1. READ SF1 = Status\_Flags
2. VERIFY Reliability = NO\_FAULT\_DETECTED
3. VERIFY Present\_Stage = S
4. READ O1 = Target\_References, ARRAY INDEX = 1
5. VERIFY O1, Present\_Value = V1
6. IF (Out\_Of\_Service is writable) THEN  
    WRITE Out\_Of\_Service = TRUE  
ELSE  
    MAKE (Out\_Of\_Service TRUE)
7. VERIFY Out\_Of\_Service = TRUE
8. VERIFY Status\_Flags = (?, ?, ?, TRUE)
9. WRITE Present\_Value = (PV: (Stages[S].Limit + Stages[S].Deadband) < PV < Stages[S+1].Limit)
10. VERIFY Present\_Value = PV
11. VERIFY Present\_Stage = S+1
12. VERIFY O1, Present\_Value = **V1**
13. IF (the IUT supports Reliability values other than NO\_FAULT\_DETECTED) 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)
        }
14. IF (Out_Of_Service is writable) THEN
    WRITE Out_Of_Service = FALSE
    ELSE
        MAKE (Out_Of_Service FALSE)
15. VERIFY Status_Flags = SF1
16. VERIFY Reliability = NO_FAULT_DETECTED
17. IF (Present_Stage = S+1) THEN
    VERIFY O1, Present_Value = V2
```

## BTL-20.0 Errata-5: Test 7.3.2.15.X7 Incorrectly Specifies Initiating Device as TD [BTLWG-1223]

### Overview:

Test 7.3.2.15.X7 incorrectly specifies the initiating device as TD. In step 2, the initiating Device should be IUT instead of TD.

### Changes:

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## Checklist Changes

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None

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## Test Plan Changes

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None

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## Specified Test Changes

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[Modify test step 2 as shown below.]

### 7.3.2.15.X7 Support Operation\_Expected Property

Reason for Change: No test exists in the standard for this functionality.

BACnet Reference Clauses: 12.15.24, and 12.16.24

Purpose: To verify that the Operation\_Expected property takes on the value of ConfirmedEventNotification-Request.

Test Concept: It verifies the interrelationship between the Operation\_Expected property, and ConfirmedEventNotification-Request. This test applies to Life Safety Zone and Life Safety point object. The IUT will select one instance of each appropriate object type and test it as described.

### Test Steps:

1. MAKE (the IUT send an ConfirmedEventNotification)
2. RECEIVE ConfirmedEventNotification-Request,
  - 'Process Identifier' = (any valid process identifier),
  - 'Initiating Device Identifier' = **IUT**,
  - 'Event Object Identifier' = (any Life-Safety object),
  - 'Time Stamp' = (the current local time),
  - 'Notification Class' = (any valid notification class),
  - 'Priority' = (any valid priority),
  - 'Event Type' = CHANGE-OF-LIFE-SAFETY,
  - 'Message Text' = (any character string),
  - 'Notify Type' = ALARM | EVENT,
  - 'AckRequired' = TRUE | FALSE,
  - 'From State' = NORMAL,
  - 'To State' = (any non-normal state appropriate to the event type),
  - 'Event Values' = (New State: (Any Valid State), New-Mode: (Any Valid Mode), Status-Flag: (TRUE, FALSE, ?, ?), Operation\_Expected: (X: Any Valid operation))
3. VERIFY Operation\_Expected = X ( operation expected in the step 2)

**BTL-20.0 Errata-6: Update Test Conditionality for BTL-13.10.X8 in section 6.1.1 in BTL Test Plan [BTLWG-1194]**

**Overview:**

Test conditionality for test 13.10.X8 Modify a Self-inconsistent Timer to be Consistent, of "Must be executed" is incorrect and should be "Must be executed if the IUT claims Protocol\_Revision 17 or higher."

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

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[Update test conditionality]

**6.1.1 Base Requirements**

Base requirements must be met by any IUT claiming conformance to this BIBB.

...	
<b>BTL - 13.10.X8 - Modify a Self-inconsistent Timer to be Consistent</b>	
<b>Test Conditionality</b>	Must be executed <i>if the IUT claims Protocol Revision 17 or higher.</i>
<b>Test Directives</b>	
<b>Testing Hints</b>	The IUT is not required to present the self-inconsistent timer, only that the IUT write out a consistent timer after the modification. Ideally, the IUT should involve the user in the process of modifying the timer to be consistent, presenting the full data of the timer and allowing the user to edit the data to correct the inconsistencies. If the IUT modifies the timer automatically to make it consistent, it should at least notify the user that the timer has been modified. It is not acceptable for the IUT to modify the timer without any indication to the user that this was done.
...	

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**Specified Test Changes**

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None

## **BTL-20.0 Errata-7: Incorrect Test Names in References to 135.1-2019 [BTLWG-1244]**

### **Overview:**

Multiple tests contained incorrect test references in the BTL Test Package

### **Changes:**

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## **Checklist Changes**

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None

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## **Test Plan Changes**

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[Update each test reference noted below]

reference to 14.8 - this was renumbered to 14.8.1 which is also referenced in the Test Plan - remove reference to 14.8

reference to 8.20.5.2 - the referenced name is incorrect and there is a version in BTL Specified tests - change name and reference BTL

reference to 7.3.1.X4 thru .X9 changed to 7.3.1.17 to .22

reference to BTL 7.3.1.X5 change to 135.1-2019 7.3.1.18

reference to BTL 8.5.4 change to 135-1.2019 8.5.4

reference to BTL 8.5.9 change to 135.1-2019 8.5.9

reference to BTL 9.20.2.1 change to 135.1-2019 9.20.2.1

reference to BTL 9.20.2.2 change to 135.1-2019 9.20.2.2

reference to BTL 9.4.6 change to 135.1-2019 9.4.6

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## **Specified Test Changes**

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None

**BTL-20.0 Errata-8: Language of 14.1.X12 is Grammatically Incorrect [BTLWG-1243]**

**Overview:**

The existing title and purpose of the 14.1.X12 are difficult to understand given the grammar issues.

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

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[Update each test reference with the new test title below]

**14.1.X12 Processing Forwarded-NPDU Request Initiated from a Different Port when Registered as a Foreign Device**

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**Specified Test Changes**

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[Update the test name and Purpose as shown]

**14.1.X12 Processing Forwarded-NPDU Request Initiated from a Different Port when Registered as a Foreign Device**

Purpose: To verify that an IUT when configured as a Foreign Device, will correctly process a Forwarded-NPDU message received from a device using a different UDP port number from those in the source and destination of the Forwarded-NPDU.

**BTL-20.0 Errata-9: Numerous Errata in Test References in BTL Test Plan [BTLWG-1242]**

**Overview:**

Numerous errors in test references in the Test Plan. The names are shown as <testplan> vs <specified tests>.

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

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[Update each test reference with the new test title below]

8.2.X12: referenced test name diff (Change of Value Notification from an Access Point object vs Change of Value Notification from an Access Point object)
8.2.X13: referenced test name diff (Change of Value Notification from a Credential Data Input Object vs Change of Value Notification from an Credential Data Input object)
10.2.3.6.1: referenced test name diff (Failed Attempt to Locate (Downstream) Router vs Failed Attempt to Locate Router)
10.2.3.6.2: referenced test name diff (Successful Attempt to Locate (Downstream) Router vs Successful Attempt to Locate Router)
10.5.2.X1: referenced test name diff (Query A Router's Known Routes vs Query A Routers Known Routes)
10.8.7.4: referenced test name diff (Who-Is Specifying Unknown Device IDs vs Who-Is Specifying Unknown Device Ids)
10.8.7.5: referenced test name diff (Who-Has Specifying Unknown Device IDs vs Who-Has Specifying Unknown Device Ids)
12.1.3.X1: referenced test name diff (Frame Type Based on Transmitted NPDU Size vs Frame Type Based on Transmitted NPDU size)
13.10.4.9: referenced test name diff (Modify an Exception_Schedule by adding a BACnetSpecialEvent with period of choice calendarEntry of choice WeekNDay vs Modify an Exception_Schedule by Adding a BACnetSpecialEvent with Period of Choice calendarEntry of Choice WeekNDay)
13.10.5.4: referenced test name diff (Modify a Calendar Object by adding a BACnetCalendarEntry of choice WeekNDay to the Date_List vs Modify a Calendar by Adding a BACnetCalendarEntry of Choice WeekNDay to the Date_List)
13.8.1.10: referenced test name diff (Executing and Ending a Backup Procedure when a password is not required vs Starting and Ending a Backup Procedure when a Password is not Required)
13.8.1.11: referenced test name diff (Executing and Ending a Restore Procedure when a Password is not Required vs Starting and Ending a Restore Procedure when a Password is not Required)
13.8.1.2: referenced test name diff (Attempting Backup While Already Performing a Backup Procedure vs Attempting a Backup Procedure While Already Performing a Backup Procedure)

13.8.1.3: referenced test name diff (Attempting Backup While Already Performing a Restore Procedure vs Attempting a Backup Procedure While Already Performing a Restore Procedure)
13.8.1.4: referenced test name diff (Attempting Restore While Already Performing a Backup Procedure vs Attempting a Restore Procedure While Already Performing a Backup Procedure)
13.8.1.5: referenced test name diff (Attempting Restore While Already Performing a Restore Procedure vs Attempting a Restore Procedure While Already Performing a Restore Procedure)
13.8.1.8: referenced test name diff (Attempting Backup with an Invalid Password vs Attempting a Backup Procedure with an Invalid Password)
13.8.1.9: referenced test name diff (Attempting Restore with an Invalid Password vs Attempting a Restore Procedure with an Invalid Password)
14.1.X12: referenced test name diff (Processing Forwarded-NPDU request initiated from different port when registered as a Foreign Device into a BBMD vs Processing Forwarded-NPDU request initiated from different port when registered as a Foreign Device into a BBMD.)
14.6.3.1: referenced test name diff (Non-zero-Duration Foreign Device Table Timer Operations vs Non-Zero-Duration Foreign Device Table Timer Operations)
14.8.1: referenced test name diff (Register-Foreign-Device Test vs Registering as a Foreign Device)
14.X10.2: referenced test name diff (Holds at least 5 Foreign Device Registrations vs Holds at Least 5 Foreign Device Registrations)
14.YY.1.2.3: referenced test name diff (Discard BLVC with Wrong Address Test vs Discard BVLC with Wrong Address Test)
14.YY.1.2.8: referenced test name diff (No Additional Certificate Checks Performed Test on Outgoing Connections vs No Additional Certificate Checks Performed Test On Outgoing Connections)
14.YY.2.1.5: referenced test name diff (Failover Hub's Local Node Connects to Failover Hub Test vs Failover Hub's Local Node Connects to Failover Hub Test)
14.YY.2.1.6: referenced test name diff (Failover hub Split Horizon Test vs Failover Hub Split Horizon Test)
14.YY.3.3.2.2: referenced test name diff (Invalid Web Socket Scheme In Discovered Direct Connect URI Test vs Invalid Web Socket Scheme in Discovered Direct Connect URI Test)
7.2.X6: referenced test name diff (Datetime Non-Pattern Properties Test vs DateTime Non-Pattern Properties Test)
7.3.1.1.X1: referenced test name diff (Out_Of_Service, Status_Flags, and Reliability Test vs 7.3.1.1 Out_Of_Service, Status_Flags, and Reliability Test)
7.3.1.1.X3: referenced test name diff (Out_Of_Service, Status_Flags, and Reliability test for Objects without Present_Value vs Out_Of_Service, Status_Flags, and Reliability Test for Objects without Present_Value)
7.3.1.10.1: referenced test name diff (Event_Enable Tests for TO_OFFNORMAL and TO_NORMAL, and TO_FAULT vs Event_Enable Test for TO_OFFNORMAL and TO_NORMAL, and TO_FAULT)
7.3.1.11.1: referenced test name diff (Acked_Transitions Tests vs Acked_Transitions TestsTest)

7.3.1.8: referenced test name diff (Change of State Tests vs Binary Object Change of State Tests)
7.3.1.9: referenced test name diff (Elapsed Active Time Test vs Binary Object Elapsed Active Time Tests)
7.3.1.9: referenced test name diff (Elapsed Active Time Tests vs Binary Object Elapsed Active Time Tests)
7.3.1.X41.Y9: referenced test name diff (Blink Warn WARN_RELINQUISH Command Halted Test vs Blink-Warn WARN_RELINQUISH Command Halted Test)
7.3.1.X42.Y1: referenced test name diff (Writing to the Value_Source Property by a Device Other than the Device that Commanded the Property. vs Writing to the Value_Source Property by a Device Other than the Device that Commanded the Object.)
7.3.1.X504.1: referenced test name diff (Monitored Objects Test vs Monitored_Objects Test)
7.3.2.10.X: referenced test name diff (Ensure UTC_Offset is configurable vs Ensure UTC_Offset is Configurable)
7.3.2.13.X6: referenced test name diff (COVU_Period and COVU_Recipients Zero Test vs COVU_Period and COVU_Recipient Zero Test)
7.3.2.15.X5: referenced test name diff (Support Writable Tracking_Value vs Writable Tracking_Value)
7.3.2.23.10.3.6: referenced test name diff (Revision 4 Calendar Entry WeekNDay Special Week Of Month Test vs Revision 4 Calendar Entry WeekNDay LastSpecial Week Of Month Test)
7.3.2.24.X8: referenced test name diff (Clock-aligned logging vs Clock-Aligned Logging)
7.3.2.X37.1.6: referenced test name diff (Out_Of_Service in Accumulator Test vs Out_Of_Service Accumulator Test)
7.3.2.X38.1.2: referenced test name diff (Scale_Factor Pulse Converter Test vs Scale_Factor Test)
7.3.2.X40.13: referenced test name diff (Writing with a NULL value Test vs Writing with a NULL Value Test)
7.3.2.X45.3: referenced test name diff (Linking of Landing_Call_Control Property Test vs Landing_Call_Control test)
7.3.2.X46.1: referenced test name diff (Array Size of the Lift Object properties based on car door size vs Array Size of the Lift Object properties based on car door size.)
7.3.2.X46.3: referenced test name diff (Out_Of_Service, Status_Flags for Lift Object vs Out_Of_Service, Status_Flags for Lift object)
7.3.2.X47.1: referenced test name diff (Out_Of_Service, Status_Flags for Escalator Object vs Out_Of_Service, Status_Flags for Escalator object)
7.3.2.X54.35: referenced test name diff (Lighting Command Operation STEP_DOWN Test vs Lighting Command Operation STEP_DOWN Test)
7.3.2.X54.37: referenced test name diff (Lighting Command Operation STEP_OFF Test vs Lighting Command Operation STEP_OFF Test)
7.3.2.X54.41: referenced test name diff (Transition None Test vs Transition None test)

7.3.2.X54.62: referenced test name diff (Min_Actual_Value and Max_Actual_Value ScalingTest vs Min_Actual_Value and Max_Actual_Value Scaling Test)
7.3.2.X55.1.X7: referenced test name diff (Masked_Alarm_Values Test vs Masked_Alarm_Values Tests)
7.3.2.X61.1: referenced test name diff (Return From Out Of Service Undefined Test vs Return from Out Of Service Undefined test)
7.3.2.X62.7.1: referenced test name diff (Basic IP DHCP Test vs Basic IPv4 DHCP Test)
7.3.2.X62.7.2: referenced test name diff (Basic Ipv6 DHCP Test vs Basic IPv6 DHCP Test)
7.3.2.X65.6: referenced test name diff (Target Audit Reporting - Confirmed Service Operation Test vs Target Audit Reporting - Confirmed Service Operation Audit Notification)
7.3.2.X66.16: referenced test name diff (CONFIGURATION_ERROR when Stages size is less than Two vs CONFIGURATION_ERROR when Stages Size is less than Two)
7.3.2.X66.19: referenced test name diff (Target_References Array Sizing Test vs Target References Array Sizing Test)
8.11.X1.1: referenced test name diff (Change of Value Notifications vs Change of Value Notification)
8.11.X4: referenced test name diff (Generates 8 Hour Lifetimes vs Requests 8 Hour Lifetimes)
8.2.1: referenced test name diff (Change of Value Notication for Changes to Present_Value in Objects with a COV_Increment vs Change of Value Notification from an Analog Input, Analog Output, and Analog Valuea Object's a Numeric Object's Present_Value Property)
8.2.1: referenced test name diff (Change of Value Notification for Changes to Present_Value in Objects with COV_Increment vs Change of Value Notification from an Analog Input, Analog Output, and Analog Valuea Object's a Numeric Object's Present_Value Property)
8.2.1: referenced test name diff (Change of Value Notification for Changes to Present_Value in Objects with a COV_Increment vs Change of Value Notification from an Analog Input, Analog Output, and Analog Valuea Object's a Numeric Object's Present_Value Property)
8.2.1: referenced test name diff (Change of Value Notification for Changes to Present_Value in Objects with a COV_Increment vs Change of Value Notification from an Analog Input, Analog Output, and Analog Valuea Object's a Numeric Object's Present_Value Property)
8.2.1: referenced test name diff (Change of Value Notification for changes to Present_Value in Objects with a COV_Increment vs Change of Value Notification from an Analog Input, Analog Output, and Analog Valuea Object's a Numeric Object's Present_Value Property)
8.2.2: referenced test name diff (Change of Value Notification for Changes to Status_Flags Property vs Change of Value Notification from an Analog Input, Analog Output, and Analog Value Object's for Changes to Status_Flags Property)
8.2.3: referenced test name diff (Change of Value Notification for Changes to Present_Value in Objects without a COV_Increment vs Change of Value Notification from a Binary Input, Binary Output, and Binary Value Object's for Changes to Present_Value Property in Objects without a COV_Increment)
8.2.X17: referenced test name diff (Change of Value Notification of Staging Object Present_Value property vs Change of Value Notification of Staging Object Present_Value Property)

8.2.X18: referenced test name diff (Change of Value Notification of Staging Object Status_Flags property vs Change of Value Notification from a Staging Object Status_Flags Property)
8.2.X19: referenced test name diff (Change of Value Notification of Staging Object Present_Stage property vs Change of Value Notification from a Staging Object Present_Stage Property)
8.21.9: referenced test name diff (Presents Log Records vs Presents Log Records Containing a Specific Datatype)
8.3.1: referenced test name diff (Change of Value Notification for Changes to Present_Value in Objects with a COV_Increment vs Change of Value Notification from an Analog Input, Analog Output, and Analog Value Object's for changes to Present_Value Property in Objects with a COV_Increment)
8.3.2: referenced test name diff (Change of Value Notification for Changes to Status_Flags Property vs Change of Value Notification from an Analog Input, Analog Output, and Analog Value Object's for Changes to Status_Flags Property)
8.3.2: referenced test name diff (Change of Value Notification from Numeric Object's Status_Flags Property vs Change of Value Notification from an Analog Input, Analog Output, and Analog Value Object's for Changes to Status_Flags Property)
8.3.2: referenced test name diff (Change of Value Notification from a Numeric Object's Status_Flags Property vs Change of Value Notification from an Analog Input, Analog Output, and Analog Value Object's for Changes to Status_Flags Property)
8.3.3: referenced test name diff (Change of Value Notification for Changes to Present_Value in Objects without a COV_Increment vs Change of Value Notification from a Binary Input, Binary Output, and Binary Value Object's for Changes to Present_Value Property in Objects without a COV_Increment)
8.3.7: referenced test name diff (Change of Value Notification from Loop Object Present_Value Property vs Change of Value Notification from Object Present_Value Property)
8.3.X16: referenced test name diff (Change of Value Notification from a Credential Data Input Object vs Change of Value Notification from an Credential Data Input object)
8.3.X17: referenced test name diff (Change of Value Notification of Staging Object Present_Value property vs Change of Value Notification of Staging Object Present_Value Property)
8.3.X18: referenced test name diff (Change of Value Notification of Staging Object Status_Flags property vs Change of Value Notification of Staging Object Status_Flags Property)
8.3.X19: referenced test name diff (Change of Value Notification of Staging Object Present_Stage property vs Change of Value Notification of Staging Object Present_Stage Property)
8.4.17.1: referenced test name diff (CHANGE_OF_RELIABILITY with No Fault Algorithm (ConfirmedEventNotifications) vs CHANGE_OF_RELIABILITY with No Fault the NONE fault Algorithm (ConfirmedEventNotifications))
8.4.9: referenced test name diff (EXTENDED Test (ConfirmedEventNotification) vs EXTENDED Tests (ConfirmedEventNotification))
8.5.17.1: referenced test name diff (CHANGE_OF_RELIABILITY with No Fault Algorithm (UnconfirmedEventNotifications) vs CHANGE_OF_RELIABILITY with No NONE faultFault Algorithm (UnconfirmedEventNotifications))

8.5.X18.X2: referenced test name diff (CHANGE_OF_TIMER Offnormal-to-Offnormal UnconfirmedEventNotification vs CHANGE_OF_TIMER Offnormal-to-Offnormal UnconfirmedEventNotification Test)
8.X12.1.7: referenced test name diff (Change of Value Multiple Notifications vs Change of Value Multiple Notification)
8.X12.1.7: referenced test name diff (Change of Value Notification vs Change of Value Multiple Notification)
9.10.2.X3: referenced test name diff (The LifeTime Parameter is Out of Range vs The Lifetime Parameter is Out of Range)
9.11.1.1: referenced test name diff (Confirmed COV Notifications for a SubscribeCOVProperty subscription vs Confirmed COV Notifications)
9.11.1.2: referenced test name diff (Unconfirmed COV Notifications for a SubscribeCOVProperty subscription vs Unconfirmed COV Notifications)
9.12.1.2.1: referenced test name diff (Reading an Entire Stream-based File vs Reading an Entire Stream-Based File)
9.13.1.2.1: referenced test name diff (Writing an Entire Stream-based File vs Writing an Entire Stream-Based File)
9.16.2.5: referenced test name diff (Attempting to Create an Object with an Object Identifier and an Error in the Initial Values vs Attempting to Create an Object with an Object Identifier Object Specifier and an Error in the Initial Values)
9.2.1.X4: referenced test name diff (Change of Value Notification from proprietary Objects vs Change of Value Notification from Proprietary Objects)
9.2.1.X6: referenced test name diff (ConfirmedCOVNotification from Access Point vs ConfirmedCOVNotification from Access Point Object)
9.2.1.X7: referenced test name diff (ConfirmedCOVNotification from Credential Data Input vs ConfirmedCOVNotification from Credential Data Input Object)
9.21.2.2: referenced test name diff (Attempting to Read a Property That is not a List or Array of Lists vs Attempting to Read a Property That is not a List)
9.21.2.X6: referenced test name diff (Reading a Range of Items that do not Exist (by Position) vs Reading a Range of Items that do not Exist (Using by Position))
9.22.1.3: referenced test name diff (Writing a Non-Commandable Property With a Priority vs Writing a Non-Commandable Property with a Priority)
9.22.2.X4: referenced test name diff (Writing with a Property Value related to a not supported optional functionality vs Writing a Property Value Related to Non-supported Optional Functionality)
9.23.2.X4: referenced test name diff (Writing first element of 'List of Write Access Specifications with a Write Access Error vs Writing first element of 'List of Write Access Specifications' with a Write Access Error)
9.23.2.X7: referenced test name diff (Writing with a Property Value related to a not supported optional functionality vs Writing with a Property Value that is Out of the restricted range)

9.29.1: referenced test name diff (UnconfirmedTextMessage with no Message Class vs UnconfirmedTextMessage With No Message Class)
9.29.2: referenced test name diff (UnconfirmedTextMessage with an Unsigned Message Class vs UnconfirmedTextMessage With an Unsigned Message Class)
9.29.3: referenced test name diff (UnconfirmedTextMessage with a CharacterString Message Class vs UnconfirmedTextMessage With a CharacterString Message Class)
9.3.1.X7: referenced test name diff (UnconfirmedCOVNotification from Access Point vs UnconfirmedCOVNotification from Access Point Object)
9.3.1.X8: referenced test name diff (UnconfirmedCOVNotification from Credential Data Input vs UnconfirmedCOVNotification from Credential Data Input Object)
9.31.1.1: referenced test name diff (UTC TimeSynchronization Local Broadcast vs UTCTimeSynchronization Local Broadcast)
9.32.1.1: referenced test name diff (Object ID Version with no Device Range vs Object ID Version with No Device Range)
9.9.1.2: referenced test name diff (Reset Multiple Object Execution Test vs Reset Multiple Object Execution Tests)
9.9.1.3: referenced test name diff (Silencing Execution Test vs Silencing/Unsilencing Execution Tests)
9.X33.1.1: referenced test name diff (AuditLogQuery By Target Test vs - AuditLogQuery By Target Test)
9.X33.1.2: referenced test name diff (AuditLogQuery By Source Test vs - AuditLogQuery By Source Test)
9.X33.2.1: referenced test name diff (Attempting to Query For Non-existent Audit Log vs - Attempting to Query a Non-existent Audit Log)
9.X41.1.5: referenced test name diff (Supports Subscriptions Multiple Properties Using Multiple Requests vs Supports Subscriptions to Multiple Properties Using Multiple Requests)
9.X41.1.6: referenced test name diff (Ensuring 5 Concurrent COV-Multiple Contexts With 5 COV-References per Context vs Ensuring 5 Concurrent COV-Multiple Contexts With 5 COV-References Per Context)
9.X41.2.6: referenced test name diff (Array Index Provided is Out Of Range vs Array Index Provided Is Out Of Range)
9.X41.2.7: referenced test name diff (No Space To Add List Element vs No Space to Add List Element)

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## Specified Test Changes

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[For each test noted above in the changes for BTL Test Plan, modify to correct the test name if necessary.]

**BTL-20.0 Errata-10: Numerous Tests use Test Configuration instead of Configuration Requirements [BTLWG-1241]**

**Overview:**

Numerous tests use Test Configuration instead of Configuration Requirements.

**Changes:**

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**Checklist Changes**

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None

---

**Test Plan Changes**

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None

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**Specified Test Changes**

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[Change all occurrences of Test Configuration to Configuration Requirements for all tests]

## **BTL-20.0 Errata-11: Test 9.21.1.10 Has Inconsistent Reference in Test Plan [BTLWG-1236]**

### **Overview:**

In Test Package 20.0 Test 9.21.1.10 is referenced using both BTL and 135.1-2019. The BTL version of the test should be referenced throughout.

Example: Chapter 13.1.1:

BTL - 9.21.1.10 - Reading Items by Sequence with Negative Count

Chapter 7.7.2:

135.1-2019 - 9.21.1.10 - Reading Items by Sequence with Negative Count

### **Changes:**

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## **Checklist Changes**

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None

---

## **Test Plan Changes**

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[Locate all references to test 9.21.1.10 and ensure they are all referencing the BTL version of the test.]

---

## **Specified Test Changes**

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None

## **BTL-20.0 Errata-12: Test 7.3.2.15.X9 Steps 1 and 2 Conflict [BTLWG-1225]**

### **Overview:**

Steps 1 and 2 in test 7.3.2.15.X9 Silenced Property Test contradict each other:

1. InitialSilencedState = READ Silenced
2. VERIFY Silenced = Other than InitialSilencedState

This should be replaced with

1. InitialSilencedState = READ Silenced
2. *MAKE(the object change it silenced state)*
3. VERIFY Silenced = Other than InitialSilencedState

### **Changes:**

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## **Checklist Changes**

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None

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## **Test Plan Changes**

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None

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## **Specified Test Changes**

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[Change Test 7.3.2.15.X9 as directed above]

**BTL-20.0 Errata-13: Section 5.25.6 Supports DM-LM-B for Recipient\_List Property Clarification [BTLWG-1213]**

**Overview:**

The current directive for the 'Verify Checklist' entry implies that both object types are required. Instead it should require that DM-LM-B is supported for Notification Forwarder and Notification Class if supported, and that at least one is.

**Changes:**

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**Checklist Changes**

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None

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**Test Plan Changes**

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[Replace the test directive the new one below]

**5.25.6 Supports DM-LM-B for Recipient\_List Property**

If the IUT supports AddListElement and RemoveListElement services for the Recipient\_List property this item must be checked.

Verify Checklist	
Test Conditionality	Must be executed.
Test Directives	<del>Verify DM-LM-B support for both Notification Forwarder and Notification Class objects.</del> Verify DM-LM-B is supported in both Notification Forwarder and Notification Class objects, if supported, and at least one of those objects is.
Testing Hints	

---

**Specified Test Changes**

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None

## **BTL-20.0 Errata-14: Remove unused Tests from BTL Specified Tests [BTLWG-323]**

### **Overview:**

In the TP 15 BTL specified tests document a number of tests seem to not be referenced at all in the TP15 Test Plan document:

- 7.3.2.21.3.3 IssueConfirmedNotifications Test
- 8.24.1 Indefinite Duration, Disable, No Password
- 8.24.7 Time Duration, Disable-Initiation, Password
- 9.16.2.6 Attempting to Create an Object with an instance of 4194303
- 9.23.2.4 Writing Non-Array Properties with an Array Index

Comparing to TP 20 BTL Specified Tests the following tests have already been removed:

- 7.3.2.21.3.3 IssueConfirmedNotifications Test
- 9.23.2.4 Writing Non-Array Properties with an Array Index

### **Changes:**

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## **Checklist Changes**

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None

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## **Test Plan Changes**

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None

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## **Specified Test Changes**

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[These tests will be removed from BTL Specified Tests however the tests that exist in 135.1-2019 are WRONG. The changes we made in BTL will be lost and 135.1-2019 will NOT be corrected.]

- 8.24.1 Indefinite Duration, Disable, No Password
- 8.24.7 Time Duration, Disable-Initiation, Password
- 9.16.2.6 Attempting to Create an Object with an instance of 4194303

## BTL-20.0 Errata-15: Various TI-WG noted issues [BTLWG-1247]

### Overview:

During a TI-WG meeting Thomas pointed out several issues with the BTL Specified Tests document 20.0. This records the changes made per the discussion.

### Changes:

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## Checklist Changes

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None

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## Test Plan Changes

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[The Accumulator Object Tests (7.3.2.X37) are all one level too deep (i.e. 7.3.2.X37.1.1 vs 7.3.2.X37.1). These would need to change in the Test Plan as well.]

[The Pulse Converter Object Tests (7.3.2.X38) are all one level too deep (i.e. 7.3.2.X38.1.1 vs 7.3.2.X38.1). These would need to change in the Test Plan as well.]

[Test 8.4.17.X9.15 CHANGE\_OF\_RELIABILITY with the FAULT\_OUT\_OF\_RANGE Algorithm (ConfirmedEventNotification). This test will be renumbered when it goes into 135.1 so we will need to update the Test Plan.]

[Test 8.5.17.X9.15 CHANGE\_OF\_RELIABILITY with the FAULT\_OUT\_OF\_RANGE Algorithm (UnconfirmedEventNotification). This test will be renumbered when it goes into 135.1 so we will need to update the Test Plan.]

---

## Specified Test Changes

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[Test 7.3.1.1 steps 1 and 2 seem to be missing the ‘READ’ statement.]

Change:

1. *SF1 = Status\_Flags*
2. *R1 = Reliability*

to

1. *READ SF1 = Status\_Flags*
2. *READ R1 = Reliability*

[Test 7.3.1.10.1 Event\_Enable Test for TO\_OFFNORMAL and TO\_NORMAL, and TO\_FAULT does not have the correct change markings from test 135.1-2019.]

[Test 7.3.1.13.1 Limit\_Enable Test, LowLimitEnable test has an italic ‘BACnet’ in it and should not.]

[Test 7.3.1.13.2 Limit\_Enable Test, HighLimitEnable test has an italic ‘BACnet’ in it and should not.]

[Go through entire BTL Specified Test document and make sure we put italic for test steps that were changed.]

[Test 7.3.2.9.7 Write While In\_Process is TRUE Test. Italic for ‘IF’ in step 3 is incorrect.]

[Test 7.3.2.15.X5 Writable Tracking\_Value. The last sentence of the Test Concept references ‘IUT’ and it should say ‘TD’.]

[The Accumulator Object Tests (7.3.2.X37) are all one level too deep (i.e. 7.3.2.X37.1.1 vs 7.3.2.X37.1). These would need to change in the Test Plan as well.]

[The Pulse Converter Object Tests (7.3.2.X38) are all one level too deep (i.e. 7.3.2.X38.1.1 vs 7.3.2.X38.1). These would need to change in the Test Plan as well.]

[Test 7.3.2.X59.2 Negative Rules Test. This test is missing a Purpose.]

[7.3.2.X64.8 Hierarchical Logging Test. This test has duplicate Configuration Requirements.]

[Test 8.1.1 AcknowledgeAlarm Service Initiation Test. Add level for Test? Not sure I understand what this means.]

[When deleting a test from 135.1 in our BTL Specified Test Document, don't keep the entire struck out test. Just put a note to delete the test. TI-WG was confused about our removal of test 8.2.8 and they way it is represented in the BTL Specified Test document.]

[Test 8.4.17.X9.15 CHANGE\_OF\_RELIABILITY with the FAULT\_OUT\_OF\_RANGE Algorithm (ConfirmedEventNotification). This test will be renumbered when it goes into 135.1 so we will need to update the Test Plan.]

[Test 8.5.17.X9.15 CHANGE\_OF\_RELIABILITY with the FAULT\_OUT\_OF\_RANGE Algorithm (UnconfirmedEventNotification). This test will be renumbered when it goes into 135.1 so we will need to update the Test Plan.]

[Test 14.2.2.2 Execute Original-Broadcast-NPDU (Two-hop Distribution). The RECEIVE labeled as step 4 is part of the ELSE of step 3 and therefore should not have a step number associated with it.]

[Test 14.6.3.1 Non-Zero-Duration Foreign Device Table Timer Operations. Step 5 of this test needs to have the (50 is also acceptable if Protocol\_Revision < 7) changed to a comment -- 50 is also acceptable if Protocol\_Revision < 7. (notice the removal of () and added --).]