# BACnet® TESTING LABORATORIES ADDENDA

# Addendum cf to
# BTL Test Package 23.3

**Revision final**
**Revised 10/2/2024**

Approved by the BTL Working Group on September 23, 2024;
Approved by the BTL Working Group Voting Members on October 16, 2024;
Published on October 17, 2024.

**[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.

In the following document, language to be added to existing clauses within the BTL Test Package 23.3 is indicated through the use of *italics*, while deletions are indicated by ~~strikethrough~~. Where entirely new subclauses are proposed to be added, plain type is used throughout.

In contrast, changes to BTL Specified Tests also contain a <mark>yellow</mark> 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-23.3 cf-1: Test B-SC IPv4 and IPv6 Support [BTLWG-1551]**

**Overview:**

Devices can support both B/SC over IPv4 and over IPv6. Presently, the Test Package does not mandate testing of both IPs.

**Changes:**

## Checklist Changes

| | | | Data Link Layer - Secure Connect |
|---|---|---|---|
| | | R | Base Requirements |
| | | C[1] | Is able to operate as a node without a local hub function |
| | | C[1] | Is able to operate as a hub |
| | | O | Supports direct connections |
| | | O[2] | Is able to accept direct connections |
| | | O[2] | Is able to initiate direct connections |
| | | O | Supports configuration through Network Port object |
| | S | C[x] | Supports B/SC over IPv4 |
| | | C[x] | Supports B/SC over IPv6 |
| | | | [1] At least one of these options must be supported. [2] At least one of these options must be supported if the device supports direct connections. [x] At least one of these options must be supported. |

## Test Plan Changes

[Change 9.9.1

## 9.9.1 Base Requirements

Base requirements must be met by any IUT that supports BACnet/Secure Connect.

| 135.1-2023 - 12.5.1.1.1 - Connect and Maintain Hub Connection Test | | |
|---|---|---|
| | Test Conditionality | Must be executed. |
| | Test Directives | Repeat with IUT configured with a hub URI that requires DNS resolution, one with a URI that does not, and one with a URI that contains a valid path. |
| | Testing Hints | A URI that includes a valid path such as "wss://ip:Port/hub". |
| 135.1-2023 - 12.5.1.1.5 - Unicast Through Hub Test | | |
| | Test Conditionality | Must be executed. |
| | Test Directives | |
| | Testing Hints | |
| ... | | |

[Change 9.9.3]

## 9.9.3 Is Able to Operate as a Hub

The IUT is able to operate as a hub (contains a hub function).

| 135.1-2023 - 12.5.2.1.1 - Local Broadcast Initiation Test | | |
|---|---|---|
| | Test Conditionality | If the IUT never initiates broadcasts, this test shall be skipped. |
| | Test Directives | |
| | Testing Hints | |
| BTL - 12.5.2.1.2 - Local Broadcast Execution Test | | |
| | Test Conditionality | Must be executed. |

| | | |
|---|---|---|
| | ~~**Test Directives**~~ | ~~Repeat test with 1, and N clients attached to the hub, where N is any value supported by the IUT.~~ |
| | ~~**Testing Hints**~~ | |
| **BTL - 12.5.2.1.3 - Minimum NPDU Forwarding Size Test** | | |
| | **Test Conditionality** | Must be executed. |
| | **Test Directives** | |
| | **Testing Hints** | |
| … | | |

[Remove existing clause 9.9.8 "Supports data Attributes as of Protocol_Revision 25"]

[Add 9.9.x]

## 9.9.x Supports B/SC over IPv4

IUT supports BACnet/Secure Connect over IPv4.

| **135.1-2023 - 12.5.1.1.1 - Connect and Maintain Hub Connection Test** | | |
|---|---|---|
| | **Test Conditionality** | Must be executed. |
| | **Test Directives** | Repeat test over IPv4 with IUT configured with a hub URI that requires DNS resolution, one with a URI that does not, and one with a URI that contains a valid non-empty path. |
| | **Testing Hints** | A URI that includes a valid path such as "wss://theHost:4321/thePath". |
| **BTL - 12.5.2.1.2 - Local Broadcast Execution Test** | | |
| | **Test Conditionality** | Must be executed if the IUT is able to operate as a Hub. |
| | **Test Directives** | Repeat test with 1, and N IPv4 clients attached to the hub, where N is any value supported by the IUT. |
| | **Testing Hints** | |

[Add 9.9.y]

## 9.9.y Supports B/SC over IPv6

IUT supports BACnet/Secure Connect over IPv6.

| **135.1-2023 - 12.5.1.1.1 - Connect and Maintain Hub Connection Test** | | |
|---|---|---|
| | **Test Conditionality** | Must be executed. |
| | **Test Directives** | Repeat test over IPv6 with IUT configured with a hub URI that requires DNS resolution, one with a URI that does not, and one with a URI that contains a valid non-empty path. |
| | **Testing Hints** | A URI that includes a valid path such as "wss://theHost:4321/thePath". |
| **BTL - 12.5.2.1.2 - Local Broadcast Execution Test** | | |
| | **Test Conditionality** | Must be executed if the IUT is able to operate as a Hub. |
| | **Test Directives** | Repeat test with 1, and N IPv6 clients attached to the hub, where N is any value supported by the IUT. |
| | **Testing Hints** | |

# Specified Test Changes

**None**