



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

**Addendum bz to  
BTL Test Package 20.0.1**

**Revision v3  
Revised 10/27/2022**

Approved by the BTL Working Group on 2022-06-23.  
Approved by the BTL Working Group Voting Members on 2022-10-27.  
Published on 2022-10-28.

**[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-20.0.1 bz-1: Add Tests for DM-DDA-A and DM-DDA-B [BTLWG-798].....2

In the following document, language to be added to existing clauses within the BTL Test Package 20.0.1 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 **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-20.0.1 bz-1: Add Tests for DM-DDA-A and DM-DDA-B [BTLWG-798]**

**Overview:**

No testing exists for these services. Added in PR\_22

**Changes:**

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**Checklist Changes**

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[ Add new BIBBs DM-DDA-A and DM-DDA-B ]

<b>Device Management - Dynamic Device Assignment - A</b>		
	R	Base Requirements
	R	Can Configure Device object instance number using the You-Are service
	R	Can Configure MAC address using the You-Are service
	R	Can Configure both Device object instance number and MAC address using the You-Are service
<b>Device Management - Dynamic Device Assignment - B</b>		
	R	Base Requirements
	R	Has configurable Device object instance number using the You-Are service
	O	Has configurable MAC address using the You-Are service

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**Test Plan Changes**

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[ Replace 8.31 and 8.32 with the below sections for DM-DDA-A and DM-DDA-B ]

**8.31 Device Management - Dynamic Device Assignment - A**

**8.31.1 Base Requirements**

Base requirements must be met by any IUT that can claim this BIBB.

<b>BTL - 9.X35.1 - Uses Who-Is to Configure Devices Supporting the Who-Am-I Service</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.2.2 - Only Configures When Sent Parameters Match</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 8.X36.3 - Can Unconfigure Devices</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

**8.31.2 Can Configure Device Object Instance Number Using the You-Are Service**

The IUT can configure another device's object instance number using the You-Are service.

<b>BTL - 9.X35.2 - Configures Other Device's Object Instance Number</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

### 8.31.3 Can Configure MAC Address Using the You-Are Service

The IUT can configure another device's MAC address using the You-Are service.

<b>BTL - 8.X36.1 - Configures Other Device's MAC Address</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

### 8.31.4 Can Configure Both Device Object Instance Number and MAC Address Using the You-Are Service

The IUT can configure another device's object instance number and MAC address using the You-Are service.

<b>BTL - 8.X36.2 - Configures Other Device's Object Instance Number and MAC Address</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

## 8.32 Device Management - Dynamic Device Assignment - B

### 8.32.1 Base Requirements

Base requirements must be met by any IUT that can claim this BIBB.

<b>Verify EPICS</b>		
	<b>Test Conditionality</b>	Verify the Device Object has the Serial_Number property required to initiate Who-Am-I and execute You-Are.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.2.2 - Only Configures When Sent Parameters Match</b>		
	<b>Test Conditionality</b>	This test shall be skipped if the IUT is an MS/TP subordinate node.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 8.X35.1 - Responds to Who-Is With Who-Am-I While in the Unconfigured State</b>		
	<b>Test Conditionality</b>	If the IUT does not support having a MAC address but no configured Device object instance number, this test shall be skipped.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.1.6 - Retains Configuration Through Restarts</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.1.7 - Unconfigurable by You-Are</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

### 8.32.2 Has Configurable Device Object Instance Number Using the You-Are Service

The IUT can be configured with a Device object instance number using the You-Are service.

<b>BTL - 9.X36.1.1 - Configurable Device Object Instance Number</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.1.4 Device Object Instance Number is Configurable Even When MAC Address is Also Sent</b>		

	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

### 8.32.3 Has Configurable MAC Address Using the You-Are Service

The IUT can be configured with a MAC address using the You-Are service.

<b>BTL - 9.X36.1.2 - Configurable MAC Address</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.2.1 - Only Supports Execution of the You-Are Service While Unconfigured</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.1.5 MAC Address is Reconfigurable</b>		
	<b>Test Conditionality</b>	If the IUT cannot be configured with a MAC address that can be changed using the You-Are service, this test shall be skipped.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.1.3 - Configurable Device Object Instance Number and MAC Address</b>		
	<b>Test Conditionality</b>	Must be executed.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	
<b>BTL - 9.X36.1.4 Device Object Instance Number is Configurable Even When MAC Address is Also Sent</b>		
	<b>Test Conditionality</b>	If the IUT cannot be configured with a MAC address that cannot be changed using the You-Are service, this test shall be skipped.
	<b>Test Directives</b>	
	<b>Testing Hints</b>	

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## Specified Test Changes

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[Add new test sections into BTL Specified Tests]

### 8.X35 Who-Am-I Service Initiation Tests

#### 8.X35.1 Responds to Who-Is With Who-Am-I While in the Unconfigured State

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT will send a Who-Am-I while in the unconfigured state when a Who-Is is received.

Test Concept: TD sends a Who-Is using the wildcard instance of 4194303 and the IUT responds with a Who-Am-I Request.

Test Configuration: The IUT's Device object is not configured with an object instance number. The IUT is configured with a MAC address. If the IUT does not support having a MAC address but no configured Device object instance number, this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT
  - DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,
  - Who-Is Request,
  - 'Device Instance Range Low Limit' = 4194303,
  - 'Device Instance Range High Limit' = 4194303
2. BEFORE Unconfirmed Response Fail Time
  - RECEIVE

DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
Who-Am-I Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (the IUT's Serial\_Number)

## 8.X36 You-Are Service Initiation Tests

### 8.X36.1 Configures Other Device's MAC Address

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can configure another device's MAC address using the You-Are service without relying on the Who-Am-I service.

Test Concept: The IUT configures TD with an appropriate MAC address without TD first sending a Who-Am-I.

Configuration Requirements: TD's Device object is configured with a known Device object instance number and no configured MAC address.

Notes to Tester: The IUT may require the tester to specify all the parameters needed to configure TD with You-Are, using the IUT's software. The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. MAKE (the IUT configure TD)
2. RECEIVE  
DESTINATION = LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (TD's Vendor\_Identifier),  
'Model Name' = (TD's Model\_Name),  
'Serial Number' = (TD's Serial\_Number),  
'Device Identifier' = (TD's Device object),  
'Device MAC Address' = (an appropriate MAC address)
3. IF (TD is not an MS/TP subordinate node)  
TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (TD's Device object)  
'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (TD's Vendor\_Identifier)

### 8.X36.2 Configures Other Device's Object Instance Number and MAC Address

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can configure another Device's object instance number and MAC address using the You-Are service without relying on the Who-Am-I service.

Test Concept: The IUT configures TD with an appropriate Device object instance number (X) and MAC address without TD first sending a Who-Am-I.

Configuration Requirements: TD is not configured with a Device object instance number and has no configured MAC address.

Notes to Tester: The IUT will require the tester to specify all the parameters needed to configure TD with You-Are, using the IUT's software. The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. MAKE (the IUT configure TD)
2. BEFORE **Internal Processing Fail Time**

RECEIVE

DESTINATION = LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

You-Are Request,

'Vendor Identifier' = (TD's Vendor\_Identifier),

'Model Name' = (TD's Model\_Name),

'Serial Number' = (TD's Serial\_Number),

'Device Identifier' = (Device, X),

'Device MAC Address' = (any valid MAC address)

3. IF (TD is not an MS/TP subordinate node)

TRANSMIT

DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

I-Am Request,

'Device Identifier' = (Device, X),

'Max APDU Length Accepted' = (any valid value),

'Segmentation Supported' = (any valid value),

'Vendor Identifier' = (TD's Vendor\_Identifier)

### 8.X36.3 Can Unconfigure Devices

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can unconfigure a device using the You-Are service.

Test Concept: The IUT transmits a You-Are with 'Device Identifier' = (Device, 4194303) in order to unconfigure TD.

Test Steps:

1. MAKE (the IUT unconfigure TD)
2. BEFORE **Internal Processing Fail Time**

RECEIVE

DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

You-Are Request,

'Vendor Identifier' = (TD's Vendor\_Identifier),

'Model Name' = (TD's Model\_Name),

'Serial Number' = (TD's Serial\_Number),

'Device Identifier' = (Device, 4194303),

'Device MAC Address' = (any valid MAC address, or absent)

### 9.X35 Who-Am-I Service Execution Tests

#### 9.X35.1 Uses Who-Is to Configure Devices Supporting the Who-Am-I Service

Reason for Change: No test exists for this functionality.

Purpose: To verify that the IUT can configure a device when it receives a Who-Am-I in response to a Who-Is that it sent.

Test Concept: The IUT sends a Who-Is and TD responds with a Who-Am-I. The IUT then configures the TD's Device object instance number (X) using the You-Are service.

Configuration Requirements: TD has a MAC address but is not configured with a Device object instance number.

Notes to Tester: The IUT may require the tester to specify a Device object instance number to assign TD, using the IUT's software. If the IUT requires this step to occur at the beginning of step 3, then the amount of time it takes the tester to enter this should not be counted towards the fail timer. The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. MAKE (the IUT transmit a Who-Is request to discover devices needing configuration)
2. RECEIVE

DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

Who-Is Request,

'Device Instance Range Low Limit' = 4194303,

'Device Instance Range High Limit' = 4194303

3. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
Who-Am-I Request,  
'Vendor Identifier' = (TD's Vendor\_Identifier),  
'Model Name' = (any valid Model Name),  
'Serial Number' = (any valid Serial Number)
4. BEFORE **Unconfirmed Request Fail Time**  
RECEIVE  
DESTINATION = TD | GLOBAL BROADCAST | LOCAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (TD's Vendor\_Identifier),  
'Model Name' = (the Model Name sent by TD in the previous step),  
'Serial Number' = (the Serial Number sent by TD in the previous step),  
'Device Identifier' = (Device, X),  
'Device MAC Address' = (TD's MAC address, or absent)
5. IF (TD is not an MS/TP subordinate node)  
TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X),  
'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (TD's Vendor\_Identifier)

### 9.X35.2 Configures Other Device's Object Instance Number

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can configure another Device's object instance number using the You-Are service

Test Concept: TD sends a Who-Am-I, and the IUT configures it with an appropriate Device object instance number (X).

Configuration Requirements: TD is configured with a MAC address but no Device object instance number. The IUT is not actively discovering devices.

Notes to Tester: The IUT may require the tester to specify a Device object instance number to assign TD, using the IUT's software. If the IUT requires this step to occur between it receiving the Who-Am-I request and sending a You-Are request, then the amount of time it takes the tester to enter this should not be counted towards the fail timer. The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
Who-Am-I Request,  
'Vendor Identifier' = (TD's Vendor\_Identifier),  
'Model Name' = (any valid Model Name),  
'Serial Number' = (any valid Serial Number)
2. BEFORE **Internal Processing Fail Time**  
RECEIVE  
DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (TD's Vendor\_Identifier),  
'Model Name' = (the Model Name sent by TD in the previous step),  
'Serial Number' = (the Serial Number sent by TD in the previous step),  
'Device Identifier' = (Device, X),  
'Device MAC Address' = (TD's MAC address, or absent)
3. IF (TD is not an MS/TP subordinate node)  
TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X)



'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (TD's Vendor\_Identifier)

## 9.X36 You-Are Service Execution Tests

### 9.X36.1 Positive Tests

#### 9.X36.1.1 Configurable Device Object Instance Number

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT will send a Who-Am-I while in the unconfigured state.

Test Concept: The IUT is made to send a Who-Am-I while unconfigured. TD configures the IUT's Device object instance number (X).

Configuration Requirements: The IUT is not configured with a Device object instance number. The IUT is configured with a MAC address. If the IUT cannot be configured in this way, this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. MAKE (the IUT send a Who-Am-I)
2. RECEIVE  
DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
Who-Am-I Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (the IUT's Serial\_Number)
3. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (the IUT's Serial\_Number),  
'Device Identifier' = (Device, X),  
'Device MAC Address' = (IUT's MAC address, or absent)
4. IF (the IUT is not an MS/TP subordinate node)  
BEFORE **Unconfirmed Response Fail Time**  
RECEIVE  
DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X),  
'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (the IUT's Vendor\_Identifier)

#### 9.X36.1.2 Configurable MAC Address

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can be configured with a MAC address using the You-Are service.

Test Concept: TD sends a You-Are request to configure TD's MAC address.

Configuration Requirements: The IUT is not configured with a MAC address. The IUT is configured with a Device object instance number (X). If the IUT cannot be configured in this way, this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT

DESTINATION = LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (the IUT's Serial\_Number),  
'Device Identifier' = (absent),  
'Device MAC Address' = (a valid MAC address)

2. IF (the IUT is not an MS/TP subordinate node)

BEFORE **Internal Processing Fail Time**

RECEIVE

DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X),  
'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (the IUT's Vendor\_Identifier)

### 9.X36.1.3 Configurable Device Object Instance Number and MAC Address

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can be configured with both a Device object instance number and MAC address using the You-Are service.

Test Concept: TD sends a You-Are request to configure the device with both a Device object instance number (X) and a MAC address.

Configuration Requirements: The IUT is not configured with a Device object instance number or a MAC address. If the IUT cannot be configured in this way, this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT

DESTINATION = LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (the IUT's Serial\_Number),  
'Device Identifier' = (Device, X),  
'Device MAC Address' = (any valid MAC address)

2. IF (the IUT is not an MS/TP subordinate node)

BEFORE **Internal Processing Fail Time**

RECEIVE

DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X),  
'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (the IUT's Vendor\_Identifier)

### 9.X36.1.4 Device Object Instance Number is Configurable Even When MAC Address is Also Sent

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can be configured with a Device object instance number even when a MAC address that does not match its own is also sent.

Test Concept: The IUT sends a Who-Am-I while unconfigured. TD assigns the IUT a Device object instance number (X) and also sends a MAC address (M1), which is different than the IUT's MAC address. The IUT will accept both values, but not change its MAC address to M1.

Configuration Requirements: The IUT is not configured with a Device ID. The IUT is configured with a MAC address. If the IUT cannot be configured in this way, this test shall be skipped. If the IUT cannot be configured with a MAC address that cannot be changed using You-Are, this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. MAKE (The IUT send a Who-Am-I)
2. RECEIVE
  - SOURCE = IUT
  - DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,
  - Who-Am-I Request,
  - 'Vendor Identifier' = (the IUT's Vendor\_Identifier),
  - 'Model Name' = (the IUT's Model\_Name),
  - 'Serial Number' = (the IUT's Serial\_Number)
3. TRANSMIT
  - DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,
  - You-Are Request,
  - 'Vendor Identifier' = (the IUT's Vendor\_Identifier),
  - 'Model Name' = (the IUT's Model\_Name),
  - 'Serial Number' = (the IUT's Serial\_Number),
  - 'Device Identifier' = (Device, X),
  - 'Device MAC Address' = (M1: a MAC address different than that of the IUT)
4. IF (the IUT is not an MS/TP subordinate node)
  - BEFORE **Unconfirmed Response Fail Time**
  - RECEIVE
    - SOURCE = IUT -- ensure that the MAC address has not changed
    - DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,
    - I-Am Request,
    - 'Device Identifier' = (Device, X),
    - 'Max APDU Length Accepted' = (any valid value),
    - 'Segmentation Supported' = (any valid value),
    - 'Vendor Identifier' = (the IUT's Vendor\_Identifier)
5. CHECK (the IUT's MAC address did not change)

### 9.X36.1.5 MAC Address is Reconfigurable

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can be configured with a MAC address different than the one it was configured with using the You-Are service, without having to be unconfigured first.

Test Concept: The IUT is configured and does not need a MAC address configured to it. TD assigns a different MAC address to the IUT using the You-Are service. The IUT changes its MAC address.

Configuration Requirements: The IUT is configured with a MAC address. If the IUT cannot be configured with a MAC address that can be changed using You-Are, this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. VERIFY (Device, IUT), Object\_Type = DEVICE
2. TRANSMIT
  - DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,
  - You-Are Request,
  - 'Vendor Identifier' = (the IUT's Vendor\_Identifier),
  - 'Model Name' = (the IUT's Model\_Name),
  - 'Serial Number' = (the IUT's Serial\_Number),
  - 'Device Identifier' = (the IUT's Device Object\_Identifier),
  - 'Device MAC Address' = (a MAC address different than that of the IUT)
3. IF (the IUT is not an MS/TP subordinate node)
  - BEFORE **Unconfirmed Response Fail Time**
  - RECEIVE
    - SOURCE = IUT -- ensure that the MAC address is what was set by TD
    - DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,
    - I-Am Request,
    - 'Device Identifier' = (the IUT's Device Object\_Identifier),

'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (the IUT's Vendor\_Identifier)

4. TRANSMIT  
DESTINATION = IUT -- using the newly configured MAC address  
ReadProperty-Request,  
'Object Identifier' = (Device, IUT),  
'Property Identifier' = Object\_Type
5. RECEIVE  
SOURCE = IUT -- ensure that the MAC address is what was set by TD  
ReadProperty-Ack,  
'Object Identifier' = (Device, IUT),  
'Property Identifier' = Object\_Type,  
'Property Value' = DEVICE

### 9.X36.1.6 - Retains Configuration Through Restarts

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT will retain a configured Device object instance number and MAC address across a restart.

Test Concept: The IUT is configured with a Device object instance number (X) and MAC address (M1) using You-Are. The IUT is then restarted and the Device object instance number and MAC address are verified to be the same that were configured at the beginning of the test.

Configuration Requirements: The IUT is unconfigured.

Notes to Tester: If the IUT's MAC address cannot be changed using You-Are, use the IUT's MAC address in place of M1. The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model Name),  
'Serial Number' = (the IUT's Serial Number),  
'Device Identifier' = (Device, X),  
'Device MAC Address' = (M1, or absent if the IUT does not support a configurable MAC address)
2. RECEIVE  
DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X),  
'Max APDU Length Accepted' = (any valid value),  
'Segmentation Supported' = (any valid value),  
'Vendor Identifier' = (the IUT's Vendor\_Identifier)
3. MAKE (the IUT restart)
4. WAIT (for the IUT to restart)
5. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
Who-Is Request,  
'Device Instance Range Low Limit' = 4194303,  
'Device Instance Range High Limit' = 4194303
6. WAIT **Internal Processing Fail Time**
7. CHECK (the IUT did not send a Who-Am-I Request)
8. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
Who-Is Request,
9. RECEIVE  
DESTINATION = TD | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
I-Am Request,  
'Device Identifier' = (Device, X),

'Max APDU Length Accepted' = (any valid value),

'Segmentation Supported' = (any valid value),

'Vendor Identifier' = (the IUT's Vendor\_Identifier)

10. CHECK (the IUT's MAC address is M1 if it was changeable)

### 9.X36.1.7 Unconfigurable by You-Are

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT can be unconfigured with the You-Are service.

Test Concept: The IUT is configured with a Device object instance number and MAC address. TD then sends a You-Are request with 'Device Identifier' set to 4149303, and the IUT becomes unconfigured.

Configuration Requirements: The IUT is configured with both a Device object instance number and MAC address.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT

DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

You-Are Request,

'Vendor Identifier' = (the IUT's Vendor\_Identifier),

'Model Name' = (the IUT's Model Name),

'Serial Number' = (the IUT's Serial Number),

'Device Identifier' = (Device, 4194303)

'MAC Address' = (the IUT's MAC address, or absent)

2. CHECK (the IUT did not send any requests, except for an optional Who-Am-I if the MAC address cannot be unconfigured)

### 9.X36.2 Negative Tests

#### 9.X36.2.1 - Only Supports Execution of the You-Are Service While Unconfigured

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT does not initiate or execute any other services while the MAC address is unconfigured.

Test Concept: The IUT's MAC address is unconfigured and the tester attempts to execute any services it would otherwise execute.

Configuration Requirements: The IUT is configured with a MAC address. If the IUT's MAC address cannot be unconfigured, then this test shall be skipped.

Notes to Tester: The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT

DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

You-Are-Request,

'Vendor Identifier' = (the IUT's Vendor\_Identifier),

'Model Name' = (the IUT's Model\_Name),

'Serial Number' = (the IUT's Serial\_Number),

'Device Identifier' = (Device, 4194303)

'MAC Address' = (the IUT's MAC address, or absent)

2. WAIT **Internal Processing Fail Time**

3. CHECK (the IUT did not transmit any requests)

3. TRANSMIT

DESTINATION = LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,

Read-Property-Request,

'Object Identifier' = (any object that would exist in the IUT, or (Device, 4194303)),

'Property Identifier' = (any property in the object selected)

4. WAIT **Internal Processing Fail Time**

5. CHECK (the IUT did not respond with a Read-Property-ACK)

**9.X36.2.2 Only Configures When Sent Parameters Match**

Reason for Change: No test exists for this functionality.

Purpose: To verify the IUT will not configure or reconfigure itself when the parameters in a You-Are request do not match its vendor identifier, model name, and serial number.

Test Concept: The IUT is unconfigured and is sent a You-Are but with the wrong Vendor Identifier, Model Name, and Serial Number. The IUT does not accept the configuration and does not transmit an I-Am request indicating it has been configured.

Configuration Requirements: The IUT needs configuration of either Device object instance number or MAC address, or both. This test shall be skipped if the IUT is an MS/TP subordinate node.

Notes to Tester: If the IUT only supports configuration of either Device object instance number or MAC address but not both, TD shall use the IUT's Device Identifier or MAC address, whichever is configured, when sending You-Are requests. The destination address used by TD shall be selected such that the IUT will receive the messages.

Test Steps:

1. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are-Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (any value other than the IUT's Serial\_Number),  
'Device Identifier' = (any valid Device Identifier),  
'Device MAC Address' = (any valid MAC address, or absent)
2. WAIT **Unconfirmed Response Fail Time**
3. CHECK (the IUT did not transmit an I-Am-Request)
4. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (the IUT's Vendor\_Identifier),  
'Model Name' = (any value other than the IUT's Model\_Name),  
'Serial Number' = (IUT's Serial\_Number),  
'Device Identifier' = (any valid Device Identifier),  
'Device MAC Address' = (any valid MAC address, or absent)
5. WAIT **Unconfirmed Response Fail Time**
6. CHECK (the IUT did not transmit an I-Am-Request)
7. TRANSMIT  
DESTINATION = IUT | LOCAL BROADCAST | GLOBAL BROADCAST | REMOTE BROADCAST,  
You-Are Request,  
'Vendor Identifier' = (any value other than the IUT's Vendor\_Identifier),  
'Model Name' = (the IUT's Model\_Name),  
'Serial Number' = (the IUT's Serial\_Number),  
'Device Identifier' = (any valid Device Identifier),  
'Device MAC Address' = (any valid MAC address, or absent)
8. WAIT **Unconfirmed Response Fail Time**
9. CHECK (the IUT did not transmit an I-Am-Request)