Alert Notification Profile (ANP)

***Bluetooth*® Test Suite**

- **Revision:** ANP.TS.p4
- **Revision Date:** 2023-06-29
- **Prepared By:** BTI
- **Published during TCRL:** TCRL.2023-1

Contents

1 Scope

This Bluetooth document contains the Test Suite Structure (TSS) and test cases to test the implementation of the Bluetooth Alert Notification Profile Specification with the objective to provide a high probability of air interface interoperability between the tested implementation and other manufacturers' Bluetooth devices.

2 References, definitions, and abbreviations

2.1 References

This document incorporates provisions from other publications by dated or undated reference. These references are cited at the appropriate places in the text, and the publications are listed hereinafter.

[1] Test Strategy and Terminology Overview

[2] Bluetooth Core Specification, Version 4.0 or later

[3] ICS Proforma for Alert Notification Profile

[4] Alert Notification Profile Specification, Version 1.0

[5] GAP Test Suite, GAP.TS

[6] GATT Test Suite, GATT.TS

[7] Alert Notification Service Specification, Version 1.0

[8] Alert Notification Service Test Suite, ANS.TS

2.2 Definitions

In this Bluetooth document, the definitions from [1] and [2] apply.

2.3 Acronyms and abbreviations

In this Bluetooth document, the definitions, acronyms, and abbreviations from [1] and [2] apply.

3 Test Suite Structure (TSS)

3.1 Overview

The Alert Notification Profile is a user (client) of the Generic Attribute Profile (GATT). This is illustrated in Figure 3.1.

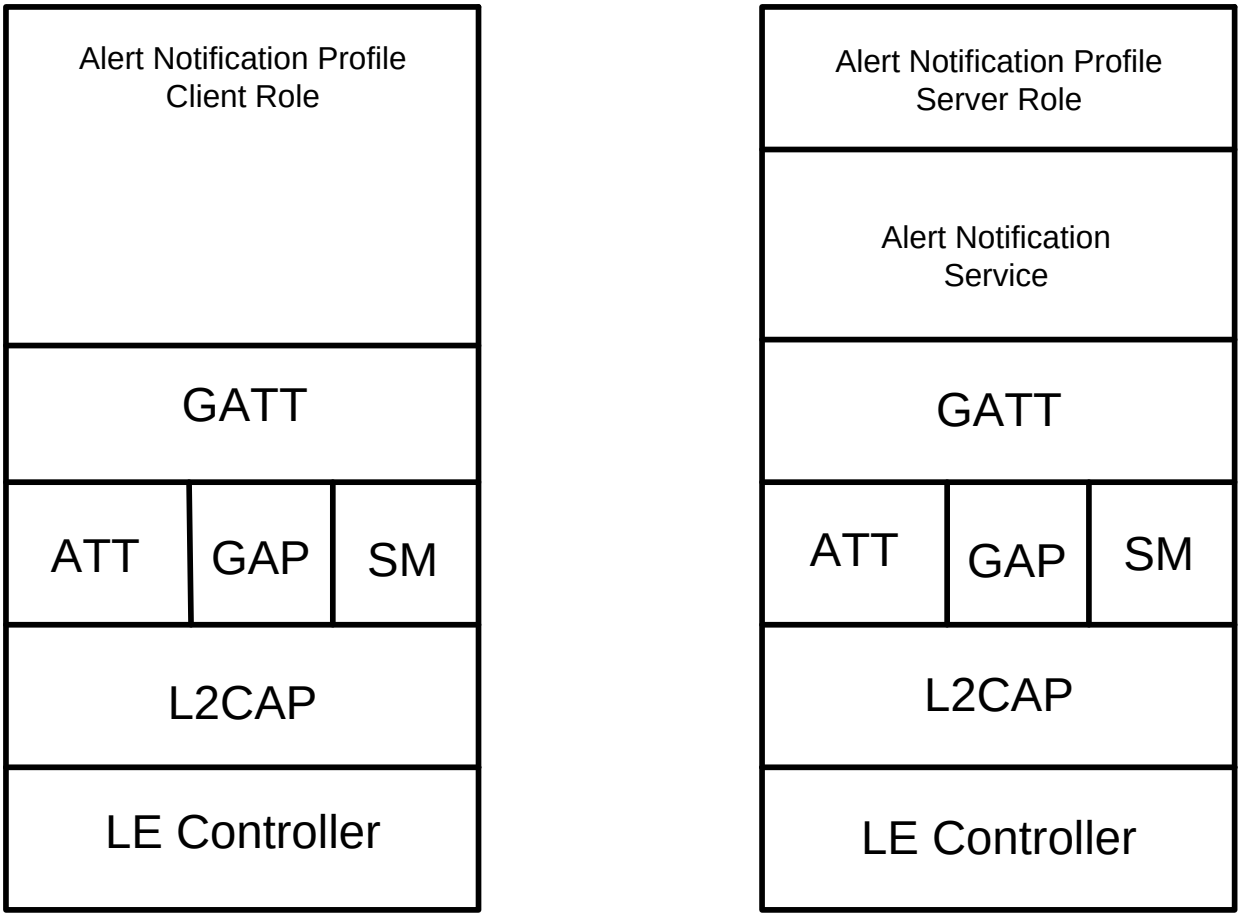

Figure 3.1: Alert Notification Profile Test Model

3.2 Test Strategy

The test objectives are to verify functionality of the Alert Notification Profile within a Bluetooth Host and enable interoperability between Bluetooth Hosts on different devices. The testing approach covers mandatory and optional requirements in the specification and matches these to the support of the IUT as described in the ICS. Any defined test herein is applicable to the IUT if the ICS logical expression defined in the Test Case Mapping Table (TCMT) evaluates to true.

The test equipment provides an implementation of the Radio Controller and the parts of the Host needed to perform the test cases defined in this Test Suite. A Lower Tester acts as the IUT's peer device and interacts with the IUT over-the-air interface. The configuration, including the IUT, needs to implement similar capabilities to communicate with the test equipment. For some test cases, it is necessary to stimulate the IUT from an Upper Tester. In practice, this could be implemented as a special test interface, a Man Machine Interface (MMI), or another interface supported by the IUT.

The following configuration is recommended for testing Alert Notification client IUT:

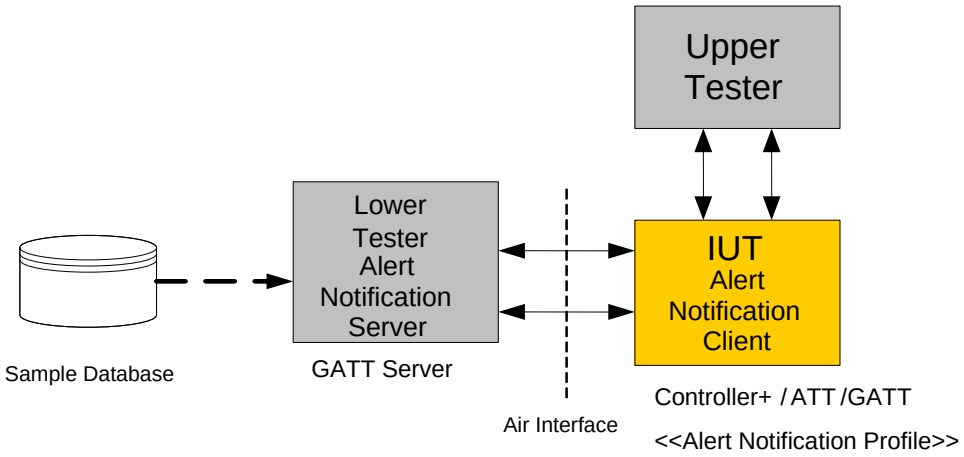

Figure 3.2: Alert Notification Profile Client Test Configuration

This Test Suite contains Valid Behavior (BV) tests complemented with Invalid Behavior (BI) tests where required. The test coverage mirrored in the Test Suite Structure is the result of a process that started with catalogued specification requirements that were logically grouped and assessed for testability enabling coverage in defined test purposes.

The Test Suite Structure is a tree with the first level representing the protocol groups listed in Section 3.3.

3.3 Test groups

The following test groups have been defined:

- Generic GATT Integrated Tests
- Configuration Features
- Notify Features
- Setup Features

4 Test cases (TC)

4.1 Introduction

4.1.1 Test case identification conventions

Test cases are assigned unique identifiers per the conventions in [1]. The convention used here is:
<spec abbreviation>/<IUT role>/<class>/**<feat>**/<func>/<subfunc>/<cap>/**<xx>-<nn>-<y>**.

Additionally, testing of this specification includes tests from the GATT Test Suite [6] referred to as Generic GATT Integrated Tests (GGIT); when used, the GGIT tests are referred to through a TCID string using the following convention:
<spec abbreviation>/<IUT role>/<GGIT test group>/< GGIT class >/<xx>-<nn>-<y>.

Identifier Abbreviation	**Spec Identifier <spec abbreviation>**
ANP	Alert Notification Profile
Identifier Abbreviation	**Role Identifier <IUT role>**
CL	Client
Identifier Abbreviation	**Reference Identifier <GGIT test group>**
CGGIT	Client Generic GATT Integrated Tests
Identifier Abbreviation	**Reference Identifier <GGIT class>**
CHA	Characteristic
SER	Service
Identifier Abbreviation	**Feature Identifier <feat>**
ANPCF	Configure Features
ANPNF	Notify Features
ANPSF	Setup Features
ANPWF	Write Features

Table 4.1: ANP TC feature naming conventions

4.1.2 Conformance

When conformance is claimed for a particular specification, all capabilities are to be supported in the specified manner. The mandated tests from this Test Suite depend on the capabilities to which conformance is claimed.

The Bluetooth Qualification Program may employ tests to verify implementation robustness. The level of implementation robustness that is verified varies from one specification to another and may be revised for cause based on interoperability issues found in the market.

Such tests may verify:

- That claimed capabilities may be used in any order and any number of repetitions not excluded by the specification
- That capabilities enabled by the implementations are sustained over durations expected by the use case
- That the implementation gracefully handles any quantity of data expected by the use case

- That in cases where more than one valid interpretation of the specification exists, the implementation complies with at least one interpretation and gracefully handles other interpretations
- That the implementation is immune to attempted security exploits

A single execution of each of the required tests is required to constitute a Pass verdict. However, it is noted that to provide a foundation for interoperability, it is necessary that a qualified implementation consistently and repeatedly pass any of the applicable tests.

In any case, where a member finds an issue with the test plan generated by Launch Studio, with the test case as described in the Test Suite, or with the test system utilized, the member is required to notify the responsible party via an erratum request such that the issue may be addressed.

4.1.3 Pass/Fail verdict conventions

Each test case has an Expected Outcome section. The IUT is granted the Pass verdict when all the detailed pass criteria conditions within the Expected Outcome section are met.

The convention in this Test Suite is that, unless there is a specific set of fail conditions outlined in the test case, the IUT fails the test case as soon as one of the pass criteria conditions cannot be met. If this occurs, the outcome of the test is a Fail verdict.

4.2 Setup preambles

The procedures defined in this section are used to achieve specific conditions on the IUT and the test equipment within the tests defined in this document. The preambles here are commonly used to establish initial conditions.

4.2.1 Set up LE Transport

Follow the preamble procedure described in Section 3.2.1.2 in [6].

4.3 Generic GATT Integrated Tests

Execute the Generic GATT Integrated Tests defined in Section 6.4, Client test procedures (CGGIT), in [6] using Table 4.2 below as input:

TCID	Service / Characteristic / Descriptor	Reference	Properties	Value Length (Octets)	Service Type
ANP/CL/CGGIT/SER/BV-01-C [Service GGIT – Alert Notification Service]	Alert Notification Service	[4] 4.1	-	-	Primary Service
ANP/CL/CGGIT/CHA/BV-01-C [Characteristic GGIT – Supported New Alert Category]	Supported New Alert Category Characteristic	[4] 4.2	0x02 (Read)	1 or 2	-
ANP/CL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Alert Notification Control Point]	Alert Notification Control Point Characteristic	[4] 4.2	0x08 (Write)	Skip	-
ANP/CL/CGGIT/CHA/BV-03-C [Characteristic GGIT – New Alert]	New Alert Characteristic	[4] 4.2	0x10 (Notify)	Skip	-
ANP/CL/CGGIT/CHA/BV-04-C [Characteristic GGIT - Unread Alert Status]	Unread Alert Status Characteristic	[4] 4.2	0x10 (Notify)	Skip	-
ANP/CL/CGGIT/CHA/BV-05-C [Characteristic GGIT - Supported Unread Alert Category]	Supported Unread Alert Category Characteristic	[4] 4.2	0x02 (Read)	1 or 2	-

Table 4.2: Input for the GGIT Client test procedure

4.4 Configuration Features

The procedures defined in this test group verify Alert Notification Client IUT implementation of the configuration Features defined in the Alert Notification Profile Specification [4] by an Alert Notification Client IUT.

ANP/CL/ANPCF/BV-01-C [New Alert – Client Characteristic Configuration, write with 0x0001]

- Test Purpose

  Verify that the Alert Notification Client IUT can configure the Client Characteristic Configuration descriptor of New Alert Characteristic.

- Reference

  [4] 4.6

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-03-C [Characteristic GGIT – New Alert] and has saved the handle of the Client Characteristic Configuration descriptor for New Alert Characteristic.

- Test Procedure

  1. The Upper Tester issues a command to the IUT to configure to receive a New Alert: i.e. write 0x0001 to Client Characteristic Configuration Descriptor.
  2. The IUT executes the GATT Write Characteristic Descriptors sub-procedure using the specified handle.

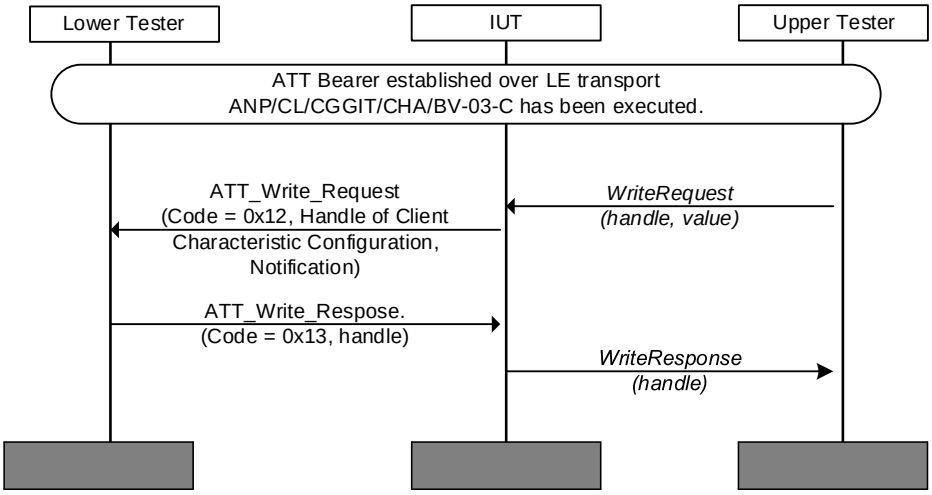

Figure 4.1: ANP/CL/ANPCF/BV-01-C [New Alert – Client Characteristic Configuration, write with 0x0001]

- Expected Outcome

  Pass verdict

  The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle specified by the Upper Tester, and the value set to <0x0001, Notification>.

The IUT receives an ATT_Write_Response from the Lower Tester and sends the WriteResponse to the Upper Tester.

ANP/CL/ANPCF/BV-02-C [New Alert – Client Characteristic Configuration, write with 0x0000]

- Test Purpose

  Verify that the Alert Notification Client IUT can configure the Client Characteristic Configuration descriptor of New Alert Characteristic.

- Reference

  [4] 4.6

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-03-C [Characteristic GGIT – New Alert] and has saved the handle of the Client Characteristic Configuration descriptor for New Alert Characteristic.

- Test Procedure

  1. The Upper Tester issues a command to the IUT to configure not to receive a New Alert: write 0x0000 to the Client Characteristic Configuration Descriptor.
  2. The IUT executes the GATT Write Characteristic Descriptors sub-procedure using the specified handle.

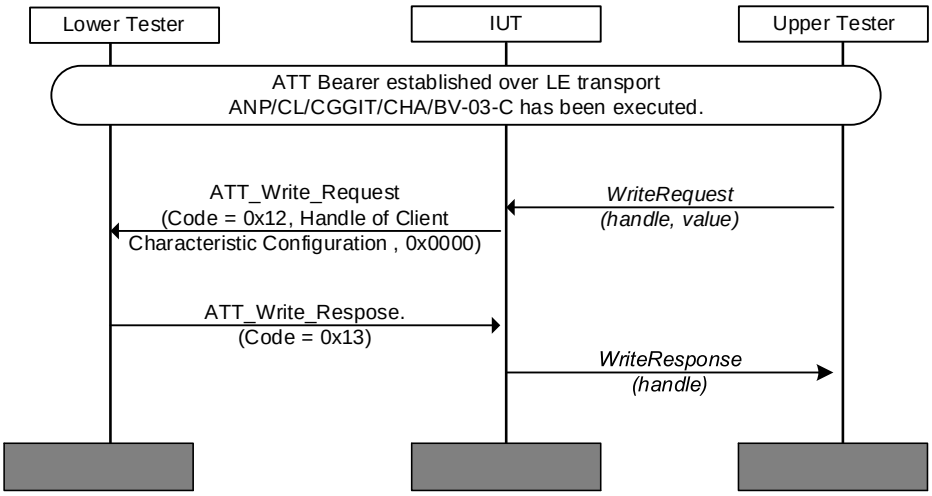

Figure 4.2: ANP/CL/ANPCF/BV-02-C [New Alert – Client Characteristic Configuration, write with 0x0000]

- Expected Outcome

  Pass verdict

  The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle specified by the Upper Tester, and the value set to <0x0000, disable all>.

  The IUT receives an ATT_Write_Response from the Lower Tester and sends the WriteResponse to the Upper Tester.

ANP/CL/ANPCF/BV-03-C [Unread Alert Status – Client Characteristic Configuration, write with 0x0001]

- Test Purpose

  Verify that the Alert Notification Client IUT can configure the Client Characteristic Configuration descriptor of the Unread Alert Status Characteristic.

- Reference

  [4] 4.8

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-04-C [Characteristic GGIT - Unread Alert Status] and has saved the handle of the Client Characteristic Configuration for Unread Alert Status Characteristic.

- Test Procedure

  1. The Upper Tester issues a command to the IUT to configure to receive an Unread Alert Status: i.e. write 0x0001 to Client Characteristic Configuration Descriptor.
  2. The IUT executes the GATT Write Characteristic Descriptors sub-procedure using the specified handle.

- Expected Outcome

  Pass verdict

  The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle specified by the Upper Tester, and the value set to <0x0001, Notification>.

  The IUT receives an ATT_Write_Response from the Lower Tester and sends the WriteResponse to the Upper Tester.

ANP/CL/ANPCF/BV-04-C [Unread Alert Status – Client Characteristic Configuration, write with 0x0000]

- Test Purpose

  Verify that the Alert Notification Client IUT can configure the Client Characteristic Configuration descriptor of Unread Alert Status Characteristic.

- Reference

  [4] 4.8

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-04-C [Characteristic GGIT - Unread Alert Status] and has saved the handle of the Client Characteristic Configuration for Unread Alert Status Characteristic.

- Test Procedure

  1. The Upper Tester issues a command to the IUT to configure not to receive an Unread Alert Status: i.e. write 0x0000 to Client Characteristic Configuration Descriptor.
  2. The IUT executes the GATT Write Characteristic Descriptors sub-procedure using the specified handle.

- Expected Outcome

  Pass verdict

  The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle specified by the Upper Tester, and the value set to <0x0000, disable all>.

  The IUT receives an ATT_Write_Response from the Lower Tester and sends the WriteResponse to the Upper Tester.

4.5 Write Feature

The procedures defined in this test group verify Alert Notification Client IUT implementation of the write feature defined in the Alert Notification Profile Specification [4] by an Alert Notification Client IUT.

ANP/CL/ANPWF/BV-01-C [Alert Notification Control Point Characteristic write]

- Test Purpose

  Verify that the Alert Notification Client IUT can write the Alert Notification Control Point Characteristic.

- Reference

  [4] 4.9

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Alert Notification Control Point] and has saved the handle of an Alert Notification Control Point characteristic.

- Test Procedure

  1. The Upper Tester issues a command to the IUT to write an Alert Notification Control Point characteristic with a valid Alert Notification Control Point value.
  2. The IUT executes the GATT Write Characteristic Value sub-procedure using the value and handle from step 1.

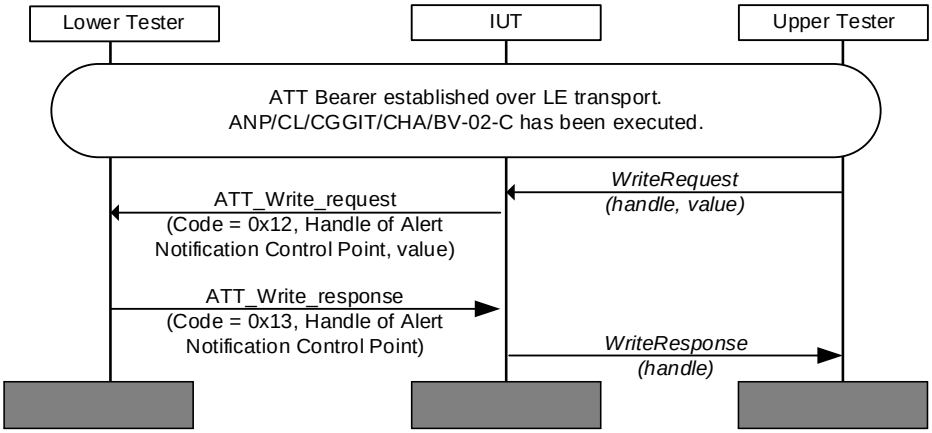

Figure 4.3: ANP/CL/ANPWF/BV-01-C [Alert Notification Control Point Characteristic write]

- Expected Outcome

  Pass verdict

  The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle of the Alert Notification Control Point Characteristic, and with the Alert Notification Control Point value specified by the Upper Tester.

  The received Alert Notification Control Point value matches the one sent by the IUT.

4.6 Notify Feature

The procedures defined in this test group verify Alert Notification Client IUT Notification of the Features defined in the Alert Notification Profile Specification [4] by an Alert Notification Client IUT.

ANP/CL/ANPNF/BV-01-C [New Alert Characteristic, Notify]

- Test Purpose

  Verify that the Alert Notification Client IUT can receive notification of the New Alert characteristic.

- Reference

  [4] 4.5, 4.6, 4.9

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Alert Notification Control Point] and ANP/CL/CGGIT/CHA/BV-03-C [Characteristic GGIT – New Alert] and has saved the handle of a New Alert characteristic and an associated Client Characteristic Configuration descriptor and an Alert Notification Control Point Characteristic.
  - The IUT has executed the procedure defined in ANP/CL/ANPCF/BV-01-C [New Alert – Client Characteristic Configuration, write with 0x0001] to enable a New Alert notify.

- Test Procedure

  1. The Upper Tester issues a command with a valid Alert Notification Control Point value to the IUT to enable a New Alert notify.
  2. The IUT executes the procedure defined in ANP/CL/ANPWF/BV-01-C [Alert Notification Control Point Characteristic write] with specified handle and value by the Upper Tester.

3. The Lower Tester sends an ATT_Handle_Value_Notification containing a New Alert Characteristic value to the IUT.
4. The Upper Tester reports the received value of the Incoming Alert Notification from the IUT.
5. Repeat procedures if the Upper Tester needs any other category notification.

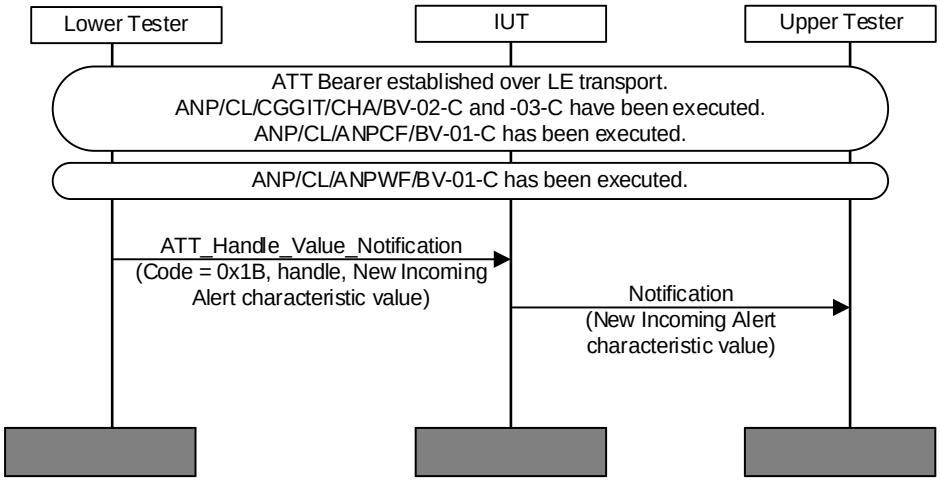

Figure 4.4: ANP/CL/ANPNF/BV-01-C [New Alert Characteristic, Notify]

- Expected Outcome

  Pass verdict

  The reported New Alert Characteristic value matches the one sent by the Lower Tester.

ANP/CL/ANPNF/BV-02-C [Unread Alert Status Characteristic, Notify]

- Test Purpose

  Verify that the Alert Notification Client IUT can receive notification of the Unread Alert Status characteristic.

- Reference

  [4] 4.7, 4.8, 4.9

- Initial Condition

  - Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  - The IUT has executed the procedure defined in ANP/CL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Alert Notification Control Point] and ANP/CL/CGGIT/CHA/BV-04-C [Characteristic GGIT - Unread Alert Status] and has saved the handle of an Unread Alert Status Characteristic and an associated Client Characteristic Configuration descriptor and an Alert Notification Control Point Characteristic. The IUT has executed the procedure defined in ANP/CL/ANPCF/BV-03-C [Unread Alert Status – Client Characteristic Configuration, write with 0x0001] to enable an Unread Alert Status notify.

- Test Procedure

  1. The Upper Tester issues a command with a valid Alert Notification Control Point value to the IUT to enable an Unread Alert Status notify.
  2. The IUT executes the procedure defined in ANP/CL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Alert Notification Control Point] with specified handle and value by the Upper Tester.

3. The Lower Tester sends an ATT_Handle_Value_Notification containing an Unread Alert Status Characteristic value to the IUT.
4. The Upper Tester reports the received value of the Unread Alert Status from the IUT.
5. Repeat procedures if the Upper Tester needs any other category status.

- Expected Outcome

  Pass verdict

  The reported Unread Alert Status Characteristic value matches the one sent by the Lower Tester.

4.7 Features

ANP/CL/ANPSF/BV-01-C [Recovery from Connection Loss for New Alerts]

- Test Purpose

  Verify that the Alert Notification Client IUT checks the Unread Alert Status characteristic value and does not alert the user if the value of the Unread Alert Status has not changed from the previous value when connected.

- Reference

  [4] 4.10

- Initial Condition

  - The Lower Tester and IUT have been already bonded.

- Test Procedure

  1. Execute the ANP/CL/ANPNF/BV-01-C [New Alert Characteristic, Notify] test case once.
  2. Disconnect the Lower Tester and IUT.
  3. The Lower Tester connects to the IUT and starts connection setup (including service discovery, service search and encryption).

- Expected Outcome

  Pass verdict

  The IUT writes one or more “Enable New Alert Category” commands to the Alert Notification Control Point exposed by the Lower Tester.

  The IUT writes the command “Notify New Alert Immediately” with 0xFF in the target category field to the Alert Notification Control Point exposed by the Lower Tester.

  The IUT successfully receives the notification of the New Alert characteristic.

  If the reported New Alert value sent by the Lower Tester matches the one that is saved on the IUT in previous connection, the IUT doesn’t alert the user.

ANP/CL/ANPSF/BV-02-C [Recovery from Connection Loss for Unread Alerts]

- Test Purpose

  Verify that the Alert Notification Client IUT checks the New Alert characteristic value and does not alert the user if the value of the New Alert has not changed from the previous value when connected.

- Reference

  [4] 4.10

- Initial Condition
  - The Lower Tester and IUT have been already bonded.
  - The Lower Tester and IUT are disconnected.
- Test Procedure
  1. Execute ANP/CL/ANPNF/BV-02-C [Unread Alert Status Characteristic, Notify] test case once.
  2. Disconnect the Lower Tester and IUT.
  3. The Lower Tester connects to the IUT and starts connection setup (including service discovery, service search and encryption).
- Expected Outcome

  Pass verdict

  The IUT writes one or more “Enable Unread Alert Category” commands to the Alert Notification Control Point exposed by the Lower Tester.

  The IUT writes the command “Notify Unread Alert Status Immediately” with ‘0xFF’ for the target category field to the Alert Notification Control Point exposed by the Lower Tester.

  The IUT successfully receives the notification of the Unread Alert Status characteristic.

  If the reported Unread Alert Status value sent by the Lower Tester matches the one that is saved on the IUT in previous connection, the IUT doesn’t alert the user.

ANP/CL/ANPSF/BV-03-C [Check the Supported Categories for New Alerts after Connection]

- Test Purpose

  Verify that the Alert Notification Client IUT checks the Supported New Alert Category characteristic value when connected.
- Reference

  [4] 4.12
- Initial Condition
  - The Lower Tester and IUT are disconnected.
- Test Procedure
  1. The Lower Tester connects to the IUT and starts connection setup (including service discovery, service search and encryption).
- Expected Outcome

  Pass verdict

  The IUT reads the Supported New Alert Category characteristic exposed by the Lower Tester.

ANP/CL/ANPSF/BV-04-C [Check the Supported Categories for Unread Alert after Connection]

- Test Purpose

  Verify that the Alert Notification Client IUT checks the Supported Unread Alert Category characteristic value when connected.

- Reference

  [4] 4.13

- Initial Condition

  - The Lower Tester and IUT are disconnected.

- Test Procedure

  1. The Lower Tester connects to the IUT and starts connection setup (including service discovery, service search and encryption).

- Expected Outcome

  Pass verdict

  The IUT reads the Supported Unread Alert Category characteristic exposed by the Lower Tester.

4.7.1 Verify Bond Status on Reconnection

- Test Purpose

  Verify that the Alert Notification Server establishes a re-connection with encryption with a previously bonded Alert Notification Client on reconnection and the Alert Notification Client responds correctly.

- Test Case IDs

  ANP/CL/ANPSF/BV-05-C

  ANP/SR/ANPSF/BV-05-C

- Reference

  [4] 5.1.3, 5.2.3

- Initial Condition

  - The IUT and the Lower Tester are bonded.
  - The IUT has configured the Lower Tester to enable notification.
  - No connection is established between the IUT and the Lower Tester.

- Test Procedure

  1. The IUT establishes a connection to the Lower Tester.
  2. The IUT encrypts the connection.

- Expected Outcome

  Pass verdict

  The IUT establishes a connection with encryption.

5 Test case mapping

The Test Case Mapping Table (TCMT) maps test cases to specific requirements in the ICS. The IUT is tested in all roles for which support is declared in the ICS document.

The columns for the TCMT are defined as follows:

Item: Contains a logical expression based on specific entries from the associated ICS document. Contains a logical expression (using the operators AND, OR, NOT as needed) based on specific entries from the applicable ICS document(s). The entries are in the form of y/x references, where y corresponds to the table number and x corresponds to the feature number as defined in the ICS document for the Alert Notification Profile (ANP) [3].

Feature: A brief, informal description of the feature being tested.

Test Case(s): The applicable test case identifiers are required for Bluetooth Qualification if the corresponding y/x references defined in the Item column are supported. Further details about the function of the TCMT are elaborated in [1].

For the purpose and structure of the ICS/IXIT, refer to [1].

Item	Feature	Test Case(s)
ANP 7/1	Alert Notification Service	ANP/CL/CGGIT/SER/BV-01-C
ANP 7/2 OR ANP 8/1	Supported New Alert Category characteristic	ANP/CL/CGGIT/CHA/BV-01-C
ANP 7/3 AND ANP 8/2	Supported Unread Alert Category characteristic	ANP/CL/CGGIT/CHA/BV-05-C
ANP 7/4 OR ANP 8/3	Alert Notification CP characteristic	ANP/CL/CGGIT/CHA/BV-02-C
ANP 7/5 OR ANP 7/6	New Alert characteristic	ANP/CL/CGGIT/CHA/BV-03-C
ANP 7/7 OR ANP 7/8	Discover Unread Alert Status characteristic	ANP/CL/CGGIT/CHA/BV-04-C
ANP 8/3	Alert Notification Control Point characteristic, write	ANP/CL/ANPWF/BV-01-C
ANP 8/4	New Alert characteristic configuration	ANP/CL/ANPCF/BV-01-C
ANP 8/4a	New Alert characteristic configuration, disable notifications.	ANP/CL/ANPCF/BV-02-C
ANP 8/5	Notify New Alert characteristic	ANP/CL/ANPNF/BV-01-C
ANP 8/6	Unread Alert Status characteristic configuration	ANP/CL/ANPCF/BV-03-C
ANP 8/6a	Unread Alert Status characteristic configuration, disable notifications	ANP/CL/ANPCF/BV-04-C
ANP 8/7	Notify Unread Alert Status characteristic	ANP/CL/ANPNF/BV-02-C
ANP 8/8	Recovery from Connection Loss for Unread Alerts	ANP/CL/ANPSF/BV-01-C
ANP 8/9	Recovery from Connection Loss for New Alerts	ANP/CL/ANPSF/BV-02-C
ANP 8/10	Check the Supported Categories for New Alert after Connection	ANP/CL/ANPSF/BV-03-C
ANP 8/11	Check the Supported Categories for Unread Alert after Connection	ANP/CL/ANPSF/BV-04-C
ANP 4/1	Verify Bonded Status on Reconnection (Server IUT)	ANP/SR/ANPSF/BV-05-C

Item	Feature	Test Case(s)
ANP 8/12 AND ANP 10/2	Verify Bonded Status on Reconnection (Client IUT)	ANP/CL/ANPSF/BV-05-C

Table 5.1*: Test case mapping*

6 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2011-09-15	Adopted by the Bluetooth SIG Board of Directors
	1.0.1r1	2012-08-29	TSE: 4832 Change to ANP/CL/ANPCF/BV-02-C and ANP/CL/ANPCF/BV-04-C (legacy ID: TP/ANPCF/ANPC/BV-02-C and TP/ANPCF/ANPC/BV-04-C) from mandatory to optional. Changes in the TCMT. TSE: 4925 Change all test cases from –C to –I.
1	1.0.1	2012-10-30	Prepare for Publication
	1.0.2r00	2016-05-20	Converted to new Test Case ID conventions as defined in TSTO v4.1.
	1.0.2r01	2016-06-01	Converted to current Test Spec template. TSE 7204: Change test case ID to ANP/CL/ANPSF/BV-05-I (legacy ID: TP/ANPSF/BV-01-I) to avoid duplication when it is renamed for the new test case convention
	1.0.2r02	2016-06-13	Split TP/ANPSF/BV-01-I (Verify Bond Status) into two test cases for Client and Server roles following test case ID conversion
2	1.0.2	2016-07-14	Prepared for TCRL 2016-1 publication.
	1.0.3r00	2016-07-28	TSE 7061 and TSE 7782: In TCMT, removed duplicate test case mapping of ANP/CL/ANPCF/BV-04-I from mapping to ANP 8/6 and changed “ANP/CL/ANPCF/BV-03-C” to “…03-I.”
3	1.0.3	2018-12-13	Approved by BTI. Prepared for TCRL 2016-2 publication.
	1.0.3 edition 2r00	2018-11-26	Editorial changes only. Template updated. Revision History and Contributors moved to the end of the document.
	1.0.3 edition 2	2019-11-11	Updated copyright page and confidentiality markings to support new Documentation Marking Requirements, performed minor formatting updates, and accepted all tracked changes to prepare for edition 2 publication.
	p4r00–r03	2023-04-06 – 2023-05-23	TSE 22392 (rating 2): Converted the following test cases to GGIT: ANP/CL/ANPD/BV-02-I – -09-I; ANP/CL/ANPRF/BV-01-I and -02-I; and ANP/CL/ANPWF/BV-01-I. The new GGIT converted TCIDs are: ANP/CL/CGGIT/SER/BV-01-C and ANP/CL/CGGIT/CHA/BV-01-C – -05-C. Updated the TCMT accordingly. Updated the initial conditions for ANP/CL/ANPCF/BV-01-I – -04-I and ANP/CL/ANPNF/BV-01-I. TSE 22753 (rating 1): Modified ANP/CL/ANPWF/BV-01-I so that is no longer converted to GGIT; updated the TCMT accordingly. Updated the Properties and

Publication Number	Revision Number	Date	Comments
			Value Length (Octets) columns in Table 4.2. Updated TCIDs within the MSCs in Figures 4.1 – 4.4. Updated the test procedures in ANP/CL/ANPCF/BV-01-I – -04-I and ANP/CL/ANPWF/BV-01-I. TSE 22901 (rating 1): Globally changed all TCIDs ending with "-I" to "-C" tests. Added a Publication Number column to the Revision History. Revised the document numbering convention, setting the last release publication of 1.0.3 as p3. Replaced the Bluetooth logo in the footer and updated the copyright page to align with v2 of the DNMD. Performed editorials to align the document with the latest TS template, including the addition of missing figure captions and updates to the scope, references, Test Strategy, test case identification conventions, conformance, Pass/Fail verdict conventions, and setup preambles.
4	p4	2023-06-29	Approved by BTI on 2023-05-28. Prepared for TCRL 2023-1 publication.

Acknowledgments

Name	Company
Tiberiu Marinescu	Bluetooth SIG, Inc.
Sadao Nagashima	Casio
Daisuke Matsuoh	Citizen
Shunsuke Koyama	Seiko-Epson