Basic Audio Profile (BAP)

***Bluetooth*® Test Suite**

- **Revision:** BAP.TS.p10
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- **Prepared By:** Generic Audio Working Group
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Contents

1 Scope

This Bluetooth document contains the Test Suite Structure (TSS) and test cases to test the implementation of the Bluetooth Basic Audio 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. Additional definitions and abbreviations can be found in [1] and [2].

[1] Bluetooth Core Specification, Version 5.2 or later

[2] Test Strategy and Terminology Overview

[3] Basic Audio Profile Specification, Version 1.0

[4] Basic Audio Profile ICS, BAP.ICS

[5] GATT Test Suite, GATT.TS

[6] Audio Stream Control Service Test Suite, ASCS.TS

[7] Basic Audio Profile Implementation eXtra Information for Test, IXIT

[8] Published Audio Capabilities Service Test Suite, PACS.TS

[9] Bluetooth SIG Assigned Numbers, https://www.bluetooth.com/specifications/assigned-numbers

2.2 Definitions

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

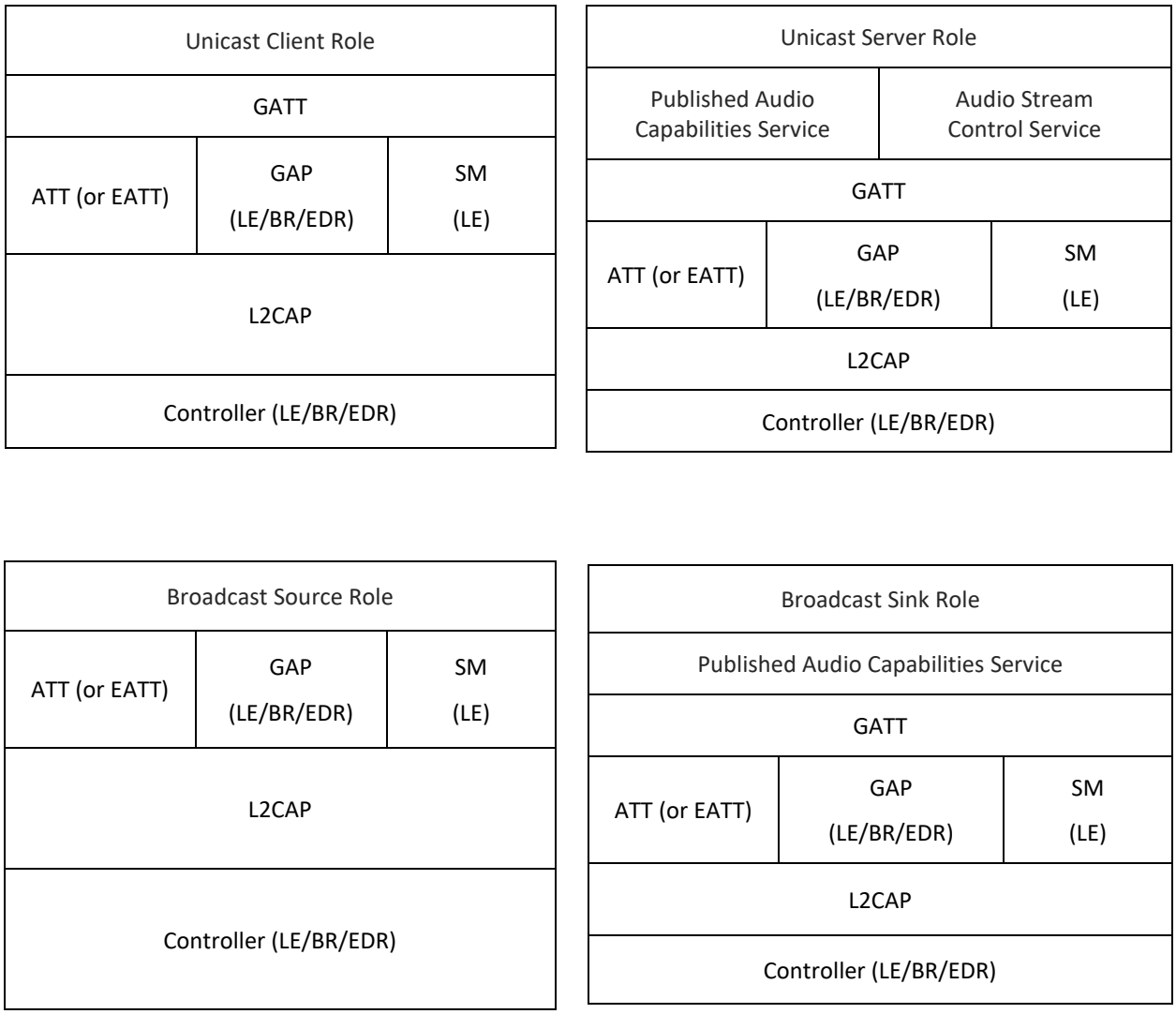
2.3 Acronyms and abbreviations

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

3 Test Suite Structure (TSS)

3.1 Overview

The Basic Audio Profile (BAP) [3] requires the presence of GAP, SM (when used over LE transport), L2CAP, and GATT. This is illustrated in Figure 3.1.



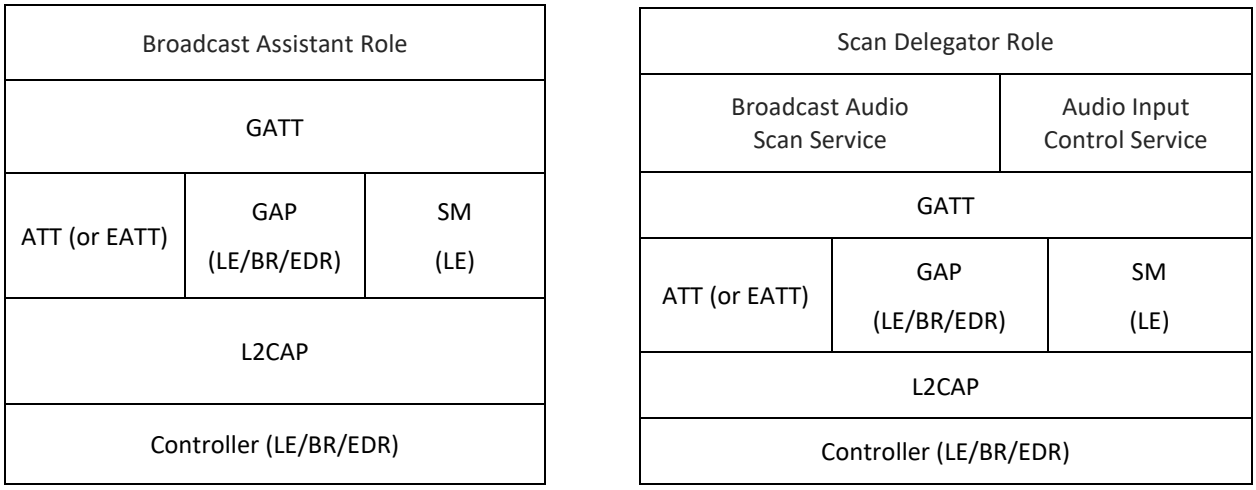


Figure 3.1 Basic Audio Profile test model

3.2 Test Strategy

The test objectives are to verify the functionality of the Basic Audio Profile within a Bluetooth Host and enable interoperability between Bluetooth Hosts on different devices, specifically those that are conforming to the Unicast Server and Unicast Client roles for unicast audio stream control, and Broadcast Source, Broadcast Sink, Broadcast Assistant, and Scan Delegator roles for broadcast audio stream control. 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. Some test cases require the presence of multiple Lower Testers.

This Test Suite contains Valid Behavior (BV) tests complemented with Invalid Behavior (BI) tests where required. Additionally, since the Basic Audio Profile is a GATT-based profile, Generic GATT Integrated Tests (GGIT) are used to validate parts of the specification. The test coverage is logically grouped in the test groups as described below after careful evaluation of requirements defined in the specification.

BAP testing focuses on ensuring the behavior of devices performing the roles for unicast and broadcast audio stream control, including the procedures and interactions between devices. This includes proper handling of all defined features of the Basic Audio Profile, such as advertising, discovery, GATT services, and control point procedures.

For the Unicast Client tests, depending on the Audio Configuration (Section 3.2.1) being tested, there may be more than one Lower Tester.

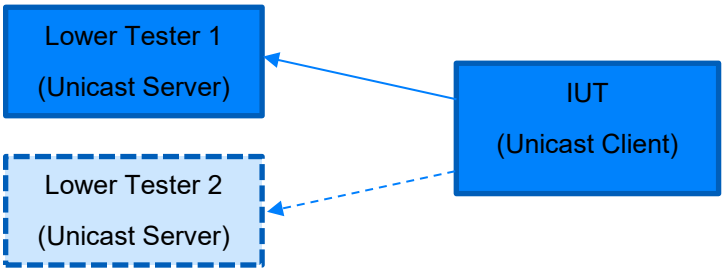


Figure 3.2: Unicast Client test topology

Figure 3.3: Unicast Server test topology

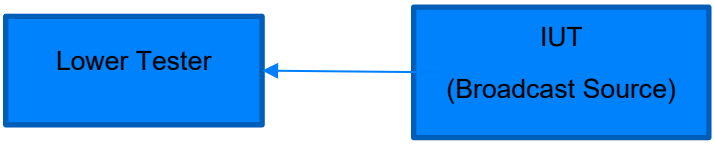


Figure 3.4: Broadcast Source test topology

For the Broadcast Tests topologies that require a Broadcast Source, since the roles may be co-located on the same device, the IUT may optionally provide its own Broadcast Source.

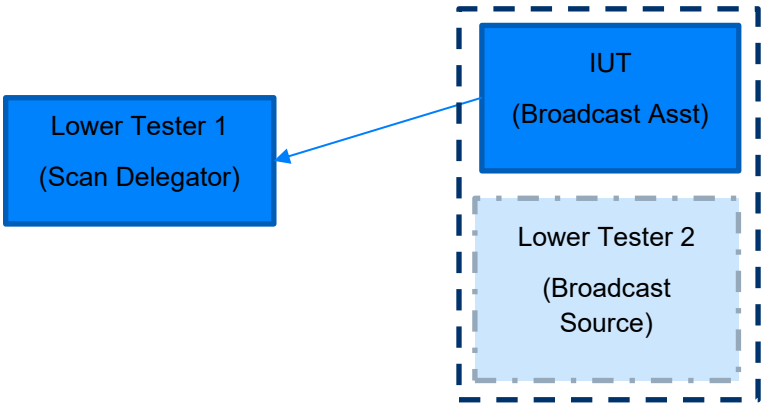


Figure 3.5: Broadcast Assistant test topology

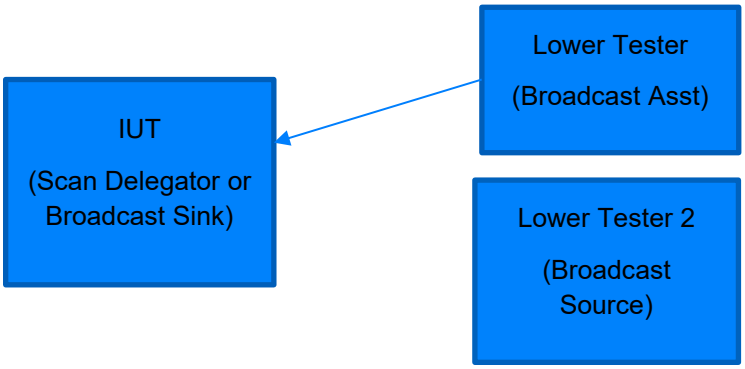


Figure 3.6: Scan Delegator/Broadcast Sink test topology

LC3 configurations are provided in Appendix A, which are referenced in some table-driven tests for the Codec Specific Configuration as well as the QoS settings used in a particular test case, in order to provide a common section for referencing LC3 Codec Setting values. Unicast Audio Configurations are provided in Section 3.2.1 and defined in Table 4.1: Unicast LC3 Audio Configurations in [3], which are utilized in the Unicast Client and Server streaming test cases, in order to provide diagrams for each audio configuration and the characteristics, Codec_Specific_Capabilities, and Codec_Specific_Configuration required to enable them. Some test cases reference other BAP test cases that have a particular Codec Specific Configuration or QoS setting that can be achieved by running that referenced test case; this is done to reduce the amount of repeated settings-related information and to prevent unnecessary maintenance error.

3.2.1 Audio Configurations

3.2.1.1 Audio Configuration 1 (Single audio channel. One unidirectional CIS. Unicast Server is Audio Sink.)

Figure 3.7 shows an example of Audio Configuration 1. A Unicast Client in the Audio Source role transmits a single channel of audio data to a Unicast Server in the Audio Sink role using one unidirectional CIS.

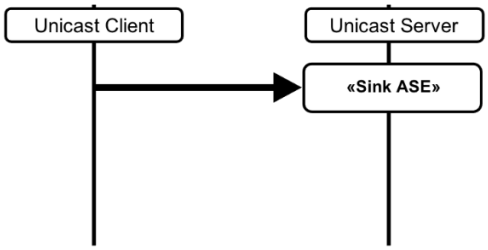


Figure 3.7: Audio Configuration 1

3.2.1.2 Audio Configuration 2 (Single audio channel. One unidirectional CIS. Unicast Server is Audio Source.)

Figure 3.8 shows an example of Audio Configuration 2. A Unicast Client in the Audio Sink role receives a single channel of audio data from a Unicast Server in the Audio Source role using one unidirectional CIS.

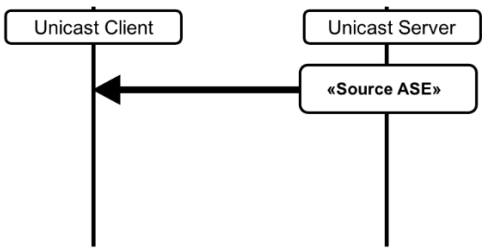


Figure 3.8: Audio Configuration 2

3.2.1.3 Audio Configuration 3 (Multiple audio channels. One bidirectional CIS. Unicast Server is Audio Sink and Audio Source.)

Figure 3.9 shows an example of Audio Configuration 3. A Unicast Client in both the Audio Source and Audio Sink roles transmits a single channel of audio data to, and receives a single channel of audio data from, a Unicast Server in the Audio Sink and Audio Source roles using one bidirectional CIS.

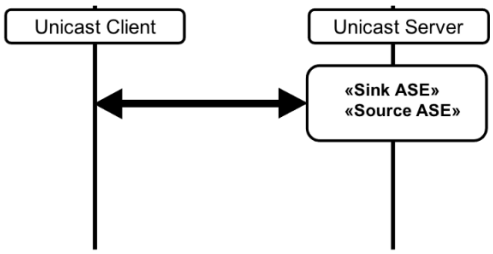


Figure 3.9: Audio Configuration 3

3.2.1.4 Audio Configuration 4 (Multiple audio channels. One unidirectional CIS. Unicast Server is Audio Sink.)

Figure 3.10 shows an example of Audio Configuration 4. A Unicast Client in the Audio Source role transmits two channels of audio data to a Unicast Server in the Audio Sink role using one unidirectional CIS.

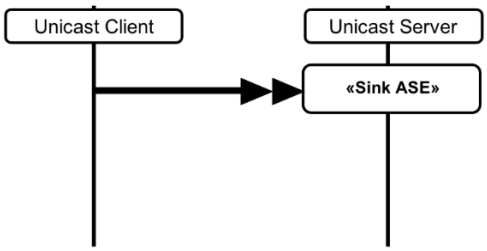


Figure 3.10: Audio Configuration 4

3.2.1.5 Audio Configuration 5 (Multiple audio channels. One bidirectional CIS. Unicast Server is Audio Sink and Audio Source.)

Figure 3.11 shows an example of Audio Configuration 5. A Unicast Client in both the Audio Source and Audio Sink roles transmits two channels of audio data to, and receives a single channel of audio data from, a Unicast Server in the Audio Sink and Audio Source roles, using one bidirectional CIS.

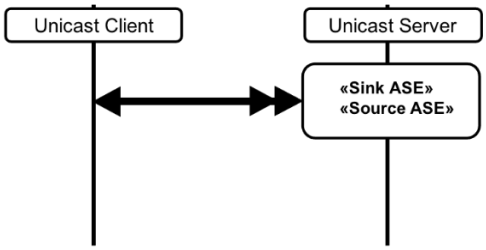


Figure 3.11: Audio Configuration 5

3.2.1.6 Audio Configuration 6(i) (Multiple audio channels. Two unidirectional CISes. Unicast Server is Audio Sink.)

Figure 3.12 shows an example of Audio Configuration 6. A Unicast Client in the Audio Source role transmits two channels of audio data to a Unicast Server in the Audio Sink role using two unidirectional CISes.

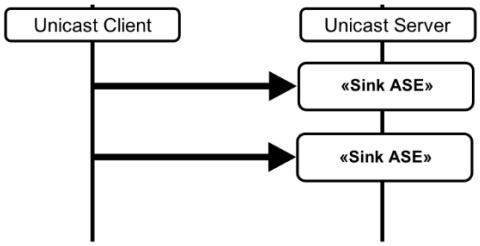


Figure 3.12: Audio Configuration 6(i)

3.2.1.7 Audio Configuration 6(ii) (Multiple audio channels. Two unidirectional CISes. Two Unicast Servers. Unicast Server 1 is Audio Sink. Unicast Server 2 is Audio Sink.)

Figure 3.13 shows a second example of Audio Configuration 6. A Unicast Client in the Audio Source role transmits two channels of audio data to a pair of Unicast Servers, both of which are in the Audio Sink role, using two unidirectional CISes.

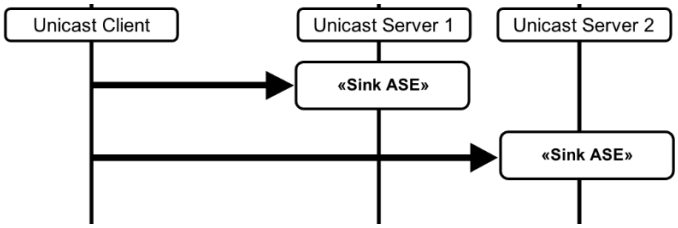


Figure 3.13: Audio Configuration 6(ii)

3.2.1.8 Audio Configuration 7(i) (Multiple audio channels. Two unidirectional CISes. Unicast Server is Audio Sink and Audio Source.)

Figure 3.14 shows an example of Audio Configuration 7. A Unicast Client in the Audio Source and Audio Sink roles transmits a single channel of audio data to, and receives a single channel of audio data from, a Unicast Server in the Audio Sink and Audio Source roles, using two unidirectional CISes.

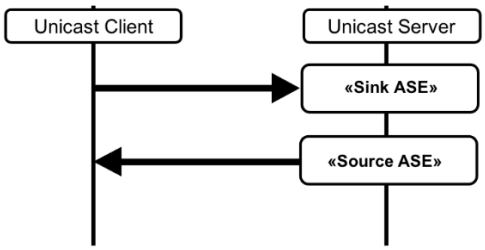


Figure 3.14: Audio Configuration 7(i)

3.2.1.9 Audio Configuration 7(ii) (Multiple audio channels. Two Unidirectional CISes. Two Unicast Servers. Unicast Server 1 is Audio Sink. Unicast Server 2 is Audio Source.)

Figure 3.15 shows a second example of Audio Configuration 7. A Unicast Client in the Audio Source and Audio Sink roles transmits a single channel of audio data to a Unicast Server in the Audio Sink role and receives a single channel of audio data from a second Unicast Server in the Audio Source role, using two unidirectional CISes.

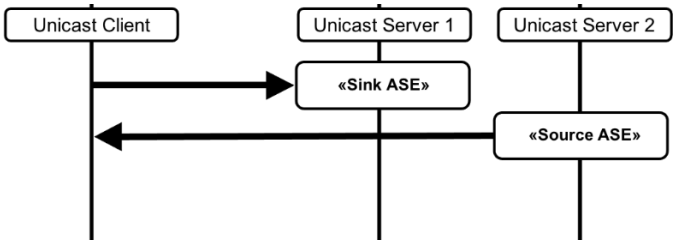


Figure 3.15: Audio Configuration 7(ii)

3.2.1.10 Audio Configuration 8(i) (Multiple audio channels. One bidirectional CIS and one unidirectional CIS. Unicast Server is Audio Sink and Audio Source.)

Figure 3.16 shows an example of Audio Configuration 8. A Unicast Client in the Audio Source and Audio Sink roles transmits two channels of audio data to, and receives a single channel of audio data from, a Unicast Server in the Audio Sink and Audio Source roles, using one unidirectional CIS and one bidirectional CIS.

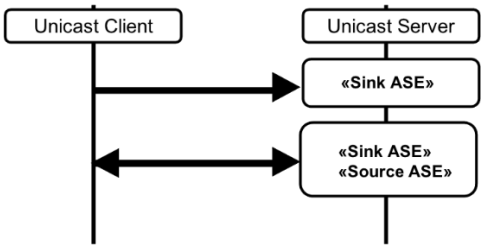


Figure 3.16: Audio Configuration 8(i)

3.2.1.11 Audio Configuration 8(ii) (Multiple audio channels. One bidirectional CIS and one unidirectional CIS. Two Unicast Servers. Unicast Server 1 is Audio Sink and Audio Source. Unicast Server 2 is Audio Sink.)

Figure 3.17 shows a second example of Audio Configuration 8. A Unicast Client in the Audio Source and Audio Sink roles transmits a single channel of audio data to, and receives a single channel of audio data from, a Unicast Server in the Audio Sink and Audio Source roles, using one bidirectional CIS. The Unicast Client also transmits a second channel of audio data to a second Unicast Server in the Audio Sink role, using one unidirectional CIS.

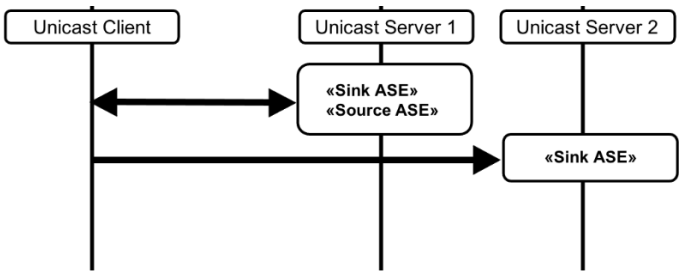


Figure 3.17: Audio Configuration 8(ii)

3.2.1.12 Audio Configuration 9(i) (Multiple audio channels. Two unidirectional CISes. Unicast Server is Audio Source.)

Figure 3.18 shows an example of Audio Configuration 9. A Unicast Client in the Audio Sink role receives two channels of audio data from a Unicast Server in the Audio Source role, using two unidirectional CISes.

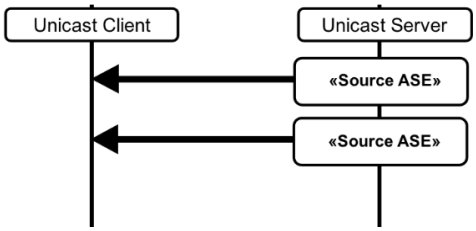


Figure 3.18: Audio Configuration 9(i)

3.2.1.13 Audio Configuration 9(ii) (Multiple audio channels. Two unidirectional CISes. Two Unicast Servers. Unicast Server 1 is Audio Source. Unicast Server 2 is Audio Source.)

Figure 3.19 shows a second example of Audio Configuration 9. A Unicast Client in the Audio Sink role receives two channels of audio data from two Unicast Servers, both in the Audio Source role, using two unidirectional CISes.

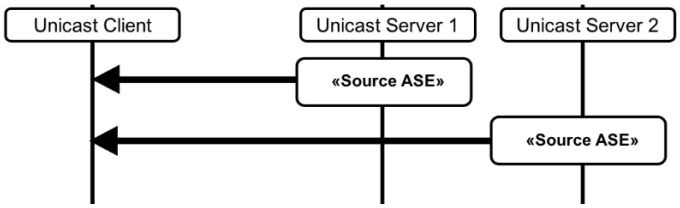


Figure 3.19: Audio Configuration 9(ii) (2 Unicast Servers)

3.2.1.14 Audio Configuration 10 (Multiple audio channels. One unidirectional CIS. Unicast Server is Audio Source.)

Figure 3.20 shows an example of Audio Configuration 10. A Unicast Client in the Audio Sink role receives two channels of audio data from a Unicast Server in the Audio Source role, using one unidirectional CIS.

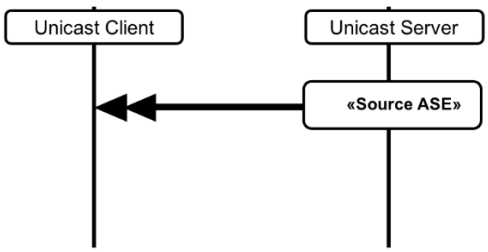


Figure 3.20: Audio Configuration 10

3.2.1.15 Audio Configuration 11(i) (Multiple audio channels. Two bidirectional CISes. Unicast Server is Audio Sink and Audio Source.)

Figure 3.21 shows an example of Audio Configuration 11. A Unicast Client in the Audio Source and Audio Sink roles transmits two channels of audio data to, and receives two channels of audio data from, a Unicast Server in the Audio Sink and Audio Source roles, using two bidirectional CISes.

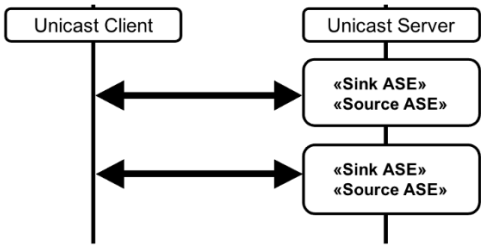


Figure 3.21: Audio Configuration 11(i)

3.2.1.16 Audio Configuration 11(ii) (Multiple audio channels. Two bidirectional CISes. Two Unicast Servers. Unicast Server 1 is Audio Sink and Audio Source. Unicast Server 2 is Audio Sink and Audio Source.)

Figure 3.22 shows a second example of Audio Configuration 11. A Unicast Client in the Audio Source and Audio Sink roles transmits a single channel of audio data to, and receives a single channel of audio data from, a Unicast Server in the Audio Sink and Audio Source roles using one bidirectional CIS. The Unicast Client also transmits a second channel of audio data to, and receives a second channel of audio data from, a second Unicast Server in the Audio Sink role using a second bidirectional CIS.

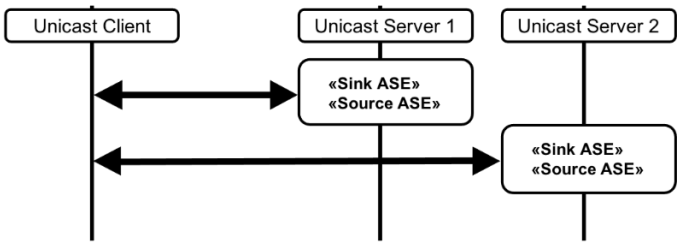


Figure 3.22: Audio Configuration 11(ii)

3.3 Test groups

The following test groups have been defined:

- Generic GATT Integrated Tests

- Advertising
- BASS
- Device Discovery
- Characteristic Discovery
- Presentation Delay
- Stream Configuration/Connection
- Service Procedure – Error Handling
- Streaming

4 Test cases (TC)

4.1 Test case identification conventions

Test cases are assigned unique identifiers per the conventions in [2]. 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 [5] referred to as Generic GATT Integrated Tests (GGIT); when used, the test cases in GGIT are referred to through a TCID string using the following convention:
<spec abbreviation>/<IUT role>/<GGIT test group>/< GGIT class >/<xx>-<nn>-<y>.

GGIT tests that are shared among roles use the /CL/ for the /<IUT role>/ part.

Identifier Abbreviation	**Spec Identifier <spec abbreviation>**
BAP	Basic Audio Profile
Identifier Abbreviation	**Role Identifier <IUT role>**
BA	Broadcast Assistant
BSNK	Broadcast Sink
BSRC	Broadcast Source
CL	Generic Client BAP Role Agnostic
SDE	Scan Delegator
UCL	Unicast Client
USR	Unicast Server
Identifier Abbreviation	**Reference Identifier <GGIT test group>**
CGGIT	Client Generic GATT Integrated Tests
SGGIT	Server Generic GATT Integrated Tests
Identifier Abbreviation	**Feature Identifier <feat>**
ADV	Advertising
BASS	Broadcast Audio Scan Service
DEVD	Device discovery
DISC	Unicast Discovery of characteristics and characteristic values
PD	Presentation Delay
SCC	Stream Configuration/Connection
SPE	Service Procedure Error Handling
STR	Streaming

Table 4.1: BAP TC feature naming conventions

4.2 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 the Bluetooth SIG qualification tool, 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.

4.3 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, then the outcome of the test is a Fail verdict.

4.4 Setup preambles

Some test cases require a precondition being satisfied, such as the Lower Tester needing specific information, or the IUT being in a specific state. The following subsections instruct the Lower Tester and the IUT to satisfy the precondition. They are structured as standalone procedures that require input parameters, execute steps, and optionally produce an output. The input parameters may come from the Upper Tester, a test procedure, or an IXIT item. If a preamble specifies that a parameter is provided by the Upper Tester, this means that when the preamble is used, a reference to the preamble will be accompanied by that parameter.

4.4.1 ATT Bearer on LE Transport with Extended Advertising

- Preamble procedure:
  1. Establish an LE transport connection between the IUT and the Lower Tester, where the advertising implementation (as GAP Peripheral) uses Extended Advertising as defined in Section 8.1.1 of [3] and the discovering implementation (as GAP Central) operates according to Section 8.1.2 of [3].
  2. Establish an L2CAP channel 0x0004 between the IUT and the Lower Tester over that LE transport.

4.4.2 ATT Bearer on BR/EDR Transport

- Preamble procedure:

  1. Establish a BR/EDR transport connection between the IUT and the Lower Tester.
  2. Establish an L2CAP channel (PSM 0x001F) between the IUT and the Lower Tester over that BR/EDR transport.

4.4.3 EATT Bearer on LE Transport with Extended Advertising

- Preamble procedure:

  1. Establish an LE transport connection between the IUT and the Lower Tester, where the advertising implementation (as GAP Peripheral) uses Extended Advertising as defined in Section 8.1.1 of [3] and the discovering implementation (as GAP Central) operates according to Section 8.1.2 of [3].
  2. Establish an L2CAP channel 0x0005 for signaling and one L2CAP channel (for ATT bearers) with EATT PSM (as defined in Assigned Numbers) between the IUT and the Lower Tester over that LE transport.

4.4.4 EATT Bearer on BR/EDR Transport

- Preamble procedure:

  1. Establish a BR/EDR transport connection between the IUT and the Lower Tester.
  2. Establish an L2CAP channel 0x0001 for signaling and one L2CAP channel (for ATT bearers) with EATT PSM (as defined in Assigned Numbers) between the IUT and the Lower Tester over that BR/EDR transport.

4.4.5 ASE Control Point

- Preamble procedure:

  1. A bearer connection between the Lower Tester and the IUT is established as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  2. The Lower Tester has discovered and cached the ASCS service and characteristic handles (e.g., by running the test procedure in Section 4.5).
  3. For each ASE characteristic, the Lower Tester has enabled notification by writing the value 0x0001 using the GATT Write Characteristic Descriptor sub-procedure for the CCCD.
  4. The ASE_State field of the ASE selected for a Codec Config operation is set to 0x00 (Idle), 0x01 (Codec Configured), or 0x02 (QoS Configured).

4.4.6 Transition ASE to the Idle State

- Preamble Purpose

  This procedure specifies the steps necessary to transition an ASE (either Sink ASE or Source ASE) on the IUT to the Idle state.

- Preamble Procedure

  1. The Lower Tester has cached the ASCS service and characteristics handles (e.g., by running the procedures in Section 4.5).
  2. The Lower Tester randomly selects one ASE characteristic of the specified ASE type (Sink ASE or Source ASE) and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The Lower Tester caches the ASE_ID field value as Test_ASE_ID.

3. The Lower Tester enables notifications by writing the value 0x0001 using the GATT Write Characteristic Descriptor sub-procedure for the CCCD of the specified ASE type.
4. If the ASE_State field of the characteristic value read in Step 3 is different than 0x00 (Idle), the Upper Tester commands the IUT to reset the ASE_State to Idle.
5. The Lower Tester enables notifications by writing the value 0x0001 using the GATT Write Characteristic Descriptor sub-procedure for the ASE Control Point CCCD.

4.4.7 Transition ASE to the Codec Configured State

- Preamble Purpose

  This procedure specifies the steps necessary to transition an ASE (either Sink ASE or Source ASE) on the IUT to the Codec Configured state.

- Preamble Procedure

1. The Lower Tester retrieves the ASE_State value of an ASE characteristic of the specified ASE type (Sink ASE or Source ASE) on the IUT by executing the GATT Read Characteristic Value sub-procedure. The Lower Tester caches the ASE_ID field value as Test_ASE_ID.
2. If the ASE_State is 0x03 (Enabling) or 0x04 (Streaming):
   a. The Lower Tester writes to the ASE Control Point characteristic on the IUT by executing either the GATT Write Without Response or Write Characteristic Value sub-procedure with the opcode set to 0x05 (Disable) and:
      - Number_of_ASEs set to 1
      - ASE_ID[0] set to Test_ASE_ID
   b. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic with ASE_ID[0] set to Test_ASE_ID.
   c. The IUT sends a GATT Characteristic Value Notification for the specified ASE characteristic type, with ASE_ID set to Test_ASE_ID.
3. If the ASE_State is 0x06 (Releasing), the IUT performs the Released operation and does one of these two actions depending on which action it supports:
   a. If the IUT supports transitioning to Codec Configured state, the IUT transitions the ASE to the Codec Configured state where the ASE_State field is 0x01.
   b. If the IUT supports transitioning to Idle state, the IUT transitions the ASE to the Idle state where the ASE_State field is 0x00.
4. If the ASE_State is 0x00 (Idle) or 0x02 (QoS Configured):
   a. The Lower Tester writes to the ASE Control Point characteristic on the IUT by executing either the GATT Write Without Response or Write Characteristic Value sub-procedure with the opcode set to 0x01 (Config Codec) and:
      - Number_of_ASEs set to 1
      - ASE_ID[0] set to Test_ASE_ID
      - Target_Latency[0], Target_PHY[0], Codec_ID[0], Codec_Specific_Configuration_Length[0], and Codec_Specific_Configuration[0] set to values supported by the IUT (e.g., known to the Lower Tester from the TSPX_SUPPORTED_CODEC_CONFIGURATIONS IXIT item).
   b. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic with ASE_ID[0] set to Test_ASE_ID.
   c. The IUT sends a GATT Characteristic Value Notification for the specified ASE characteristic type, with ASE_ID set to Test_ASE_ID.
5. If the ASE_State is 0x01 (Codec Configured), this preamble is successfully completed.

4.4.8 Transition ASE to the QoS Configured State

- Preamble Purpose

  This procedure specifies the steps necessary to transition an ASE (either Sink ASE or Source ASE) on the IUT to the QoS Configured state.

- Preamble Procedure

  1. The Lower Tester retrieves the ASE_State value of an ASE of the specified ASE type (Sink ASE or Source ASE) on the IUT by executing the GATT Read Characteristic Value sub-procedure.
  2. If the ASE_State is 0x02 (QoS Configured), the preamble is successfully completed.
  3. The Lower Tester executes the procedure in Section 4.4.7.
  4. The Lower Tester writes to the ASE Control Point characteristic on the IUT by executing either the GATT Write Without Response or Write Characteristic Value sub-procedure with the opcode set to 0x02 (Config QoS) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to Test_ASE_ID
     - Random valid values for CIG_ID[0] and CIS_ID[0]
     - The remaining QoS parameters set to values acceptable for the IUT based on the values exposed through the Additional_ASE_Parameters field of the codec configured ASE (e.g., after running Step 1)
  5. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.
  6. The IUT sends a GATT Characteristic Value Notification for the specified ASE characteristic type identified by Test_ASE_ID.

4.4.9 Unicast Audio Data Path Setup

- Preamble procedure:

  1. If the codec in use resides in the Bluetooth Controller of the device using the LE Setup ISO Data Path command defined in [1] (Vol 4, Part E, Section 7.8.109):
     a. Write the LE Setup ISO Data Path command Codec_ID parameter with the value of the Codec_ID for the target ASE.
     b. Write the LE Setup ISO Data Path command Codec_Configuration_Length parameter with the value of the Codec_Specific_Configuration_Length for the target ASE.
     c. Write the LE Setup ISO Data Path command Codec_Configuration parameter including the following Codec_Specific_Configuration values from the IXIT [7]:
        - TSPX_Sampling_Frequency
        - TSPX_Frame_Duration
        - TSPX_Audio_Channel_Allocation
        - TSPX_Octets_Per_Codec_Frame
        - TSPX_Codec_Frame_Blocks_Per_SDU
  2. If the codec in use resides in the Bluetooth Host of the device using the LE Setup ISO Data Path command:
     a. Write the LE Setup ISO Data Path command Codec_Configuration_Length parameter with the value 0x00.
     b. Write octet 0 (Coding_Format) of the LE Setup ISO Data Path command Codec_ID parameter with the value 0x03 (Transparent).

4.5 Generic GATT Integrated Tests

Execute the Generic GATT Integrated Tests defined in [5] Section 6.4, Client test procedures, using Table 4.2 below as input:

TCID	Service / Characteristic / Descriptor	Reference	Properties	Value Length (Octets)
BAP/CL/CGGIT/SER/BV-01-C [Service GGIT – Published Audio Capabilities]	Published Audio Capabilities Service	[3] 3.6.3	-	-
BAP/CL/CGGIT/CHA/BV-01-C [Characteristic GGIT – Sink PAC]	Sink PAC Characteristic	[3] 3.6.4	Mandatory: 0x02 (Read) Optional: 0x10 (Notify)	skip
BAP/CL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Sink Audio Locations]	Sink Audio Locations Characteristic	[3] 3.6.4	Mandatory: 0x02 (Read) Optional: 0x18 (Write, Notify)	4
BAP/CL/CGGIT/CHA/BV-03-C [Characteristic GGIT – Source PAC]	Source PAC Characteristic	[3] 3.6.4	Mandatory: 0x02 (Read) Optional: 0x10 (Notify)	skip
BAP/CL/CGGIT/CHA/BV-04-C [Characteristic GGIT – Source Audio Locations]	Source Audio Locations Characteristic	[3] 3.6.4	Mandatory: 0x02 (Read) Optional: 0x18 (Write, Notify)	4
BAP/CL/CGGIT/CHA/BV-05-C [Characteristic GGIT – Available Audio Contexts]	Available Audio Contexts Characteristic	[3] 3.6.4	0x12 (Read, Notify)	4
BAP/CL/CGGIT/CHA/BV-06-C [Characteristic GGIT – Supported Audio Contexts]	Supported Audio Contexts Characteristic	[3] 3.6.4	Mandatory: 0x02 (Read) Optional: 0x10 (Notify)	4
BAP/UCL/CGGIT/SER/BV-01-C [Service GGIT – Audio Stream Control Service]	Audio Stream Control Service	[3] 3.6.3	-	-
BAP/UCL/CGGIT/CHA/BV-01-C [Characteristic GGIT – Sink ASE]	Sink ASE Characteristic	[3] 3.6.4	0x12 (Read, Notify)	-
BAP/UCL/CGGIT/CHA/BV-02-C [Characteristic GGIT – Source ASE]	Source ASE Characteristic	[3] 3.6.4	0x12 (Read, Notify)	
BAP/UCL/CGGIT/CHA/BV-03-C [Characteristic GGIT – ASE Control Point]	ASE Control Point Characteristic	[3] 3.6.4	0x1C (Write, WriteWithoutResponse, Notify)	-
BAP/BA/CGGIT/SER/BV-01-C [Service GGIT – Broadcast Audio Scan Service]	Broadcast Audio Scan Service	[3] 3.9.2	-	-
BAP/BA/CGGIT/CHA/BV-01-C [Characteristic GGIT – Broadcast Audio Scan Control Point]	Broadcast Audio Scan Control Point Characteristic	[3] 3.10.4	Mandatory: 0x0C (Write, WriteWithoutResponse)	skip
BAP/BA/CGGIT/CHA/BV-02-C [Characteristic GGIT – Broadcast Receive State]	Broadcast Receive State Characteristic	[3] 3.10.4	0x12 (Read, Notify)	skip

Table 4.2: Input for the GGIT Client test procedures

4.6 Unicast Device Discovery

4.6.1 LE Audio Major Service Class CoD Field Support

- Test Purpose

  Verify that the IUT implementing either the Unicast Server or Broadcast Source or Broadcast Sink or Broadcast Assistant or Scan Delegator roles that supports the BR/EDR transport sets the LE Audio Major Service Class in the Class of Device field.

- Reference

  [3] 8.2.3

- Initial Condition

  - The IUT is discoverable and connectable over the BR/EDR transport.

- Test Case Configuration

Test Case
BAP/USR/DEVD/BV-01-C [Unicast Server – LE Audio Major Service Class CoD Support]
BAP/BSRC/DEVD/BV-01-C [Broadcast Source – LE Audio Major Service Class CoD Support]
BAP/BSNK/DEVD/BV-01-C [Broadcast Sink – LE Audio Major Service Class CoD Support]
BAP/BA/DEVD/BV-01-C [Broadcast Assistant – LE Audio Major Service Class CoD Support]
BAP/SDE/DEVD/BV-01-C [Scan Delegator – LE Audio Major Service Class CoD Support]

Table 4.3: LE Audio Major Service Class CoD Support test cases

- Test Procedure

  1. The Lower Tester performs the General Inquiry procedure (as defined in [1] Volume 3, Part C, Section 6.1).
  2. The IUT sends an Inquiry response message.

- Expected Outcome

  Pass verdict

  In Step 2, the IUT reports that the Class of Device field has the LE Audio Major Service Class bit 14 set to 1.

  If the IUT uses limited discoverable mode, the limited discoverable Major Service Class bit is also set to 1.

4.7 Unicast Characteristic Discovery

4.7.1 Unicast Client – Audio Capability Discovery

- Test Purpose

  Verify that a Unicast Client IUT can perform audio capability discovery with an Audio Sink, reading the values of its Sink PAC characteristic and Sink Audio Locations characteristic, or with an Audio Source, reading the values of its Source PAC characteristic and Source Audio Locations characteristic. The verification is performed for each PAC Characteristic and Location Characteristic in turn, as enumerated in the test cases in Table 4.4.

- Reference

  [3] 5.2

- Initial Condition
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server that has an instantiation of the Published Audio Capabilities Service with at least one instance of the PAC Characteristic specified in Table 4.4, and one instance of the Location Characteristic specified in Table 4.4.
  - The IUT is a Unicast Client that has discovered the Published Audio Capabilities Service and has saved the handle range.
- Test Case Configuration

Test Case	PAC Characteristic	Location Characteristic
BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities]	Sink PAC	Sink Audio Locations
BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities]	Source PAC	Source Audio Locations

Table 4.4: Unicast Client – Audio Capability Discovery test cases

- Test Procedure
  1. The Upper Tester orders the IUT to execute the GATT Discover All Characteristics of a Service sub-procedure or the GATT Discover Characteristics by Characteristic UUID sub-procedure to discover the PAC Characteristic and Location Characteristic specified in Table 4.4, and their CCCD.
  2. The Upper Tester orders the IUT to read the value of the characteristic specified in the PAC Characteristic column in Table 4.4 (e.g., by executing the GATT Read Characteristic Value sub-procedure or by other means).
  3. The Upper Tester orders the IUT to read the value of the characteristic specified in the Location Characteristic column in Table 4.4 (e.g., by executing the GATT Read Characteristic Value sub-procedure or by other means).
- Expected Outcome

  Pass verdict

  The IUT discovers the characteristics specified in the PAC Characteristic and Location Characteristic columns in Table 4.4. The IUT reads the values of the characteristics specified in the PAC Characteristic and Location Characteristic columns.

4.7.2 Unicast Server – Audio Capability Exposure

- Test Purpose

  Verify that a Unicast Server IUT can allow audio capability discovery with an Audio Sink reading the values of the Sink PAC characteristic and the Sink Audio Locations characteristic on the IUT, or with an Audio Source reading the values of the Source PAC characteristic and the Source Audio Locations characteristic on the IUT. The verification is performed for each PAC Characteristic and Location Characteristic in turn, as enumerated in the test cases in Table 4.5.
- Reference

  [3] 5.2

- Initial Condition
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server and has an instantiation of the Published Audio Capabilities Service with at least one instance of the PAC Characteristic and optionally a Location Characteristic specified in Table 4.5.
  - The Lower Tester is a Unicast Client that has discovered the Published Audio Capabilities Service and has saved the handle range.
- Test Case Configuration

Test Case	PAC Characteristic	Location Characteristic
BAP/USR/DISC/BV-01-C [Expose Audio Sink Capabilities]	Sink PAC	Sink Audio Locations
BAP/USR/DISC/BV-02-C [Expose Audio Source Capabilities]	Source PAC	Source Audio Locations

Table 4.5: Unicast Server – Audio Capability Exposure test cases

- Test Procedure
  1. The Lower Tester discovers the PAC Characteristic and Location Characteristic specified in Table 4.5 by executing the GATT Discover All Characteristics of a Service sub-procedure.
  2. The Lower Tester reads the value of the characteristic specified in the PAC Characteristic column in Table 4.5 by executing the GATT Read Characteristic Value sub-procedure.
  3. If exposed on the IUT, the Lower Tester reads the value of the characteristic specified in the Location Characteristic column in Table 4.5 by executing the GATT Read Characteristic Value sub-procedure.
- Expected Outcome

  Pass verdict

  The specified PAC Characteristic and the Location Characteristic, if supported, are read on the IUT.

4.7.3 Discover ASE_ID Value

- Test Purpose

  Verify that a Unicast Client IUT can perform ASE_ID discovery by reading all ASE characteristic values exposed by a Unicast Server.
- Reference

  [3] 5.3

- Initial Condition
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service with at least one instance of the ASE Characteristic specified in Table 4.6 and an instantiation of the Published Audio Capabilities Service.
- Test Case Configuration

Test Case	ASE Characteristic
BAP/UCL/DISC/BV-03-C [Discover Sink ASE_ID]	Sink ASE
BAP/UCL/DISC/BV-04-C [Discover Source ASE_ID]	Source ASE

Table 4.6: Unicast Client Discover ASE_ID Value test cases

- Test Procedure
  1. The Upper Tester orders the IUT to discover the Audio Stream Control Service on the Lower Tester by executing the GATT Discover All Primary Services sub-procedure.
  2. The Upper Tester orders the IUT to discover the ASE Control Point characteristic and ASE Characteristic specified in Table 4.6 on the Lower Tester by executing the GATT Discover All Characteristics of a Service sub-procedure for the Audio Stream Control Service.
  3. The Upper Tester orders the IUT to read the values of all discovered characteristics of the type specified in Step 2 by executing the GATT Read Characteristic Value sub-procedure for each ASE characteristic discovered in Step 2.
- Expected Outcome

  Pass verdict

  The IUT successfully reads the ASE_ID values of each discovered ASE characteristic on the Lower Tester.

4.7.4 Expose ASE_ID Value

- Test Purpose

  Verify that a Unicast Server IUT allows a Unicast Client to perform ASE_ID discovery by reading all ASE characteristic values exposed by the IUT.
- Reference

  [3] 5.3
- Initial Condition
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server including an instantiation of the Audio Stream Control Service with at least one ASE characteristic specified in Table 4.7.
  - The Lower Tester is a Unicast Client.

- Test Case Configuration

Test Case	ASE Characteristic
BAP/USR/DISC/BV-03-C [Expose Sink ASE_ID]	Sink ASE
BAP/USR/DISC/BV-04-C [Expose Source ASE_ID]	Source ASE
BAP/USR/DISC/BV-05-C [Expose Sink and Source ASE_ID]	Source ASE AND Sink ASE

Table 4.7: Unicast Server Expose ASE_ID Value test cases

- Test Procedure

  1. The Lower Tester discovers the Audio Stream Control Service on the IUT by executing the GATT Discover All Primary Services sub-procedure.
  2. The Lower Tester discovers the ASE Control Point characteristic and all characteristics of the type(s) specified in Table 4.7 on the IUT by executing the GATT Discover All Characteristics of a Service sub-procedure for the Audio Stream Control Service.
  3. The Lower Tester reads the values of all discovered characteristics of the type specified in Step 2 by executing the GATT Read Characteristic Value sub-procedure for each characteristic.

- Expected Outcome

  Pass verdict

  The IUT successfully returns the values of each ASE characteristic read by the Lower Tester. The value of the ASE_ID field is unique for each ASE characteristic.

BAP/UCL/DISC/BV-05-C [Discover Supported Audio Contexts]

- Test Purpose

  Verify that a Unicast Client IUT can read the value of the Supported Audio Contexts characteristic on a Unicast Server.

- Reference

  [3] 5.4

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server including an instantiation of the Published Audio Capabilities Service.

- Test Procedure

  1. The Upper Tester orders the IUT to discover the Published Audio Capabilities Service on the Lower Tester by executing the GATT Discover All Primary Services or GATT Discover Primary Services by Service UUID sub-procedure.
  2. The Upper Tester orders the IUT to discover the Supported Audio Contexts characteristic on the Lower Tester by executing the GATT Discover All Characteristics of a Service or Discover Characteristic by UUID sub-procedure for the Published Audio Capabilities Service.
  3. The Upper Tester orders the IUT to read the value of the Supported Audio Contexts characteristic discovered in Step 2 by executing the GATT Read Characteristic Value sub-procedure for the Supported Audio Contexts characteristic discovered in Step 2.

- Expected Outcome

  Pass verdict

  The IUT successfully reads the value of the Supported Audio Contexts characteristic on the Lower Tester.

BAP/USR/DISC/BV-07-C [Expose Supported Audio Contexts]

- Test Purpose

  Verify that a Unicast Server IUT returns the value of its Supported Audio Contexts characteristic when read by a Unicast Client.

- Reference

  [3] 5.4

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server including an instantiation of the Published Audio Capabilities Service.
  - The Lower Tester is a Unicast Client.

- Test Procedure

  1. The Lower Tester discovers the Published Audio Capabilities Service on the IUT by executing the GATT Discover All Primary Services sub-procedure.
  2. The Lower Tester discovers the Supported Audio Contexts characteristic on the IUT by executing the GATT Discover All Characteristics of a Service sub-procedure for the Published Audio Capabilities Service.
  3. The Lower Tester reads the value of the Supported Audio Contexts characteristic discovered in Step 2 by executing the GATT Read Characteristic Value sub-procedure for the Supported Audio Contexts characteristic discovered in Step 2.

- Expected Outcome

  Pass verdict

  The IUT successfully returns the value of its Supported Audio Contexts characteristic when read by the Lower Tester.

BAP/UCL/DISC/BV-06-C [Discover Available Audio Contexts]

- Test Purpose

  Verify that a Unicast Client IUT can read the value of the Available Audio Contexts characteristic on a Unicast Server to retrieve audio data Context Type values available for reception or transmission.

- Reference

  [3] 5.5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server including an instantiation of the Published Audio Capabilities Service.

- Test Procedure

  1. The Upper Tester orders the IUT to discover the Published Audio Capabilities Service on the Lower Tester by executing the GATT Discover All Primary Services or GATT Discover Primary Services by Service UUID sub-procedure.
  2. The Upper Tester orders the IUT to discover the Available Audio Contexts characteristic on the Lower Tester by executing the GATT Discover All Characteristics of a Service or Discover Characteristic by UUID sub-procedure for the Published Audio Capabilities Service.
  3. The Upper Tester orders the IUT to read the value of the Available Audio Contexts characteristic discovered in Step 2.

- Expected Outcome

  Pass verdict

  The IUT successfully reads the value of the Available Audio Contexts characteristic on the Lower Tester.

BAP/USR/DISC/BV-06-C [Expose Available Audio Contexts]

- Test Purpose

  Verify that a Unicast Server IUT returns the value of its Available Audio Contexts characteristic when read by a Unicast Client.

- Reference

  [3] 5.5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server.
  - The Lower Tester is a Unicast Client.

- Test Procedure

  1. The Lower Tester discovers the Published Audio Capabilities Service on the IUT by executing the GATT Discover All Primary Services sub-procedure.
  2. The Lower Tester discovers the Available Audio Contexts characteristic on the IUT by executing the GATT Discover All Characteristics of a Service sub-procedure for the Published Audio Capabilities Service.
  3. The Lower Tester reads the value of the Available Audio Contexts characteristic discovered in Step 2 by executing the GATT Read Characteristic Value sub-procedure for the Available Audio Contexts characteristic discovered in Step 2.

- Expected Outcome

  Pass verdict

  The IUT returns the value of its Available Audio Contexts characteristic when read by the Lower Tester.

4.7.5 Unicast Advertising

BAP/UCL/ADV/BV-01-C [Unicast Client Receives Extended Advertising PDUs]

- Test Purpose

  Verify that a Unicast Client IUT can receive extended advertising PDUs including Available Audio Contexts.

- Reference

  [3] 3.5.3

- Initial Condition

  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server transmitting connectable extended advertising PDUs containing the following fields: Service Data AD type data, Audio Stream Control Service UUID, Announcement Type, Available Audio Contexts, Metadata_Length, and Metadata.

- Test Procedure

  1. The Upper Tester orders the IUT to scan for advertising packets containing the Audio Stream Control Service UUID.
  2. The IUT receives an Extended Advertising PDU.
  3. The Upper Tester verifies the extended advertising data.

- Expected Outcome

  Pass verdict

  The IUT receives an Extended Advertising PDU containing the fields and data defined for the Lower Tester within the Initial Condition.

4.7.5.1 Unicast Server Transmits Extended Advertising PDUs

- Test Purpose

  Verify that a Unicast Server IUT can transmit connectable extended advertising PDUs informing Unicast Clients that the IUT is connectable and available to receive or transmit audio data for specific Context Type values.

- Reference

  [3] 3.5.3

- Initial Condition

  - If the IUT is a BR/EDR/LE device as indicated in Table 4.8, then the IUT is discoverable over BR/EDR.
  - The IUT is a Unicast Server transmitting connectable extended advertising PDUs containing the following fields: Service Data AD data type, Audio Stream Control Service UUID, Announcement Type as specified in Table 4.8, Available Audio Contexts, Metadata_Length, and Metadata.
  - The Lower Tester is a Unicast Client.
  - The Lower Tester retrieves and stores the value of the Available Audio Contexts characteristic by executing the procedure in BAP/USR/DISC/BV-06-C [Expose Available Audio Contexts].
  - The Lower Tester retrieves and stores the value of the Supported Audio Contexts characteristic by executing the procedure in BAP/USR/DISC/BV-07-C [Expose Supported Audio Contexts].

- Test Case Configuration

Test Case	Type	CTKD	Announcement Type
BAP/USR/ADV/BV-01-C [Unicast Server Transmits Extended Advertising PDUs, General Announcement]	LE	N/A	0x00
BAP/USR/ADV/BV-02-C [Unicast Server Transmits Extended Advertising PDUs, BR/EDR/LE, General Announcement]	BR/EDR/LE	Y	0x00
BAP/USR/ADV/BV-03-C [Unicast Server Transmits Extended Advertising PDUs, BR/EDR/LE, No CTKD, General Announcement]	BR/EDR/LE	N	0x00
BAP/USR/ADV/BV-04-C [Unicast Server Transmits Extended Advertising PDUs, Targeted Announcement]	LE	N/A	0x01
BAP/USR/ADV/BV-05-C [Unicast Server Transmits Extended Advertising PDUs, BR/EDR/LE, Targeted Announcement]	BR/EDR/LE	Y	0x01
BAP/USR/ADV/BV-06-C [Unicast Server Transmits Extended Advertising PDUs, BR/EDR/LE, No CTKD, Targeted Announcement]	BR/EDR/LE	N	0x01

Table 4.8: Unicast Server Transmits Extended Advertising PDUs test cases

- Test Procedure

  1. Perform alternative 1A if the IUT is BR/EDR/LE as indicated in Table 4.8.
     Alternative 1A:
     1A.1 The Lower Tester performs BR/EDR Inquiry to discover the IUT.
     1A.2 The IUT sends an Inquiry response message.
  2. The Lower Tester scans for advertising packets with the Audio Stream Control Service UUID.
  3. The Lower Tester receives a connectable extended advertising PDU (as defined in [1] Volume 6, Part B, Section 4.4.2) containing the following fields: Service Data AD data type, Announcement Type, Available Audio Contexts, Metadata_Length, and Metadata.

- Expected Outcome

  Pass verdict

  The IUT sends connectable extended advertising PDUs containing the following fields: Service Data AD data type, Audio Stream Control Service UUID, Announcement Type as specified in Table 4.8, Available Audio Contexts, Metadata_Length, and Metadata. The Available Audio Contexts value matches the Available Audio Contexts value retrieved in the Initial Condition. The Metadata field is only present if Metadata_Length is not 0x00.

  In Step 2, all bits set in the Available Audio Contexts value are also set in the Supported Audio Contexts value retrieved in the Initial Condition.

  If the IUT is BR/EDR/LE as indicated in Table 4.8, then the IUT is discoverable over both BR/EDR and LE.

  If the IUT is BR/EDR/LE and CTKD is not used as indicated in Table 4.8, then the BD_ADDR in the Inquiry response is the same as the Public Device Address of the extended advertising PDU used to expose discoverable mode.

4.8 Unicast Client Configuration

4.8.1 Unicast Client Initiates a Config Codec Operation – LC3

- Test Purpose

  Verify that a Unicast Client IUT can initiate a Config Codec operation for an LC3 codec. The verification is performed for each ASE Type and Codec Specific Configuration Setting in turn, as enumerated in the test cases in Table 4.9.

- Reference

  [3] 5.6.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service with at least one ASE characteristic of the type specified in Table 4.9 and an instantiation of the Published Audio Capabilities Service with available Source and Sink PAC records.
  - The IUT is a Unicast Client and has discovered the Audio Stream Control Service on the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.

- The IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT enables notification for the ASE Control Point characteristic by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT reads the characteristic value of one characteristic of the ASE Type listed in Table 4.9 by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field value as Test_ASE_ID.
- The state of the selected ASE is set to Idle.

• Test Case Configuration

Test Case ID	ASE Type	Codec Specific Configuration Setting (Section A.3)
BAP/UCL/SCC/BV-001-C [UCL SRC Config Codec, LC3 8_1]	Sink ASE	8_1
BAP/UCL/SCC/BV-002-C [UCL SRC Config Codec, LC3 8_2]	Sink ASE	8_2
BAP/UCL/SCC/BV-003-C [UCL SRC Config Codec, LC3 16_1]	Sink ASE	16_1
BAP/UCL/SCC/BV-004-C [UCL SRC Config Codec, LC3 16_2]	Sink ASE	16_2
BAP/UCL/SCC/BV-005-C [UCL SRC Config Codec, LC3 24_1]	Sink ASE	24_1
BAP/UCL/SCC/BV-006-C [UCL SRC Config Codec, LC3 24_2]	Sink ASE	24_2
BAP/UCL/SCC/BV-007-C [UCL SRC Config Codec, LC3 32_1]	Sink ASE	32_1
BAP/UCL/SCC/BV-008-C [UCL SRC Config Codec, LC3 32_2]	Sink ASE	32_2
BAP/UCL/SCC/BV-009-C [UCL SRC Config Codec, LC3 44.1_1]	Sink ASE	441_1
BAP/UCL/SCC/BV-010-C [UCL SRC Config Codec, LC3 44.1_2]	Sink ASE	441_2
BAP/UCL/SCC/BV-011-C [UCL SRC Config Codec, LC3 48_1]	Sink ASE	48_1
BAP/UCL/SCC/BV-012-C [UCL SRC Config Codec, LC3 48_2]	Sink ASE	48_2
BAP/UCL/SCC/BV-013-C [UCL SRC Config Codec, LC3 48_3]	Sink ASE	48_3
BAP/UCL/SCC/BV-014-C [UCL SRC Config Codec, LC3 48_4]	Sink ASE	48_4
BAP/UCL/SCC/BV-015-C [UCL SRC Config Codec, LC3 48_5]	Sink ASE	48_5
BAP/UCL/SCC/BV-016-C [UCL SRC Config Codec, LC3 48_6]	Sink ASE	48_6
BAP/UCL/SCC/BV-017-C [UCL SNK Config Codec, LC3 8_1]	Source ASE	8_1
BAP/UCL/SCC/BV-018-C [UCL SNK Config Codec, LC3 8_2]	Source ASE	8_2
BAP/UCL/SCC/BV-019-C [UCL SNK Config Codec, LC3 16_1]	Source ASE	16_1
BAP/UCL/SCC/BV-020-C [UCL SNK Config Codec, LC3 16_2]	Source ASE	16_2
BAP/UCL/SCC/BV-021-C [UCL SNK Config Codec, LC3 24_1]	Source ASE	24_1
BAP/UCL/SCC/BV-022-C [UCL SNK Config Codec, LC3 24_2]	Source ASE	24_2
BAP/UCL/SCC/BV-023-C [UCL SNK Config Codec, LC3 32_1]	Source ASE	32_1
BAP/UCL/SCC/BV-024-C [UCL SNK Config Codec, LC3 32_2]	Source ASE	32_2
BAP/UCL/SCC/BV-025-C [UCL SNK Config Codec, LC3 44.1_1]	Source ASE	441_1
BAP/UCL/SCC/BV-026-C [UCL SNK Config Codec, LC3 44.1_2]	Source ASE	441_2
BAP/UCL/SCC/BV-027-C [UCL SNK Config Codec, LC3 48_1]	Source ASE	48_1
BAP/UCL/SCC/BV-028-C [UCL SNK Config Codec, LC3 48_2]	Source ASE	48_2
BAP/UCL/SCC/BV-029-C [UCL SNK Config Codec, LC3 48_3]	Source ASE	48_3
BAP/UCL/SCC/BV-030-C [UCL SNK Config Codec, LC3 48_4]	Source ASE	48_4

Test Case ID	ASE Type	Codec Specific Configuration Setting (Section A.3)
BAP/UCL/SCC/BV-031-C [UCL SNK Config Codec, LC3 48_5]	Source ASE	48_5
BAP/UCL/SCC/BV-032-C [UCL SNK Config Codec, LC3 48_6]	Source ASE	48_6

Table 4.9: Unicast Client Initiates a Config Codec Operation – LC3 test cases

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Target_PHY[0] set to a valid value
     - Codec_ID[0] set to LC3
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters referenced in Table 4.9, if included, Codec_Frame_Blocks_Per_SDU set to TSPX_Codec_Frame_Blocks_Per_SDU, and Audio_Channel_Allocation set to TSPX_Audio_Channel_Allocation
  2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
  3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control point with the opcode set to 0x01 (Config Codec) and correctly formatted parameter values from Table 4.9.

  The Codec_ID field is a 5-octet field with octet 0 set to the LC3 Coding_Format value defined in Bluetooth Assigned Numbers, octets 1–4 set to 0x0000.

  Each parameter (if present) included in the data sent in Codec_Specific_Configuration is formatted in an LTV structure with the length, type, and value specified in Table 4.10.

Length	Type	Value
0x02	Sampling_Frequency	Referenced in Codec Specific Configuration Setting column in Table 4.9
0x02	Frame_Durations	Referenced in Codec Specific Configuration Setting column in Table 4.9
0x05	Audio_Channel_Allocation	TSPX_Audio_Channel_Allocation
0x03	Octets_Per_Codec_Frame	Referenced in Codec Specific Configuration Setting column in Table 4.9
0x02	Codec_Frame_Blocks_Per_SDU	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.10: LTV structures for Codec_Specific_Configuration parameters

4.8.2 Unicast Client Initiates a Config Codec Operation – Vendor-Specific

- Test Purpose

  Verify that a Unicast Client IUT can initiate a Config Codec operation for a vendor-specific codec. The verification is performed for each ASE Type specified in Table 4.11.

- Reference

  [3] 5.6.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service with at least one characteristic of the ASE Type specified in Table 4.11 and an instantiation of the Published Audio Capabilities Service with available Source and Sink PAC records.
  - The IUT is a Unicast Client that has discovered the Audio Stream Control Service on the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The IUT has discovered the characteristics on the Lower Tester by executing the GATT Discover All Characteristics of a Service or Discover Characteristic by UUID sub-procedure for the Audio Stream Control Service.
  - The IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The IUT enables notification for the ASE Control Point characteristic by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT reads the characteristic value of a characteristic of the ASE Type specified in Table 4.11 by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field value as Test_ASE_ID.
  - The state of the selected ASE is set to Idle.

- Test Case Configuration

Test Case ID	ASE Type
BAP/UCL/SCC/BV-033-C [UCL SRC Config Codec, VS]	Sink ASE
BAP/UCL/SCC/BV-034-C [UCL SNK Config Codec, VS]	Source ASE

Table 4.11: Unicast Client Initiates a Config Codec Operation – Vendor-Specific test cases

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Target_PHY[0] set to a valid value
     - Codec_ID[0] set to TSPX_VS_Codec_ID
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
  2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
  3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and the specified parameters.

  The Codec_ID parameter is formatted with octet 0 set to 0xFF, octets 1–2 set to TSPX_VS_Company_ID, and octets 3–4 set to TSPX_VS_Codec_ID.

4.8.3 Unicast Client Initiates Config QoS – LC3

- Test Purpose

  Verify that a Unicast Client IUT can initiate a Config QoS operation for the LC3 codec. The verification is performed for each Codec Configuration and QoS Config Settings in turn, as enumerated in the test cases in Table 4.12.

- Reference

  [3] 3.6.7, 5.6.2

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service with at least one ASE characteristic as listed in Table 4.12 and an ASE Control Point characteristic.
  - The Lower Tester exposes a Max_Transport_Latency value ≥ the value referenced in the QoS Config Settings in Table 4.12.
  - The IUT is a Unicast Client.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.

- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT performs the Config Codec operation by executing the test case specified in the Codec Configuration column in Table 4.12.

• Test Case Configuration

Test Case ID	ASE Type	Codec Specific Config Setting (Section A.3)	QoS Config (Section A.4)
BAP/UCL/SCC/BV-035-C [UCL SRC Config QoS, LC3 8_1_1]	Sink ASE	8_1	8_1_1
BAP/UCL/SCC/BV-036-C [UCL SRC Config QoS, LC3 8_2_1]	Sink ASE	8_2	8_2_1
BAP/UCL/SCC/BV-037-C [UCL SRC Config QoS, LC3 16_1_1]	Sink ASE	16_1	16_1_1
BAP/UCL/SCC/BV-038-C [UCL SRC Config QoS, LC3 16_2_1]	Sink ASE	16_2	16_2_1
BAP/UCL/SCC/BV-039-C [UCL SRC Config QoS, LC3 24_1_1]	Sink ASE	24_1	24_1_1
BAP/UCL/SCC/BV-040-C [UCL SRC Config QoS, LC3 24_2_1]	Sink ASE	24_2	24_2_1
BAP/UCL/SCC/BV-041-C [UCL SRC Config QoS, LC3 32_1_1]	Sink ASE	32_1	32_1_1
BAP/UCL/SCC/BV-042-C [UCL SRC Config QoS, LC3 32_2_1]	Sink ASE	32_2	32_2_1
BAP/UCL/SCC/BV-043-C [UCL SRC Config QoS, LC3 44.1_1_1]	Sink ASE	441_1	441_1_1
BAP/UCL/SCC/BV-044-C [UCL SRC Config QoS, LC3 44.1_2_1]	Sink ASE	441_2	441_2_1
BAP/UCL/SCC/BV-045-C [UCL SRC Config QoS, LC3 48_1_1]	Sink ASE	48_1	48_1_1
BAP/UCL/SCC/BV-046-C [UCL SRC Config QoS, LC3 48_2_1]	Sink ASE	48_2	48_2_1
BAP/UCL/SCC/BV-047-C [UCL SRC Config QoS, LC3 48_3_1]	Sink ASE	48_3	48_3_1
BAP/UCL/SCC/BV-048-C [UCL SRC Config QoS, LC3 48_4_1]	Sink ASE	48_4	48_4_1
BAP/UCL/SCC/BV-049-C [UCL SRC Config QoS, LC3 48_5_1]	Sink ASE	48_5	48_5_1
BAP/UCL/SCC/BV-050-C [UCL SRC Config QoS, LC3 48_6_1]	Sink ASE	48_6	48_6_1
BAP/UCL/SCC/BV-051-C [UCL SNK Config QoS, LC3 8_1_1]	Source ASE	8_1	8_1_1
BAP/UCL/SCC/BV-052-C [UCL SNK Config QoS, LC3 8_2_1]	Source ASE	8_2	8_2_1
BAP/UCL/SCC/BV-053-C [UCL SNK Config QoS, LC3 16_1_1]	Source ASE	16_1	16_1_1
BAP/UCL/SCC/BV-054-C [UCL SNK Config QoS, LC3 16_2_1]	Source ASE	16_2	16_2_1
BAP/UCL/SCC/BV-055-C [UCL SNK Config QoS, LC3 24_1_1]	Source ASE	24_1	24_1_1
BAP/UCL/SCC/BV-056-C [UCL SNK Config QoS, LC3 24_2_1]	Source ASE	24_2	24_2_1
BAP/UCL/SCC/BV-057-C [UCL SNK Config QoS, LC3 32_1_1]	Source ASE	32_1	32_1_1
BAP/UCL/SCC/BV-058-C [UCL SNK Config QoS, LC3 32_2_1]	Source ASE	32_2	32_2_1
BAP/UCL/SCC/BV-059-C [UCL SNK Config QoS, LC3 44.1_1_1]	Source ASE	441_1	441_1_1
BAP/UCL/SCC/BV-060-C [UCL SNK Config QoS, LC3 44.1_2_1]	Source ASE	441_2	441_2_1
BAP/UCL/SCC/BV-061-C [UCL SNK Config QoS, LC3 48_1_1]	Source ASE	48_1	48_1_1
BAP/UCL/SCC/BV-062-C [UCL SNK Config QoS, LC3 48_2_1]	Source ASE	48_2	48_2_1
BAP/UCL/SCC/BV-063-C [UCL SNK Config QoS, LC3 48_3_1]	Source ASE	48_3	48_3_1
BAP/UCL/SCC/BV-064-C [UCL SNK Config QoS, LC3 48_4_1]	Source ASE	48_4	48_4_1
BAP/UCL/SCC/BV-065-C [UCL SNK Config QoS, LC3 48_5_1]	Source ASE	48_5	48_5_1
BAP/UCL/SCC/BV-066-C [UCL SNK Config QoS, LC3 48_6_1]	Source ASE	48_6	48_6_1
BAP/UCL/SCC/BV-067-C [UCL SRC Config QoS, LC3 8_1_2]	Sink ASE	8_1	8_1_2
BAP/UCL/SCC/BV-068-C [UCL SRC Config QoS, LC3 8_2_2]	Sink ASE	8_2	8_2_2
BAP/UCL/SCC/BV-069-C [UCL SRC Config QoS, LC3 16_1_2]	Sink ASE	16_1	16_1_2

Test Case ID	ASE Type	Codec Specific Config Setting (Section A.3)	QoS Config (Section A.4)
BAP/UCL/SCC/BV-070-C [UCL SRC Config QoS, LC3 16_2_2]	Sink ASE	16_2	16_2_2
BAP/UCL/SCC/BV-071-C [UCL SRC Config QoS, LC3 24_1_2]	Sink ASE	24_1	24_1_2
BAP/UCL/SCC/BV-072-C [UCL SRC Config QoS, LC3 24_2_2]	Sink ASE	24_2	24_2_2
BAP/UCL/SCC/BV-073-C [UCL SRC Config QoS, LC3 32_1_2]	Sink ASE	32_1	32_1_2
BAP/UCL/SCC/BV-074-C [UCL SRC Config QoS, LC3 32_2_2]	Sink ASE	32_2	32_2_2
BAP/UCL/SCC/BV-075-C [UCL SRC Config QoS, LC3 44.1_1_2]	Sink ASE	441_1	441_1_2
BAP/UCL/SCC/BV-076-C [UCL SRC Config QoS, LC3 44.1_2_2]	Sink ASE	441_2	441_2_2
BAP/UCL/SCC/BV-077-C [UCL SRC Config QoS, LC3 48_1_2]	Sink ASE	48_1	48_1_2
BAP/UCL/SCC/BV-078-C [UCL SRC Config QoS, LC3 48_2_2]	Sink ASE	48_2	48_2_2
BAP/UCL/SCC/BV-079-C [UCL SRC Config QoS, LC3 48_3_2]	Sink ASE	48_3	48_3_2
BAP/UCL/SCC/BV-080-C [UCL SRC Config QoS, LC3 48_4_2]	Sink ASE	48_4	48_4_2
BAP/UCL/SCC/BV-081-C [UCL SRC Config QoS, LC3 48_5_2]	Sink ASE	48_5	48_5_2
BAP/UCL/SCC/BV-082-C [UCL SRC Config QoS, LC3 48_6_2]	Sink ASE	48_6	48_6_2
BAP/UCL/SCC/BV-083-C [UCL SNK Config QoS, LC3 8_1_2]	Source ASE	8_1	8_1_2
BAP/UCL/SCC/BV-084-C [UCL SNK Config QoS, LC3 8_2_2]	Source ASE	8_2	8_2_2
BAP/UCL/SCC/BV-085-C [UCL SNK Config QoS, LC3 16_1_2]	Source ASE	16_1	16_1_2
BAP/UCL/SCC/BV-086-C [UCL SNK Config QoS, LC3 16_2_2]	Source ASE	16_2	16_2_2
BAP/UCL/SCC/BV-087-C [UCL SNK Config QoS, LC3 24_1_2]	Source ASE	24_1	24_1_2
BAP/UCL/SCC/BV-088-C [UCL SNK Config QoS, LC3 24_2_2]	Source ASE	24_2	24_2_2
BAP/UCL/SCC/BV-089-C [UCL SNK Config QoS, LC3 32_1_2]	Source ASE	32_1	32_1_2
BAP/UCL/SCC/BV-090-C [UCL SNK Config QoS, LC3 32_2_2]	Source ASE	32_2	32_2_2
BAP/UCL/SCC/BV-091-C [UCL SNK Config QoS, LC3 44.1_1_2]	Source ASE	441_1	441_1_2
BAP/UCL/SCC/BV-092-C [UCL SNK Config QoS, LC3 44.1_2_2]	Source ASE	441_2	441_2_2
BAP/UCL/SCC/BV-093-C [UCL SNK Config QoS, LC3 48_1_2]	Source ASE	48_1	48_1_2
BAP/UCL/SCC/BV-094-C [UCL SNK Config QoS, LC3 48_2_2]	Source ASE	48_2	48_2_2
BAP/UCL/SCC/BV-095-C [UCL SNK Config QoS, LC3 48_3_2]	Source ASE	48_3	48_3_2
BAP/UCL/SCC/BV-096-C [UCL SNK Config QoS, LC3 48_4_2]	Source ASE	48_4	48_4_2
BAP/UCL/SCC/BV-097-C [UCL SNK Config QoS, LC3 48_5_2]	Source ASE	48_5	48_5_2
BAP/UCL/SCC/BV-098-C [UCL SNK Config QoS, LC3 48_6_2]	Source ASE	48_6	48_6_2

Table 4.12: Unicast Client Initiates Config QoS – LC3 test cases

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Target_PHY[0] set to a valid value
     - Codec_ID[0] set to LC3
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters referenced in Table 4.12, if included, Codec_Frame_Blocks_Per_SDU set to TSPX_Codec_Frame_Blocks_Per_SDU, and Audio_Channel_Allocation set to TSPX_Audio_Channel_Allocation
  2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
  3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
  4. The IUT retrieves the Presentation_Delay_Min and Presentation_Delay_Max values from the Additional_ASE_Parameters field of the ASE notified in Step 1.
  5. The Upper Tester orders the IUT to execute the LE_Set_CIG_Parameters command using values from TSPX_CIG_Parameters if the IUT incorporates HCI; otherwise, the TSPX_CIG_Parameters are configured by other means.
  6. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the IUT retrieves its accepted QoS parameters by other means.
  7. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
     - Number_of_ASEs = 1
     - ASE_ID[0] set using the value from the Initial Condition
     - CIG_ID[0] and CIS_ID[0] values matching values used in Step 4
     - SDU_Interval[0] set to the value referenced in Table 4.12
     - Framing[0] set to the value referenced in Table 4.12
     - PHY[0] set to TSPX_QoS_PHY
     - Max_SDU[0] set to the value referenced in Table 4.12
     - Retransmission_Number[0] set to the value referenced in Table 4.12
     - Max_Transport_Latency[0] set to the value referenced in Table 4.12
     - Presentation_Delay[0] set to a value between the Presentation_Delay_Min and Presentation_Delay_Max values retrieved in Step 4
  8. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
  9. The Lower Tester sends the IUT a notification of the ASE characteristic value for the ASE_ID that was set in Step 5.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and the specified parameters.

4.8.4 Unicast Client Initiates Config QoS – Vendor-Specific

- Test Purpose

  Verify that a Unicast Client IUT can initiate a Config QoS operation for a vendor-specific codec. The verification is performed for each Codec Configuration in turn, as enumerated in the test cases in Table 4.13.

- Reference

  [3] 3.6.7, 5.6.2

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service with at least one characteristic as listed in Table 4.13 and an ASE Control Point characteristic.
  - The IUT is a Unicast Client.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- Test Case Configuration

Test Case ID	ASE Type
BAP/UCL/SCC/BV-099-C [UCL SNK Config QoS, VS]	Source ASE
BAP/UCL/SCC/BV-100-C [UCL SRC Config QoS, VS]	Sink ASE

Table 4.13: Unicast Client Initiates Config QoS – Vendor-Specific test cases

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Target_PHY[0] set to a valid value
     - Codec_ID[0] set to TSPX_VS_Codec_ID
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
  2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
  3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
  4. The Upper Tester orders the IUT to execute the LE_Set_CIG_Parameters command if the IUT incorporates HCI or confirms the settings with the Link Layer by other means.

5. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs = 1
   - ASE_ID[0] set using the value from the Initial Condition
   - CIG_ID[0] and CIS_ID[0] set to values matching values used in Step 2
   - SDU_Interval[0] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] set to TSPX_VS_QoS_Framing
   - PHY[0] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] set to TSPX_VS_QoS_Presentation_Delay
6. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
7. The Lower Tester sends the IUT a notification of the ASE characteristic value for the ASE_ID that was set in Step 1.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and the specified parameters.

4.8.5 Unicast Client Initiates Enable Operation

- Test Purpose

  Verify that a Unicast Client IUT can initiate an Enable operation for an ASE with a Unicast Server that is either in the Audio Sink role or the Audio Source role. The verification is performed for each ASE Type in turn, as enumerated in the test cases in Table 4.14.

- Reference

  [3] 5.6.3

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client and has configured a CIG/CIS by running BAP/UCL/SCC/BV-038-C [UCL SRC Config QoS, LC3 16_2_1] or by other means.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The Lower Tester is a Unicast Server and configured to support the Metadata defined in the TSPX_Metadata IXIT entry.

- Test Case Configuration

Test Case ID	ASE Type
BAP/UCL/SCC/BV-101-C [UCL SRC Enable]	Sink ASE
BAP/UCL/SCC/BV-102-C [UCL SNK Enable]	Source ASE

Table 4.14: Unicast Client Initiates Enable Operation test cases

- Test Procedure

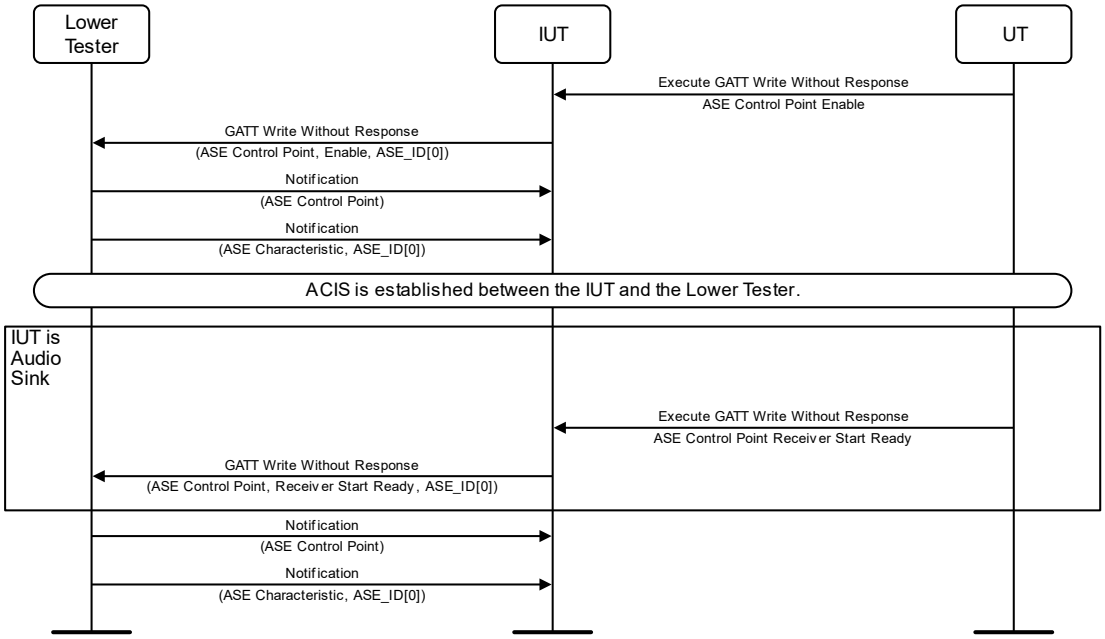


Figure 4.1: Unicast Client Initiates Enable Operation MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0], CIG_ID[0], and CIS_ID[0] set to values from the Initial Condition
   - Metadata set to the TSPX_Metadata IXIT entry
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 2.
4. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].The audio data paths are configured by executing the preamble in Section 4.4.9.
5. If the ASE is a Source ASE, the Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and the Number_of_ASEs = 1, ASE_ID set using the value from the Initial Condition.
6. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
7. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 2.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and the specified parameters.

  If the IUT is in the Audio Sink role, the IUT successfully writes the Receiver Start Ready opcode.

4.8.6 Unicast Client Initiates Disable Operation

- Test Purpose

  Verify that a Unicast Client IUT can initiate a Disable operation for an ASE in the Enabling or Streaming state. The verification is performed for each Initial ASE_State and ASE Type in turn, as enumerated in the test cases in Table 4.15.

- Reference

  [3] 5.6.5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client and has enabled an ASE of the specified type with the Initial ASE_State specified in Table 4.15 by running the procedure in BAP/UCL/SCC/BV-101-C [UCL SRC Enable] or by other means.
  - The Lower Tester is a Unicast Server.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- Test Case Configuration

Test Case ID	Initial ASE_State	ASE Type
BAP/UCL/SCC/BV-103-C [UCL SNK Disable in Enabling state]	0x03 (Enabling)	Source ASE
BAP/UCL/SCC/BV-104-C [UCL SRC Disable in Enabling or Streaming state]	0x03 (Enabling) or 0x04 (Streaming)	Sink ASE
BAP/UCL/SCC/BV-105-C [UCL SNK Disable in Streaming state]	0x04 (Streaming)	Source ASE

Table 4.15: Unicast Client Initiates Disable Operation test cases

- Test Procedure

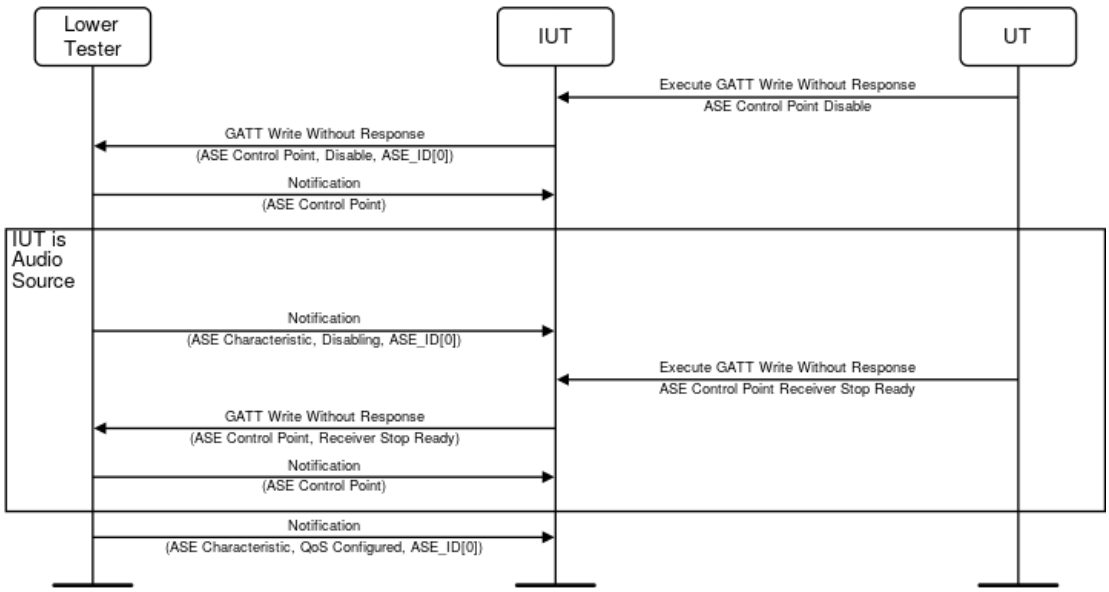


Figure 4.2: Unicast Client Initiates Disable Operation MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x05 (Disable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set using the value from the Initial Condition
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. If the Lower Tester is in the Audio Source role:
   a. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 1, with ASE_State set to Disabling.
   b. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x06 (Receiver Stop Ready) and:
      - Number_of_ASEs set to 1
      - ASE_ID[0] set using the value from the Initial Condition
4. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
5. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 4, with ASE_State set to QoS Configured.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x05 (Disable) and the specified parameters.

  If the IUT is an Audio Sink, the IUT successfully writes the Receiver Stop Ready (0x06) opcode with valid parameters.

4.8.7 Unicast Client Initiates Release Operation

- Test Purpose

  Verify that a Unicast Client IUT can release an ASE by initiating a Release operation. The verification is performed for each Initial ASE_State and ASE Type in turn, as specified in Table 4.16.

- Reference

  [3] 5.6.6

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client and has an ASE with ASE_State and type specified in Table 4.16.
  - The Lower Tester is a Unicast Server.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- Test Case Configuration

Test Case ID	Initial ASE_State	ASE Type
BAP/UCL/SCC/BV-106-C [UCL SNK Release in Codec Configured state]	0x01 (Codec Configured)	Source ASE
BAP/UCL/SCC/BV-107-C [UCL SRC Release in Codec Configured state]	0x01 (Codec Configured)	Sink ASE
BAP/UCL/SCC/BV-108-C [UCL SNK Release in QoS Configured state]	0x02 (QoS Configured)	Source ASE
BAP/UCL/SCC/BV-109-C [UCL SRC Release in QoS Configured state]	0x02 (QoS Configured)	Sink ASE
BAP/UCL/SCC/BV-110-C [UCL SNK Release in Enabling state]	0x03 (Enabling)	Source ASE
BAP/UCL/SCC/BV-111-C [UCL SRC Release in Enabling or Streaming state]	0x03 (Enabling) or 0x04 (Streaming)	Sink ASE
BAP/UCL/SCC/BV-112-C [UCL SNK Release in Streaming state]	0x04 (Streaming)	Source ASE
BAP/UCL/SCC/BV-113-C [UCL SNK Release in Disabling state]	0x05 (Disabling)	Source ASE

Table 4.16: Unicast Client Initiates Release Operation test cases

- Test Procedure

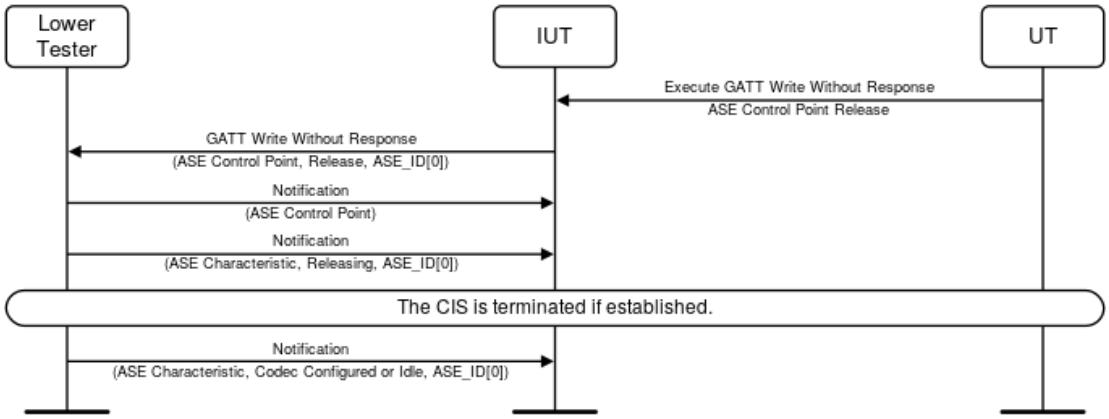


Figure 4.3: Unicast Client Initiates Release Operation MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x08 (Release) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set using the value from the Initial Condition
2. The Lower Tester sends the IUT a Notification of the ASE Control Point characteristic value.
3. The Lower Tester sends the IUT a Notification of the ASE characteristic value that corresponds to the ASE_ID that was set in Step 1, with ASE_State set to 0x06 (Releasing).
4. The IUT terminates the CIS if established.
5. The Lower Tester sends the IUT a Notification of the ASE characteristic value that corresponds to the ASE_ID that was set in Step 1, with ASE_State set to either Codec Configured or Idle.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x08 (Release) and the specified parameters.

4.8.8 Unicast Client Initiates Update Metadata Operation

- Test Purpose

  Verify that a Unicast Client IUT can update the Metadata of an ASE by initiating an Update Metadata operation. The verification is performed for each Initial State in turn, as enumerated in the test cases in Table 4.17.

- Reference

  [3] 5.6.4

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client and has an ASE of the type and in the state specified in Table 4.17.
  - The Lower Tester is a Unicast Server.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The IUT executes either the GATT Write Characteristic Value or the GATT Write Without Response Characteristic Value sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and Metadata set to the TSPX_Metadata IXIT entry.

- Test Case Configuration

Test Case ID	ASE Type	Initial ASE_State
BAP/UCL/SCC/BV-115-C [UCL SNK Update Metadata in Enabling state]	Source ASE	0x03 (Enabling)
BAP/UCL/SCC/BV-116-C [UCL SRC Update Metadata in Enabling or Streaming state]	Sink ASE	0x03 (Enabling) or 0x04 (Streaming)
BAP/UCL/SCC/BV-117-C [UCL SNK Update Metadata in Streaming state]	Source ASE	0x04 (Streaming)

Table 4.17: Unicast Client Initiates Update Metadata Operation test cases

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x07 (Update Metadata) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the value from the Initial Condition
  2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
  3. The Lower Tester sends the IUT a notification of the ASE characteristic.

- Expected Outcome

  Pass verdict

  The IUT successfully writes to the ASE Control Point characteristic with the opcode set to 0x07 (Update Metadata) and the specified parameters.

4.8.9 Unicast Client Determines Proper Presentation Delay – 2 Servers

- Test Purpose

  Verify that a Unicast Client IUT can determine the proper Presentation Delay for two synchronized streams with two Unicast Servers.

- Reference

  [3] 5.6.2, 7.1

- Initial Condition

  - There are two Unicast Server Lower Testers configured with overlapping, but not equal, presentation delay range values. Each Lower Tester includes an instantiation of the Audio Stream Control Service with at least one ASE characteristic as listed in Table 4.18 and an ASE Control Point characteristic.
  - Establish a Bearer connection between both Lower Testers and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - For each Lower Tester, the IUT reads the characteristic value of one characteristic of the ASE Type listed in Table 4.18 by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field value as Test_ASE_ID1 and Test_ASE_ID2.
  - The IUT enables notification on both Lower Testers by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.

- The IUT enables notification on both Lower Testers by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The Codec Config operation has been performed on the ASE by executing the Codec Config procedure in Table 4.18 or by other means.

- Test Case Configuration

Test Case ID	ASE Type	Codec Config
BAP/UCL/PD/BV-01-C [Determine Proper Presentation Delay, 2 Servers, SNK]	Sink ASE	BAP/UCL/SCC/BV-004-C
BAP/UCL/PD/BV-02-C [Determine Proper Presentation Delay, 2 Servers, SRC]	Source ASE	BAP/UCL/SCC/BV-020-C

Table 4.18: Unicast Client Determines Proper Presentation Delay – 2 Servers

Round	ASE_ID	Lower Tester
1	Test_ASE_ID1	Lower Tester 1
2	Test_ASE_ID2	Lower Tester 2

Table 4.19: Rounds for Unicast Client Determines Proper Presentation Delay – 2 Servers

- Test Procedure

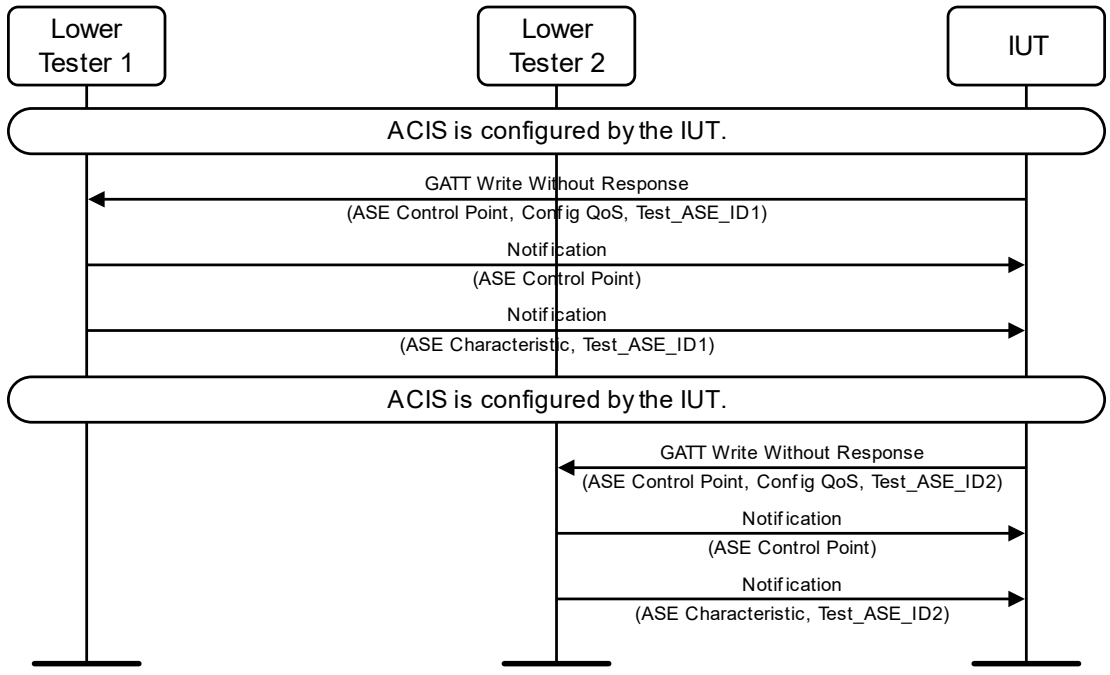


Figure 4.4: Unicast Client Determines Proper Presentation Delay – 2 Servers MSC

The IUT executes Steps 1–4 for each round in Table 4.19.

1. The IUT configures a CIS by using the LE_Set_CIG_Parameters command using parameters from TSPX_CIG_Parameters, which returns a CIG_ID and CIS_IDs if the IUT incorporates HCI, or configures the CIS by other means.
2. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic for the Lower Tester specified in Table 4.19 with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the value in Table 4.19
   - CIG_ID and CIS_ID set to the values obtained in Step 1
   - Metadata set to the TSPX_Metadata IXIT entry
   - Valid values for the other parameters
3. The Lower Tester specified in Table 4.19 sends the IUT a notification of the ASE Control Point characteristic.
4. The Lower Tester specified in Table 4.19 sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 2.

- Expected Outcome

  Pass verdict

  The IUT determines a Presentation Delay value within the common range of min and max values exposed by the Lower Testers.

4.8.10 Unicast Client Determines Proper Presentation Delay – 1 Server

- Test Purpose

  Verify that a Unicast Client IUT can determine the proper Presentation Delay for two synchronized streams with one Unicast Server.

- Reference

  [3] 5.6.2, 7.1

- Initial Condition

  - The Lower Tester is acting as a Unicast Server configured with overlapping, but not equal, presentation delay range values. The Lower Tester includes an instantiation of the Audio Stream Control Service with at least two ASE characteristics as listed in Table 4.20 and an ASE Control Point characteristic.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT reads the characteristic value of two characteristics of the ASE Type listed in Table 4.20 by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_ASE_ID1 and Test_ASE_ID2.
  - The IUT enables notification on the Lower Tester by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.

- The IUT enables notification on the Lower Tester by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The Codec Config operation has been performed on each ASE by executing the Codec Config procedure in Table 4.20 or by other means.

- Test Case Configuration

Test Case ID	ASE Type	Codec Config
BAP/UCL/PD/BV-03-C [Determine Proper Presentation Delay, 1 Server, SNK]	Sink ASE	BAP/UCL/SCC/BV-004-C
BAP/UCL/PD/BV-04-C [Determine Proper Presentation Delay, 1 Server, SRC]	Source ASE	BAP/UCL/SCC/BV-020-C

Table 4.20: Unicast Client Determines Proper Presentation Delay – 1 Server

- Test Procedure

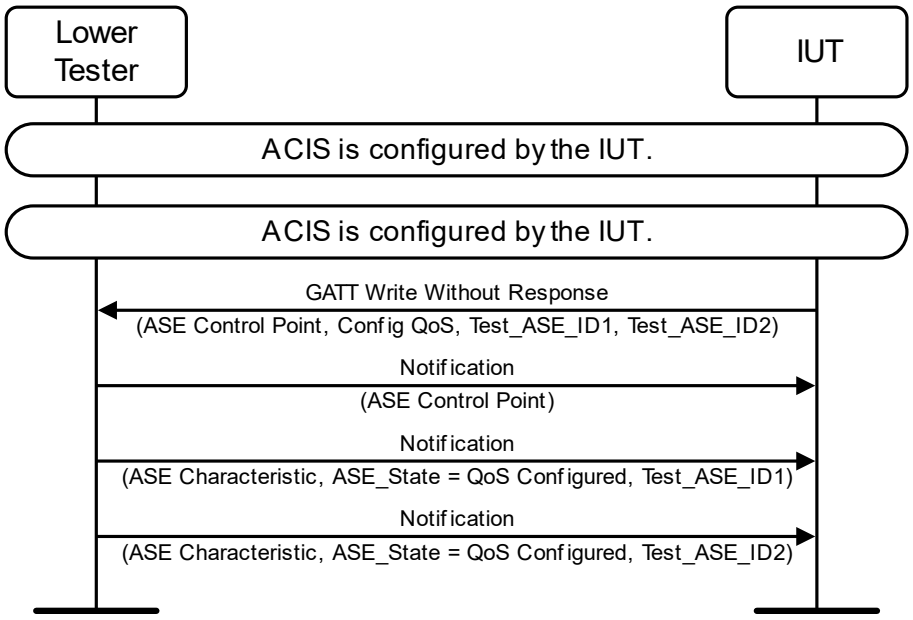


Figure 4.5: Unicast Client Determines Proper Presentation Delay – 1 Server MSC

1. The IUT configures a CIS by using the LE_Set_CIG_Parameters command using parameters from TSPX_CIG_Parameters, which returns a CIG_ID1 and CIS_ID1 if the IUT incorporates HCI, or configures the CIS by other means.
2. The IUT configures a CIS by using the LE_Set_CIG_Parameters command using parameters from TSPX_CIG_Parameters, which returns a CIG_ID1 and CIS_ID2 if the IUT incorporates HCI, or configures the CIS by other means.

3. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic for the Lower Tester specified in Table 4.20 with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - CIG_ID[0] and CIG_ID[1] set to CIG_ID1
   - CIS_ID[0] set to CIS_ID1
   - CIS_ID[1] set to CIS_ID2
   - Valid values for the other parameters
4. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
5. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID1.
6. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID2.

- Expected Outcome

  Pass verdict

  The IUT determines a Presentation Delay value within the common range of min and max values exposed by the Lower Tester for each ASE characteristic.

  The IUT writes the same Max_Transport_Latency value to each ASE.

4.9 Unicast Server Configuration

4.9.1 Unicast Server as Audio Sink Performs Config Codec – LC3

- Test Purpose

  Verify that a Unicast Server Audio Sink IUT can perform a Config Codec operation initiated by a Unicast Client for an ASE in the Idle state, the Codec Configured state, and the QoS Configured state. The verification is performed for each Codec Specific Capabilities specified in the test cases in Table 4.21.

- Reference

  [3] 5.6.1

- Initial Condition

  - The IUT is a Unicast Server in the Audio Sink role and has an instantiation of the Audio Stream Control Service exposing at least one Sink ASE characteristic and an instantiation of the Published Audio Capabilities Service.
  - The IUT exposes all supported audio capability settings for the Audio Sink role in one or Sink PAC characteristics containing one or more PAC records.
  - The IUT supports the settings specified in Table 4.21.
  - The Lower Tester is a Unicast Client.

- Test Case Configuration

Test Case ID	Codec Specific Config Setting (Section A.3)	Codec Specific Capabilities (Section A.2)
BAP/USR/SCC/BV-001-C [USR SNK Config Codec, LC3 8_1]	8_1	8_1
BAP/USR/SCC/BV-002-C [USR SNK Config Codec, LC3 8_2]	8_2	8_2

Test Case ID	Codec Specific Config Setting (Section A.3)	Codec Specific Capabilities (Section A.2)
BAP/USR/SCC/BV-003-C [USR SNK Config Codec, LC3 16_1]	16_1	16_1
BAP/USR/SCC/BV-004-C [USR SNK Config Codec, LC3 16_2]	16_2	16_2
BAP/USR/SCC/BV-005-C [USR SNK Config Codec, LC3 24_1]	24_1	24_1
BAP/USR/SCC/BV-006-C [USR SNK Config Codec, LC3 24_2]	24_2	24_2
BAP/USR/SCC/BV-007-C [USR SNK Config Codec, LC3 32_1]	32_1	32_1
BAP/USR/SCC/BV-008-C [USR SNK Config Codec, LC3 32_2]	32_2	32_2
BAP/USR/SCC/BV-009-C [USR SNK Config Codec, LC3 44.1_1]	441_1	441_1
BAP/USR/SCC/BV-010-C [USR SNK Config Codec, LC3 44.1_2]	441_2	441_2
BAP/USR/SCC/BV-011-C [USR SNK Config Codec, LC3 48_1]	48_1	48_1
BAP/USR/SCC/BV-012-C [USR SNK Config Codec, LC3 48_2]	48_2	48_2
BAP/USR/SCC/BV-013-C [USR SNK Config Codec, LC3 48_3]	48_3	48_3
BAP/USR/SCC/BV-014-C [USR SNK Config Codec, LC3 48_4]	48_4	48_4
BAP/USR/SCC/BV-015-C [USR SNK Config Codec, LC3 48_5]	48_5	48_5
BAP/USR/SCC/BV-016-C [USR SNK Config Codec, LC3 48_6]	48_6	48_6

Table 4.21: Unicast Server as Audio Sink Performs Config Codec – LC3 test cases

Round	Preamble
1	Section 4.4.6 Transition ASE to the Idle State
2	Section 4.4.7 Transition ASE to the Codec Configured State
3	Section 4.4.8 Transition ASE to the QoS Configured State

Table 4.22: Rounds for Unicast Server as Audio Sink Performs Config Codec – LC3

- Test Procedure

  Perform Steps 1–6 for each round in Table 4.22.

  1. Execute the Preamble specified in Table 4.22.
  2. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.
  3. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Codec_ID[0] set to LC3
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters referenced in Table 4.21 including Codec_Frame_Blocks_Per_SDU set to TSPX_Codec_Frame_Blocks_Per_SDU, if included, and Audio_Channel_Allocation set to TSPX_Audio_Channel_Allocation, if included.
  4. The IUT sends a notification of the ASE Control Point characteristic.
  5. The IUT sends a notification of the ASE characteristic for the ASE_ID in Step 3.
  6. Perform the preamble in Section 4.4.6 Transition ASE to the Idle State.

- Expected Outcome

  Pass verdict

  The IUT sends a Response_Code of 0x00 (Success) in response to each Config Codec operation.

  The Additional_ASE_Parameters field of the ASE characteristic notification sent in Step 5 includes a Codec_Specific_Configuration field with correctly formatted LTV structures containing values specified in Step 2.

  All other Additional_ASE_Parameters fields contain valid and correctly formatted values.

  The Codec_ID field is a 5-octet field with octet 0 set to the LC3 Coding_Format value defined in Bluetooth Assigned Numbers and octets 1–4 set to 0x0000.

4.9.2 Unicast Server as Audio Source Performs Config Codec – LC3

- Test Purpose

  Verify that a Unicast Server Audio Source IUT can perform a Config Codec operation initiated by a Unicast Client for an ASE in the Idle state, the Codec Configured state, and the QoS Configured state. The verification is performed for each Codec Specific Capabilities referenced in Table 4.23.

- Reference

  [3] 5.6.1

- Initial Condition

  - Execute the preamble in Section 4.4.6 Transition ASE to the Idle State.
  - The IUT is a Unicast Server that has an instantiation of the Audio Stream Control Service with at least one Sink ASE characteristic and an instantiation of the Published Audio Capabilities Service.
  - The IUT supports the settings specified in Table 4.23.
  - The Lower Tester is a Unicast Client.

- Test Case Configuration

Test Case ID	Codec Specific Config Setting (Section A.3)	Codec Specific Capabilities (Section A.2)
BAP/USR/SCC/BV-017-C [USR SRC Config Codec, LC3 8_1]	8_1	8_1
BAP/USR/SCC/BV-018-C [USR SRC Config Codec, LC3 8_2]	8_2	8_2
BAP/USR/SCC/BV-019-C [USR SRC Config Codec, LC3 16_1]	16_1	16_1
BAP/USR/SCC/BV-020-C [USR SRC Config Codec, LC3 16_2]	16_2	16_2
BAP/USR/SCC/BV-021-C [USR SRC Config Codec, LC3 24_1]	24_1	24_1
BAP/USR/SCC/BV-022-C [USR SRC Config Codec, LC3 24_2]	24_2	24_2
BAP/USR/SCC/BV-023-C [USR SRC Config Codec, LC3 32_1]	32_1	32_1
BAP/USR/SCC/BV-024-C [USR SRC Config Codec, LC3 32_2]	32_2	32_2
BAP/USR/SCC/BV-025-C [USR SRC Config Codec, LC3 44.1_1]	441_1	441_1
BAP/USR/SCC/BV-026-C [USR SRC Config Codec, LC3 44.1_2]	441_2	441_2
BAP/USR/SCC/BV-027-C [USR SRC Config Codec, LC3 48_1]	48_1	48_1
BAP/USR/SCC/BV-028-C [USR SRC Config Codec, LC3 48_2]	48_2	48_2
BAP/USR/SCC/BV-029-C [USR SRC Config Codec, LC3 48_3]	48_3	48_3
BAP/USR/SCC/BV-030-C [USR SRC Config Codec, LC3 48_4]	48_4	48_4
BAP/USR/SCC/BV-031-C [USR SRC Config Codec, LC3 48_5]	48_5	48_5
BAP/USR/SCC/BV-032-C [USR SRC Config Codec, LC3 48_6]	48_6	48_6

Table 4.23: Unicast Server as Audio Source Performs Config Codec – LC3 test cases

Round	Preamble
1	Section 4.4.6 Transition ASE to the Idle State
2	Section 4.4.7 Transition ASE to the Codec Configured State
3	Section 4.4.8 Transition ASE to the QoS Configured State

Table 4.24: Rounds for Unicast Server as Audio Source Performs Config Codec – LC3

- Test Procedure

  Perform Steps 1–6 for each round in Table 4.24.

  1. Execute the Preamble specified in Table 4.24.
  2. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.
  3. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Codec_ID[0] set to LC3
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters referenced in Table 4.23, including Codec_Frame_Blocks_Per_SDU set to TSPX_Codec_Frame_Blocks_Per_SDU, if included, and Audio_Channel_Allocation set to TSPX_Audio_Channel_Allocation, if included.
  4. The IUT sends a notification of the ASE Control Point characteristic.

5. The IUT sends a notification of the ASE characteristic for the ASE_ID in Step 3.
6. Perform the preamble in Section 4.4.6 Transition ASE to the Idle State.

- Expected Outcome

  Pass verdict

  The IUT sends a Response_Code of 0x00 (Success) in response to each Config Codec operation.

  The Additional_ASE_Parameters field of the ASE characteristic notification sent in Step 5 includes a Codec_Specific_Configuration field with correctly formatted LTV structures containing values specified in Step 2.

  All other Additional_ASE_Parameters fields contain valid and correctly formatted values.

  The Codec_ID field is a 5-octet field with octet 0 set to the LC3 Coding_Format value defined in Bluetooth Assigned Numbers and octets 1–4 set to 0x0000.

BAP/USR/SCC/BV-033-C [USR SNK Config Codec, VS]

- Test Purpose

  Verify that a Unicast Server Audio Sink IUT can perform a Config Codec operation initiated by a Unicast Client for a vendor-specific codec for an ASE in the Idle state, the Codec Configured state, and the QoS Configured state.

- Reference

  [3] 5.6.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server and has an instantiation of the Audio Stream Control Service with at least one Sink ASE characteristic and an instantiation of the Published Audio Capabilities Service.
  - The Lower Tester is a Unicast Client.

- Test Procedure

Round	Preamble
1	Section 4.4.6 Transition ASE to the Idle State
2	Section 4.4.7 Transition ASE to the Codec Configured State
3	Section 4.4.8 Transition ASE to the QoS Configured State

Table 4.25: Rounds for Unicast Server as Audio Sink Performs Config Codec Vendor-Specific

Repeat Steps 1–5 for each round in Table 4.25.

1. Execute the Preamble specified in Table 4.25.
2. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.

3. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Target_Latency[0] and Target_PHY set to values supported by the IUT
   - Codec_ID[0] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
4. The IUT sends a notification of the ASE Control Point characteristic.
5. The IUT sends a notification of the ASE characteristic for the ASE_ID in Step 3.

- Expected Outcome

  Pass verdict

  The IUT sends a notification of the ASE Control Point characteristic with the Response_Code field set to 0x00 (Success) for the requested ASE_ID and opcode.

  The IUT sends a notification of the ASE specified in Step 3. The notified ASE characteristic value is correctly formatted: the ASE_State field is set to 0x01 (Codec Configured), the ASE_ID field is set to Test_ASE_ID, and the Additional_ASE_Parameters field contains the values requested in Step 3 and valid values for Server preferred QoS parameters.

BAP/USR/SCC/BV-034-C [USR SRC Config Codec, VS]

- Test Purpose

  Verify that a Unicast Server Audio Source IUT can perform a Config Codec operation initiated by a Unicast Client for a vendor-specific codec for a Source ASE in the Idle state, the Codec Configured state, and the QoS Configured state.

- Reference

  [3] 5.6.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server and has an instantiation of the Audio Stream Control Service with at least one Source ASE characteristic and an instantiation of the Published Audio Capabilities Service.

- Test Procedure

Round	Preamble
1	Section 4.4.6 Transition ASE to the Idle State
2	Section 4.4.7 Transition ASE to the Codec Configured State
3	Section 4.4.8 Transition ASE to the QoS Configured State

Table 4.26: Rounds for Unicast Server Audio Source Performs Config Codec Vendor-Specific

Repeat Steps 1–5 for each round in Table 4.26.

1. Execute the Preamble specified in Table 4.26.
2. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.
3. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
   - Target_Latency[0] and Target_PHY[0] set to values supported by the IUT
   - Codec_ID[0] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
4. The IUT sends a notification of the ASE Control Point characteristic.
5. The IUT sends a notification of the ASE characteristic for the ASE_ID in Step 3.

- Expected Outcome

  Pass verdict

  The IUT sends a notification of the ASE Control Point characteristic with the Response_Code field set to 0x00 (Success) for the requested ASE_ID and opcode.

  The IUT sends a notification of the ASE specified in Step 3. The notified ASE characteristic value is correctly formatted: the ASE_State field is set to 0x01 (Codec Configured), the ASE_ID field is set to Test_ASE_ID, and the Additional_ASE_Parameters field contains the values requested in Step 3 and valid values for Server preferred QoS parameters.

4.9.3 Unicast Server Initiates Config Codec – LC3

- Test Purpose

  Verify that a Unicast Server IUT can autonomously initiate the Config Codec operation with the LC3 codec. The verification is performed for each ASE Type and Codec Settings in turn, as enumerated in the test cases in Table 4.27.

- Reference

  [3] 5.6.1

- Initial Condition

  - The Lower Tester is a Unicast Client.
  - Enable the IUT for use with the ASE Control Point by performing the preamble described in Section 4.4.5.
  - The IUT is a Unicast Server and has an instantiation of the Audio Stream Control Service with at least one characteristic of the type listed in Table 4.27 and an instantiation of the Published Audio Capabilities Service.
  - The IUT supports the audio capability settings for the ASE Type specified in Table 4.27 in one or more PAC characteristics containing one or more PAC records.

- Test Case Configuration

Test Case ID	Codec Specific Config Setting (Section A.3)	ASE Type	Codec Specific Capabilities (Section A.2)
BAP/USR/SCC/BV-035-C [USR SNK Initiates Config Codec, LC3 8_1]	8_1	Sink ASE	8_1
BAP/USR/SCC/BV-036-C [USR SNK Initiates Config Codec, LC3 8_2]	8_2	Sink ASE	8_2
BAP/USR/SCC/BV-037-C [USR SNK Initiates Config Codec, LC3 16_1]	16_1	Sink ASE	16_1
BAP/USR/SCC/BV-038-C [USR SNK Initiates Config Codec, LC3 16_2]	16_2	Sink ASE	16_2
BAP/USR/SCC/BV-039-C [USR SNK Initiates Config Codec, LC3 24_1]	24_1	Sink ASE	24_1
BAP/USR/SCC/BV-040-C [USR SNK Initiates Config Codec, LC3 24_2]	24_2	Sink ASE	24_2
BAP/USR/SCC/BV-041-C [USR SNK Initiates Config Codec, LC3 32_1]	32_1	Sink ASE	32_1
BAP/USR/SCC/BV-042-C [USR SNK Initiates Config Codec, LC3 32_2]	32_2	Sink ASE	32_2
BAP/USR/SCC/BV-043-C [USR SNK Initiates Config Codec, LC3 44.1_1]	441_1	Sink ASE	441_1
BAP/USR/SCC/BV-044-C [USR SNK Initiates Config Codec, LC3 44.1_2]	441_2	Sink ASE	441_2
BAP/USR/SCC/BV-045-C [USR SNK Initiates Config Codec, LC3 48_1]	48_1	Sink ASE	48_1
BAP/USR/SCC/BV-046-C [USR SNK Initiates Config Codec, LC3 48_2]	48_2	Sink ASE	48_2
BAP/USR/SCC/BV-047-C [USR SNK Initiates Config Codec, LC3 48_3]	48_3	Sink ASE	48_3
BAP/USR/SCC/BV-048-C [USR SNK Initiates Config Codec, LC3 48_4]	48_4	Sink ASE	48_4
BAP/USR/SCC/BV-049-C [USR SNK Initiates Config Codec, LC3 48_5]	48_5	Sink ASE	48_5
BAP/USR/SCC/BV-050-C [USR SNK Initiates Config Codec, LC3 48_6]	48_6	Sink ASE	48_6
BAP/USR/SCC/BV-051-C [USR SRC Initiates Config Codec, LC3 8_1]	8_1	Source ASE	8_1
BAP/USR/SCC/BV-052-C [USR SRC Initiates Config Codec, LC3 8_2]	8_2	Source ASE	8_2
BAP/USR/SCC/BV-053-C [USR SRC Initiates Config Codec, LC3 16_1]	16_1	Source ASE	16_1
BAP/USR/SCC/BV-054-C [USR SRC Initiates Config Codec, LC3 16_2]	16_2	Source ASE	16_2
BAP/USR/SCC/BV-055-C [USR SRC Initiates Config Codec, LC3 24_1]	24_1	Source ASE	24_1
BAP/USR/SCC/BV-056-C [USR SRC Initiates Config Codec, LC3 24_2]	24_2	Source ASE	24_2
BAP/USR/SCC/BV-057-C [USR SRC Initiates Config Codec, LC3 32_1]	32_1	Source ASE	32_1
BAP/USR/SCC/BV-058-C [USR SRC Initiates Config Codec, LC3 32_2]	32_2	Source ASE	32_2
BAP/USR/SCC/BV-059-C [USR SRC Initiates Config Codec, LC3 44.1_1]	441_1	Source ASE	441_1
BAP/USR/SCC/BV-060-C [USR SRC Initiates Config Codec, LC3 44.1_2]	441_2	Source ASE	441_2
BAP/USR/SCC/BV-061-C [USR SRC Initiates Config Codec, LC3 48_1]	48_1	Source ASE	48_1
BAP/USR/SCC/BV-062-C [USR SRC Initiates Config Codec, LC3 48_2]	48_2	Source ASE	48_2
BAP/USR/SCC/BV-063-C [USR SRC Initiates Config Codec, LC3 48_3]	48_3	Source ASE	48_3
BAP/USR/SCC/BV-064-C [USR SRC Initiates Config Codec, LC3 48_4]	48_4	Source ASE	48_4
BAP/USR/SCC/BV-065-C [USR SRC Initiates Config Codec, LC3 48_5]	48_5	Source ASE	48_5
BAP/USR/SCC/BV-066-C [USR SRC Initiates Config Codec, LC3 48_6]	48_6	Source ASE	48_6

Table 4.27: Unicast Server Initiates Config Codec – LC3 test cases

- Test Procedure

1. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.
2. If the IUT is an Audio Sink, the Lower Tester reads the characteristic value of the Sink PAC characteristic on the IUT.
3. If the IUT is an Audio Source, the Lower Tester reads the characteristic value of the Source PAC characteristic on the IUT.
4. The Upper Tester commands the IUT to configure the codec parameters specified in Table 4.27 on one of the ASEs.
5. The IUT sends a GATT Characteristic Value Notification for an ASE characteristic.

- Expected Outcome

  Pass verdict

  In Step 5, the notified ASE characteristic value is correctly formatted, has the ASE_State field set to 0x01 (Codec Configured), the ASE_ID field set to a valid value, the Additional_ASE_Parameters containing valid values for the Codec Configured state, and includes a Codec_Specific_Configuration field with correctly formatted LTV structures with the length, type, and value specified in Table 4.28.

  The IUT does not send a notification of the ASE Control Point characteristic value.

  The Additional_ASE_Parameters field of the ASE characteristic notification sent in Step 5.

  Type value defined in Bluetooth Assigned Numbers [9].

Parameter	Length	Value
Sampling_Frequency	0x02	Referenced in Codec Specific Configuration Setting corresponding column in Table 4.27
Frame_Durations	0x02	Referenced in Codec Specific Configuration Setting corresponding column in Table 4.27
Audio_Channel_Allocation	0x05	TSPX_Audio_Channel_Allocation
Octets_Per_Codec_Frame	0x03	Referenced in Codec Specific Configuration Setting corresponding column in Table 4.27
Codec_Frame_Blocks_Per_SDU	0x02	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.28: LTV structures in Codec_Specific_Configuration field

4.9.4 Unicast Server Initiates Config Codec – Vendor-Specific

- Test Purpose

  Verify that a Unicast Server IUT can initiate the Config Codec operation autonomously for vendor-specific codec settings. The verification is performed for each ASE Type specified in Table 4.29.

- Reference

  [3] 5.6.1

- Initial Condition

  - Enable the IUT for use with the ASE Control Point by performing the preamble described in Section 4.4.5.

- Test Case Configuration

Test Case ID	ASE Type
BAP/USR/SCC/BV-067-C [USR SNK Initiates Config Codec, Vendor-Specific]	Sink ASE
BAP/USR/SCC/BV-068-C [USR SRC Initiates Config Codec, Vendor-Specific]	Source ASE

Table 4.29: Unicast Server Initiates Config Codec – Vendor-Specific test cases

- Test Procedure

  1. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.
  2. If the IUT is an Audio Sink, the Lower Tester reads the characteristic value of the Sink PAC characteristic on the IUT.
  3. If the IUT is an Audio Source, the Lower Tester reads the characteristic value of the Source PAC characteristic on the IUT.

4. The Upper Tester commands the IUT to configure the codec parameters as specified with the characteristic type specified in Table 4.29 and codec settings defined in TSPX_VS_Codec_Specific_Configuration in [7] on one of the ASEs.
5. The IUT sends a GATT Characteristic Value Notification for an ASE characteristic.

- Expected Outcome

  Pass verdict

  In Step 5, the notified ASE characteristic value is correctly formatted, has the ASE_State field set to 0x01 (Codec Configured), the ASE_ID field set to a valid value, the Additional_ASE_Parameters containing valid values for the Codec Configured state, and includes a Codec_Specific_Configuration field with correctly formatted LTV structures with the length, type, and value specified in Table 4.29.

  All other Additional_ASE_Parameters fields contain valid and correctly formatted values.

4.9.5 Unicast Server Performs Config QoS – LC3

- Test Purpose

  Verify that a Unicast Server IUT can perform a Config QoS operation initiated by a Unicast Client for the LC3 codec. The verification is performed for each Codec Configuration and parameter in turn, as enumerated in the test cases in Table 4.30.

- Reference

  [3] 5.6.2

- Initial Condition

  - The IUT is a Unicast Server.
  - The Lower Tester is a Unicast Client.

- Test Case Configuration

Test Case ID	Codec Specific Config Setting (Section A.3)	QoS Config (Section A.4)
BAP/USR/SCC/BV-069-C [USR SNK Config QoS, LC3 8_1_1]	8_1	8_1_1
BAP/USR/SCC/BV-070-C [USR SNK Config QoS, LC3 8_2_1]	8_2	8_2_1
BAP/USR/SCC/BV-071-C [USR SNK Config QoS, LC3 16_1_1]	16_1	16_1_1
BAP/USR/SCC/BV-072-C [USR SNK Config QoS, LC3 16_2_1]	16_2	16_2_1
BAP/USR/SCC/BV-073-C [USR SNK Config QoS, LC3 24_1_1]	24_1	24_1_1
BAP/USR/SCC/BV-074-C [USR SNK Config QoS, LC3 24_2_1]	24_2	24_2_1
BAP/USR/SCC/BV-075-C [USR SNK Config QoS, LC3 32_1_1]	32_1	32_1_1
BAP/USR/SCC/BV-076-C [USR SNK Config QoS, LC3 32_2_1]	32_2	32_2_1
BAP/USR/SCC/BV-077-C [USR SNK Config QoS, LC3 44.1_1_1]	441_1	441_1_1
BAP/USR/SCC/BV-078-C [USR SNK Config QoS, LC3 44.1_2_1]	441_2	441_2_1
BAP/USR/SCC/BV-079-C [USR SNK Config QoS, LC3 48_1_1]	48_1	48_1_1
BAP/USR/SCC/BV-080-C [USR SNK Config QoS, LC3 48_2_1]	48_2	48_2_1
BAP/USR/SCC/BV-081-C [USR SNK Config QoS, LC3 48_3_1]	48_3	48_3_1
BAP/USR/SCC/BV-082-C [USR SNK Config QoS, LC3 48_4_1]	48_4	48_4_1
BAP/USR/SCC/BV-083-C [USR SNK Config QoS, LC3 48_5_1]	48_5	48_5_1
BAP/USR/SCC/BV-084-C [USR SNK Config QoS, LC3 48_6_1]	48_6	48_6_1
BAP/USR/SCC/BV-085-C [USR SRC Config QoS, LC3 8_1_1]	8_1	8_1_1

Test Case ID	Codec Specific Config Setting (Section A.3)	QoS Config (Section A.4)
BAP/USR/SCC/BV-086-C [USR SRC Config QoS, LC3 8_2_1]	8_2	8_2_1
BAP/USR/SCC/BV-087-C [USR SRC Config QoS, LC3 16_1_1]	16_1	16_1_1
BAP/USR/SCC/BV-088-C [USR SRC Config QoS, LC3 16_2_1]	16_2	16_2_1
BAP/USR/SCC/BV-089-C [USR SRC Config QoS, LC3 24_1_1]	24_1	24_1_1
BAP/USR/SCC/BV-090-C [USR SRC Config QoS, LC3 24_2_1]	24_2	24_2_1
BAP/USR/SCC/BV-091-C [USR SRC Config QoS, LC3 32_1_1]	32_1	32_1_1
BAP/USR/SCC/BV-092-C [USR SRC Config QoS, LC3 32_2_1]	32_2	32_2_1
BAP/USR/SCC/BV-093-C [USR SRC Config QoS, LC3 44.1_1_1]	441_1	441_1_1
BAP/USR/SCC/BV-094-C [USR SRC Config QoS, LC3 44.1_2_1]	441_2	441_2_1
BAP/USR/SCC/BV-095-C [USR SRC Config QoS, LC3 48_1_1]	48_1	48_1_1
BAP/USR/SCC/BV-096-C [USR SRC Config QoS, LC3 48_2_1]	48_2	48_2_1
BAP/USR/SCC/BV-097-C [USR SRC Config QoS, LC3 48_3_1]	48_3	48_3_1
BAP/USR/SCC/BV-098-C [USR SRC Config QoS, LC3 48_4_1]	48_4	48_4_1
BAP/USR/SCC/BV-099-C [USR SRC Config QoS, LC3 48_5_1]	48_5	48_5_1
BAP/USR/SCC/BV-100-C [USR SRC Config QoS, LC3 48_6_1]	48_6	48_6_1
BAP/USR/SCC/BV-101-C [USR SNK Config QoS, LC3 8_1_2]	8_1	8_1_2
BAP/USR/SCC/BV-102-C [USR SNK Config QoS, LC3 8_2_2]	8_2	8_2_2
BAP/USR/SCC/BV-103-C [USR SNK Config QoS, LC3 16_1_2]	16_1	16_1_2
BAP/USR/SCC/BV-104-C [USR SNK Config QoS, LC3 16_2_2]	16_2	16_2_2
BAP/USR/SCC/BV-105-C [USR SNK Config QoS, LC3 24_1_2]	24_1	24_1_2
BAP/USR/SCC/BV-106-C [USR SNK Config QoS, LC3 24_2_2]	24_2	24_2_2
BAP/USR/SCC/BV-107-C [USR SNK Config QoS, LC3 32_1_2]	32_1	32_1_2
BAP/USR/SCC/BV-108-C [USR SNK Config QoS, LC3 32_2_2]	32_2	32_2_2
BAP/USR/SCC/BV-109-C [USR SNK Config QoS, LC3 44.1_1_2]	441_1	441_1_2
BAP/USR/SCC/BV-110-C [USR SNK Config QoS, LC3 44.1_2_2]	441_2	441_2_2
BAP/USR/SCC/BV-111-C [USR SNK Config QoS, LC3 48_1_2]	48_1	48_1_2
BAP/USR/SCC/BV-112-C [USR SNK Config QoS, LC3 48_2_2]	48_2	48_2_2
BAP/USR/SCC/BV-113-C [USR SNK Config QoS, LC3 48_3_2]	48_3	48_3_2
BAP/USR/SCC/BV-114-C [USR SNK Config QoS, LC3 48_4_2]	48_4	48_4_2
BAP/USR/SCC/BV-115-C [USR SNK Config QoS, LC3 48_5_2]	48_5	48_5_2
BAP/USR/SCC/BV-116-C [USR SNK Config QoS, LC3 48_6_2]	48_6	48_6_2
BAP/USR/SCC/BV-117-C [USR SRC Config QoS, LC3 8_1_2]	8_1	8_1_2
BAP/USR/SCC/BV-118-C [USR SRC Config QoS, LC3 8_2_2]	8_2	8_2_2
BAP/USR/SCC/BV-119-C [USR SRC Config QoS, LC3 16_1_2]	16_1	16_1_2
BAP/USR/SCC/BV-120-C [USR SRC Config QoS, LC3 16_2_2]	16_2	16_2_2
BAP/USR/SCC/BV-121-C [USR SRC Config QoS, LC3 24_1_2]	24_1	24_1_2
BAP/USR/SCC/BV-122-C [USR SRC Config QoS, LC3 24_2_2]	24_2	24_2_2
BAP/USR/SCC/BV-123-C [USR SRC Config QoS, LC3 32_1_2]	32_1	32_1_2
BAP/USR/SCC/BV-124-C [USR SRC Config QoS, LC3 32_2_2]	32_2	32_2_2
BAP/USR/SCC/BV-125-C [USR SRC Config QoS, LC3 44.1_1_2]	441_1	441_1_2
BAP/USR/SCC/BV-126-C [USR SRC Config QoS, LC3 44.1_2_2]	441_2	441_2_2
BAP/USR/SCC/BV-127-C [USR SRC Config QoS, LC3 48_1_2]	48_1	48_1_2
BAP/USR/SCC/BV-128-C [USR SRC Config QoS, LC3 48_2_2]	48_2	48_2_2

Test Case ID	Codec Specific Config Setting (Section A.3)	QoS Config (Section A.4)
BAP/USR/SCC/BV-129-C [USR SRC Config QoS, LC3 48_3_2]	48_3	48_3_2
BAP/USR/SCC/BV-130-C [USR SRC Config QoS, LC3 48_4_2]	48_4	48_4_2
BAP/USR/SCC/BV-131-C [USR SRC Config QoS, LC3 48_5_2]	48_5	48_5_2
BAP/USR/SCC/BV-132-C [USR SRC Config QoS, LC3 48_6_2]	48_6	48_6_2

Table 4.30: Unicast Server Performs Config QoS – LC3 test cases

- Test Procedure

  1. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to the Test_ASE_ID
     - Target_Latency[0] set to a valid value
     - Codec_ID[0] set to LC3
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters referenced in Table 4.30, including Codec_Frame_Blocks_Per_SDU set to TSPX_Codec_Frame_Blocks_Per_SDU, if included, and Audio_Channel_Allocation set to TSPX_Audio_Channel_Allocation, if included
  2. The IUT sends a notification of the ASE Control Point characteristic.
  3. The IUT sends a notification of the ASE characteristic that corresponds to Test_ASE_ID.
  4. The Lower Tester executes the GATT Write Without Response sub-procedure with the opcode set to 0x02 (Config QoS) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to Test_ASE_ID
     - Random valid values for CIG_ID[0] and CIS_ID[0]
     - SDU_Interval[0] set to the QoS Configuration value referenced in in Table 4.30
     - Framing[0] set to the QoS Configuration value referenced in Table 4.30
     - PHY[0] set to TSPX_QoS_PHY
     - Max_SDU[0] set to the QoS Configuration value referenced in Table 4.30
     - Retransmission_Number[0] set to the QoS Configuration value referenced in Table 4.30
     - Max_Transport_Latency[0] set to the QoS Configuration value referenced in Table 4.30
     - Presentation_Delay[0] set to TSPX_QoS_Presentation_Delay
  5. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.
  6. The IUT sends a GATT Characteristic Value Notification for the ASE characteristic that corresponds to Test_ASE_ID.

- Expected Outcome

  Pass verdict

  In Step 2, the IUT sends a notification of the ASE Control Point characteristic with Response_Code set to Success (0x00) for the requested ASE_ID and opcode.

  In Step 3, the notified ASE characteristic value is correctly formatted, has the ASE_ID field set to Test_ASE_ID, the ASE_State field set to 0x02 (QoS Configured), and the Additional_ASE_Parameters field containing the CIG_ID, CIS_ID, and QoS configuration values requested in Step 2.

4.9.6 Unicast Server Performs Config QoS – Vendor-Specific

- Test Purpose

  Verify that a Unicast Server IUT can handle a Config QoS operation for a vendor-specific codec. The verification is performed for each Codec Configuration and parameter in turn, as enumerated in the test cases in Table 4.31.

- Reference

  [3] 5.6.2

- Initial Condition

  - The IUT is a Unicast Server.
  - The Lower Tester is a Unicast Client.

- Test Case Configuration

Test Case ID	ASE Type
BAP/USR/SCC/BV-133-C [USR SNK Config QoS, VS]	Sink ASE
BAP/USR/SCC/BV-134-C [USR SRC Config QoS, VS]	Source ASE

Table 4.31: Unicast Server Performs Config QoS – Vendor-Specific test cases

- Test Procedure

  1. The Lower Tester reads the characteristic value of the specified ASE characteristic by executing the GATT Read Characteristic Value sub-procedure.
  2. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to Test_ASE_ID
     - Target_Latency[0] and Target_PHY set to values supported by the IUT
     - Codec_ID[0] set to TSPX_VS_Codec_ID
     - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
     - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
  3. The IUT sends a notification of the ASE Control Point characteristic.
  4. The IUT sends a notification of the ASE characteristic that corresponds to Test_ASE_ID.
  5. The Lower Tester executes the GATT Write Without Response sub-procedure with the opcode set to 0x02 (Config QoS) and:
     - Number_of_ASEs = 1
     - ASE_ID[0] set to Test_ASE_ID
     - CIG_ID[0] and CIS_ID[0] set to valid values
     - SDU_Interval[0] set to TSPX_VS_QoS_SDU_Interval
     - Framing[0] set to TSPX_VS_QoS_Framing
     - PHY[0] set to TSPX_VS_QoS_PHY
     - Max_SDU[0] set to TSPX_VS_QoS_Max_SDU
     - Retransmission_Number[0] set to TSPX_VS_QoS_Retransmission_Number
     - Max_Transport_Latency[0] set to TSPX_VS_QoS_Max_Transport_Latency
     - Presentation_Delay[0] set to TSPX_VS_QoS_Presentation_Delay
  6. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.
  7. The IUT sends a GATT Characteristic Value Notification for the ASE characteristic.

- Expected Outcome

  Pass verdict

  In Step 3, the IUT sends a notification of the ASE Control Point characteristic with Response_Code set to Success (0x00) for the requested ASE_ID and opcode.

  In Step 4, the notified ASE characteristic value is correctly formatted, has the ASE_ID field set to Test_ASE_ID, the ASE_State field set to 0x02 (QoS Configured), and the Additional_ASE_Parameters field containing the CIG_ID, CIS_ID, and QoS configuration values requested in Step 2.

4.9.7 Unicast Server Performs Client-Initiated Enable Operation

- Test Purpose

  Verify that a Unicast Server IUT can handle a client-initiated Enable operation for an ASE with a Unicast Client that is either in the Audio Sink role or the Audio Source role. The verification is performed for each ASE Type in turn, as enumerated in the test cases in Table 4.32.

- Reference

  [3] 5.6.3

- Initial Condition

  - The IUT is a Unicast Server.
  - The Lower Tester is a Unicast Client. The Lower Tester transitions one characteristic of the type specified in Table 4.32 on the IUT into the QoS Configured state.
  - A CIG/CIS is configured by running one round of BAP/USR/SCC/BV-088-C [USR SRC Config QoS, LC3 16_2_1] or by other means.

- Test Case Configuration

Test Case ID	ASE Type
BAP/USR/SCC/BV-135-C [USR SNK Enable]	Sink ASE
BAP/USR/SCC/BV-136-C [USR SRC Enable]	Source ASE

Table 4.32: Unicast Server Performs Client-Initiated Enable Operation test cases

- Test Procedure

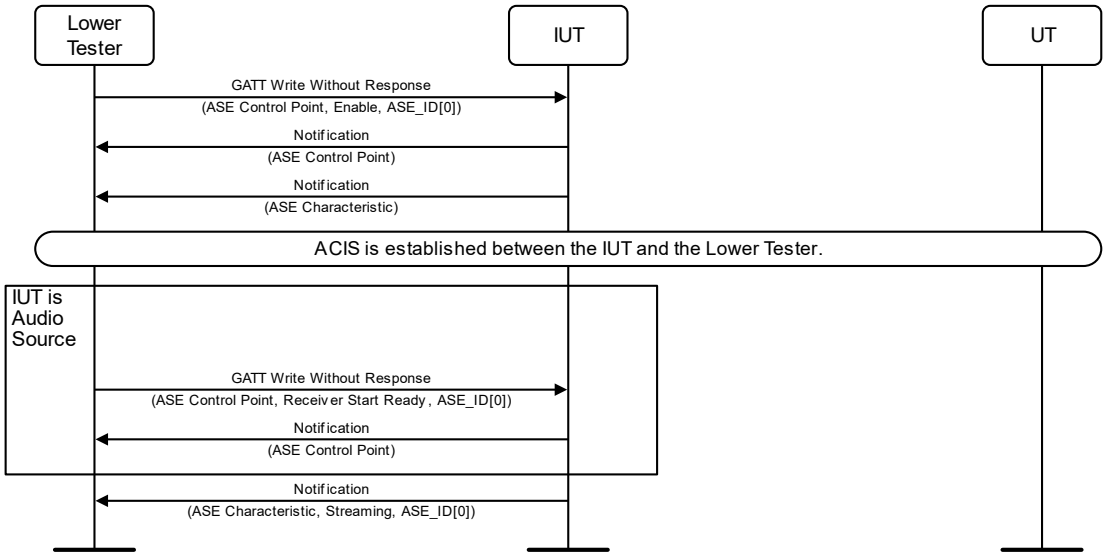


Figure 4.6: Unicast Server Performs Client-Initiated Enable Operation MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Metadata_Length[0] set to the length of Metadata[0]
   - Metadata[0] set to the TSPX_Metadata IXIT entry
2. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.
3. The IUT sends a GATT Characteristic Value Notification for the ASE characteristic.
4. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
5. The audio data paths are configured by executing the preamble in Section 4.4.9.
6. If the ASE Type specified in Table 4.32 is Sink ASE:
   a. The IUT autonomously transitions the ASE for the ASE_ID returned in Step 2 to Streaming state.
7. If the ASE Type specified in Table 4.32 is Source ASE:
   a. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and the Number_of_ASEs = 1, ASE_ID set using the value from the Initial Condition.
   b. The IUT sends a notification of the ASE Control Point characteristic.
8. The IUT sends a notification of the ASE characteristic that corresponds to the ASE_ID sent in Step 2 with the ASE_State set to 0x04 (Streaming).

- Expected Outcome

  Pass verdict

  In Step 2, the IUT sends a notification of the ASE Control Point characteristic with Response_Code set to 0x00 (Success) for the requested ASE_ID and opcode.

In Step 3, the notified ASE characteristic value is correctly formatted, has the ASE_ID field set to Test_ASE_ID, the ASE_State field set to 0x03 (Enabling), and the Additional_ASE_Parameters field containing the correct Metadata.

The IUT accepts the Enable operation and transitions from QoS Configured state to either Enabling state or the Streaming state.

4.9.8 Unicast Server Performs Client-Initiated Disable Operation

- Test Purpose

  Verify that a Unicast Server IUT can perform a client-initiated Disable operation for an ASE in the Enabling or Streaming state. The verification is performed for each Initial ASE_State and ASE Type in turn, as specified in Table 4.33.

- Reference

  [3] 5.6.5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Client.
  - The IUT is a Unicast Server.
  - The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The IUT has an ASE configured with the Initial ASE_State and ASE Type specified in Table 4.33, e.g., by running BAP/USR/SCC/BV-072-C [USR SNK Config QoS, LC3 16_2_1] if Sink ASE or BAP/USR/SCC/BV-088-C [USR SRC Config QoS, LC3 16_2_1] if Source ASE or by other means. The ASE_ID value of the selected ASE characteristic is read and stored as Test_ASE_ID, by executing a GATT Characteristic Read or by other means.
  - The QoS Config operation has been performed on the ASE by executing BAP/USR/SCC/BV-072-C [USR SNK Config QoS, LC3 16_2_1] or BAP/USR/SCC/BV-088-C [USR SRC Config QoS, LC3 16_2_1] or by other means.

- Test Case Configuration

Test Case ID	Initial ASE_State	ASE Type
BAP/USR/SCC/BV-137-C [USR SRC Disable in Enabling state]	0x03 (Enabling)	Source ASE
BAP/USR/SCC/BV-138-C [USR SNK Disable in Enabling or Streaming state]	0x03 (Enabling) or 0x04 (Streaming)	Sink ASE
BAP/USR/SCC/BV-139-C [USR SRC Disable in Streaming state]	0x04 (Streaming)	Source ASE

Table 4.33: Unicast Server Performs Client-Initiated Disable Operation test cases

- Test Procedure

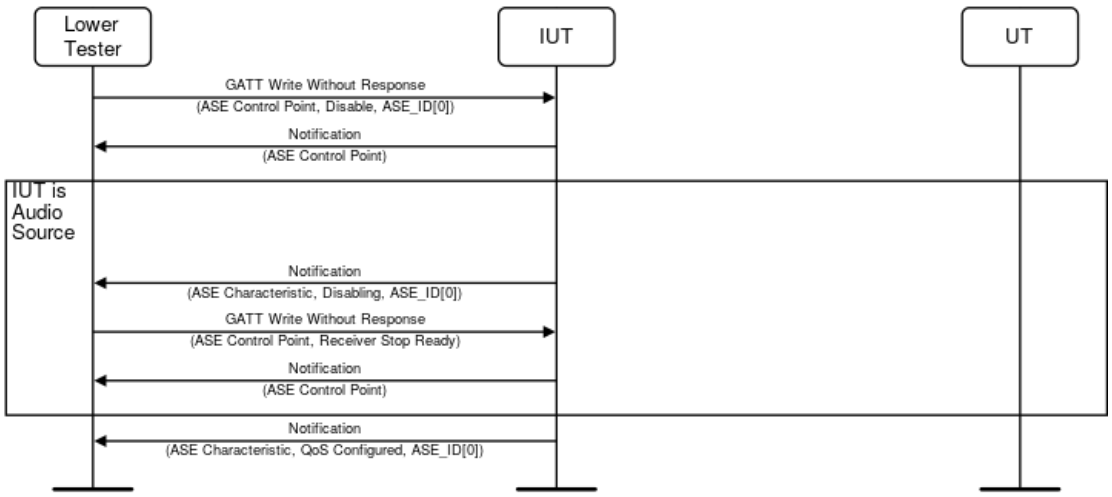


Figure 4.7: Unicast Server Performs Client-Initiated Disable Operation MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x05 (Disable) and the Number_of_ASEs = 1, ASE_ID[0] set to Test_ASE_ID.
2. The IUT sends a notification of the ASE Control Point characteristic.
3. If the IUT is in the Audio Source role:
   a. The IUT sends the Lower Tester a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 1, with ASE_State set to Disabling.
   b. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x06 (Receiver Stop Ready) and the Number_of_ASEs = 1, ASE_ID set to Test_ASE_ID.
   c. The IUT sends a notification of the ASE Control Point characteristic.
   d. The IUT autonomously transitions the ASE for the ASE_ID that was set in Step 1 to QoS Configured state.
4. The IUT sends a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 1, with ASE_State set to QoS Configured.

- Expected Outcome

  Pass verdict

  In Step 2, the IUT sends a notification of the ASE Control Point characteristic.

  If the IUT is in Audio Source role, in Step 3 the IUT sends a notification of the ASE characteristic corresponding to the ASE_ID from Step 1, with ASE_State set to 0x05 (Disabling), and the IUT sends a notification of the ASE Control Point characteristic.

  In Step 4, the IUT sends a notification of the ASE characteristic corresponding to the ASE_ID from Step 1, with ASE_State set to 0x02 (QoS Configured).

4.9.9 Unicast Server Initiates Disable Operation

- Test Purpose

  Verify that a Unicast Server IUT can initiate a Disable operation autonomously for an ASE in the Enabling or Streaming state. The verification is performed for each Initial ASE_State and ASE Type in turn, as specified in Table 4.34.

- Reference

  [3] 5.6.5

- Initial Condition

  - Enable the IUT for use with the ASE Control Point by performing the preamble described in Section 4.4.5.
  - The IUT is a Unicast Server and has an ASE characteristic of the type and ASE Type and ASE_State specified in Table 4.34.

- Test Case Configuration

Test Case ID	Initial ASE_State	ASE Type
BAP/USR/SCC/BV-140-C [USR SRC Initiates Disable in Enabling state]	0x03 (Enabling)	Source ASE
BAP/USR/SCC/BV-141-C [USR SNK Initiates Disable in Enabling or Streaming state]	0x03 (Enabling) or 0x04 (Streaming)	Sink ASE
BAP/USR/SCC/BV-142-C [USR SRC Initiates Disable in Streaming state]	0x04 (Streaming)	Source ASE

Table 4.34: Unicast Server Initiates Disable Operation test cases

- Test Procedure

  1. The Upper Tester commands the IUT to disable the ASE identified by Test_ASE_ID.
  2. The IUT sends a GATT Characteristic Value Notification for the ASE characteristic.

- Expected Outcome

  Pass verdict

  The IUT sends a notification of the ASE characteristic.
  - If the IUT is the Audio Source, the notified characteristic value has the ASE_State field set to 0x05 (Disabling).
  - If the IUT is the Audio Sink, the notified characteristic value has the ASE_State field set to 0x02 (QoS Configured).

4.9.10 Unicast Server Initiates Disable While Streaming on Loss of CIS

- Test Purpose

  Verify that a Unicast Server IUT handles a CIS loss autonomously in the Streaming state when the CIS for an ASE is lost. The verification is performed for each Initial State and ASE Type in turn, as specified in Table 4.35.

- Reference

  [3] 5.6.5

  [6] 3.2, 5.5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server and exposes an ASE of the type specified in Table 4.35.

- The Lower Tester is a Unicast Client.
- The IUT and Lower Tester are streaming audio data, e.g., by running BAP/USR/SCC/BV-135-C [USR SNK Enable] if Audio Sink or BAP/USR/SCC/BV-136-C [USR SRC Enable] if Audio Source or by other means. The ASE_ID of the ASE characteristic associated with the streaming audio date is identified by Test_ASE_ID.
- The Lower Tester enables notification on the IUT by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The Lower Tester enables notification on the IUT by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- Test Case Configuration

Test Case ID	ASE Type
BAP/USR/SCC/BV-167-C [USR SNK Initiates Disable While Streaming – Loss of CIS]	Sink ASE
BAP/USR/SCC/BV-168-C [USR SRC Initiates Disable While Streaming – Loss of CIS]	Source ASE

Table 4.35: Unicast Server Initiates Disable While Streaming on Loss of CIS test cases

- Test Procedure

  1. The Lower Tester tears down the CIS for the ASE that is being used to stream audio data.
  2. The IUT sends a GATT Characteristic Value Notification for the ASE characteristic with ASE_ID = Test_ASE_ID.

- Expected Outcome

  Pass verdict

  The IUT sends a notification of the ASE characteristic with the ASE_State field set to 0x02 (QoS Configured).

4.9.11 Unicast Server Performs Client-Initiated Release Operation

- Test Purpose

  Verify the behavior of a Unicast Server IUT when a Unicast Client initiates a Release operation. The verification is performed for each Initial ASE_State and ASE Type in turn, as specified in Table 4.36.

- Reference

  [3] 5.6.6

- Initial Condition
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server with an ASE characteristic of the ASE Type with ASE_State specified by the Initial ASE_State and ASE Type values in Table 4.36. The Lower Tester has learned the ASE_ID of the specified ASE Type.
  - The Lower Tester is a Unicast Client.

- The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- Test Case Configuration

Test Case ID	Initial ASE_State	ASE Type
BAP/USR/SCC/BV-143-C [USR SRC Release in Codec Configured state]	0x01 (Codec Configured)	Source ASE
BAP/USR/SCC/BV-144-C [USR SNK Release in Codec Configured state]	0x01 (Codec Configured)	Sink ASE
BAP/USR/SCC/BV-145-C [USR SRC Release in QoS Configured state]	0x02 (QoS Configured)	Source ASE
BAP/USR/SCC/BV-146-C [USR SNK Release in QoS Configured state]	0x02 (QoS Configured)	Sink ASE
BAP/USR/SCC/BV-147-C [USR SRC Release in Enabling state]	0x03 (Enabling)	Source ASE
BAP/USR/SCC/BV-148-C [USR SNK Release in Enabling or Streaming state]	0x03 (Enabling) or 0x04 (Streaming)	Sink ASE
BAP/USR/SCC/BV-149-C [USR SRC Release in Streaming state]	0x04 (Streaming)	Source ASE
BAP/USR/SCC/BV-150-C [USR SRC Release in Disabling state]	0x05 (Disabling)	Source ASE

Table 4.36: Unicast Server Performs Client-Initiated Release Operation test cases

- Test Procedure

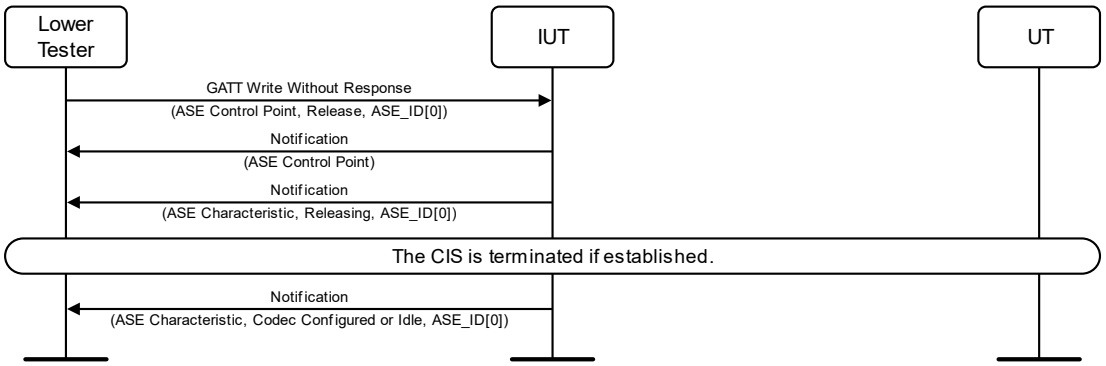


Figure 4.8: Unicast Server Performs Client-Initiated Release Operation MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x08 (Release) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to the value from the Initial Condition
2. The IUT sends a Notification of the ASE Control Point characteristic value.
3. The IUT sends a Notification of the ASE characteristic value for the ASE_ID used in Step 1, with ASE_State set to 0x06 (Releasing).
4. The Lower Tester terminates the CIS if established.
5. The IUT sends a Notification of the ASE characteristic value for the ASE_ID used in Step 1, with ASE_State set to either 0x01 (Codec Configured) or 0x00 (Idle).

- Expected Outcome

  Pass verdict

  The IUT sends a notification of the ASE Control Point characteristic value.

  In Step 3, the IUT sends a notification of the ASE characteristic value with ASE_State set to 0x06 (Releasing).

  In Step 5, the IUT sends a notification of the ASE characteristic value with ASE_State set to either 0x00 (Idle) or 0x01 (Codec Configured).

4.9.12 Unicast Server Initiates Release Operation Autonomously

- Test Purpose

  Verify the behavior of a Unicast Server IUT when initiating a Release operation for an ASE. The verification is performed for each Initial ASE_State and ASE characteristic in turn, as enumerated in the test cases in Table 4.37.

- Reference

  [3] 5.6.6

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has an ASE characteristic of the type and ASE_State specified in Table 4.37.
  - The Lower Tester enables notification of the ASE Control Point by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester enables notification of the specified ASE characteristic by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- Test Case Configuration

Test Case ID	Initial ASE_State	ASE Type
BAP/USR/SCC/BV-152-C [USR SRC Initiates Release in Codec Configured state]	0x01 (Codec Configured)	Source ASE
BAP/USR/SCC/BV-153-C [USR SNK Initiates Release in Codec Configured state]	0x01 (Codec Configured)	Sink ASE
BAP/USR/SCC/BV-154-C [USR SRC Initiates Release in QoS Configured state]	0x02 (QoS Configured)	Source ASE
BAP/USR/SCC/BV-155-C [USR SNK Initiates Release in QoS Configured state]	0x02 (QoS Configured)	Sink ASE
BAP/USR/SCC/BV-156-C [USR SRC Initiates Release in Enabling state]	0x03 (Enabling)	Source ASE
BAP/USR/SCC/BV-157-C [USR SNK Initiates Release in Enabling state]	0x03 (Enabling) or 0x04 (Streaming)	Sink ASE
BAP/USR/SCC/BV-158-C [USR SRC Initiates Release in Streaming state]	0x04 (Streaming)	Source ASE
BAP/USR/SCC/BV-159-C [USR SRC Initiates Release in Disabling state]	0x05 (Disabling)	Source ASE

Table 4.37: Unicast Server Initiates Release Operation Autonomously test cases

- Test Procedure

  1. The Upper Tester orders the IUT to initiate the Release operation.
  2. The IUT sends the Lower Tester a notification of the ASE characteristic, with ASE_State set to 0x06 (Releasing).
  3. The IUT terminates the CIS if established, removing any audio data paths for the ASE.
  4. The IUT sends the Lower Tester a notification of the ASE characteristic with the ASE_ID of the ASE in the Initial Condition, with ASE_State set to 0x00 (Idle) or 0x01 (Codec Configured).

- Expected Outcome

  Pass verdict

  The IUT terminates the CIS if established.

  In Step 2, the IUT sets the ASE_State to 0x06 (Releasing).

  In Step 4, the IUT returns to 0x00 (Idle) or 0x01 (Codec Configured) state.

4.9.13 Unicast Server Performs Update Metadata Operation

- Test Purpose

  Verify that a Unicast Server IUT can perform an Update Metadata operation initiated by a Unicast Client. The verification is performed for each Initial ASE_State and ASE Type in turn, as specified in Table 4.38.

- Reference

  [3] 5.6.4

- Initial Condition

  - The IUT is a Unicast Server and has configured an ASE of the type and in the state specified in Table 4.38 by running BAP/USR/SCC/BV-135-C [USR SNK Enable] or BAP/USR/SCC/BV-136-C [USR SRC Enable] or by other means.
  - The QoS Config operation has been performed on the ASE by executing BAP/USR/SCC/BV-071-C [USR SNK Config QoS, LC3 16_1_1] or BAP/USR/SCC/BV-087-C [USR SRC Config QoS, LC3 16_1_1] or by other means.
  - The value of the Additional_ASE_Parameters field of the selected ASE characteristic has been retrieved by performing the GATT Read Characteristic Value sub-procedure or by other means.

- Test Case Configuration

Test Case ID	ASE Type	Initial ASE_State
BAP/USR/SCC/BV-161-C [USR SRC Update Metadata in Enabling state]	Source ASE	0x03 (Enabling)
BAP/USR/SCC/BV-162-C [USR Audio Sink Performs Update Metadata in Enabling or Streaming state]	Sink ASE	0x03 (Enabling) or 0x04 (Streaming)
BAP/USR/SCC/BV-163-C [USR SRC Update Metadata in Streaming state]	Source ASE	0x04 (Streaming)

Table 4.38: Unicast Server Performs Update Metadata Operation test cases

- Test Procedure

  1. The Lower Tester executes the GATT Write Without Response sub-procedure with the opcode set to 0x07 (Update Metadata) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to Test_ASE_ID
     - Metadata[0] set to a valid value using the TSPX_Update_Metadata IXIT entry
  2. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.
  3. The IUT sends a GATT Characteristic Value Notification for the ASE characteristic.

- Expected Outcome

  Pass verdict

  In Step 2, the IUT sends a notification of the ASE Control Point characteristic with Response_Code set to Success (0x00) for the requested ASE_ID and opcode.

  In Step 3, the notified ASE characteristic value is correctly formatted, the value of the ASE_ID field is set to Test_ASE_ID, and the Additional_ASE_Parameters field contains the values the Metadata sent in Step 1. The value of the ASE_State in the ASE characteristic notification is equal to the value in Table 4.38.

  If the Metadata sent in Step 1 includes a Streaming_Audio_Contexts LTV, the value of the Streaming_Audio_Contexts LTV included in the ASE characteristic notification in Step 3 is set to the value sent in Step 1. If the Metadata sent in Step 1 does not include a Streaming_Audio_Contexts LTV, there is no change to the Streaming_Audio_Contexts LTV included in the ASE characteristic notification in Step 3.

4.9.14 Unicast Server Initiates Update Metadata Operation

- Test Purpose

  Verify that a Unicast Server IUT can autonomously initiate an Update Metadata operation. The verification is performed for each ASE Type and Initial ASE_State in turn, as specified in Table 4.39.

- Reference

  [3] 5.6.4

- Initial Condition

  - The IUT is a Unicast Server and codec configuration has been performed on the ASE specified in Table 4.39 by running BAP/USR/SCC/BV-003-C [USR SNK Config Codec, LC3 16_1] or BAP/USR/SCC/BV-019-C [USR SRC Config Codec, LC3 16_1] or by other means.
  - The QoS Config operation has been performed on the ASE by executing BAP/USR/SCC/BV-037-C [USR SNK Initiates Config Codec, LC3 16_1] or BAP/USR/SCC/BV-071-C [USR SNK Config QoS, LC3 16_1_1] or by other means.
  - The Lower Tester retrieves the value of the Metadata for the ASE by executing the GATT Read Characteristic Value sub-procedure for the ASE characteristic or by other means.

- Test Case Configuration

Test Case ID	ASE Type	Initial ASE_State
BAP/USR/SCC/BV-164-C [USR SRC Initiates Update Metadata in Enabling state]	Source ASE	0x03 (Enabling)
BAP/USR/SCC/BV-165-C [USR SNK Initiates Update Metadata in Enabling or Streaming state]	Sink ASE	0x03 (Enabling) or 0x04 (Streaming)
BAP/USR/SCC/BV-166-C [USR SRC Initiates Update Metadata in Streaming state]	Source ASE	0x04 (Streaming)

Table 4.39: Unicast Server Initiates Update Metadata Operation test cases

- Test Procedure

  1. The Upper Tester orders the IUT to autonomously update its metadata for the specified ASE, updating its metadata to values included in the TSPX_Update_Metadata IXIT entry.
  2. The Lower Tester executes the GATT Read Characteristic Value sub-procedure for the ASE characteristic.

- Expected Outcome

  Pass verdict

  In Step 2, the value of the Metadata read by the Lower Tester is equal to the value set in Step 1. The Streaming_Audio_Contexts value does not change. The value of the ASE_State read by the Lower Tester is the same as the Initial ASE_State in Table 4.39.

  If the Metadata updated in Step 1 includes a Streaming_Audio_Contexts LTV, the value of the Streaming_Audio_Contexts LTV included in the Metadata field read in Step 2 is set to the value sent in Step 1. If the Metadata updated in Step 1 does not include a Streaming_Audio_Contexts LTV, there is no change to the Streaming_Audio_Contexts LTV in the Metadata of the ASE characteristic read in Step 2.

4.10 Unicast Client Streaming

Verify audio streaming by a Unicast Client and one or more Unicast Servers. The number of Unicast Audio Streams created in each test case and the audio capabilities required to enable each test case are dependent on the Audio Configurations supported in Table 4.1: Unicast LC3 Audio Configurations in [3].

4.10.1 Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – LC3

- Test Purpose

  Verify that a Unicast Client IUT can stream audio data over one unicast Audio Stream to or from a Unicast Server. The verification is performed for each ASE Type and QoS settings in turn, as enumerated in the test cases in Table 4.40. This test group applies to Audio Configurations 1, 2, 4, and 10 in Table 4.1: Unicast LC3 Audio Configurations in [3].

- Reference

  [3] 4, 4.4.1, 4.4.2, 4.4.4, 4.4.14

- Initial Condition
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service with an ASE characteristic of the type specified in Table 4.40 and an instantiation of the Published Audio Capabilities Service with available PAC records. The ASE characteristic exposed by the Lower Tester is in the Idle state.
  - The IUT is a Unicast Client and has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester exposes a PAC record, ASE, and Audio Location depending on the ASE Type specified in Table 4.40.
    - If ASE Type is Source ASE:

Audio Channels/ Locations Table 4.40	Source PAC record, Supported_Audio_Channel_Counts parameter with bit # set to ##	Source Audio Locations characteristic
0a	bit 0 set to 0b1	no bits set
0b	not present	no bits set
0c	bit 0 set to 0b1	not present
0d	not present	not present
1	bit 0 set to 0b1	One bit set to 0b1
1a	bit 0 and 1 set to 0b1	One bit set to 0b1
1b	bit 0 set to 0b1	Two bits set to 0b1
1c	bit 0 and 1 set to 0b1	Two bits set to 0b1
2	bit 1 set to 0b1	Two bits set to 0b1
2a	bit 0 and 1 set to 0b1	Two bits set to 0b1
2b	bit 1 set to 0b1	Three bits set to 0b1
2c	bit 0 and 1 set to 0b1	Three bits set to 0b1

    - If ASE Type is Sink ASE:

Audio Channels/ Locations Table 4.40	Sink PAC record, Supported_Audio_Channel_Counts parameter with bit # set to ##	Sink Audio Locations characteristic
0a	bit 0 set to 0b1	no bits set
0b	not present	no bits set
0c	bit 0 set to 0b1	not present
0d	not present	not present
1	bit 0 set to 0b1	One bit set to 0b1
1a	bit 0 and 1 set to 0b1	One bit set to 0b1
1b	bit 0 set to 0b1	Two bits set to 0b1
1c	bit 0 and 1 set to 0b1	Two bits set to 0b1

Audio Channels/ Locations Table 4.40	Sink PAC record, Supported_Audio_Channel_Counts parameter with bit # set to ##	Sink Audio Locations characteristic
2	bit 1 set to 0b1	Two bits set to 0b1
2a	bit 0 and 1 set to 0b1	Two bits set to 0b1
2b	bit 1 set to 0b1	Three bits set to 0b1
2c	bit 0 and 1 set to 0b1	Three bits set to 0b1

- The IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT selects one ASE characteristic and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field value as Test_ASE_ID.

• Test Case Configuration

Test Case ID	ASE Type	Audio Channels/ Locations per ASE	CIS Establishment
BAP/UCL/STR/BV-535-C [UCL, AC 2, Generic]	Source ASE	1	Enable
BAP/UCL/STR/BV-568-C [UCL, AC 2, Generic, Multi Channels]	Source ASE	1a	Enable
BAP/UCL/STR/BV-569-C [UCL, AC 2, Generic, Multi Location]	Source ASE	1b	Enable
BAP/UCL/STR/BV-570-C [UCL, AC 2, Generic, Multi Channels and Location]	Source ASE	1c	Enable
BAP/UCL/STR/BV-552-C [UCL, AC 2, Generic, Mono]	Source ASE	0a	Enable
BAP/UCL/STR/BV-553-C [UCL, AC 2, Generic, Mono, Default Ch Count]	Source ASE	0b	Enable
BAP/UCL/STR/BV-554-C [UCL, AC 2, Generic, Mono, No PACS]	Source ASE	0c	Enable
BAP/UCL/STR/BV-555-C [UCL, AC 2, Generic, Mono, Default Ch Count, No PACS]	Source ASE	0d	Enable
BAP/UCL/STR/BV-536-C [UCL, AC 10, Generic]	Source ASE	2	Enable
BAP/UCL/STR/BV-571-C [UCL, AC 10, Generic, Multi Channels]	Source ASE	2a	Enable
BAP/UCL/STR/BV-572-C [UCL, AC 10, Generic, Multi Location]	Source ASE	2b	Enable
BAP/UCL/STR/BV-573-C [UCL, AC 10, Generic, Multi Channels and Location]	Source ASE	2c	Enable
BAP/UCL/STR/BV-537-C [UCL SRC, AC 1, Generic]	Sink ASE	1	Enable

Test Case ID	ASE Type	Audio Channels/ Locations per ASE	CIS Establishment
BAP/UCL/STR/BV-574-C [UCL, AC 1, Generic, Multi Channels]	Sink ASE	1a	Enable
BAP/UCL/STR/BV-575-C [UCL, AC 1, Generic, Multi Location]	Sink ASE	1b	Enable
BAP/UCL/STR/BV-576-C [UCL, AC 1, Generic, Multi Channels and Location]	Sink ASE	1c	Enable
BAP/UCL/STR/BV-556-C [UCL SRC, AC 1, Generic, Mono]	Sink ASE	0a	Enable
BAP/UCL/STR/BV-557-C [UCL SRC, AC 1, Generic, Mono, Default Ch Count]	Sink ASE	0b	Enable
BAP/UCL/STR/BV-558-C [UCL SRC, AC 1, Generic, Mono, No PACS]	Sink ASE	0c	Enable
BAP/UCL/STR/BV-559-C [UCL SRC, AC 1, Generic, Mono, Default Ch Count, No PACS]	Sink ASE	0d	Enable
BAP/UCL/STR/BV-538-C [UCL SRC, AC 4, Generic]	Sink ASE	2	Enable
BAP/UCL/STR/BV-577-C [UCL, AC 4, Generic, Multi Channels]	Sink ASE	2a	Enable
BAP/UCL/STR/BV-578-C [UCL, AC 4, Generic, Multi Location]	Sink ASE	2b	Enable
BAP/UCL/STR/BV-579-C [UCL, AC 4, Generic, Multi Channels and Location]	Sink ASE	2c	Enable
QoS Config			
BAP/UCL/STR/BV-539-C [UCL, AC 2, Generic, QoS]	Source ASE	1	QoS Config
BAP/UCL/STR/BV-580-C [UCL, AC 2, Generic, QoS, Multi Channels]	Source ASE	1a	QoS Config
BAP/UCL/STR/BV-581-C [UCL, AC 2, Generic, QoS, Multi Location]	Source ASE	1b	QoS Config
BAP/UCL/STR/BV-582-C [UCL, AC 2, Generic, QoS, Multi Channels and Location]	Source ASE	1c	QoS Config
BAP/UCL/STR/BV-560-C [UCL, AC 2, Generic, QoS, Mono]	Source ASE	0a	QoS Config
BAP/UCL/STR/BV-561-C [UCL, AC 2, Generic, QoS, Mono, Default Ch Count]	Source ASE	0b	QoS Config
BAP/UCL/STR/BV-562-C [UCL, AC 2, Generic, QoS, Mono, No PACS]	Source ASE	0c	QoS Config
BAP/UCL/STR/BV-563-C [UCL, AC 2, Generic, QoS, Mono, Default Ch Count, No PACS]	Source ASE	0d	QoS Config
BAP/UCL/STR/BV-540-C [UCL, AC 10, Generic, QoS]	Source ASE	2	QoS Config
BAP/UCL/STR/BV-583-C [UCL, AC 10, Generic, QoS, Multi Channels]	Source ASE	2a	QoS Config

Test Case ID	ASE Type	Audio Channels/ Locations per ASE	CIS Establishment
BAP/UCL/STR/BV-584-C [UCL, AC 10, Generic, QoS, Multi Location]	Source ASE	2b	QoS Config
BAP/UCL/STR/BV-585-C [UCL, AC 10, Generic, QoS, Multi Channels and Location]	Source ASE	2c	QoS Config
BAP/UCL/STR/BV-541-C [UCL SRC, AC 1, Generic, QoS]	Sink ASE	1	QoS Config
BAP/UCL/STR/BV-586-C [UCL, AC 1, Generic, QoS, Multi Channels]	Sink ASE	1a	QoS Config
BAP/UCL/STR/BV-587-C [UCL, AC 1, Generic, QoS, Multi Location]	Sink ASE	1b	QoS Config
BAP/UCL/STR/BV-588-C [UCL, AC 1, Generic, QoS, Multi Channels and Location]	Sink ASE	1c	QoS Config
BAP/UCL/STR/BV-564-C [UCL SRC, AC 1, Generic, QoS, Mono]	Sink ASE	0a	QoS Config
BAP/UCL/STR/BV-565-C [UCL SRC, AC 1, Generic, QoS, Mono, Default Ch Count]	Sink ASE	0b	QoS Config
BAP/UCL/STR/BV-566-C [UCL SRC, AC 1, Generic, QoS, Mono, No PACS]	Sink ASE	0c	QoS Config
BAP/UCL/STR/BV-567-C [UCL SRC, AC 1, Generic, QoS, Mono, Default Ch Count, No PACS]	Sink ASE	0d	QoS Config
BAP/UCL/STR/BV-542-C [UCL SRC, AC 4, Generic, QoS]	Sink ASE	2	QoS Config
BAP/UCL/STR/BV-589-C [UCL, AC 4, Generic, QoS, Multi Channels]	Sink ASE	2a	QoS Config
BAP/UCL/STR/BV-590-C [UCL, AC 4, Generic, QoS, Multi Location]	Sink ASE	2b	QoS Config
BAP/UCL/STR/BV-591-C [UCL, AC 4, Generic, QoS, Multi Channels and Location]	Sink ASE	2c	QoS Config

Table 4.40: Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – LC3 test cases

- Test Procedure

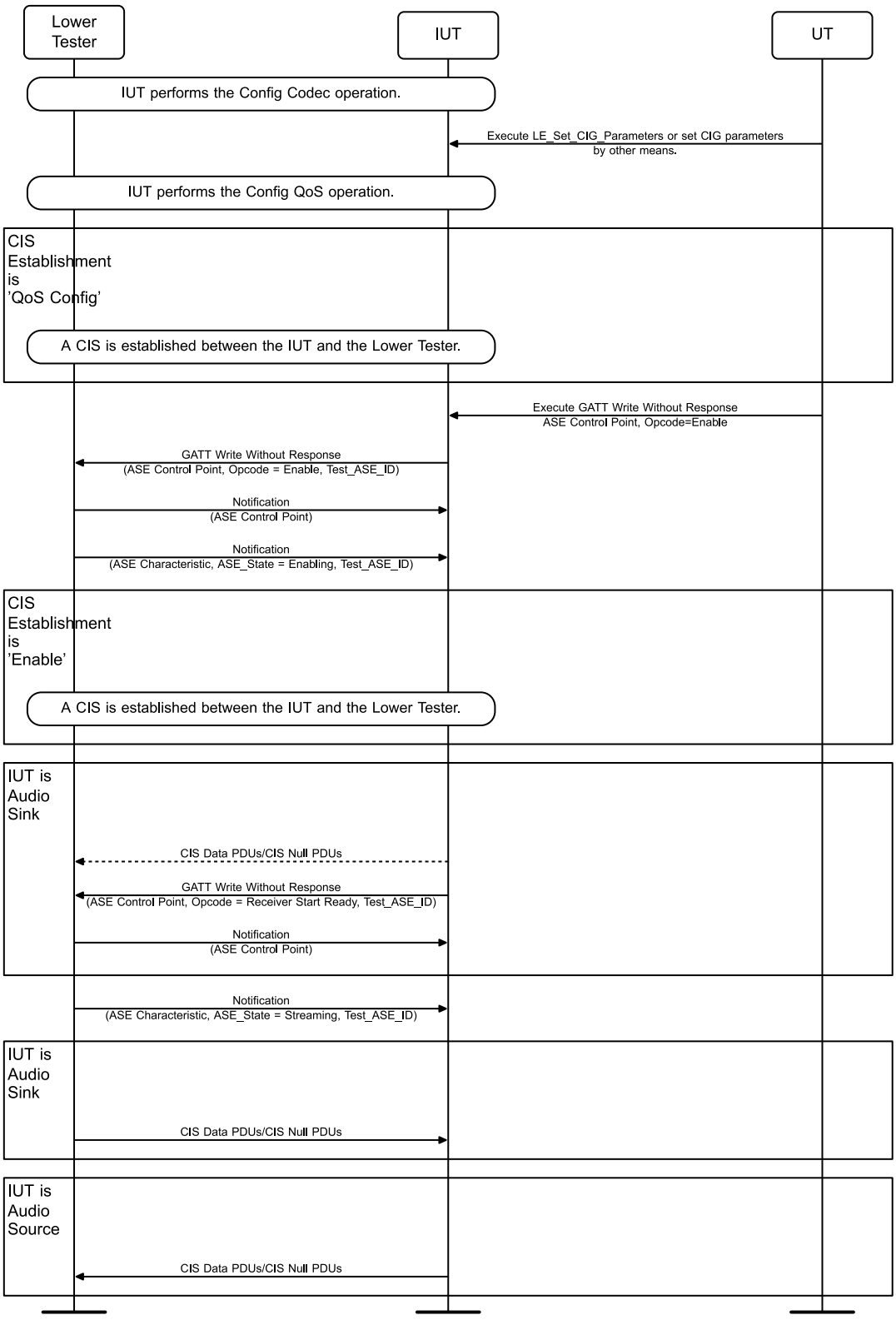


Figure 4.9: Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – LC3 MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1 if ASE Type is Sink ASE, otherwise TSPX_CODEC_CONFIG_SOURCE_ASEID1
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count set to 1 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - CIG_ID and CIS_ID set to values obtained in Step 6.
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1 ID1 if ASE Type is Sink ASE, otherwise set to TSPX_QOS_CONFIG_SOURCE_ASEID1
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID.
9. If CIS Establishment as specified in Table 4.40 is QoS Config:
   a. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
   b. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
10. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 1
    - ASE_ID[0] set using the value from the Initial Condition
    - Metadata set to the TSPX_Metadata IXIT entry
11. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
12. The Lower Tester sends the IUT a notification of the ASE characteristic value that corresponds to the ASE_ID value equal to Test_ASE_ID with the ASE_State set to 0x03 (Enabling).
13. If CIS Establishment as specified in Table 4.40 is Enable:
    a. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
    b. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. If not already set up, the audio data paths are configured by executing the preamble in Section 4.4.9.

15. If the IUT is in the Audio Sink role:
    a. The IUT may send CIS Data PDUs or CIS Null PDUs to the Lower Tester.
    b. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
        - Number_of_ASEs = 1
        - ASE_ID set using the value from the Initial Condition
    c. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
16. The Lower Tester sends the IUT a notification of the ASE characteristic value corresponding to the ASE_ID value equal to Test_ASE_ID with ASE_State set to 0x04 (Streaming).
17. If the IUT is in the Audio Sink role:
    - The Lower Tester sends CIS Data PDUs or CIS Null PDUs.
18. If the IUT is in the Audio Source role:
    - The IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  The ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries.

  If the IUT is in the Audio Sink role, the IUT receives SDUs with a zero or more length that contains LC3-encoded data formatted using the LC3 Media Packet format (defined in [3] Section 4.2).

  If the IUT is in the Audio Source role, the IUT sends SDUs with a zero or more length that uses the LC3 Media Packet format (defined in [3] Section 4.2).

  For the Mono TCIDs, the IUT doesn't send an Audio_Channel_Allocation LTV.

4.10.2 Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – Vendor-Specific Codec

- Test Purpose

  Verify that a Unicast Client IUT can stream audio data with a vendor-specific codec over one unicast Audio Stream to/from a Unicast Server. The verification is performed for each ASE Type and Config Parameters in turn, as enumerated in the test cases in Table 4.41. This test group applies to Audio Configurations 1, 2, 4, and 10, as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.1, 4.4.2, 4.4.4, 4.4.14

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service exposing an ASE characteristic of the ASE Type listed in Table 4.41 and an instantiation of the Published Audio Capabilities Service with available PAC records. The ASE characteristic exposed by the Lower Tester is in the Idle state.
  - The IUT is a Unicast Client and has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.

- The Lower Tester exposes a PAC record, ASE, and Audio Location depending on the ASE Type specified in Table 4.41.
  - If ASE Type is Source ASE:
    - If the Audio Channels/Locations column in Table 4.41 specifies 1 Audio Channels/Locations:
      - If the Source PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1.
    - If the Audio Channels/Locations column in Table 4.41 specifies 2 Audio Channels/ Locations:
      - If the Source PAC record contains a Supported_Audio_Channel_Counts parameter, bit 1 is set to 0b1. The Source Audio Locations characteristic contains two bits set to 0b1.
  - If ASE Type is Sink ASE:
    - If the Audio Channels/Locations column in Table 4.41 specifies 1 Audio Channels/Locations:
      - If the Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1.
    - If the Audio Channels/Locations column in Table 4.41 specifies 2 Audio Channels/Locations:
      - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 1 is set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.
- The IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT selects one characteristic of the ASE Type listed in Table 4.41 and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field value as Test_ASE_ID.

• Test Case Configuration

Test Case ID	ASE Type	Channel Count
BAP/UCL/STR/BV-129-C [UCL SRC, AC 1, VS Codec]	Sink ASE	1
BAP/UCL/STR/BV-130-C [UCL SRC, AC 4, VS Codec]	Sink ASE	2
BAP/UCL/STR/BV-131-C [UCL, AC 2, VS Codec]	Source ASE	1
BAP/UCL/STR/BV-132-C [UCL, AC 10, VS Codec]	Source ASE	2

Table 4.41: Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – Vendor Specific Codec test cases

- Test Procedure

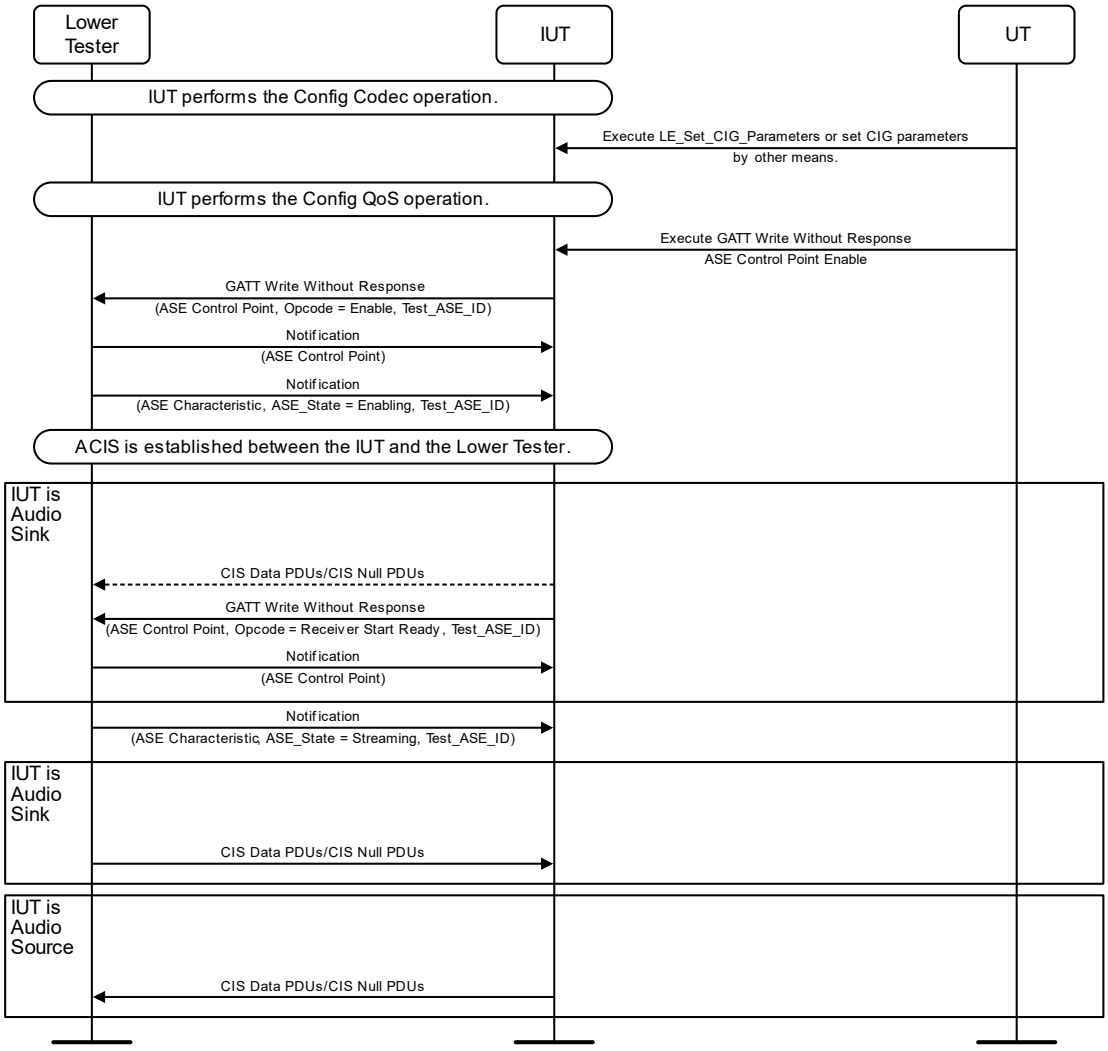


Figure 4.10: Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – Vendor Specific Codec MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Target_Latency[0] set to a valid value
   - Target_PHY[0] set to a valid value
   - Codec_ID[0] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7].
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The Upper Tester orders the IUT to execute the LE_Set_CIG_Parameters command if the IUT incorporates HCI or sets the CIG parameters by other means.

5. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs = 1
   - ASE_ID[0] set to Test_ASE_ID
   - CIG_ID[0] and CIS_ID[0] set to values matching values used in Step 2
   - SDU_Interval[0] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] set to TSPX_VS_QoS_Framing
   - PHY[0] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] set to TSPX_VS_QoS_Presentation_Delay
6. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
7. The Lower Tester sends the IUT a notification of the ASE characteristic value for the ASE_ID that was set in Step 5.
8. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0], CIG_ID[0], and CIS_ID[0] set using the values from the Initial Condition
   - Metadata set to the TSPX_Metadata IXIT entry
9. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
10. The Lower Tester sends the IUT a notification of the ASE characteristic value that corresponds to the ASE_ID used in Step 4 with the ASE_State set to 0x03 (Enabling).
11. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
12. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
13. The audio data paths are configured by executing the preamble in Section 4.4.9.
14. If the IUT is in the Audio Sink role:
    a. The IUT may send CIS Data PDUs or CIS Null PDUs to the Lower Tester.
    b. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
       - Number_of_ASEs set to 1
       - ASE_ID[0] set to Test_ASE_ID
    c. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic value.
15. The Lower Tester sends the IUT a notification of the ASE characteristic value that corresponds to the ASE_ID that was set in Step 9 with ASE_State set to 0x04 (Streaming).
16. If the IUT is in the Audio Sink role:
    a. The Lower Tester transmits CIS Data PDUs or CIS Null PDUs.
17. If the IUT is in the Audio Source role:
    a. The IUT transmits CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  If the IUT is in the Audio Sink role, the IUT receives SDUs with a zero or more length.

  If the IUT is in the Audio Source role, the IUT sends SDUs with a zero or more length.

4.10.3 Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3

- Test Purpose

  Verify that a Unicast Client IUT can stream LC3-encoded audio data over two audio streams with one bidirectional CIS to and from a Unicast Server. This test group applies to Audio Configurations 3, 5, and 7(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.3, 4.4.5, 4.4.8, 5.6.3.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service exposing at least one of each of Sink ASE and Source ASE characteristics and an instantiation of the Published Audio Capabilities Service with available PAC records including at least one Source PAC and at least one Sink PAC. The ASEs exposed by the Lower Tester are in the Idle state.
  - The IUT is a Unicast Client and has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester exposes source and sink PAC records, ASEs, and Audio Locations.
    - If ASE Type is Source ASE:
      - If the Audio Channels/Locations column in Table 4.42 specifies 1 Audio Channels/Locations:
        - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1.
      - If the Audio Channels/Locations column in Table 4.42 specifies 2 Audio Channels/Locations:
        - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 1 set to 0b1. The Source Audio Locations characteristic contains two bits set to 0b1.
    - If ASE Type is Sink ASE:
      - If the Audio Channels/Locations column in Table 4.42 specifies 1 Audio Channels/Locations:
        - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1.
      - If the Audio Channels/Locations column in Table 4.42 specifies 2 Audio Channels/Locations:
        - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 1 set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.

- The IUT enables notification for each of the two selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT enables notification of the ASE Control Point by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT reads the characteristic values of one Sink ASE and one Source ASE by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Sink_ASE_ID1 and Test_Source_ASE_ID1, respectively.

• Test Case Configuration

Test Case ID	Audio Channels / Locations per Sink ASE	Number of CISes	CIS Establishment	
			Sink State	Source State
BAP/UCL/STR/BV-523-C [UCL, AC 3, Generic]	1	1	Enable	Enable
BAP/UCL/STR/BV-524-C [UCL, AC 5, Generic]	2	1	Enable	Enable
BAP/UCL/STR/BV-525-C [UCL, AC 7(i), Generic]	1	2	Enable	Enable
BAP/UCL/STR/BV-543-C [UCL, AC 3, Generic, Enable, QoS]	1	1	Enable	QoS Config
BAP/UCL/STR/BV-544-C [UCL, AC 5, Generic, Enable, QoS]	2	1	Enable	QoS Config
BAP/UCL/STR/BV-545-C [UCL, AC 7(i), Generic, Enable, QoS]	1	2	Enable	QoS Config
BAP/UCL/STR/BV-546-C [UCL, AC 3, Generic, QoS, Enable]	1	1	QoS Config	Enable
BAP/UCL/STR/BV-547-C [UCL, AC 5, Generic, QoS, Enable]	2	1	QoS Config	Enable
BAP/UCL/STR/BV-548-C [UCL, AC 7(i), Generic, QoS, Enable]	1	2	QoS Config	Enable
BAP/UCL/STR/BV-549-C [UCL, AC 3, Generic, QoS, QoS]	1	1	QoS Config	QoS Config
BAP/UCL/STR/BV-550-C [UCL, AC 5, Generic, QoS, QoS]	2	1	QoS Config	QoS Config
BAP/UCL/STR/BV-551-C [UCL, AC 7(i), Generic, QoS, QoS]	1	2	QoS Config	QoS Config

Table 4.42: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3 test cases

- Test Procedure

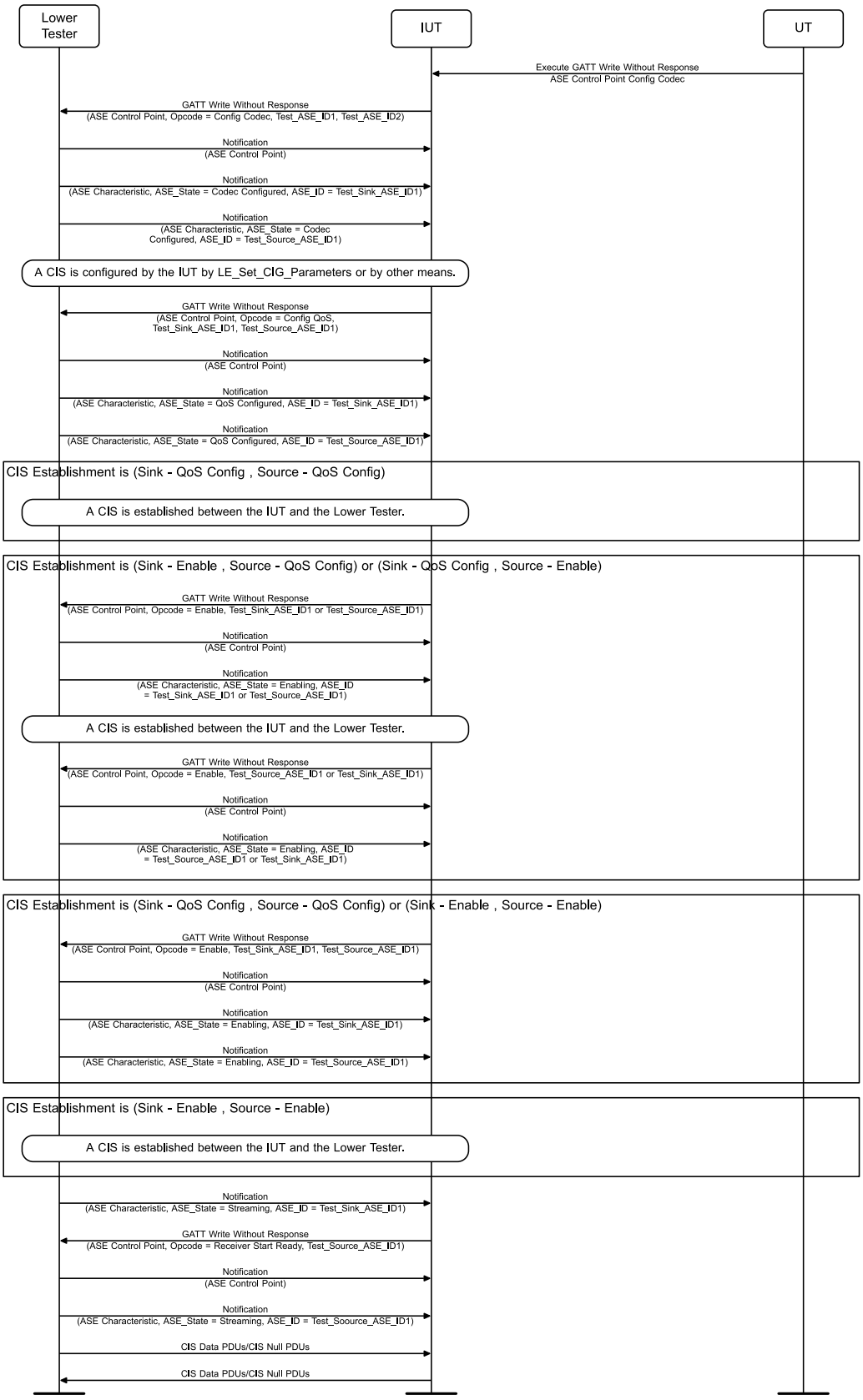


Figure 4.11: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3 MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID1
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Sink_ASE_ID1.
4. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Source_ASE_ID2.
5. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count set to the value in Table 4.42 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
6. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
7. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - CIG_ID and CIS_ID set to values obtained in Step 6. If using multiple CISes, the CIS_IDs must be unique for each.
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
8. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
9. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Sink_ASE_ID1.
10. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Source_ASE_ID2.
11. If CIS Establishment as specified in Table 4.42 is Sink – QoS Config, Source – QoS Config:
    a. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
    b. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
12. If CIS Establishment as specified in Table 4.42 is (Sink – QoS Config , Source – Enable) or (Sink – Enable, Source – QoS Config):
    a. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
       - Number_of_ASEs set to 1
       - ASE_ID[0] set to Test_Sink_ASE_ID1 or Test_Source_ASE_ID1 as indicated by Table 4.42
       - Metadata set to the TSPX_Metadata IXIT entry
    b. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.

c. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Sink_ASE_ID1 or Test_Source_ASE_ID1 as indicated by Table 4.42.
d. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
e. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
f. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_Sink_ASE_ID1 or Test_Source_ASE_ID1 as indicated by Table 4.42
   - Metadata set to the TSPX_Metadata IXIT entry
g. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
h. The Lower Tester sends the IUT a notification of the ASE characteristic for the Test_Sink_ASE_ID1 Test_Source_ASE_ID1 as indicated by Table 4.42.

13. If CIS Establishment as specified in Table 4.42 is (Sink – QoS Config, Source – QoS Config) or (Sink – Enable, Source – Enable):
    a. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
       - Number_of_ASEs set to 2
       - ASE_ID[0] set to Test_Sink_ASE_ID1
       - ASE_ID[1] set to Test_Source_ASE_ID1
       - Metadata set to the TSPX_Metadata IXIT entry
    b. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
    c. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Sink_ASE_ID1.
    d. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Source_ASE_ID1.
14. If CIS Establishment as specified in Table 4.42 is (Sink – Enable, Source – Enable):
    a. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
    b. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
15. If not already set up, the audio data paths are configured by executing the preamble in Section 4.4.9.
16. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Sink_ASE_ID1.
17. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs set to 1
    - ASE_ID[0] set to Test_Source_ASE_ID1
18. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
19. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID used in Step 17.
20. The Lower Tester sends CIS Data PDUs or CIS Null PDUs.
21. The IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  In Step 22, the IUT receives SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2).

  In Step 23, the IUT sends SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2).

4.10.4 Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – Vendor-Specific Codec

- Test Purpose

  Verify that a Unicast Client IUT can stream audio data using a vendor-specific codec over two audio streams (one as source, one as sink) to and from a Unicast Server. The verification is performed for each Config Parameters in turn, as specified in Table 4.43. This test group applies to Audio Configurations 3, 5, and 7(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.3, 4.4.5, 4.4.8, 5.6.3.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server including an instantiation of the Audio Stream Control Service exposing at least one of each of Sink ASE and Source ASE characteristics and an instantiation of the Published Audio Capabilities Service with available PAC records including at least one Source PAC and at least one Sink PAC. The ASEs exposed by the Lower Tester are in the Idle state.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.

- The Lower Tester exposes source and sink PAC records, ASEs, and Audio Locations.
  - If ASE Type is Source ASE:
    - If the Audio Channels/Locations column in Table 4.43 specifies 1 Audio Channels/Locations:
      - If the Source PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1.
    - If the Audio Channels/Locations column in Table 4.43 specifies 2 Audio Channels/Locations:
      - If the Source PAC record contains a Supported_Audio_Channel_Counts parameter, bit 1 is set to 0b1. The Source Audio Locations characteristic contains two bits set to 0b1.
  - If ASE Type is Sink ASE:
    - If the Audio Channels/Locations column in Table 4.43 specifies 1 Audio Channels/Locations:
      - If the Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1.
    - If the Audio Channels/Locations column in Table 4.43 specifies 2 Audio Channels/Locations:
      - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 1 is set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.
- The IUT enables notification for each of the two selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT enables notification of the ASE Control Point by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT reads the characteristic values of one Sink ASE and one Source ASE by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_ASE_ID1 and Test_ASE_ID2, respectively.

• Test Case Configuration

Test Case ID	Audio Channels / Locations per Sink ASE	CIS Count
BAP/UCL/STR/BV-229-C [UCL, AC 3, VS]	1	1
BAP/UCL/STR/BV-230-C [UCL, AC 5, VS]	2	1
BAP/UCL/STR/BV-231-C [UCL, AC 7, VS]	1	2

Table 4.43: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – Vendor-Specific Codec test cases

- Test Procedure

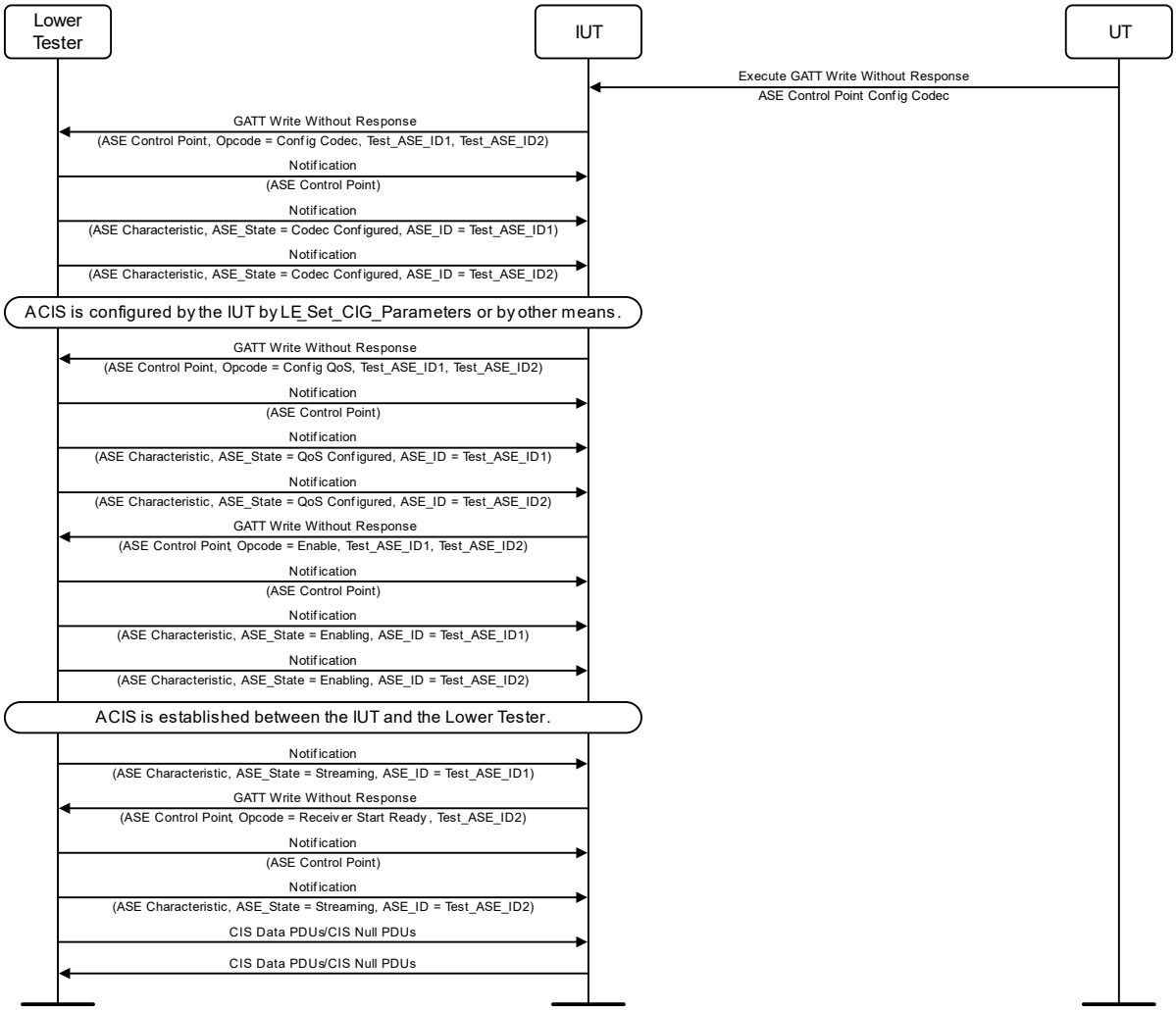


Figure 4.12: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – Vendor-Specific Codec MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - Target_Latency[0] and Target_PHY set to values supported by the IUT
   - Codec_ID[0] and [1] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] and [1] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] and [1] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID1.
4. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID2.
5. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count set to the value in Table 4.43 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.

6. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
7. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs = 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - CIG_ID and CIS_ID set to the values obtained in Step 6, with CIS_ID[0] and CIS_ID[1] set to different values
   - SDU_Interval[0] and [1] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] and [1] set to TSPX_VS_QoS_Framing
   - PHY[0] and [1] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] and [1] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] and [1] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] and [1] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] and [1] set to TSPX_VS_QoS_Presentation_Delay
8. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
9. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID1.
10. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID2.
11. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 2
    - ASE_ID[0] set to Test_ASE_ID1
    - ASE_ID[1] set to Test_ASE_ID2
    - Metadata set to the TSPX_Metadata IXIT entry
12. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
13. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID1.
14. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID2.
15. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
16. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
17. The audio data paths are configured by executing the preamble in Section 4.4.9.
18. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID1.
19. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs set to 1
    - ASE_ID set to Test_ASE_ID2
20. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
21. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_ASE_ID2.
22. The Lower Tester sends CIS Data PDUs or CIS Null PDUs.
23. The IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  In Step 22, the IUT receives SDUs with a zero or more length.

  In Step 23, the IUT sends SDUs with a zero or more length.

4.10.5 Unicast Client Streaming – 2 Unicast Servers, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data via two bidirectional CISes to two Unicast Servers, each with one Sink ASE and one Source ASE with one audio channel per ASE. This test group applies to Audio Configuration 7(ii), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.9, 5.6.3.1

- Initial Condition

  - There are two Lower Testers acting as Unicast Servers: Lower Tester 1 and Lower Tester 2.
  - Establish a Bearer connection between both Lower Testers and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - Lower Tester 1 includes an instantiation of the Audio Stream Control Service exposing at least one Sink ASE characteristic and an instantiation of the Published Audio Capabilities Service with available PAC records including at least one Sink PAC. The exposed Sink ASE is in the Idle state.
  - Lower Tester 2 includes an instantiation of the Audio Stream Control Service exposing at least one Source ASE characteristic and an instantiation of the Published Audio Capabilities Service with available PAC records including at least one Source PAC. The exposed Source ASE is in the Idle state.
  - The IUT is a Unicast Client and has discovered all ASCS characteristics of both Lower Testers by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - If the TSPX_EXPOSE_CSIS IXIT Entry is set to True, Lower Tester 1 and Lower Tester 2 include an instance of CSIS that conforms to the CAP Acceptor Role.
  - Lower Tester 1 exposes a sink PAC record, ASE, and Audio Location.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
  - Lower Tester 2 exposes a source PAC record, ASE, and Audio Location.
    - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
  - The IUT enables notification for each of the two selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- The IUT enables notification of the ASE Control Point on both Lower Testers by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT reads the characteristic value of one Sink ASE on Lower Tester 1 by executing the GATT Read Characteristic Value sub-procedure and caches the ASE_ID field value as Test_Sink_ASE_ID1. The IUT reads the characteristic value of one Source ASE on Lower Tester 2 by executing the GATT Read Characteristic Value sub-procedure and caches the ASE_ID field values as Test_Source_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-526-C [UCL, AC 7(ii), Generic]

Table 4.44: Unicast Client Streaming – 2 Unicast Servers, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3 test cases

Round	Target	ASE_ID	Codec Config	QoS Config
1	Lower Tester 1	Test_Sink_ASE_ID1	TSPX_CODEC_CONFIG_SINK_ASEID1	TSPX_QOS_CONFIG_SINK_ASEID1
2	Lower Tester 2	Test_Source_ASE_ID2	TSPX_CODEC_CONFIG_SOURCE_ASEID2	TSPX_QOS_CONFIG_SOURCE_ASEID2

Table 4.45: Rounds for Unicast Client Streaming – 2 Unicast Servers, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3

- Test Procedure

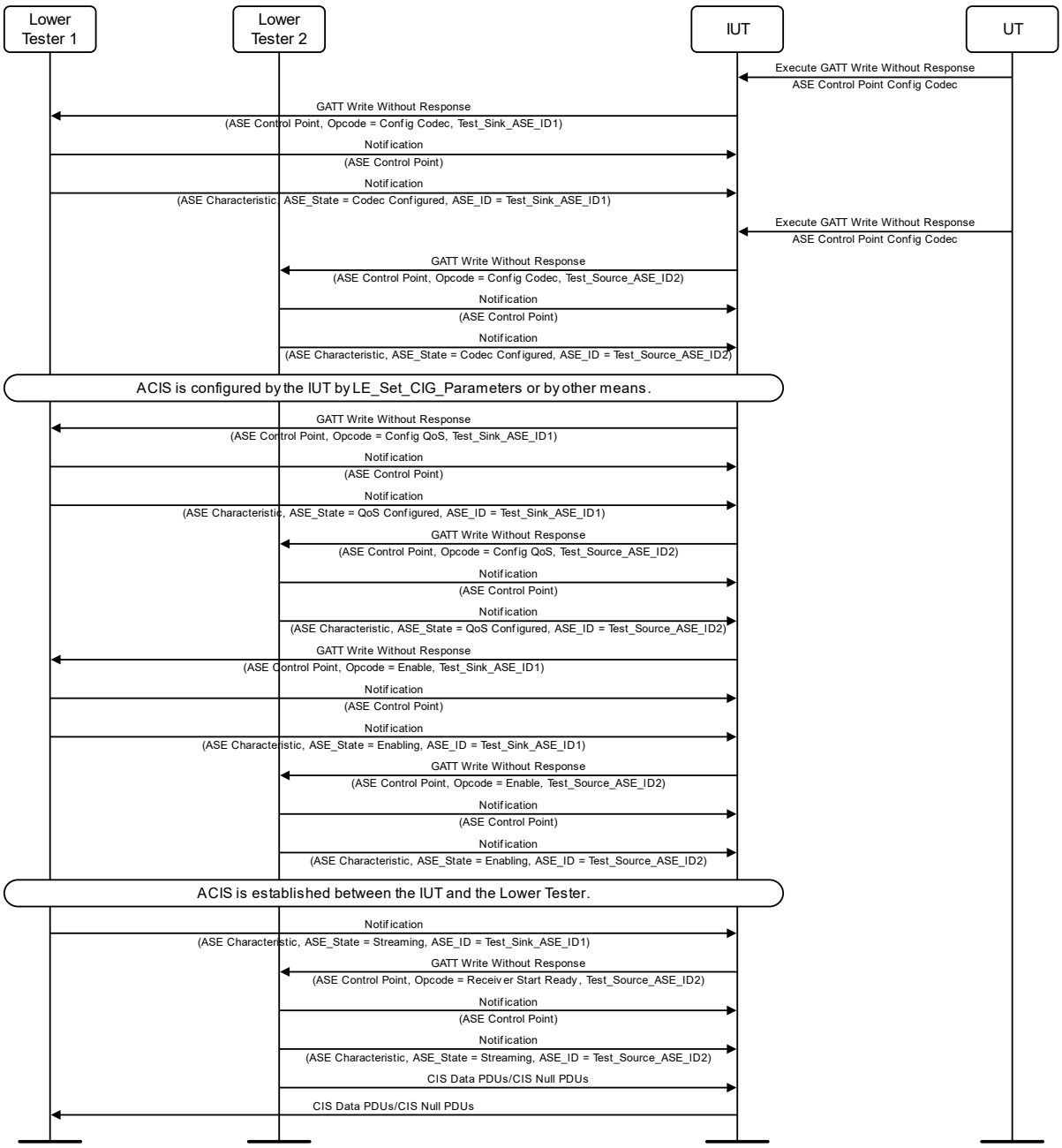


Figure 4.13: Unicast Client Streaming – 2 Unicast Servers, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3 MSC

Repeat Steps 1–3 for each round in Table 4.45.

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on the Lower Tester specified in Table 4.45 with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the value of the ASE_ID specified in Table 4.45.
   - Remaining parameters set to values referenced in Codec Config for the ASE specified in Table 4.45.
2. The Lower Tester specified in Table 4.45 sends the IUT a notification of the ASE Control Point characteristic.

3. The Lower Tester specified in Table 4.45 sends the IUT a notification of the ASE characteristic for the ASE_ID used in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.

Repeat Steps 6–8 for each round in Table 4.45.

6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on the Lower Tester specified in Table 4.45 with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to the value of the ASE_ID specified in Table 4.45
   - CIG_ID[0] and CIS_ID[0] set to values obtained in Step 5. The CIS_ID fields for each ASE are set to different values.
   - Remaining parameters set to values referenced in QoS Config for the ASE specified in Table 4.45
7. The Lower Tester specified in Table 4.45 sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester specified in Table 4.45 sends the IUT a notification of the ASE characteristic for the ASE_ID used in Step 6.

Repeat Steps 9–11 for each Lower Tester.

9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on the Lower Tester specified in Table 4.45 with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to the value of the ASE_ID specified in Table 4.45
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester specified in Table 4.45 sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester specified in Table 4.45 sends the IUT a notification of the ASE characteristic for the ASE_ID used in Step 9.
12. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
13. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The audio data paths are configured by executing the preamble in Section 4.4.9.
15. The Lower Tester sends the IUT a notification of the ASE characteristic for Test_Sink_ASE_ID1.
16. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on Lower Tester 2 with the opcode set to 0x04 (Receiver Start Ready) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_Source_ASE_ID2
17. Lower Tester 2 sends the IUT a notification of the ASE Control Point characteristic.
18. Lower Tester 2 sends the IUT a notification of the ASE characteristic for Test_Source_ASE_ID2.
19. Lower Tester 2 sends CIS Data PDUs or CIS Null PDUs.
20. The IUT sends CIS Data PDUs or CIS Null PDUs to Lower Tester 1.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  In Step 19, the IUT receives SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2) or CIS Null PDUs.

  In Step 20, the IUT sends SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2) or CIS Null PDUs.

4.10.6 Unicast Client Streaming – 1 Unicast Server, 2 Streams, 2 Sink ASEs – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data via two unidirectional CISes on two ASEs to a Unicast Server Audio Sink that supports two audio locations with one audio channel per ASE. This test group applies to Audio Configuration 6(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.6

- Initial Condition
  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester exposes a Sink_Audio_Locations characteristic with value including at least two bits set to 0b1.
  - The Lower Tester exposes at least two Sink ASE characteristics.
  - The Lower Tester exposes a sink PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.
  - The IUT enables notification for the selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT selects two Sink ASE characteristics and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Sink_ASE_ID1 and Test_Sink_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-527-C [UCL, AC 6(i), Generic]

Table 4.46: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 2 Sink ASEs – LC3 test cases

- Test Procedure

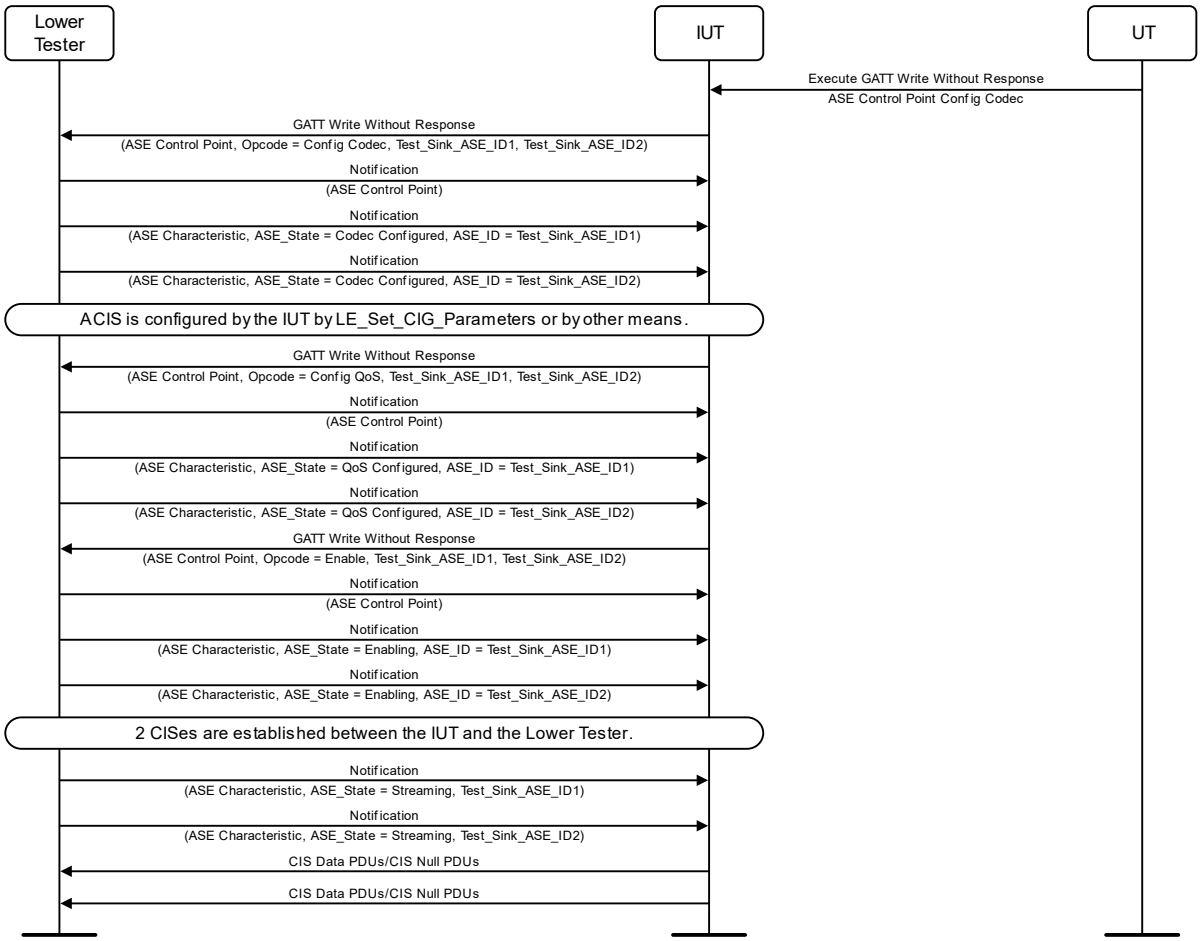


Figure 4.14: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 2 Sink ASEs – LC3 MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID2
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends notifications for both Sink ASE characteristics with the ASE_IDs used in Step 1.

4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - CIG_ID and CIS_ID set to the values obtained in Step 5, with CIS_ID[0] and CIS_ID[1] set to different values
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 6.
9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID1.
12. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID2.
13. The IUT establishes two unidirectional CISes by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
14. The Lower Tester accepts the establishment of both CISes by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
15. The Lower Tester sends notifications for both Sink ASE characteristics with the ASEs in Streaming state.
16. On both audio streams, the IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On both audio streams, the IUT sends SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2).

BAP/UCL/STR/BV-296-C [UCL, AC 6(i), VS]

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data using a vendor-specific codec via two unidirectional CISes on two ASEs to a Unicast Server Audio Sink that supports two audio locations with one audio channel per ASE. This test group applies to Audio Configuration 6(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.6

- Initial Condition

  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester exposes a Sink_Audio_Locations characteristic with value including at least two bits set to 0b1.
  - The Lower Tester exposes at least two Sink ASE characteristics.
  - The Lower Tester exposes a sink PAC record, ASEs, and Audio Locations.
    - If the Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.
  - The IUT enables notification for the selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT selects two Sink ASE characteristics and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_ASE_ID1 and Test_ASE_ID2.

- Test Procedure

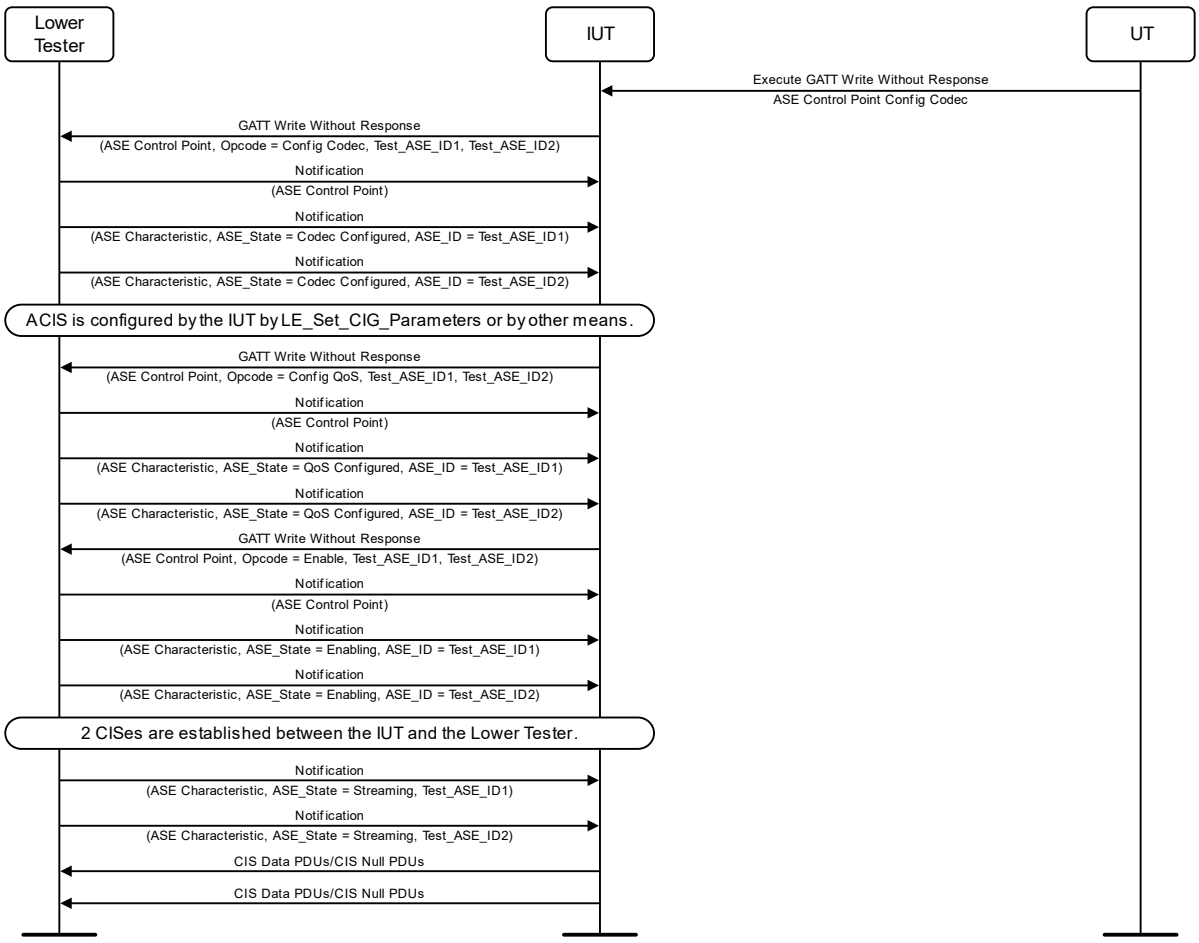


Figure 4.15: UCL Streaming 1 Server 2 Streams 2 Sinks – Vendor Specific MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - Target_Latency[0] and [1] set to a valid value
   - Target_PHY[0] and [1] set to a valid value
   - Codec_ID[0] and [1] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] and [1] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] and [1] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7], including the Audio_Channel_Allocation LTV structure. The Audio_Channel_Allocation value contains one bit set to 0b1 and which matches a bit set to 0b1 in the Sink_Audio_Locations characteristic value. The Audio_Channel_Allocation value for ASE_ID[0] is different from the Audio_Channel_Allocation value for ASE_ID[1].
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends notifications for both Sink ASE characteristics with the ASE_IDs used in Step 1.

4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs = 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - CIG_ID and CIS_ID set to the values obtained in Step 5, with CIS_ID[0] and CIS_ID[1] set to different values
   - SDU_Interval[0] and [1] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] and [1] set to TSPX_VS_QoS_Framing
   - PHY[0] and [1] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] and [1] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] and [1] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] and [1] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] and [1] set to TSPX_VS_QoS_Presentation_Delay
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 6.
9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID1.
12. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID2.
13. The IUT establishes two unidirectional CISes by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
14. The Lower Tester accepts the establishment of both CISes by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
15. The Lower Tester sends notifications for both Sink ASE characteristics with the ASEs in the Streaming state.
16. On both audio streams, the IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  On both audio streams, the IUT sends SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2).

4.10.7 Unicast Client Streaming – 2 Unicast Servers, 2 Streams – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data via two synchronized streams to two Audio Sink Unicast Servers. The Unicast Server Lower Testers each support at least one audio location. This test group applies to Audio Configuration 6(ii), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.7

- Initial Condition

  - The IUT is a Unicast Client.
  - There are two Unicast Server Lower Testers: Lower Tester 1 and Lower Tester 2.
  - For each Lower Tester, establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. Each Lower Tester exposes at least one Sink ASE characteristic.
  - The IUT has discovered the Audio Locations and PAC records on each Lower Tester by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
  - For each Lower Tester, the IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - For each Lower Tester, the IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - If the TSPX_EXPOSE_CSIS IXIT Entry is set to True, Lower Tester 1 and Lower Tester 2 include an instance of CSIS that conforms to the CAP Acceptor Role.
  - Lower Tester 1 exposes a sink PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
  - Lower Tester 2 exposes a sink PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
  - For each Lower Tester, the IUT selects a Sink ASE characteristic and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Sink_ASE_ID1 (Lower Tester 1) and Test_Sink_ASE_ID2 (Lower Tester 2).

- Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-528-C [UCL, AC 6(ii), Generic]

Table 4.47: Unicast Client Streaming – 2 Unicast Servers, 2 Streams – LC3 test cases

Round	Target	ASE_ID	Codec Config	QoS Config
1	Lower Tester 1	Test_Sink_ASE_ID1	TSPX_CODEC_CONFIG_SINK_ASEID1	TSPX_QOS_CONFIG_SINK_ASEID1
2	Lower Tester 2	Test_Sink_ASE_ID2	TSPX_CODEC_CONFIG_SINK_ASEID2	TSPX_QOS_CONFIG_SINK_ASEID2

Table 4.48: Rounds for Unicast Client Streaming – 2 Unicast Servers, 2 Streams – LC3

- Test Procedure

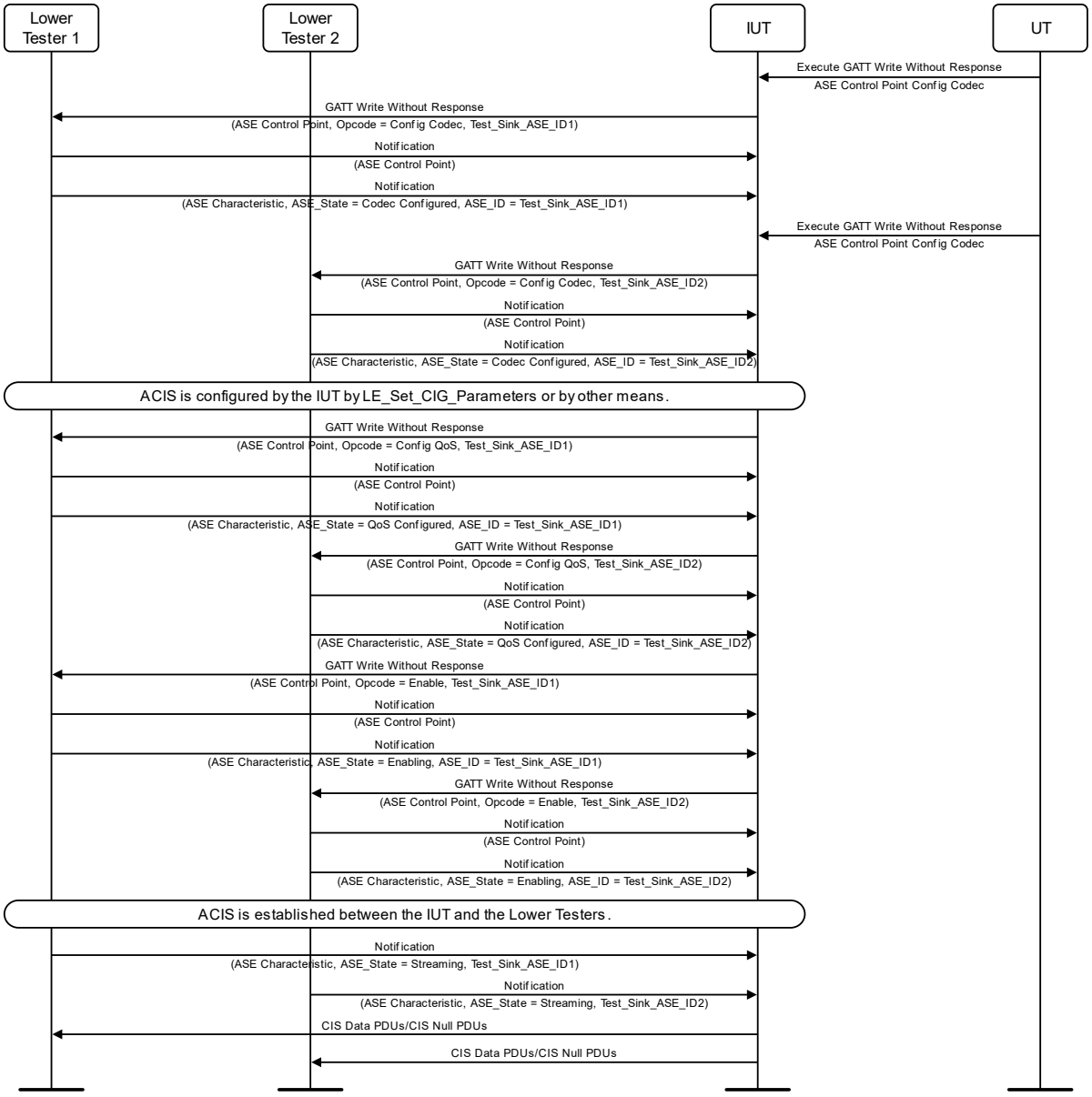


Figure 4.16: Unicast Client Streaming – 2 Unicast Servers, 2 Streams – LC3 MSC

Execute Steps 1–3 for each round in Table 4.48 against the Lower Tester specified in Table 4.48.

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the ASE_ID specified in Table 4.48
   - Codec parameters set to values referenced in Codec Config for the ASE specified in Table 4.48
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.

Execute Steps 6–8 for each round in Table 4.48 against the Lower Tester specified in Table 4.48.

6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to the ASE_ID specified in Table 4.48
   - CIG_ID[0] and CIS_ID[0] set to the values obtained in Step 4
   - Remaining parameters set to values referenced in QoS Config for the ASE specified in Table 4.48
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 6.

Execute Steps 9–11 for each round in Table 4.48 against the Lower Tester specified in Table 4.48.

9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the ASE_ID specified in Table 4.48
   - CIG_ID and CIS_ID set using the values from Step 5
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 8.
12. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
13. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The audio data paths are configured by executing the preamble in Section 4.4.9.
15. Lower Tester 1 sends a notification of the ASE for Test_Sink_ASE_ID1 in the Streaming state.
16. Lower Tester 2 sends a notification of the ASE for Test_Sink_ASE_ID2 in the Streaming state.
17. The IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  The IUT sends SDUs with a zero or more length using the LC3 Media Packet format (defined in [3] Section 4.2) to both Lower Testers.

BAP/UCL/STR/BV-329-C [UCL, AC 6(ii) – VS]

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data using a vendor-specific codec via two synchronized streams to two Unicast Servers. The Unicast Server Lower Testers each support at least one audio location. This test applies to Audio Configuration 6(ii), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.7

- Initial Condition
  - The IUT is a Unicast Client.
  - There are two Unicast Server Lower Testers: Lower Tester 1 and Lower Tester 2.
  - For each Lower Tester, establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester exposes an ASCS server with at least two Sink ASE characteristics.
  - If the TSPX_EXPOSE_CSIS IXIT Entry is set to True, Lower Tester 1 and Lower Tester 2 include an instance of CSIS that conforms to the CAP Acceptor Role.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The IUT has discovered the Audio Locations and PAC records on each Lower Tester by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
  - For each Lower Tester, the IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - For each Lower Tester, the IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - Lower Tester 1 exposes a sink PAC record, ASEs, and Audio Locations.
    - If the Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 2.

- Lower Tester 2 exposes a sink PAC record, ASEs, and Audio Locations.
  - If the Sink PAC record contains a Supported_Audio_Channel_Counts parameter, bit 0 is set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
- For each Lower Tester, the IUT selects a Sink ASE characteristic and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_ASE_ID1 (Lower Tester 1) and Test_ASE_ID2 (Lower Tester 2).

- Test Case Configuration

Round	Target	ASE_ID
1	Lower Tester 1	Test_ASE_ID1
2	Lower Tester 2	Test_ASE_ID2

Table 4.49: Rounds for Unicast Client Transmits Synchronized Audio Data to Two Unicast Servers – Vendor-specific Codec

- Test Procedure

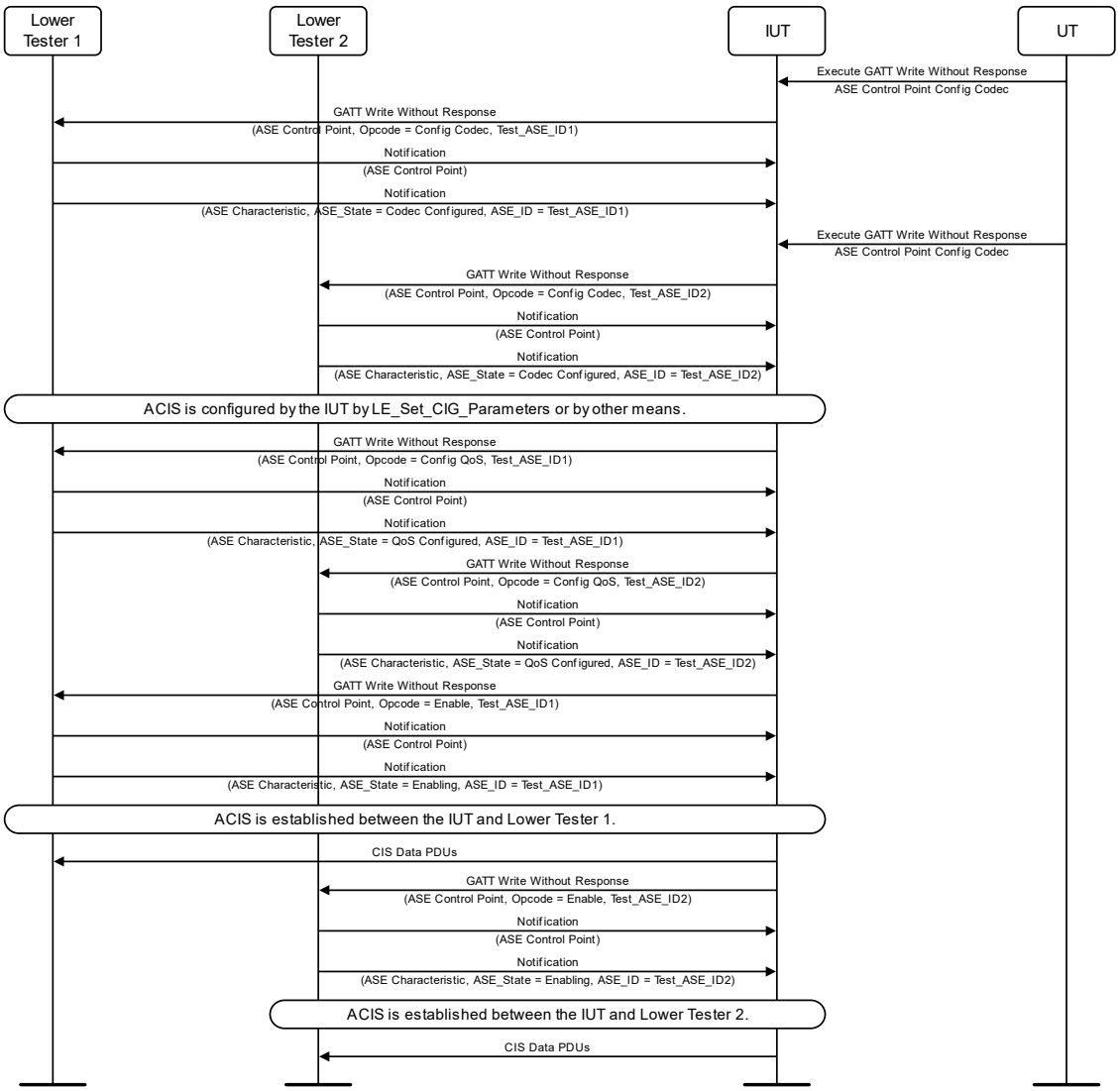


Figure 4.17: Unicast Client Transmits Synchronized Audio Data to Two Unicast Servers – Vendor-specific Codec MSC

Execute Steps 1–3 for each round in Table 4.49 against the Lower Tester specified in Table 4.49.

1. The Upper Tester orders the IUT to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to the ASE_ID specified in Table 4.49
   - Target_Latency[0] and Target_PHY set to values supported by the IUT
   - Codec_ID[0] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 1 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.

Execute Steps 6–8 for each round in Table 4.49 against the Lower Tester specified in Table 4.49.

6. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs = 1
   - ASE_ID[0] set to the ASE_ID specified in Table 4.49
   - CIG_ID[0] and CIS_ID[0] set to values matching values used in Step 2
   - SDU_Interval[0] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] set to TSPX_VS_QoS_Framing
   - PHY[0] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] set to TSPX_VS_QoS_Presentation_Delay
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was passed in Step 6.

Execute Steps 9–14 for each round in Table 4.49 against the Lower Tester specified in Table 4.49.

9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to the ASE_ID specified in Table 4.49
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 9.
12. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].

13. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The IUT sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  The IUT sends SDUs with a zero or more length to both Lower Testers.

4.10.8 Unicast Client Streaming – 1 Unicast Server, 2 Streams, 2 Source ASEs – LC3

- Test Purpose

  Verify that a Unicast Client IUT can receive audio data on two unidirectional CISes with two Source ASEs from a Unicast Server that supports at least two audio locations. This test group applies to Audio Configuration 9(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.12

- Initial Condition

  - The IUT is a Unicast Client.
  - The Lower Tester is a Unicast Server.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. The Lower Tester exposes at least two Source ASE characteristics.
  - The Lower Tester exposes a Source_Audio_Locations characteristic with value including at least two bits set to 0b1.
  - The Lower Tester exposes the appropriate PAC records that match those in Table 4.50 that includes a Supported_Audio_Channel_Counts LTV structure that has bit 0 set to 0b1 and all other bits set to 0b0.
  - Lower Tester 1 exposes a source PAC record, ASEs, and Audio Locations.
    - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
  - Lower Tester 2 exposes a source PAC record, ASEs, and Audio Locations.
    - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
  - The IUT enables notification for the selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT selects two Source ASE characteristics and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Source_ASE_ID1 and Test_Source_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-529-C [UCL, AC 9(i), Generic]

Table 4.50: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 2 Source ASEs – LC3 test cases

- Test Procedure

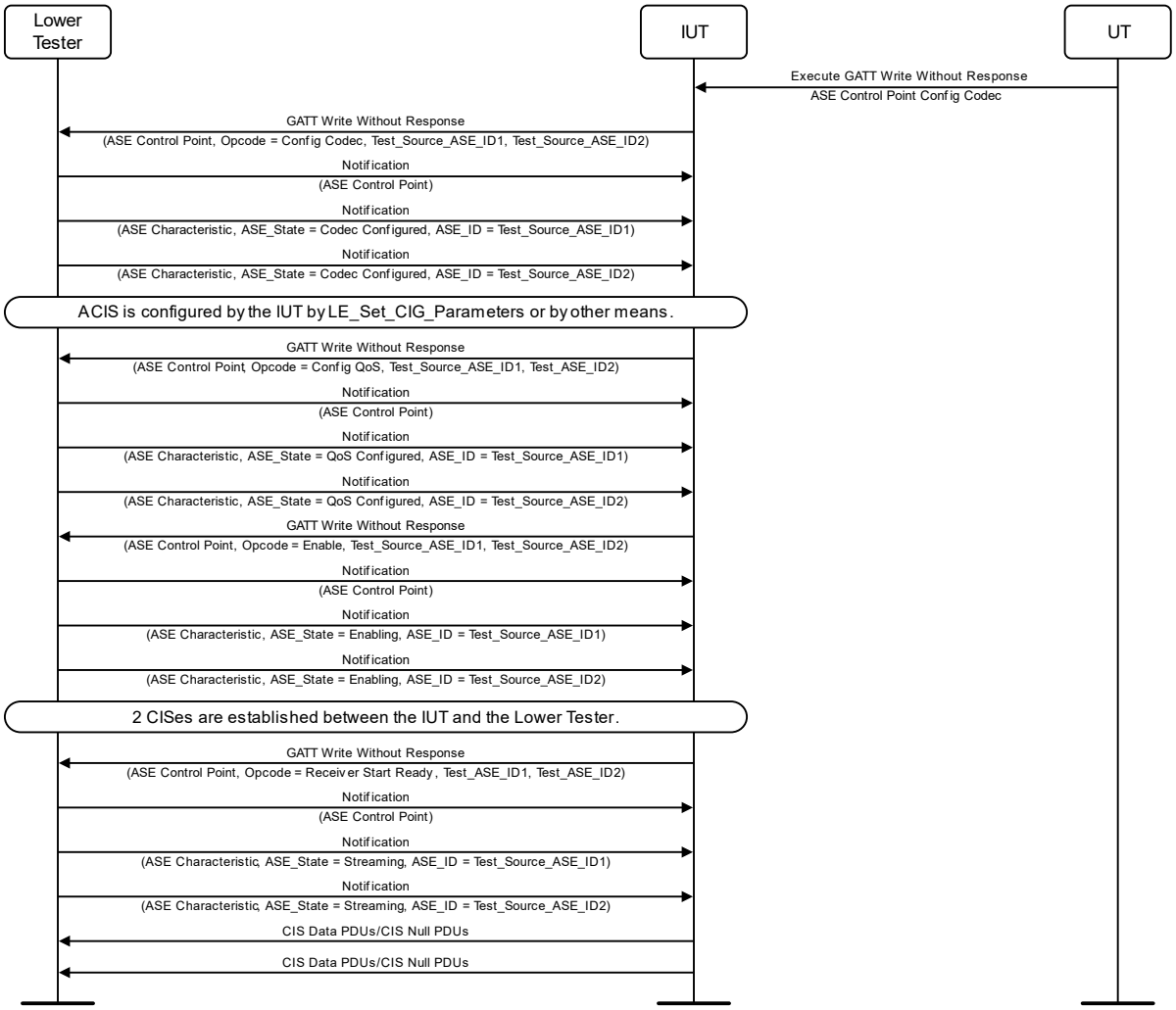


Figure 4.18: Unicast Client Streaming – 1 Unicast Server, 2 Streams, 2 Source ASEs – LC3 MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Source_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID2
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends notifications for both Sink ASE characteristics with the ASE_IDs used in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Source_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID2
   - CIG_ID and CIS_ID set to the values obtained in Step 4, with CIS_ID[0] and CIS_ID[1] set to different values
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
9. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
10. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 2
    - ASE_ID[0] set to Test_Source_ASE_ID1
    - ASE_ID[1] set to Test_Source_ASE_ID2
    - Metadata set to the TSPX_Metadata IXIT entry
11. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
12. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID1.
13. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID2.
14. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
15. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].

16. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs = 2
    - ASE_ID[0] set to Test_Source_ASE_ID1
    - ASE_ID[1] set to Test_Source_ASE_ID2
17. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
18. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID1.
19. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_ASE_ID2.
20. On both audio streams, the Lower Tester sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On both audio streams, the IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.10.9 Unicast Client Streaming – 2 Servers, 2 Streams, 2 Source ASEs – LC3

- Test Purpose

  Verify that a Unicast Client IUT can receive audio data on two unidirectional CISes from two Unicast Servers, each with a Source ASE and each supporting distinct Source Audio Locations. This test group applies to Audio Configuration 9(ii), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.13

- Initial Condition

  - There are two Lower Testers: Lower Tester 1 and Lower Tester 2. Both Lower Testers are Unicast Servers.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. Each Lower Tester exposes at least one Source ASE characteristic.
  - Each Lower Tester exposes a unique Source_Audio_Locations characteristic with value including at least one bit set to 0b1 different from the other Lower Tester.
  - Each Lower Tester exposes PAC records, which has the Supported_Audio_Channel_Counts LTV structure with bit 0 set to 0b1, and all other bits set to 0b0.
  - The IUT has discovered the PAC records on each Lower Tester by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or by other means. If present, the Supported_Audio_Channel_Counts LTV structure has bit 0 set to 0b1, and all other bits set to 0b0.

- The IUT enables notification for the selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- If the TSPX_EXPOSE_CSIS IXIT Entry is set to True, Lower Tester 1 and Lower Tester 2 include an instance of CSIS that conforms to the CAP Acceptor Role.
- Lower Tester 1 exposes a source PAC record, ASEs, and Audio Locations.
  - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
- Lower Tester 2 exposes a source PAC record, ASEs, and Audio Locations.
  - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
- The IUT selects one Source ASE characteristic from each Lower Tester and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Source_ASE_ID1 and Test_Source_ASE_ID2.

• Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-530-C [UCL, AC 9(ii), Generic]

Table 4.51: Unicast Client Streaming – 2 Servers, 2 Streams, 2 Source ASEs – LC3 test cases

Round	Target	ASE_ID	Codec Config	QoS Config
1	Lower Tester 1	Test_Source_ASE_ID1	TSPX_CODEC_CONFIG_SOURCE_ASEID1	TSPX_QOS_CONFIG_SOURCE_ASEID1
2	Lower Tester 2	Test_Source_ASE_ID2	TSPX_CODEC_CONFIG_SOURCE_ASEID2	TSPX_QOS_CONFIG_SOURCE_ASEID2

Table 4.52: Rounds for Unicast Client Streaming – 2 Servers, 2 Streams, 2 Source ASEs – LC3

- Test Procedure

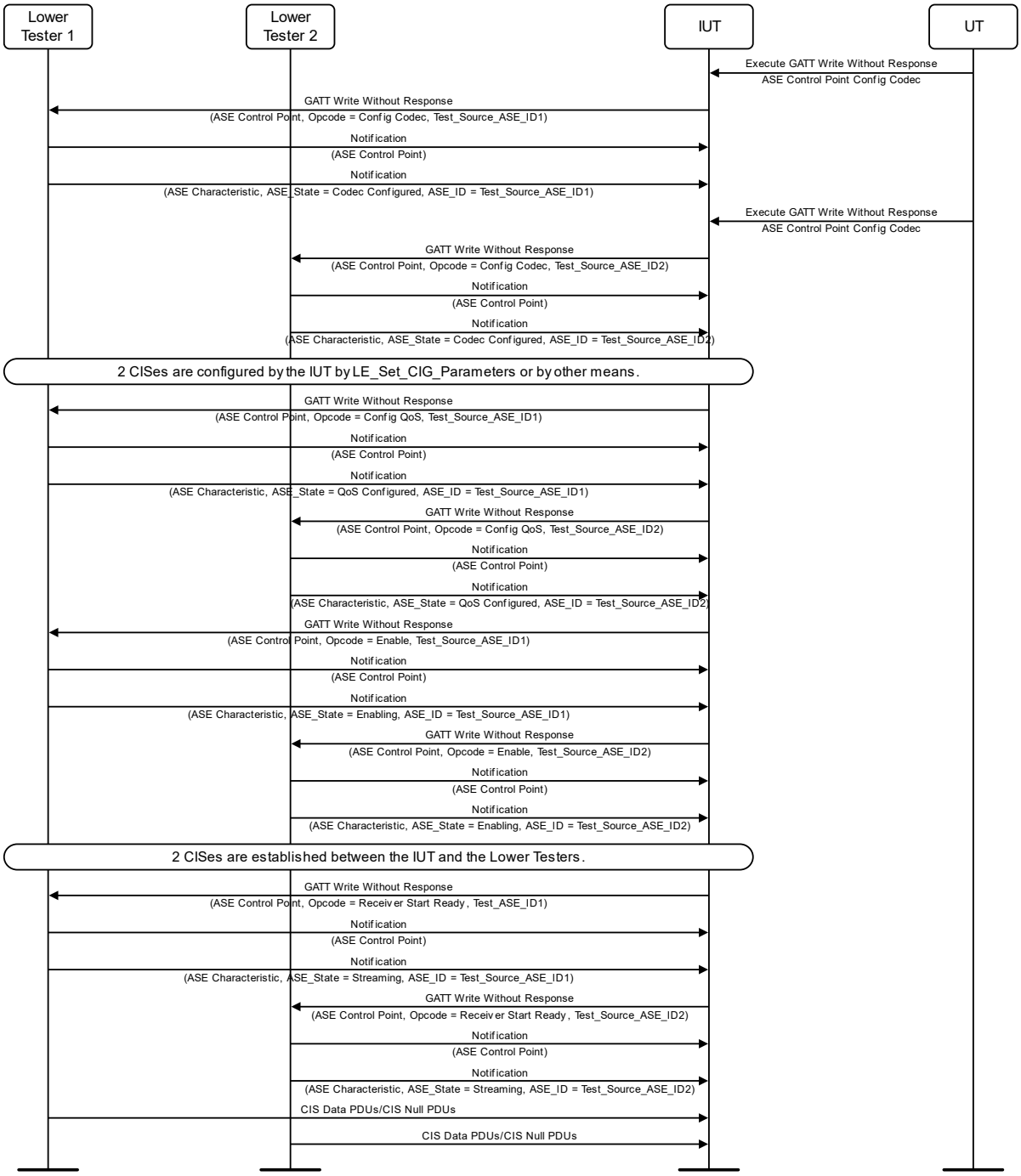


Figure 4.19: Unicast Client Streaming – 2 Servers, 2 Streams, 2 Source ASEs – LC3 MSC

Execute Steps 1–3 for each round in Table 4.52 against the Lower Tester specified in Table 4.52.

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the value specified in Table 4.52
   - Codec parameters set to values referenced in Codec Config for the ASE specified in Table 4.52
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends notifications for both Sink ASE characteristics with the ASE_IDs used in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2, and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.

Execute Steps 6–8 for each round in Table 4.52 against the Lower Tester specified in Table 4.52.

6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the value specified in Table 4.52
   - CIG_ID and CIS_ID set to the values obtained in Step 4, with CIS_ID[0] and CIS_ID[1] set to different values
   - Remaining parameters set to values referenced in QoS Config for the ASE specified in Table 4.52
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 6.

Execute Steps 9–11 for each round in Table 4.52 against the Lower Tester specified in Table 4.52.

9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the value specified in Table 4.52
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 9.
12. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
13. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].

Execute Steps 14–16 for each round in Table 4.52 against the Lower Tester specified in Table 4.52.

14. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
   - Number_of_ASEs = 1
   - ASE_ID set to the value specified in Table 4.52
15. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.

16. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 14.
17. The Lower Tester sends CIS Data PDUs or CIS Null PDUs to both audio streams.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  The IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.10.10 Unicast Client Streaming – 1 Server, 3 Audio Streams, 2 CISes – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data on three Audio Streams with two CISes, one unidirectional and one bidirectional with two distinct Sink Audio Locations. This test group applies to Audio Configuration 8(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.11

- Initial Condition

  - The IUT is a Unicast Client.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. The Lower Tester exposes at least two Sink ASE characteristics and one Source ASE characteristic.
  - The Lower Tester exposes a sink and source PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.
    - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1.
  - The IUT reads the values of one Sink ASE to be coupled to a unidirectional CIS and a Sink ASE and Source ASE coupled to a bidirectional CIS by executing the GATT Read Characteristic Value sub-procedure. The ASE_IDs are stored as Test_Sink_ASE_ID1, Test_Sink_ASE_ID2, and Test_Source_ASE_ID2.
  - The IUT enables notification for the selected Source ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.

- Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-531-C [UCL, AC 8(i), Generic]

Table 4.53: Unicast Client Streaming – 1 Server, 3 Audio Streams, 2 CISes – LC3 test cases

Round	ASE_ID	CIS_ID	Codec Config	QoS Config
1	Test_Sink_ASE_ID1	CIS_ID1	TSPX_CODEC_CONFIG_SINK_ASEID1	TSPX_QOS_CONFIG_SINK_ASEID1
2	Test_Sink_ASE_ID2	CIS_ID2	TSPX_CODEC_CONFIG_SINK_ASEID2	TSPX_QOS_CONFIG_SINK_ASEID2
3	Test_Source_ASE_ID2	CIS_ID2	TSPX_CODEC_CONFIG_SOURCE_ASEID2	TSPX_QOS_CONFIG_SOURCE_ASEID2

Table 4.54: Rounds for Unicast Client Streaming – 1 Server, 3 Audio Streams, 2 CISes – LC3

- Test Procedure

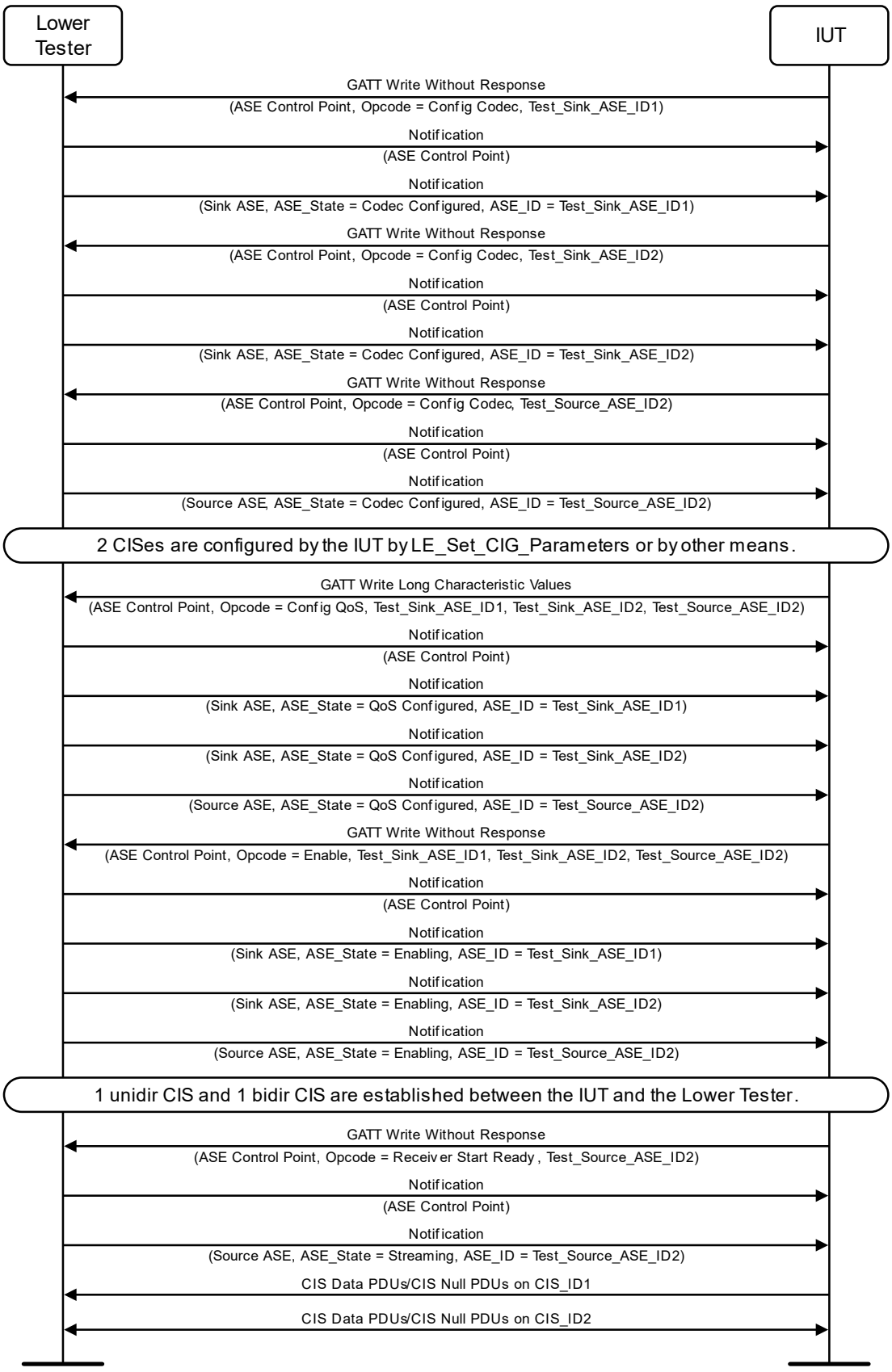


Figure 4.20: Unicast Client Streaming – 1 Server, 3 Audio Streams, 2 CISes – LC3 MSC

Repeat Steps 1–3 for each round in Table 4.54.

1. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the value specified in Table 4.54
   - Codec parameters set to values referenced in Codec Config for the ASE specified in Table 4.54
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Long Characteristic Value sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 3
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - CIG_ID[0], CIG_ID[1], and CIG_ID[2] set to the value from Step 5
   - CIS_ID[0] set to the CIS_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - CIS_ID[1] set to the CIS_ID2
   - ASE_ID[2] set to Test_Source_ASE_ID2
   - CIS_ID[2] set to the CIS_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
   - Remaining values for [2] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 6.
9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 3
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - ASE_ID[2] set to Test_Source_ASE_ID2
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 9.
12. The IUT establishes one unidirectional CIS and one bidirectional CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].

13. The Lower Tester accepts the establishment of both CISes by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs = 1
    - ASE_ID[0] set to Test_Source_ASE_ID2
15. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
16. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 14.
17. The IUT sends CIS Data PDUs or CIS Null PDUs over the unidirectional CIS.
18. The IUT sends and receives CIS Data PDUs or CIS Null PDUs over the bidirectional CIS.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On the bidirectional stream, the IUT sends and receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

  On the unidirectional stream, the IUT sends SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.10.11 Unicast Client Streaming – 2 Unicast Servers, 3 Streams, 2 CISes – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data on three Audio Streams with two CISes. This test group applies to Audio Configuration 8(ii), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.10

- Initial Condition

  - The IUT is a Unicast Client.
  - There are two Unicast Server Lower Testers: Lower Tester 1 and Lower Tester 2.
  - For each Lower Tester, establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of each Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - If the TSPX_EXPOSE_CSIS IXIT Entry is set to True, Lower Tester 1 and Lower Tester 2 include an instance of CSIS that conforms to the CAP Acceptor Role.
  - Lower Tester 1 exposes a sink PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 2.

- Lower Tester 2 exposes a sink and a source PAC record, ASEs, and Audio Locations.
  - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1.
  - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
- The IUT selects a Sink ASE characteristic from Lower Tester 1 and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_ASE_ID1(Lower Tester 1). The Sink ASE is coupled with a unidirectional CIS.
- For each Lower Tester, the IUT enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- For each Lower Tester, the IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT selects a Sink ASE characteristic and Source ASE characteristic from Lower Tester 2 and reads their values by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_IDs as Test_Sink_ASE_ID2 (Lower Tester 2) and Test_Source_ASE_ID2 (Lower Tester 2). The Sink ASE and Source ASE are coupled to a bidirectional CIS.

• Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-532-C [UCL, AC 8(ii), Generic]

Table 4.55: Unicast Client Streaming – 2 Unicast Servers, 3 Streams, 2 CISes – LC3 test cases

Round	Target	ASE_ID	Codec Config	QoS Config
1	Lower Tester 1	Test_Sink_ASE_ID1	TSPX_CODEC_CONFIG_SINK_ASEID1	TSPX_QOS_CONFIG_SINK_ASEID1
2	Lower Tester 2	Test_Sink_ASE_ID2	TSPX_CODEC_CONFIG_SINK_ASEID2	TSPX_QOS_CONFIG_SINK_ASEID2
3	Lower Tester 2	Test_Source_ASE_ID2	TSPX_CODEC_CONFIG_SOURCE_ASEID2	TSPX_QOS_CONFIG_SOURCE_ASEID2

Table 4.56: Rounds for Unicast Client Streaming – 2 Unicast Servers, 3 Streams, 2 CISes – LC3

- Test Procedure

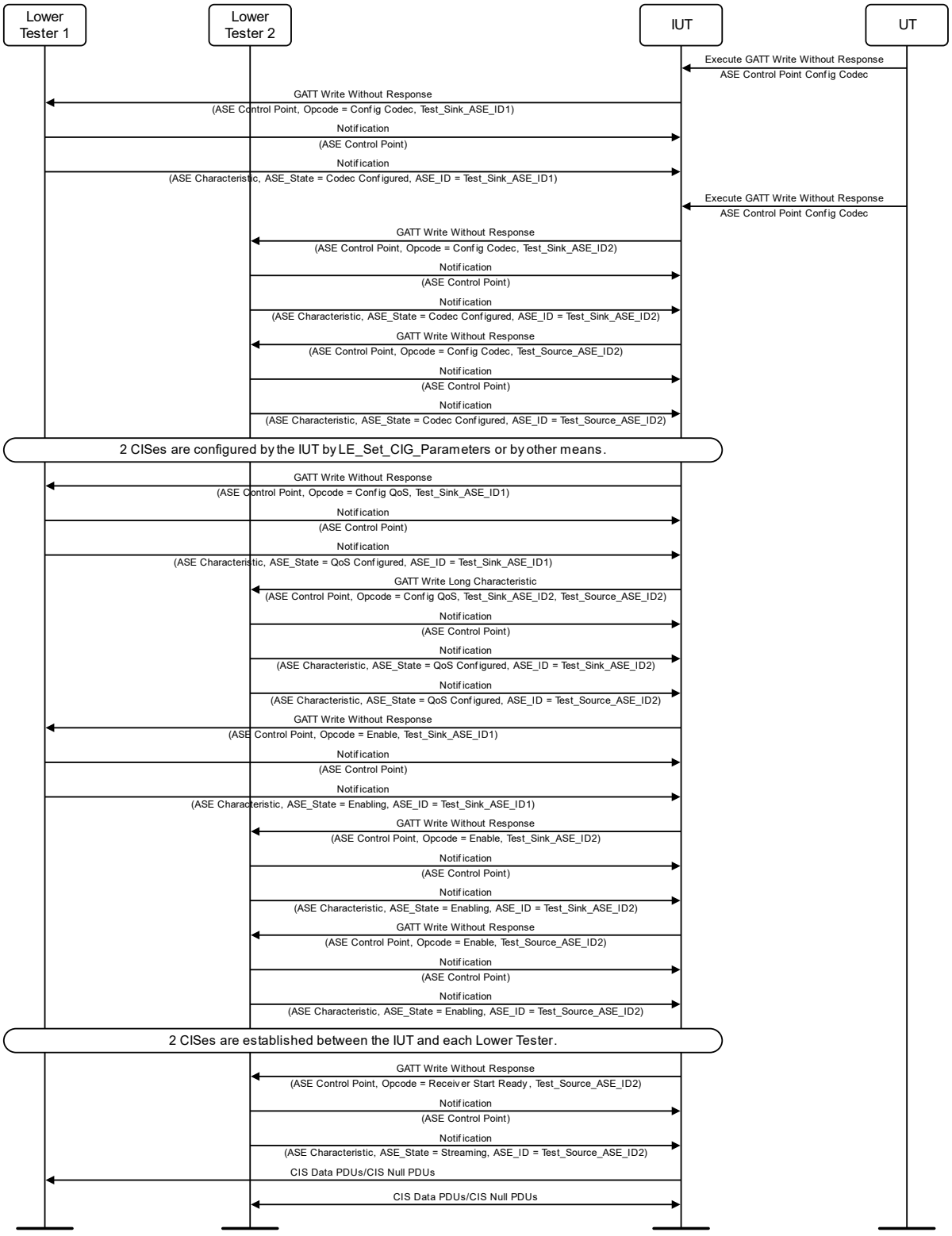


Figure 4.21: Unicast Client Streaming – 2 Unicast Servers, 3 Streams, 2 CISes – LC3 MSC

Execute Steps 1–3 for each round in Table 4.56 against the Lower Tester specified in Table 4.56.

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the ASE_ID specified in Table 4.56
   - Codec parameters set to values referenced in Codec Config for the ASE specified in Table 4.56
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) against Lower Tester 1 and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set Test_Sink_ASE_ID1
   - CIG_ID[0] and CIS_ID[0] set to the values obtained in Step 5
   - Remaining parameters set to values referenced in QoS Config for the ASE specified in Table 4.56
7. Lower Tester 1 sends the IUT a notification of the ASE Control Point characteristic.
8. Lower Tester 1 sends the IUT a notification of the ASE characteristic for the ASE_ID of Test_ASE_ID1.
9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) against Lower Tester 2 and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID2
   - CIG_ID[0] and CIS_ID[0] set to the values obtained in Step 5
   - ASE_ID[1] set to Test_Source_ASE_ID2
   - CIG_ID[1] and CIS_ID[1] set to the values obtained in Step 5
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
10. Lower Tester 2 sends the IUT a notification of the ASE Control Point characteristic.
11. Lower Tester 2 sends the IUT a notification of the ASE characteristic for the Test_Sink_ASE_ID2.
12. Lower Tester 2 sends the IUT a notification of the ASE characteristic for the Test_Source_ASE_ID.

Execute Steps 13–18 for each round in Table 4.56 against the Lower Tester specified in Table 4.56.

13. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID set to the ASE_ID specified in Table 4.56
   - Metadata set to the TSPX_Metadata IXIT entry
14. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.

15. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 8.
16. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
17. The audio data paths are configured by executing the preamble in Section 4.4.9.
18. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
19. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) against Lower Tester 2 and:
    - Number_of_ASEs set to 1
    - ASE_ID set to Test_Source_ASE_ID2
20. Lower Tester 2 sends the IUT a notification of the ASE Control Point characteristic.
21. Lower Tester 2 sends the IUT a notification of the ASE characteristic for the Test_Source_ASE_ID2.
22. The IUT sends CIS Data PDUs or CIS Null PDUs over the connection to Lower Tester 1.
23. The IUT sends and receives CIS Data PDUs or CIS Null PDUs over the connection to Lower Tester 2.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  The IUT sends SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2) to both Lower Testers.

  The IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2) from Lower Tester 2.

4.10.12 Unicast Client Streaming – 1 Unicast Server, 4 Audio Streams, 2 CISes – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data on four Audio Streams with two bidirectional CISes. This test group applies to Audio Configuration 11(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.15

- Initial Condition

  - The IUT is a Unicast Client.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of the Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. The Lower Tester exposes at least two Sink ASE characteristics and two Source ASE characteristics.

- Lower Tester 1 exposes a sink and source PAC record, ASEs, and Audio Locations.
  - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains two bits set to 0b1.
  - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains two bits set to 0b1.
- The IUT enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
- The IUT enables notification for the selected Source ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Source ASE CCCD.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT has discovered the PAC records on each Lower Tester by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
- The IUT selects two Sink ASE characteristics and two Source ASE characteristics on the Lower Tester and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure for each characteristic. The ASE_IDs for the Sink ASEs are stored as Test_Sink_ASE_ID1 and Test_Sink_ASE_ID2. The ASE_IDs for the Source ASEs are stored as Test_Source_ASE_ID1 and Test_Source_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-533-C [UCL, AC 11(i), Generic]

Table 4.57: Unicast Client Streaming – 1 Unicast Server, 4 Audio Streams, 2 CISes – LC3 test cases

- Test Procedure

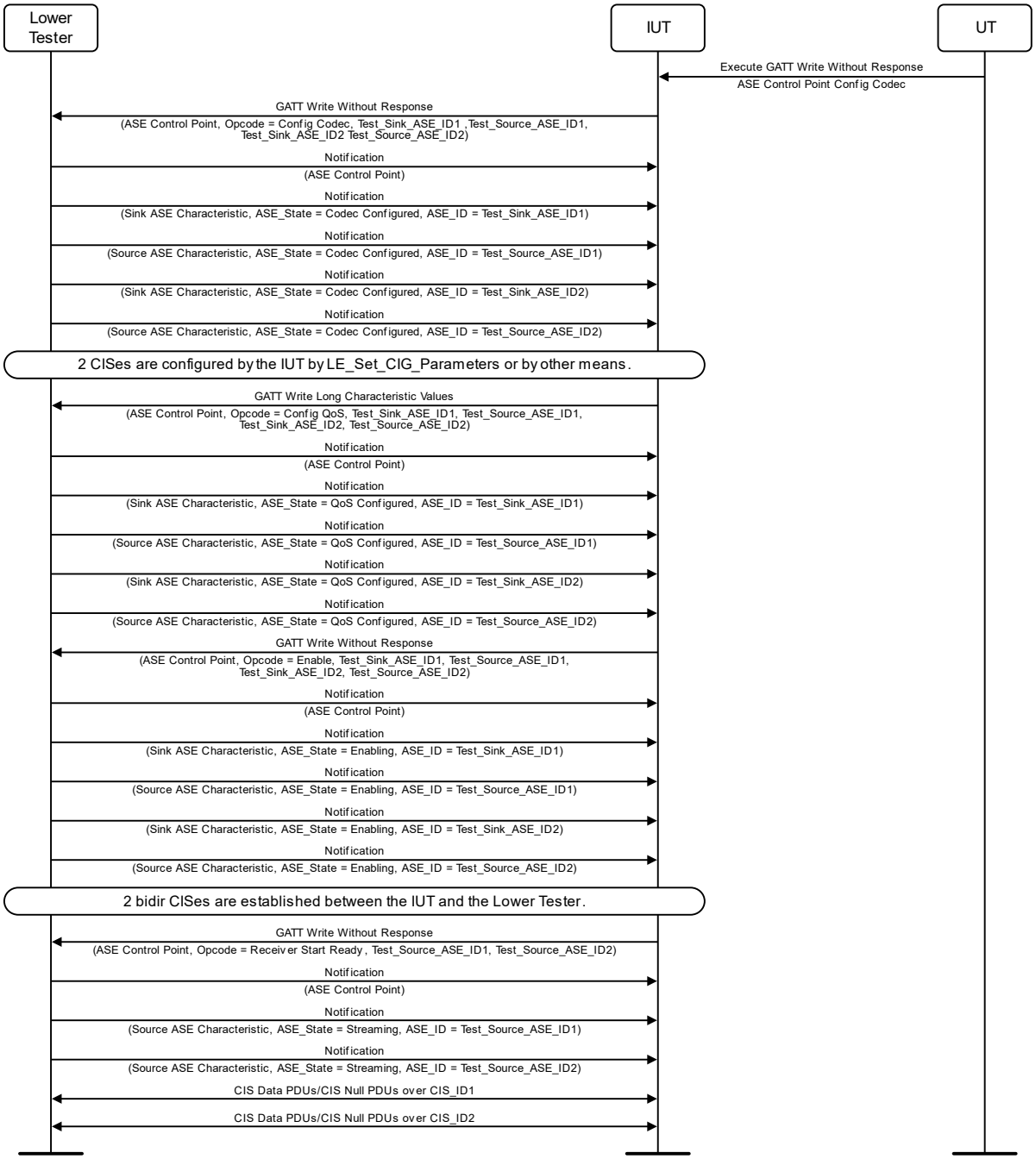


Figure 4.22: Unicast Client Streaming – 1 Unicast Server, 4 Audio Streams, 2 CISes – LC3 MSC

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 4
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - ASE_ID[2] set to Test_Sink_ASE_ID2
   - ASE_ID[3] set to Test_Source_ASE_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID1
   - Remaining values for [2] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID2
   - Remaining values for [3] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID2
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.
6. The IUT executes the GATT Write Long Characteristic Values sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 4
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - ASE_ID[2] set to Test_Sink_ASE_ID2
   - ASE_ID[3] set to Test_Source_ASE_ID2
   - CIG_ID set to the value obtained in Step 6
   - CIS_ID[0] and CIS_ID[1] set to CIS_ID1
   - CIS_ID[2] and CIS_ID[3] set to CIS_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID1
   - Remaining values for [2] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
   - Remaining values for [3] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
9. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
10. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.

11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
12. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 4
    - ASE_ID[0] set to Test_Sink_ASE_ID1
    - ASE_ID[1] set to Test_Source_ASE_ID1
    - ASE_ID[2] set to Test_Sink_ASE_ID2
    - ASE_ID[3] set to Test_Source_ASE_ID2
    - Metadata set to the TSPX_Metadata IXIT entry
13. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
14. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
15. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
16. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
17. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
18. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 9.
19. The IUT establishes two bidirectional CISes by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
20. The Lower Tester accepts the establishment of both CISes by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
21. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs = 2
    - ASE_ID[0] set to Test_Source_ASE_ID1
    - ASE_ID[1] set to Test_Source_ASE_ID2
22. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
23. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
24. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
25. The IUT sends and receives CIS Data PDUs or CIS Null PDUs on both bidirectional CISes over the connection to the Lower Tester.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On both bidirectional CISes, the IUT sends and receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.10.13 Unicast Client Streaming – 2 Servers, 4 Streams, 2 CISes – LC3

- Test Purpose

  Verify that a Unicast Client IUT can transmit audio data on four Audio Streams with two bidirectional CISes where the Servers support Sink and Source Audio Locations with at least one bit (if different) or two bits (if any overlap occurs) each. This test group applies to Audio Configuration 11(ii), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.16

- Initial Condition

  - There are two Lower Testers: Lower Tester 1 and Lower Tester 2.
  - Establish a Bearer connection between each Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered all ASCS characteristics of each Lower Tester by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. Each Lower Tester exposes at least one Sink ASE characteristic and one Source ASE characteristic.
  - If the TSPX_EXPOSE_CSIS IXIT Entry is set to True, Lower Tester 1 and Lower Tester 2 include an instance of CSIS that conforms to the CAP Acceptor Role.
  - Lower Tester 1 exposes a sink and source PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
    - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
  - Lower Tester 2 exposes a sink and source PAC record, ASEs, and Audio Locations.
    - The Sink PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Sink Audio Locations characteristic contains one bit set to 0b1 and is different from the Sink Audio Locations characteristic bit set to 0b1 by Lower Tester 1.
    - The Source PAC record contains a Supported_Audio_Channel_Counts parameter with bit 0 set to 0b1. The Source Audio Locations characteristic contains one bit set to 0b1 and is different from the Source Audio Locations characteristic bit set to 0b1 by Lower Tester 2.
  - The IUT enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
  - The IUT enables notification for the selected Source ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Source ASE CCCD.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.

- The IUT selects one Sink ASE characteristic and one Source ASE characteristic on each Lower Tester and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure for each characteristic.
- The IUT enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
- The IUT enables notification for the selected Source ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.

• Test Case Configuration

Test Case ID
BAP/UCL/STR/BV-522-C [UCL, AC 11(ii), VS]
BAP/UCL/STR/BV-534-C [UCL, AC 11(ii), Generic]

Table 4.58: Unicast Client Streaming – 2 Servers, 4 Streams, 2 CISes – LC3 test cases

Round	Target	ASE_ID	CIS_ID	Codec Config	QoS Config
1	Lower Tester 1	Test_Sink_ASE_ID1	CIS_ID1	TSPX_CODEC_CONFIG_SINK_ASEID1	TSPX_QOS_CONFIG_SINK_ASEID1
2	Lower Tester 1	Test_Source_ASE_ID1	CIS_ID1	TSPX_CODEC_CONFIG_SOURCE_ASEID1	TSPX_QOS_CONFIG_SOURCE_ASEID1
3	Lower Tester 2	Test_Sink_ASE_ID2	CIS_ID2	TSPX_CODEC_CONFIG_SINK_ASEID2	TSPX_QOS_CONFIG_SINK_ASEID2
4	Lower Tester 2	Test_Source_ASE_ID2	CIS_ID2	TSPX_CODEC_CONFIG_SOURCE_ASEID2	TSPX_QOS_CONFIG_SOURCE_ASEID2

Table 4.59: Rounds for Client – Config 11(ii)

- Test Procedure

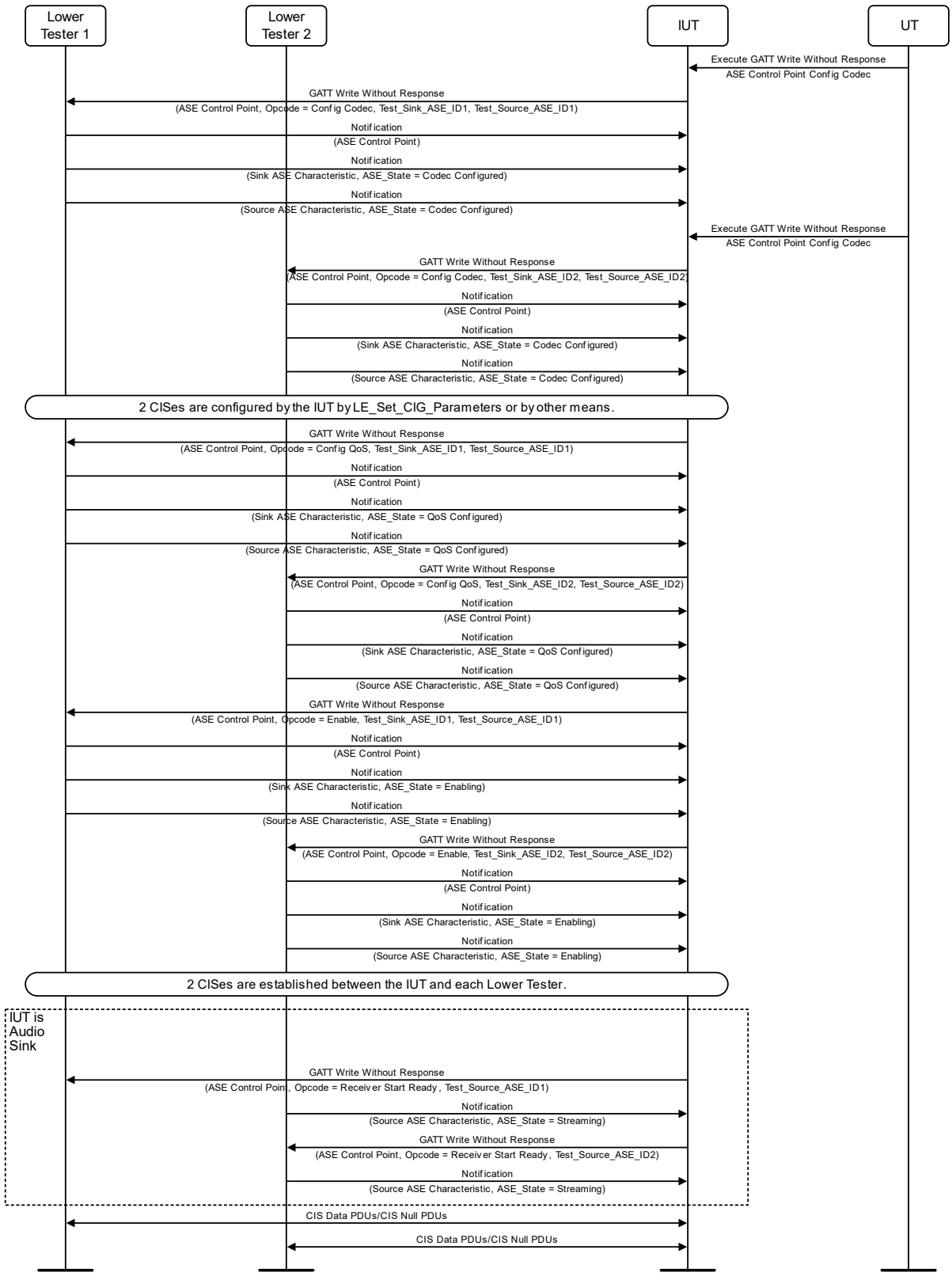


Figure 4.23: Unicast Client Streaming – 2 Servers, 4 Streams, 2 CISes – LC3 MSC

Repeat Steps 1–3 for each Lower Tester specified in Table 4.59.

1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to the ASE_ID specified in Table 4.59
   - ASE_ID[1] set to the ASE_ID specified in Table 4.59
   - Codec parameters set to values referenced in Codec Config for the ASE specified in Table 4.59
2. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
3. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 1.
4. The IUT executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters if HCI is used, or configures a CIS by other means. The CIS must be unique for each Lower Tester.
5. If HCI is used, the IUT receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command; otherwise, the QoS parameters are retrieved by other means.

Repeat Steps 6–8 for each Lower Tester specified in Table 4.59.

6. The IUT executes the GATT Write Long Characteristic Values sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] and ASE_ID[1] set to the ASE_ID specified in Table 4.59
   - CIG_ID and CIS_ID parameters set to the values obtained in Step 5
   - Remaining values for parameters set to values referenced in QoS Config for the ASEs specified in Table 4.59
7. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
8. The Lower Tester sends the IUT a notification of the ASE characteristic for the ASE_ID that was set in Step 6.

Repeat Steps 9–11 for each Lower Tester.

9. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] and ASE_ID[1] set to the ASE_ID values discovered in the Initial Condition
   - Metadata set to the TSPX_Metadata IXIT entry
10. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
11. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 9.
12. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
13. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The audio data paths are configured by executing the preamble in Section 4.4.9.

Repeat Steps 15–18 for each Lower Tester.

15. If the IUT is in the Audio Sink role:
16. The IUT executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs = 1
    - ASE_ID[0] set using ASE_ID for the Source ASE discovered in the Initial Condition
17. The Lower Tester sends the IUT a notification of the ASE Control Point characteristic.
18. The Lower Tester sends the IUT a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 16.
19. The IUT sends and receives CIS Data PDUs or CIS Null PDUs on the bidirectional CIS over the connections to Lower Tester 1 and Lower Tester 2.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On each bidirectional CIS over the connections to Lower Tester 1 and Lower Tester 2, the IUT sends and receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.11 Unicast Server Streaming

Verify audio streaming by a Unicast Client and one or more Unicast Servers. The number of unicast Audio Streams created in each test case and the audio capabilities required to enable each test case is dependent on the Audio Configurations in Table 4.1: Unicast LC3 Audio Configurations in [3].

4.11.1 Unicast Server Streaming – 1 Stream, 1 CIS – LC3

- Test Purpose

  Verify that a Unicast Server IUT can stream LC3-encoded audio data over one unicast Audio Stream to/from a Unicast Client. The verification is performed for each ASE Type and Config Parameters in turn, as enumerated in the test cases in Table 4.60. This test group applies to Audio Configurations 1, 2, 4, and 10, as referenced in Table 4.1: Unicast LC3 Audio Configurations in [3].

- Reference

  [3] 4, 4.4.1, 4.4.2, 4.4.4, 4.4.14

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server including an instantiation of the Audio Stream Control Service with an ASE characteristic of the type specified in Table 4.60 and an instantiation of the Published Audio Capabilities Service with available PAC records.
  - The Lower Tester is a Unicast Client and has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.

- The Lower Tester has discovered the PAC records of the IUT by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
- The Lower Tester enables notification for the selected ASE on the IUT by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
- The Lower Tester enables notification on the IUT by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The Lower Tester selects one ASE characteristic of the type specified in Table 4.60 and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The Lower Tester caches the ASE_ID field value as Test_ASE_ID.

• Test Case Configuration

Test Case ID	ASE Type	Channel Count	CIS Establishment
BAP/USR/STR/BV-367-C [USR, AC 1, Generic]	Sink ASE	1	Enable
BAP/USR/STR/BV-368-C [USR, AC 4, Generic]	Sink ASE	2	Enable
BAP/USR/STR/BV-369-C [USR, AC 2, Generic]	Source ASE	1	Enable
BAP/USR/STR/BV-370-C [USR, AC 10, Generic]	Source ASE	2	Enable
BAP/USR/STR/BV-371-C [USR, AC 1, Generic, QoS]	Sink ASE	1	QoS Config
BAP/USR/STR/BV-372-C [USR, AC 4, Generic, QoS]	Sink ASE	2	QoS Config
BAP/USR/STR/BV-373-C [USR, AC 2, Generic, QoS]	Source ASE	1	QoS Config
BAP/USR/STR/BV-374-C [USR, AC 10, Generic, QoS]	Source ASE	2	QoS Config

Table 4.60: Unicast Server Streaming – 1 Stream, 1 CIS – LC3 test cases

- Test Procedure

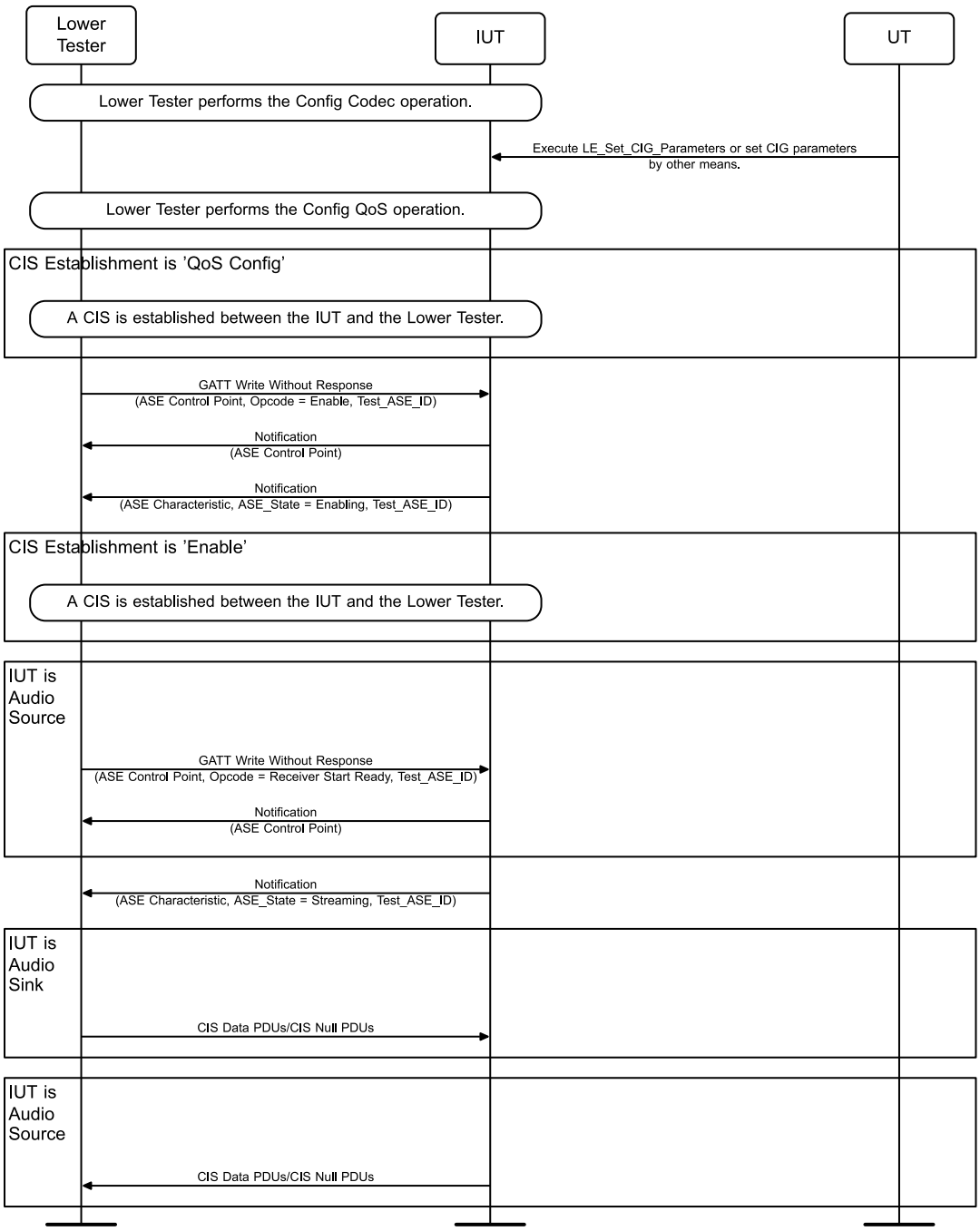


Figure 4.24: Unicast Server Streaming – 1 Stream, 1 CIS – LC3 MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1 if ASE Type is Sink ASE, otherwise set to TSPX_CODEC_CONFIG_SOURCE_ASEID1
2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends a notification of the ASE characteristic for Test_ASE_ID.

4. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count set to the CIS Count value in Table 4.60 and remaining parameters set using values from TSPX_CIG_Parameters.
5. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
6. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ ASE_ID
   - CIG_ID and CIS_ID set to values obtained in Step 5
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1 if ASE Type is Sink ASE, otherwise set to TSPX_QOS_CONFIG_SOURCE_ASEID1
7. The IUT sends a notification of the ASE Control Point characteristic.
8. The IUT sends a notification of the ASE characteristic for Test_ASE_ID.
9. If CIS Establishment as specified in Table 4.60 is QoS Config:
   a. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
   b. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
10. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 1
    - ASE_ID[0] set to Test_ASE_ID
    - Metadata[0] set to the TSPX_Metadata IXIT entry
11. The IUT sends a notification of the ASE Control Point characteristic value.
12. The IUT sends a notification of the ASE characteristic value with the ASE_State set to 0x03 (Enabling).
13. If CIS Establishment as specified in Table 4.60 is Enable:
    a. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
    b. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. If not already set up, the audio data paths are configured by executing the preamble in Section 4.4.9.
15. If the IUT is in the Audio Sink role:
    a. The IUT autonomously sets the ASE_State value to 0x04 (Streaming) for the ASE corresponding to Test_ASE_ID.
16. If the IUT is in the Audio Source role:
    a. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
       - Number_of_ASEs set to 1
       - ASE_ID[0] set to Test_ASE_ID
    b. The IUT sends a notification of the ASE Control Point characteristic value.
17. The IUT sends a notification of the ASE characteristic value that corresponds to the ASE_ID corresponding to Test_ASE_ID with ASE_State set to 0x04 (Streaming).

18. If the IUT is in the Audio Sink role:
    a. The Lower Tester transmits CIS Data PDUs or CIS Null PDUs.
19. If the IUT is in the Audio Source role:
    a. The IUT transmits CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  The ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries.

  If the IUT is in the Audio Source role, the IUT sends SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

  If the IUT is in the Audio Sink role, the IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.11.2 Unicast Server Streaming – 1 Stream, 1 CIS – Vendor-Specific Codec

- Test Purpose

  Verify that a Unicast Server IUT can stream audio data for a vendor-specific codec over one unicast Audio Stream to/from a Unicast Client. The verification is performed for each ASE Type and Config Parameters in turn, as enumerated in the test cases in Table 4.61. This test group applies to Audio Configurations 1, 2, 4, and 10, as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.1, 4.4.2, 4.4.4, 4.4.14

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server including an instantiation of the Audio Stream Control Service with an ASE characteristic of the type specified in Table 4.61 and an instantiation of the Published Audio Capabilities Service with available PAC records.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester has discovered the PAC records of the IUT by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
  - The Lower Tester enables notification for the selected ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester selects one ASE characteristic of the type specified in Table 4.61 and reads the characteristic value by executing the GATT Read Characteristic Value sub-procedure. The Lower Tester caches the ASE_ID field value as Test_ASE_ID.

- Test Case Configuration

Test Case ID	ASE Type	Channel Count
BAP/USR/STR/BV-129-C [USR, AC 1, VS]	Sink ASE	1
BAP/USR/STR/BV-130-C [USR, AC 4, VS]	Sink ASE	2
BAP/USR/STR/BV-131-C [USR, AC 2, VS]	Source ASE	1
BAP/USR/STR/BV-132-C [USR, AC 10, VS]	Source ASE	2

Table 4.61: Unicast Server Streaming – 1 Stream, 1 CIS – Vendor-Specific Codec test cases

- Test Procedure

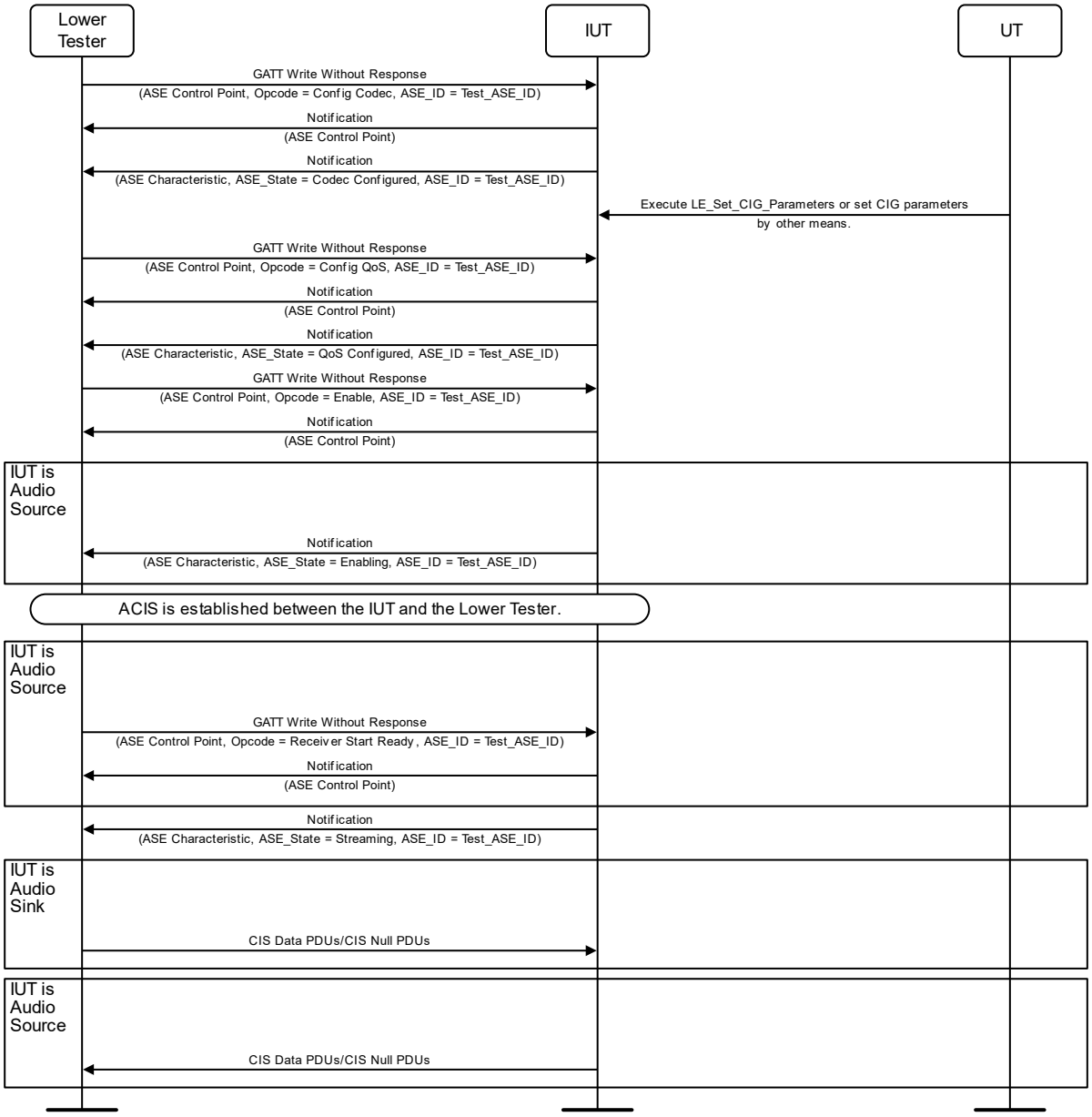


Figure 4.25: Unicast Server Streaming – 1 Stream, 1 CIS – Vendor-Specific Codec MSC

1. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Target_Latency[0] and Target_PHY set to values supported by the IUT
   - Codec_ID[0] set to TSPX_VS_Codec_ID
   - Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
   - Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7]
2. The IUT sends a notification on the ASE Control Point characteristic.
3. The IUT sends a notification on the ASE characteristic for the ASE_ID that was set in Step 1.
4. The Upper Tester orders the IUT to execute the LE_Set_CIG_Parameters command using values from the IXIT if the IUT incorporates HCI, or sets the CIG parameters by other means.
5. The Lower Tester executes the GATT Write Without Response sub-procedure with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs = 1
   - ASE_ID[0] set to Test_ASE_ID
   - CIG_ID[0] and CIS_ID[0] set to values obtained in Step 4
   - SDU_Interval[0] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] set to TSPX_VS_QoS_Framing
   - PHY[0] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] set to TSPX_VS_QoS_Presentation_Delay
6. The IUT sends a notification of the ASE Control Point characteristic value.
7. The IUT sends a notification of the ASE characteristic value for the ASE_ID that was set in Step 5 with ASE_State set to 0x02 (QoS Configured).
8. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_ASE_ID
   - Metadata[0] set to the TSPX_Metadata IXIT entry
9. The IUT sends a notification of the ASE Control Point characteristic value.
10. The IUT sends a notification of the ASE characteristic value that corresponds to the ASE_ID that was set in Step 8 with the ASE_State set to 0x03 (Enabling).
11. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
12. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
13. The audio data paths are configured by executing the preamble in Section 4.4.9.
14. If the IUT is in the Audio Sink role:
    a. The IUT autonomously sets the ASE_State value to 0x04 (Streaming) for the ASE corresponding to Test_ASE_ID.

15. If the IUT is in the Audio Source role:
    a. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
        - Number_of_ASEs set to 1
        - ASE_ID[0] set to Test_ASE_ID
16. The IUT sends a notification of the ASE Control Point characteristic value.
17. The IUT sends a notification of the ASE characteristic value that corresponds to the ASE_ID that was set in Step 15 with ASE_State set to 0x04 (Streaming).
18. If the IUT is in the Audio Sink role:
    a. The Lower Tester transmits CIS Data PDUs.
19. If the IUT is in the Audio Source role:
    a. The IUT transmits CIS Data PDUs.

- Expected Outcome

  Pass verdict

  If the IUT is in the Audio Source role, the IUT sends SDUs with a zero or more length.

  If the IUT is in the Audio Sink role, the IUT receives SDUs with a zero or more length.

4.11.3 Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – LC3

- Test Purpose

  Verify that a Unicast Server IUT can stream LC3-encoded audio data over two audio streams (one as source, one as sink) to and from a Unicast Client. This test group applies to Audio Configurations 3, 5, and 7(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.3, 4.4.5, 4.4.8, 5.6.3.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server including an instantiation of the Audio Stream Control Service exposing at least one of each of Sink ASE and Source ASE characteristics and an instantiation of the Published Audio Capabilities Service with available PAC records including at least one Source PAC and at least one Sink PAC. The ASEs exposed by the IUT are in the Idle state.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester has discovered the PAC records of the IUT by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
  - The Lower Tester enables notification for each of the two selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- The Lower Tester enables notification of the ASE Control Point by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The IUT reads the characteristic values of one Sink ASE and one Source ASE by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Sink_ASE_ID1 and Test_Source_ASE_ID1, respectively.

- Test Case Configuration

Test Case ID	Audio Channels per Sink ASE	CIS Count	CIS Establishment	
			Sink State	Source State
BAP/USR/STR/BV-360-C [USR, AC 3, Generic]	1	1	Enable	Enable
BAP/USR/STR/BV-361-C [USR, AC 5, Generic]	2	1	Enable	Enable
BAP/USR/STR/BV-362-C [USR, AC 7(i), Generic]	1	2	Enable	Enable
BAP/USR/STR/BV-375-C [USR, AC 3, Generic, Enable, QoS]	1	1	Enable	QoS Config
BAP/USR/STR/BV-376-C [USR, AC 5, Generic, Enable, QoS]	2	1	Enable	QoS Config
BAP/USR/STR/BV-377-C [USR, AC 7(i), Generic, Enable, QoS]	1	2	Enable	QoS Config
BAP/USR/STR/BV-378-C [USR, AC 3, Generic, QoS, Enable]	1	1	QoS Config	Enable
BAP/USR/STR/BV-379-C [USR, AC 5, Generic, QoS, Enable]	2	1	QoS Config	Enable
BAP/USR/STR/BV-380-C [USR, AC 7(i), Generic, QoS, Enable]	1	2	QoS Config	Enable
BAP/USR/STR/BV-381-C [USR, AC 3, Generic, QoS, QoS]	1	1	QoS Config	QoS Config
BAP/USR/STR/BV-382-C [USR, AC 5, Generic, QoS, QoS]	2	1	QoS Config	QoS Config
BAP/USR/STR/BV-383-C [USR, AC 7(i), Generic, QoS, QoS]	1	2	QoS Config	QoS Config

Table 4.62: Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – LC3 test cases

- Test Procedure

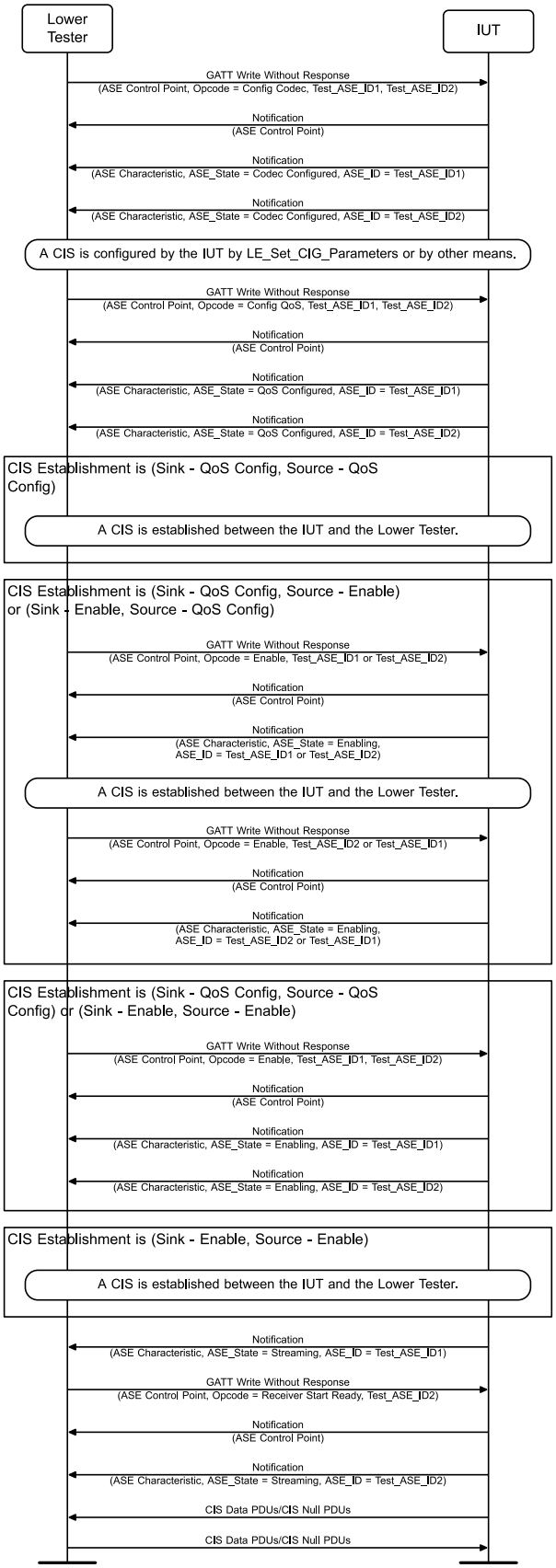


Figure 4.26: Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – LC3 MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID1
2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends a notification of the ASE characteristic for Test_Sink_ASE_ID1.
4. The IUT sends a notification of the ASE characteristic for Test_Source_ASE_ID1.
5. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count set to the CIS Count value in Table 4.62 and remaining parameters set using values from TSPX_CIG_Parameters.
6. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
7. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - CIG_ID and CIS_ID set to values obtained in Step 5, with CIS_ID[0] and CIS_ID[1] set to different values
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID1
8. The IUT sends a notification of the ASE Control Point characteristic.
9. The IUT sends a notification of the ASE characteristic for Test_ASE_ID1.
10. The IUT sends a notification of the ASE characteristic for Test_ASE_ID2.
11. If CIS Establishment as specified in Table 4.62 is Sink – QoS Config, Source – QoS Config:
    a. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
    b. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
12. If CIS Establishment as specified in Table 4.62 is (Sink – QoS Config, Source – Enable) or (Sink – Enable, Source – QoS Config):
    a. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on the IUT with the opcode set to 0x03 (Enable) and:
       - Number_of_ASEs set to 1
       - ASE_ID[0] set to Test_Sink_ASE_ID1 or Test_Source_ASE_ID1 as indicated by Table 4.62
       - Metadata set to the TSPX_Metadata IXIT entry
    b. The IUT sends a notification of the ASE Control Point characteristic.
    c. The IUT sends a notification of the ASE characteristic for Test_Sink_ASE_ID1 or Test_Source_ASE_ID1 as indicated by Table 4.62.
    d. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].

e. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
f. The audio data paths are configured by executing the preamble in Section 4.4.9.
g. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on the IUT with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 1
   - ASE_ID[0] set to Test_Source_ASE_ID1 or Test_Sink_ASE_ID1 as indicated by Table 4.62
   - Metadata set to the TSPX_Metadata IXIT entry
h. The IUT sends a notification of the ASE Control Point characteristic.
i. The IUT sends a notification of the ASE characteristic for Test_Source_ASE_ID1 or Test_Sink_ASE_ID1 as indicated by Table 4.62.

13. If CIS Establishment as specified in Table 4.62 is (Sink – QoS Config, Source – Config) or (Sink – Enable, Source – Enable):
    a. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic on the IUT with the opcode set to 0x03 (Enable) and:
       - Number_of_ASEs set to 2
       - ASE_ID[0] set to Test_Sink_ASE_ID1
       - ASE_ID[1] set to Test_Source_ASE_ID1
       - Metadata set to the TSPX_Metadata IXIT entry
    b. The IUT sends a notification of the ASE Control Point characteristic.
    c. The IUT sends a notification of the ASE characteristic for Test_Sink_ASE_ID1.
    d. The IUT sends a notification of the ASE characteristic for Test_Source_ASE_ID1.
14. If CIS Establishment as specified in Table 4.62 is Sink – Enable, Source – Enable:
    a. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
    b. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
15. If not already set up, the audio data paths are configured by executing the preamble in Section 4.4.9.
16. The IUT sends a notification of the ASE Characteristic for Test_Sink_ASE_ID1.
17. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs set to 1
    - ASE_ID set to Test_Source_ASE_ID1
18. The IUT sends a notification of the ASE Control Point characteristic.
19. The IUT sends a notification of the ASE characteristic for Test_Source_ASE_ID1.
20. The IUT sends CIS Data PDUs or CIS Null PDUs.
21. The Lower Tester sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  In Step 22, the IUT sends SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

  In Step 23, the IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.11.4 Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – Vendor-Specific Codec

- Test Purpose

  Verify that a Unicast Server IUT can stream audio data using a vendor-specific codec over two audio streams (one as source, one as sink) to and from a Unicast Client. The verification is performed for each Config Parameters in turn, as specified in Table 4.63. This test group applies to Audio Configurations 3, 5, and 7(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.3, 5.6.3.1

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server including an instantiation of the Audio Stream Control Service exposing at least one of each of Sink ASE and Source ASE characteristics and an instantiation of the Published Audio Capabilities Service with available PAC records including at least one Source PAC and at least one Sink PAC. The ASEs exposed by the IUT are in the Idle state.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester has discovered the Audio Locations and PAC records on the IUT.
  - The Lower Tester enables notification for each of the two selected ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The Lower Tester enables notification of the ASE Control Point by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester reads the characteristic values of one Sink ASE and one Source ASE by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_ASE_ID1 and Test_ASE_ID2, respectively.

- Test Case Configuration

Test Case ID	Audio Channels per Sink ASE	CIS Count
BAP/USR/STR/BV-229-C [USR, AC 3, VS]	1	1
BAP/USR/STR/BV-230-C [USR, AC 5, VS]	2	1
BAP/USR/STR/BV-231-C [USR, AC 7(i), VS]	1	2

Table 4.63: Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – Vendor-Specific Codec test cases

- Test Procedure

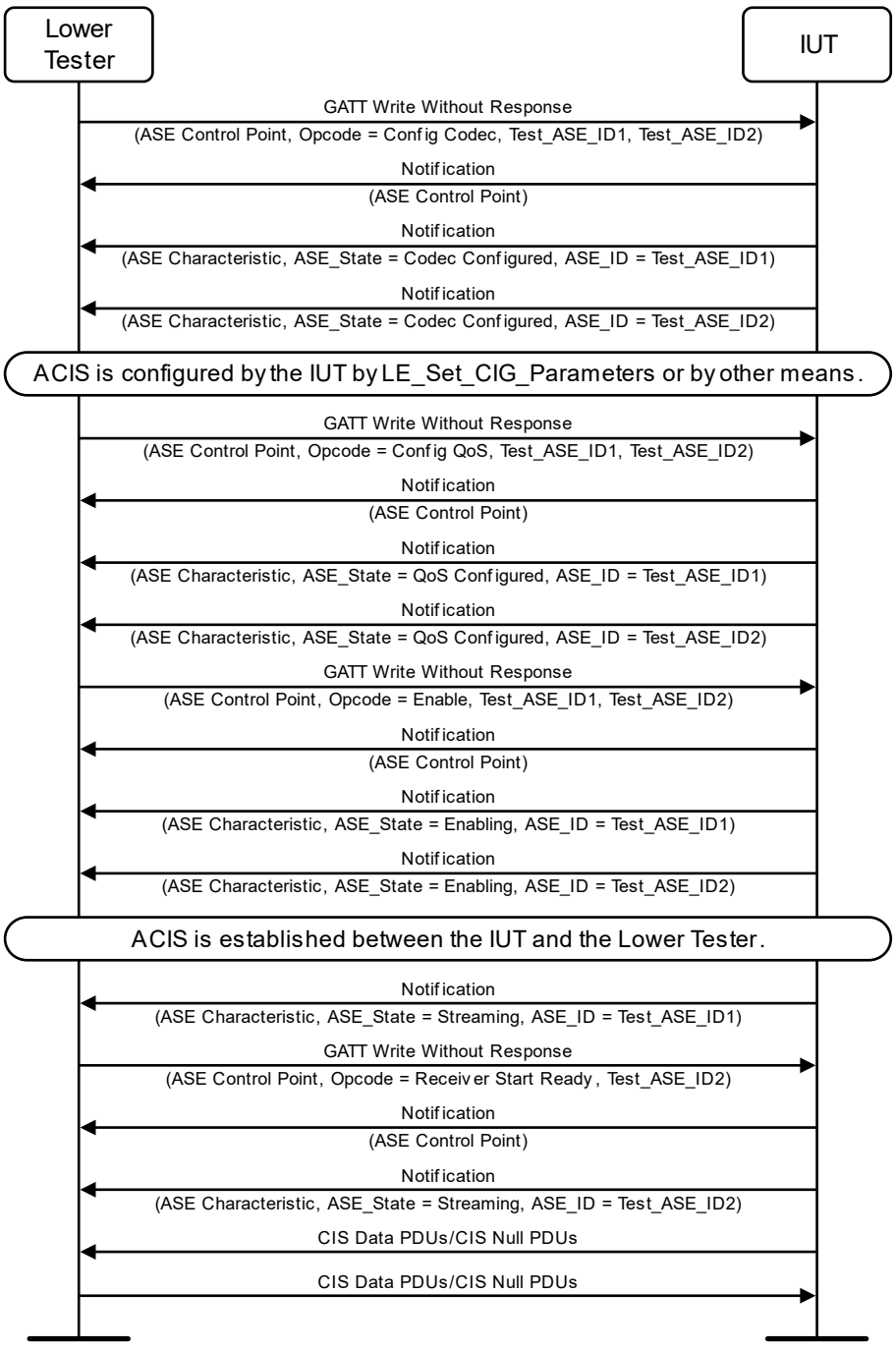


Figure 4.27: Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – Vendor-Specific Codec MSC

1. The Lower Tester writes to the ASE Control Point on the IUT by executing the GATT Write Without Response sub-procedure with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - Target_Latency[0] and Target_PHY set to values supported by the IUT
   - Codec_ID[0] set to TSPX_VS_Codec_ID

- Codec_Specific_Configuration_Length[0] set to the length of the Codec_Specific_Configuration field value
- Codec_Specific_Configuration[0] set to the parameters specified in TSPX_VS_Codec_Specific_Configuration [7].

2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends a notification of the ASE characteristic for Test_ASE_ID1.
4. The IUT sends a notification of the ASE characteristic for Test_ASE_ID2.
5. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count set to the value in Table 4.63 and remaining parameters set using values from TSPX_CIG_Parameters.
6. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
7. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_ASE_ID1
   - ASE_ID[1] set to Test_ASE_ID2
   - CIG_ID and CIS_ID set to the values obtained in Step 6
   - SDU_Interval[0] and [1] set to TSPX_VS_QoS_SDU_Interval
   - Framing[0] and [1] set to TSPX_VS_QoS_Framing
   - PHY[0] and [1] set to TSPX_VS_QoS_PHY
   - Max_SDU[0] and [1] set to TSPX_VS_QoS_Max_SDU
   - Retransmission_Number[0] and [1] set to TSPX_VS_QoS_Retransmission_Number
   - Max_Transport_Latency[0] and [1] set to TSPX_VS_QoS_Max_Transport_Latency
   - Presentation_Delay[0] and [1] set to TSPX_VS_QoS_Presentation_Delay
8. The IUT sends a notification of the ASE Control Point characteristic.
9. The IUT sends a notification of the ASE characteristic for Test_ASE_ID1.
10. The IUT sends a notification of the ASE characteristic for Test_ASE_ID2.
11. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 2
    - ASE_ID[0] set to Test_ASE_ID1
    - ASE_ID[1] set to Test_ASE_ID2
    - Metadata set to the TSPX_Metadata IXIT entry
12. The IUT sends a notification of the ASE Control Point characteristic.
13. The IUT sends a notification of the ASE characteristic for Test_ASE_ID1.
14. The IUT sends a notification of the ASE characteristic for Test_ASE_ID2.
15. The Lower Tester establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
16. The IUT accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
17. The audio data paths are configured by executing the preamble in Section 4.4.9.
18. The IUT sends a notification of the ASE Characteristic for Test_ASE_ID1.
19. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs set to 1
    - ASE_ID set to Test_ASE_ID2
20. The IUT sends a notification of the ASE Control Point characteristic.
21. The IUT sends a notification of the ASE characteristic for Test_ASE_ID2.
22. The IUT sends CIS Data PDUs or CIS Null PDUs.
23. The Lower Tester sends CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  In Step 22, the IUT sends SDUs with a zero or more length.

  In Step 23, the IUT receives SDUs with a zero or more length.

4.11.5 Unicast Server Streaming – 2 Streams, 2 Sink ASEs – LC3

- Test Purpose

  Verify that a Unicast Server IUT can receive audio data via two unidirectional CISes on two ASEs from one Unicast Client where the server has to support two Audio Locations. This test group applies to Audio Configuration 6(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.6

- Initial Condition

  - The Lower Tester is a Unicast Client.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The IUT exposes a Sink_Audio_Locations characteristic with a value including at least two bits set to 0b1.
  - The IUT exposes at least two Sink ASE characteristics.
  - The IUT exposes PAC records for the codec as specified in Table 4.64 with metadata that includes a Supported_Audio_Channel_Counts LTV structure that has bit 0 set to 0b1, and all other bits set to 0b0.
  - The Lower Tester has discovered the Audio Locations and PAC records on the IUT.
  - The Lower Tester enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.
  - The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester selects two Sink ASE characteristics and reads the characteristics value by executing the GATT Read Characteristic Value sub-procedure. The Lower Tester caches the ASE_ID field values as Test_Sink_ASE_ID1 and Test_Sink_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/USR/STR/BV-363-C [USR, AC 6(i), Generic]

Table 4.64: Unicast Server Streaming – 2 Streams, 2 Sink ASEs – LC3 test cases

- Test Procedure

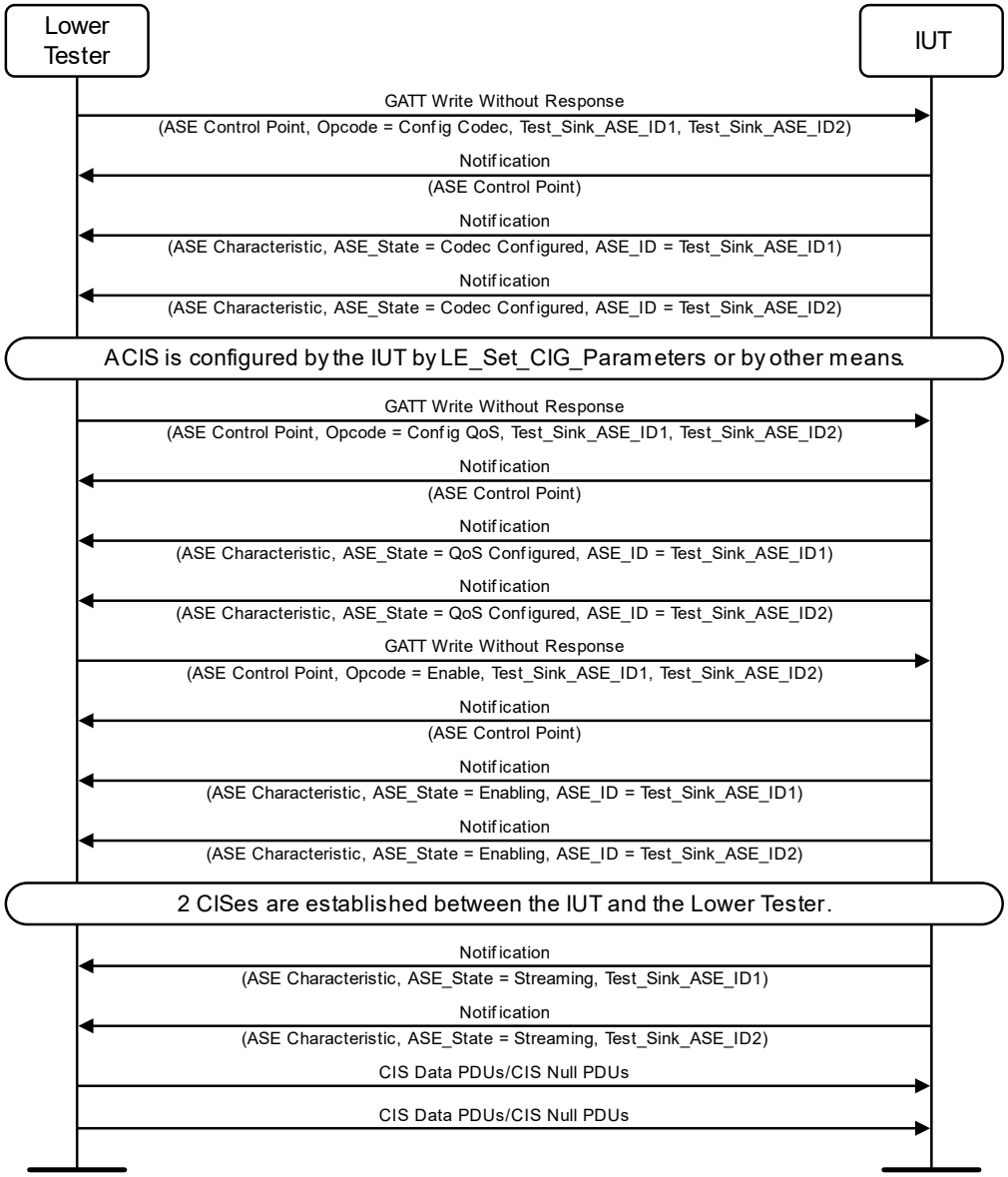


Figure 4.28: Unicast Server Streaming – 2 Streams, 2 Sink ASEs – LC3 MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID2
2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends notifications for both Sink ASE characteristics with the ASE_IDs used in Step 1.
4. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters.

5. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
6. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - CIG_ID and CIS_ID set to the values obtained in Step 6, with CIS_ID[0] and CIS_ID[1] set to different values
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
7. The IUT sends a notification of the ASE Control Point characteristic.
8. The IUT sends a notification for both Sink ASE characteristics with the ASE_IDs used in Step 6.
9. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - Metadata set to the TSPX_Metadata IXIT entry
10. The IUT sends a notification of the ASE Control Point characteristic.
11. The IUT sends a notification for both Sink ASE characteristics with the ASE_IDs used in Step 9.
12. The Lower Tester establishes two unidirectional CISes by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
13. The IUT accepts the establishment of each CIS using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The IUT sends notifications for both Sink ASE characteristics in the Streaming state.
15. On both audio streams, the IUT receives CIS Data PDUs or CIS Null PDUs.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On both audio streams, the IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.11.6 Unicast Server Streaming – 3 Audio Streams, 2 CISes – LC3

- Test Purpose

  Verify that a Unicast Server IUT can transmit audio data on three Audio Streams with two CISes, one unidirectional and one bidirectional, and with two distinct Sink Audio Locations. This test group applies to Audio Configuration 8(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.11

- Initial Condition
  - The IUT is a Unicast Server.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. The IUT exposes at least two Sink ASE characteristics and one Source ASE characteristic.
  - The Lower Tester has discovered the Audio Locations and PAC records on the IUT by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or BAP/UCL/DISC/BV-02-C [Discover Audio Source Capabilities], or by other means.
  - The Lower Tester enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
  - The Lower Tester enables notification for the selected Source ASE by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Source ASE CCCD.
  - The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester reads the values of two Sink ASEs and one Source ASE by executing the GATT Read Characteristic Value sub-procedure. The ASE_IDs are stored as Test_Sink_ASE_ID1, Test_Sink_ASE_ID2, and Test_Source_ASE_ID2.
- Test Case Configuration

Test Case ID
BAP/USR/STR/BV-364-C [USR, AC 8(i), Generic]

Table 4.65: Unicast Server Streaming – 3 Audio Streams, 2 CISes – LC3 test cases

- Test Procedure

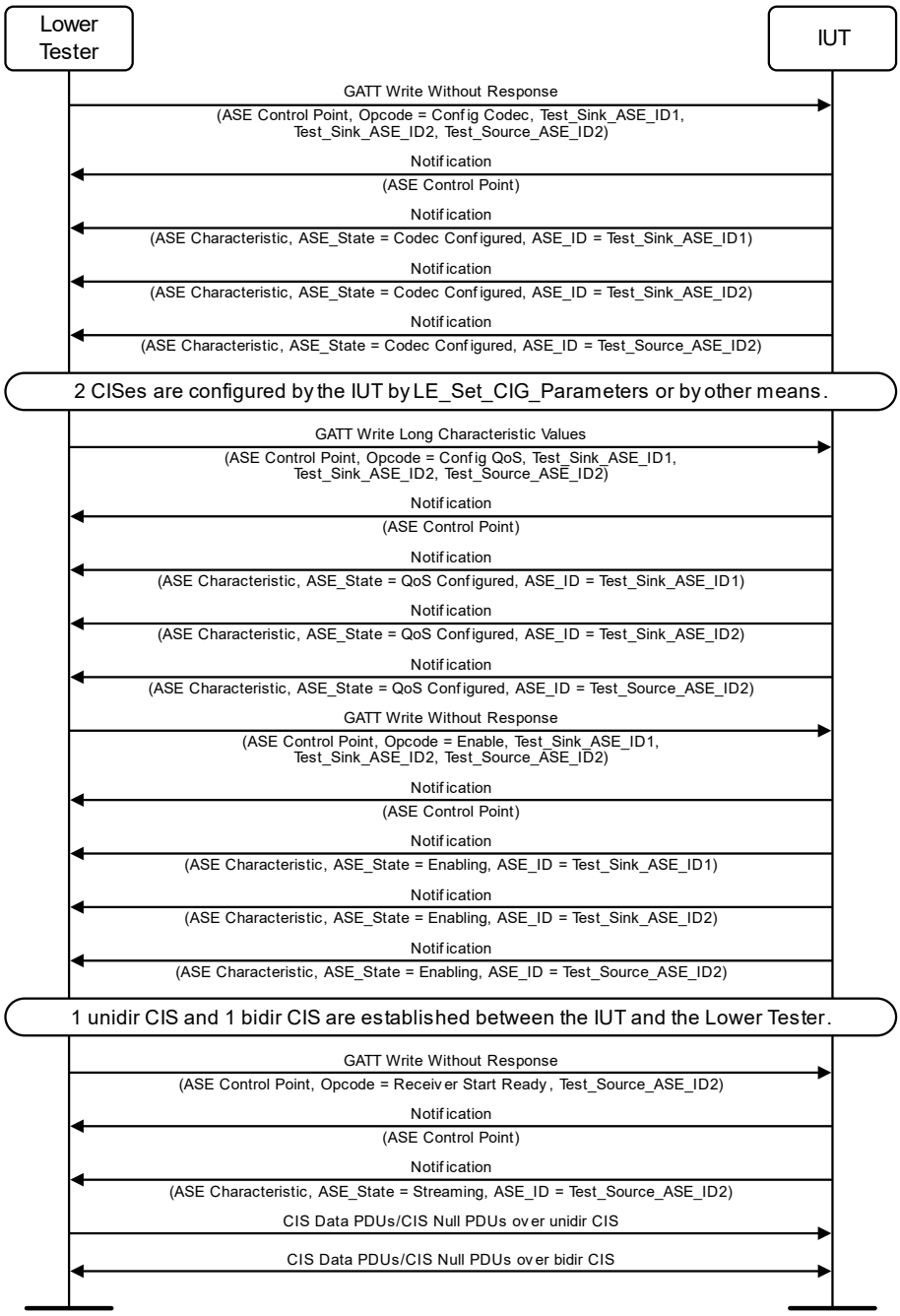


Figure 4.29: Unicast Server Streaming – 3 Audio Streams, 2 CISes – LC3 MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 3
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - ASE_ID[2] set to Test_Source_ASE_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1

- Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID2
- Remaining values for [2] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID2

2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
4. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
5. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
6. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters.
7. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
8. The Lower Tester executes the GATT Write Long Characteristic Values sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 3
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Sink_ASE_ID2
   - ASE_ID[2] set to Test_Source_ASE_ID2
   - CIG_ID[0] and CIS_ID[0] set to the values obtained in Step 7
   - CIG_ID[1] and CIS_ID[1] set to the values obtained in Step 7
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
   - Remaining values for [2] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
9. The IUT sends a notification of the ASE Control Point characteristic.
10. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
11. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
12. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
13. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 3
    - ASE_ID[0] set to Test_Sink_ASE_ID1
    - ASE_ID[1] set to Test_Sink_ASE_ID2
    - ASE_ID[2] set to Test_Source_ASE_ID2
    - Metadata set to the TSPX_Metadata IXIT entry
14. The IUT sends a notification of the ASE Control Point characteristic.
15. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
16. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
17. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
18. The Lower Tester establishes one unidirectional CIS and one bidirectional CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
19. The IUT accepts the establishment of both CISes by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
20. The audio data paths are configured by executing the preamble in Section 4.4.9.

21. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs = 1
    - ASE_ID[0] set to Test_Source_ASE_ID2
22. The IUT sends a notification of the ASE Control Point characteristic.
23. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
24. The IUT receives CIS Data PDUs or CIS Null PDUs over the unidirectional CIS.
25. The IUT sends and receives CIS Data PDUs or CIS Null PDUs over the bidirectional CIS.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On the bidirectional stream, the IUT sends and receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

  On the unidirectional stream, the IUT receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.11.7 Unicast Server Streaming – 2 Streams, 2 Source ASEs – LC3

- Test Purpose

  Verify that a Unicast Server IUT can transmit audio data on two unidirectional CISes with two Source ASEs to a Unicast Client. This test group applies to Audio Configuration 9(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.12

- Initial Condition

  - The IUT is a Unicast Server.
  - The Lower Tester is a Unicast Client.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. The IUT exposes at least two Source ASE characteristics.
  - The IUT exposes a Source_Audio_Locations characteristic with value including at least two bits set to 0b1.
  - The Lower Tester has discovered the PAC records on the IUT by running BAP/UCL/DISC/BV-01-C [Discover Audio Sink Capabilities] or by other means. If present, the Supported_Audio_Channel_Counts LTV structure has bit 0 set to 0b1, and all other bits set to 0b0.
  - The Lower Tester enables notification for the selected Source ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE CCCD.

- The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
- The Lower Tester selects two Source ASE characteristics and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure. The IUT caches the ASE_ID field values as Test_Source_ASE_ID1 and Test_Source_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/USR/STR/BV-365-C [USR, AC 9(i), Generic]

Table 4.66: Unicast Server Streaming – 2 Streams, 2 Source ASEs – LC3 test cases

- Test Procedure

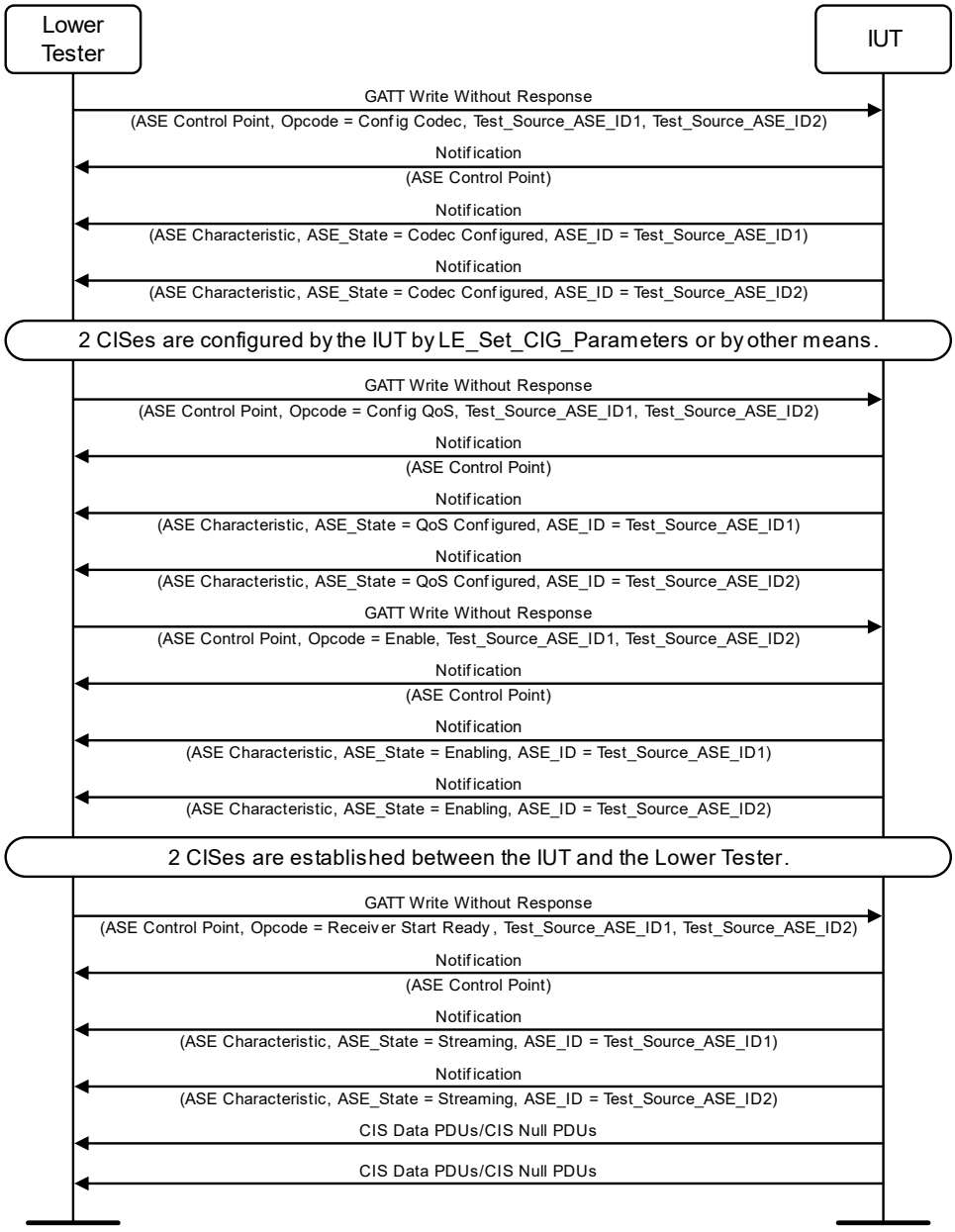


Figure 4.30: Unicast Server Streaming – 2 Streams, 2 Source ASEs – LC3 MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Source_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID2
2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends notifications for both Source ASE characteristics with the ASE_IDs used in Step 1.
4. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters.
5. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
6. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Source_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID2
   - CIG_ID and CIS_ID set to values obtained in Step 5, with CIS_ID[0] and CIS_ID[1] set to different values
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
7. The IUT sends a notification of the ASE Control Point characteristic.
8. The IUT sends a notification of the ASE characteristic for the ASE_ID that was set in Step 6.
9. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
   - Number_of_ASEs set to 2
   - ASE_ID[0] set to Test_Source_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID2
   - Metadata set to the TSPX_Metadata IXIT entry
10. The IUT sends a notification of the ASE Control Point characteristic.
11. The IUT sends a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 9.
12. The IUT establishes a CIS by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
13. The Lower Tester accepts the establishment of a CIS by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
14. The audio data paths are configured by executing the preamble in Section 4.4.9.
15. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
   - Number_of_ASEs = 2
   - ASE_ID[0] set to Test_Source_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID2
16. The IUT sends a notification of the ASE Control Point characteristic.

17. The IUT sends a notification of the ASE characteristic that corresponds to the ASE_ID that was set in Step 14.
18. The IUT sends CIS Data PDUs or CIS Null PDUs on both audio streams.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On both audio streams, the IUT sends SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.11.8 Unicast Server Streaming – 4 Audio Streams, 2 CISes – LC3

- Test Purpose

  Verify that a Unicast Server IUT can transmit audio data on four Audio Streams with two bidirectional CISes with the server supporting at least two Sink and two Source Audio Locations. This test group applies to Audio Configuration 11(i), as referenced in Section 3.2.1.

- Reference

  [3] 4, 4.4.15

- Initial Condition

  - The IUT is a Unicast Server.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID. The IUT exposes at least two Sink ASE characteristics and two Source ASE characteristics.
  - The Lower Tester has discovered all ASCS characteristics of the IUT by executing either the GATT Discover All Primary Services sub-procedure or the GATT Discover Primary Services by Service UUID.
  - The Lower Tester enables notification for the selected Sink ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Sink ASE CCCD.
  - The Lower Tester enables notification for the selected Source ASEs by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Source ASE CCCD.
  - The Lower Tester enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The Lower Tester selects two Sink ASE characteristics and two Source ASE characteristics on the IUT and reads the characteristic values by executing the GATT Read Characteristic Value sub-procedure for each characteristic. The ASE_ID values for the Sink ASEs are saved as Test_Sink_ASE_ID1 and Test_Sink_ASE_ID2. The ASE_ID values for the Source ASEs are saved as Test_Source_ASE_ID1 and Test_Source_ASE_ID2.

- Test Case Configuration

Test Case ID
BAP/USR/STR/BV-366-C [USR, AC 11(i), LC3 Generic]

Table 4.67: Unicast Server Streaming – 4 Audio Streams, 2 CISes – LC3 test cases

Round	ASE_ID	CIS_ID
1	Test_Sink_ASE_ID1	CIS_ID1
2	Test_Source_ASE_ID1	CIS_ID1
3	Test_Sink_ASE_ID2	CIS_ID2
4	Test_Source_ASE_ID2	CIS_ID2

Table 4.68: Rounds for Unicast Server Streaming – 4 Audio Streams, 2 CISes

- Test Procedure

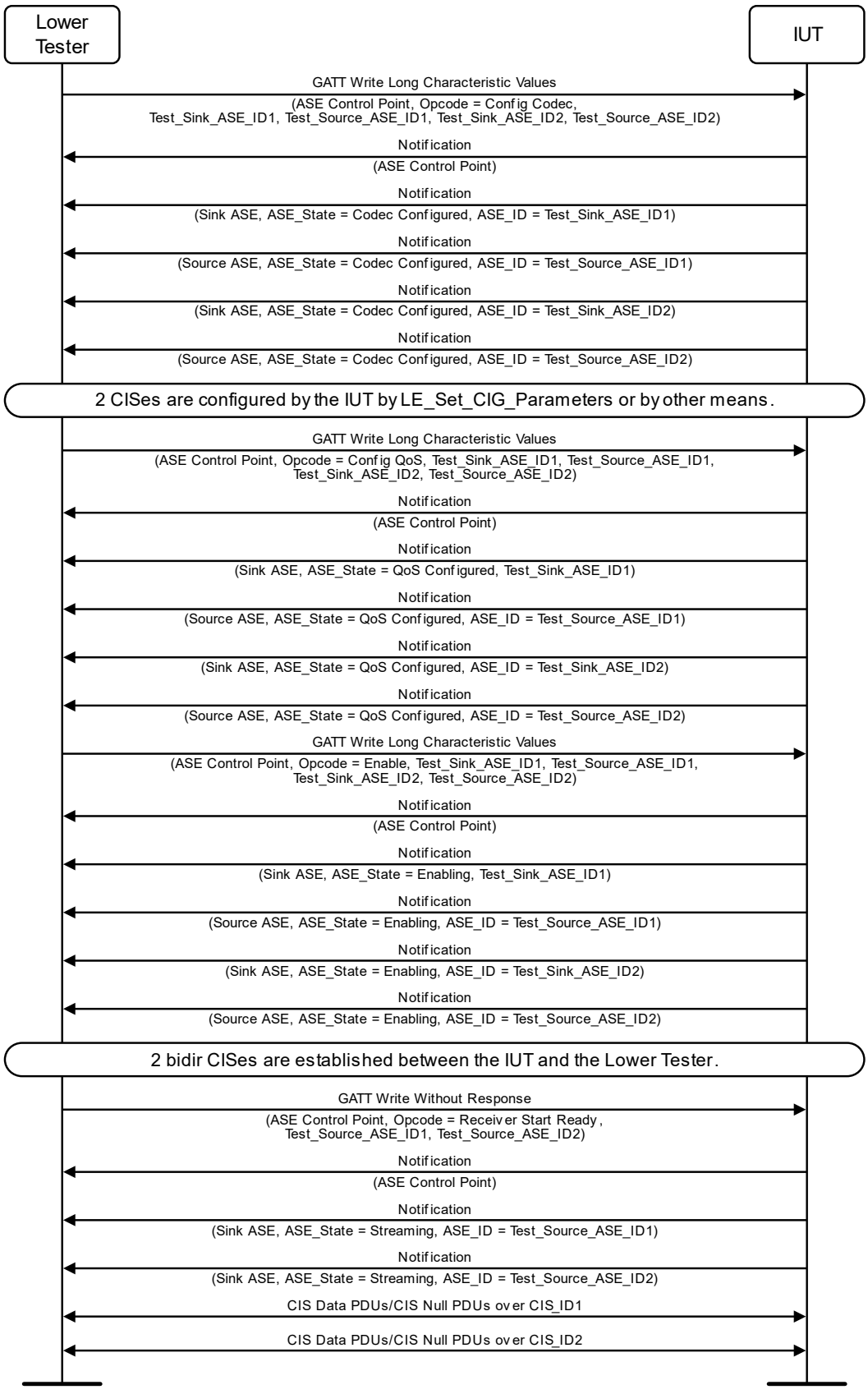


Figure 4.31: Unicast Server Streaming – 4 Audio Streams, 2 CISes MSC

1. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x01 (Config Codec) and:
   - Number_of_ASEs set to 4
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - ASE_ID[2] set to Test_Sink_ASE_ID2
   - ASE_ID[3] set to Test_Source_ASE_ID2
   - Remaining values for [0] codec parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID1
   - Remaining values for [1] codec parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID1
   - Remaining values for [2] codec parameters set to values referenced in TSPX_CODEC_CONFIG_SINK_ASEID2
   - Remaining values for [3] codec parameters set to values referenced in TSPX_CODEC_CONFIG_SOURCE_ASEID2
2. The IUT sends a notification of the ASE Control Point characteristic.
3. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
4. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
5. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
6. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
7. The Lower Tester executes the LE_Set_CIG_Parameters command with CIS_Count = 2 and remaining parameters set using values from TSPX_CIG_Parameters.
8. The Lower Tester receives a Command Complete event with a Status of 0x00 in response to the LE_Set_CIG_Parameters command.
9. The Lower Tester executes the GATT Write Long Characteristic Values sub-procedure for the ASE Control Point characteristic with the opcode set to 0x02 (Config QoS) and:
   - Number_of_ASEs set to 4
   - ASE_ID[0] set to Test_Sink_ASE_ID1
   - ASE_ID[1] set to Test_Source_ASE_ID1
   - ASE_ID[2] set to Test_Sink_ASE_ID2
   - ASE_ID[3] set to Test_Source_ASE_ID2
   - CIG_ID set to the value obtained in Step 5
   - CIS_ID[0] and CIS_ID[1] set to CIS_ID1
   - CIS_ID[2] and CIS_ID[3] set to CIS_ID2
   - Remaining values for [0] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID1
   - Remaining values for [1] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID1
   - Remaining values for [2] parameters set to values referenced in TSPX_QOS_CONFIG_SINK_ASEID2
   - Remaining values for [3] parameters set to values referenced in TSPX_QOS_CONFIG_SOURCE_ASEID2
10. The IUT sends a notification of the ASE Control Point characteristic.
11. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
12. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
13. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.

14. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
15. The Lower Tester executes the GATT Write Long Characteristic Values sub-procedure for the ASE Control Point characteristic with the opcode set to 0x03 (Enable) and:
    - Number_of_ASEs set to 4
    - ASE_ID[0] set to Test_Sink_ASE_ID1
    - ASE_ID[1] set to Test_Source_ASE_ID1
    - ASE_ID[2] set to Test_Sink_ASE_ID2
    - ASE_ID[3] set to Test_Source_ASE_ID2
    - Metadata set to the TSPX_Metadata IXIT entry
16. The IUT sends a notification of the ASE Control Point characteristic.
17. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID1.
18. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
19. The IUT sends a notification of the ASE characteristic that corresponds to Test_Sink_ASE_ID2.
20. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
21. The Lower Tester establishes two bidirectional CISes by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].
22. The IUT accepts the establishment of both CISes by using the Connected Isochronous Stream Peripheral Establishment procedure defined in Volume 3, Part C, Section 9.3.14 in [1].
23. The audio data paths are configured by executing the preamble in Section 4.4.9.
24. The Lower Tester executes the GATT Write Without Response sub-procedure for the ASE Control Point characteristic with the opcode set to 0x04 (Receiver Start Ready) and:
    - Number_of_ASEs = 2
    - ASE_ID[0] set Test_Source_ASE_ID1
    - ASE_ID[1] set Test_Source_ASE_ID2
25. The IUT sends a notification of the ASE Control Point characteristic.
26. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID1.
27. The IUT sends a notification of the ASE characteristic that corresponds to Test_Source_ASE_ID2.
28. The IUT sends and receives CIS Data PDUs or CIS Null PDUs on both bidirectional CISes over the connection to the Lower Tester.

- Expected Outcome

  Pass verdict

  Only one ASE must have the Codec Config and QoS Config Settings specified in its IXIT entries, and the other ASE may use the 16_2 Codec Config Settings and a 16_2_1 QoS Config Setting.

  On both bidirectional CISes, the IUT sends and receives SDUs with a zero or more length, using the LC3 Media Packet format (defined in [3] Section 4.2).

4.12 Unicast Server Service Procedure Errors

4.12.1 Common Control Point errors

- Test Purpose

  Verify the behavior of a Unicast Server IUT when a Unicast Client initiates control point operations with invalid ASE identifiers and Control Point operations of invalid length. The verification is performed for each opcode in turn, as specified in Table 4.69.

- Reference

  [6] 5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT is a Unicast Server.
  - The Lower Tester is a Unicast Client and has cached the ASCS service and characteristics handles (e.g., by running the procedures in Section 4.5).
  - The Lower Tester enables notifications for the ASE Control Point characteristic by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.

- Test Configuration

Test Case	Opcode
BAP/USR/SPE/BI-01-C [Disable – Common Errors]	Disable
BAP/USR/SPE/BI-02-C [Update Metadata – Common Errors]	Update Metadata
BAP/USR/SPE/BI-03-C [Release – Common Errors]	Release

Table 4.69: Common Control Point errors test cases

- Test Procedure

  Repeat Steps 1–2 for each round in Table 4.70.

  1. The Lower Tester executes the GATT Write Characteristic Value sub-procedure for the ASE Control Point with the Opcode specified in Table 4.69 and the Parameters specified in Table 4.70.
  2. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.

Round	Parameters	Response_Code	Number_of_ASEs
1	Number_of_ASEs set to 1, ASE_ID[0] set to invalid ASE_ID and appropriate parameters for the opcode	0x03 (Invalid ASE_ID)	0x01
2	Number_of_ASEs set to 1, ASE_ID[0] set to Test_ASE_ID and parameters of invalid length for the opcode	0x02 (Invalid Length)	0xFF
3	Number_of_ASEs set to 0, ASE_ID[0] set to Test_ASE_ID and parameters of invalid length for the opcode	0x02 (Invalid Length)	0xFF

Table 4.70: Rounds for Common Control Point errors

- Expected Outcome

  Pass verdict

  For each round, the IUT sends an ASE Control Point notification with:
  - Reason field set to 0x00
  - Response_Code field set to the Response_Code value specified in Table 4.70.
  - Number_of_ASEs field set to the value specified in Table 4.70.

BAP/USR/SPE/BI-04-C [Enable ASE – Invalid Parameters]

- Test Purpose

  Verify the behavior of a Unicast Server IUT when a Unicast Client initiates the Enable operation with invalid parameters.

- Reference

  [6] 5

- Initial Condition

  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The Lower Tester is a Unicast Client and has cached the ASCS service and characteristics handles (e.g., by running the procedures in Section 4.5).
  - The Lower Tester enables notifications by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the ASE Control Point CCCD.
  - The IUT is a Unicast Server with one ASE in the QoS Configured state.
  - The Lower Tester has established a CIS with the IUT by using the Connected Isochronous Stream Central Establishment procedure defined in Volume 3, Part C, Section 9.3.13 in [1].

- Test Procedure

  Repeat Steps 1–2 for each round in Table 4.71.

  1. The Lower Tester executes the GATT Write Characteristic Value sub-procedure for the ASE Control Point with the opcode set to 0x03 (Enable) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to Test_ASE_ID
     - Metadata_Length[0] set to the length of the Metadata[0] parameter
     - Metadata[0] configured as specified in Table 4.71.
  2. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.

Round	Parameters	Response Code
1	Includes Metadata Type unsupported by server	Unsupported Metadata (0x0A) or Rejected Metadata (0x0B)
2	Includes incorrectly formatted Metadata value	Rejected Metadata (0x0B) or Invalid Metadata (0x0C)
3	Streaming_Audio_Contexts LTV with a value of zero	Rejected Metadata (0x0B) or Invalid Metadata (0x0C)

Table 4.71: Rounds for Enable ASE – Invalid Parameters

- Expected Outcome

  Pass verdict

  The IUT sends an ASE Control Point notification with the Response_Code field value as specified in Table 4.71 and the Reason field set to the value of the Metadata Type field in error for each round.

BAP/USR/SPE/BI-05-C [Update Metadata – Invalid Parameters]

- Test Purpose

  Verify the behavior of a Unicast Server IUT when a Client initiates the Update Metadata operation with invalid parameters.

- Reference

  [6] 5

- Initial Condition

  - The IUT is a Unicast Server with one ASE in the Streaming state.

- Test Procedure

  Repeat Steps 1–2 for each round in Table 4.72.

  1. The Lower Tester executes the GATT Write Characteristic Value sub-procedure for the ASE Control Point with the opcode set to 0x07 (Update Metadata) and:
     - Number_of_ASEs set to 1
     - ASE_ID[0] set to Test_ASE_ID
     - Metadata_Length[0] set to the length of the Metadata[0] parameter
     - Metadata[0] configured as specified in Table 4.72.
  2. The IUT sends a GATT Characteristic Value Notification for the ASE Control Point characteristic.

Round	Metadata	Error Reason
1	Includes Metadata Type not supported by server	Unsupported Metadata (0x0A) or Rejected Metadata (0x0B)
2	Includes incorrectly formatted Metadata value	Rejected Metadata (0x0B) or Invalid Metadata (0x0C)
3	Streaming_Audio_Contexts LTV with a value of zero	Rejected Metadata (0x0B) or Invalid Metadata (0x0C)

Table 4.72: Rounds for Update Metadata – Invalid Parameters

- Expected Outcome

  Pass verdict

  The IUT sends an ASE Control Point notification with the Response_Code field set to the value specified in Table 4.72 and the Reason field set to the value of the Metadata Type field in error.

4.13 Broadcast Audio Stream Configuration

4.13.1 Broadcast Source Configures Broadcast Audio Stream

- Test Purpose

  Verify that a Broadcast Source IUT can configure a broadcast Audio Stream with information defined by the values in its BASE structure. The verification is performed one Codec Setting and set of parameters at a time, as enumerated in the test cases in Table 4.73.

- Reference

  [3] 6.3

- Initial Condition
  - The IUT is a Broadcast Source and has a BASE set to the TSPX_BASE IXIT entry in [7].
  - The Lower Tester is a Broadcast Sink.
- Test Configuration

Test Case ID	Codec Specific Config Setting (Section A.6)	Broadcast Audio Stream Config Setting (Section A.7)
BAP/BSRC/SCC/BV-01-C [Config Broadcast, LC3 8_1_1]	LC3 8_1	8_1_1
BAP/BSRC/SCC/BV-02-C [Config Broadcast, LC3 8_2_1]	LC3 8_2	8_2_1
BAP/BSRC/SCC/BV-03-C [Config Broadcast, LC3 16_1_1]	LC3 16_1	16_1_1
BAP/BSRC/SCC/BV-04-C [Config Broadcast, LC3 16_2_1]	LC3 16_2	16_2_1
BAP/BSRC/SCC/BV-05-C [Config Broadcast, LC3 24_1_1]	LC3 24_1	24_1_1
BAP/BSRC/SCC/BV-06-C [Config Broadcast, LC3 24_2_1]	LC3 24_2	24_2_1
BAP/BSRC/SCC/BV-07-C [Config Broadcast, LC3 32_1_1]	LC3 32_1	32_1_1
BAP/BSRC/SCC/BV-08-C [Config Broadcast, LC3 32_2_1]	LC3 32_2	32_2_1
BAP/BSRC/SCC/BV-09-C [Config Broadcast, LC3 44.1_1_1]	LC3 441_1	441_1_1
BAP/BSRC/SCC/BV-10-C [Config Broadcast, LC3 44.1_2_1]	LC3 441_2	441_2_1
BAP/BSRC/SCC/BV-11-C [Config Broadcast, LC3 48_1_1]	LC3 48_1	48_1_1
BAP/BSRC/SCC/BV-12-C [Config Broadcast, LC3 48_2_1]	LC3 48_2	48_2_1
BAP/BSRC/SCC/BV-13-C [Config Broadcast, LC3 48_3_1]	LC3 48_3	48_3_1
BAP/BSRC/SCC/BV-14-C [Config Broadcast, LC3 48_4_1]	LC3 48_4	48_4_1
BAP/BSRC/SCC/BV-15-C [Config Broadcast, LC3 48_5_1]	LC3 48_5	48_5_1
BAP/BSRC/SCC/BV-16-C [Config Broadcast, LC3 48_6_1]	LC3 48_6	48_6_1
BAP/BSRC/SCC/BV-17-C [Config Broadcast, LC3 8_1_2]	LC3 8_1	8_1_2
BAP/BSRC/SCC/BV-18-C [Config Broadcast, LC3 8_2_2]	LC3 8_2	8_2_2
BAP/BSRC/SCC/BV-19-C [Config Broadcast, LC3 16_1_2]	LC3 16_1	16_1_2
BAP/BSRC/SCC/BV-20-C [Config Broadcast, LC3 16_2_2]	LC3 16_2	16_2_2
BAP/BSRC/SCC/BV-21-C [Config Broadcast, LC3 24_1_2]	LC3 24_1	24_1_2
BAP/BSRC/SCC/BV-22-C [Config Broadcast, LC3 24_2_2]	LC3 24_2	24_2_2
BAP/BSRC/SCC/BV-23-C [Config Broadcast, LC3 32_1_2]	LC3 32_1	32_1_2
BAP/BSRC/SCC/BV-24-C [Config Broadcast, LC3 32_2_2]	LC3 32_2	32_2_2
BAP/BSRC/SCC/BV-25-C [Config Broadcast, LC3 44.1_1_2]	LC3 441_1	441_1_2
BAP/BSRC/SCC/BV-26-C [Config Broadcast, LC3 44.1_2_2]	LC3 441_2	441_2_2
BAP/BSRC/SCC/BV-27-C [Config Broadcast, LC3 48_1_2]	LC3 48_1	48_1_2
BAP/BSRC/SCC/BV-28-C [Config Broadcast, LC3 48_2_2]	LC3 48_2	48_2_2
BAP/BSRC/SCC/BV-29-C [Config Broadcast, LC3 48_3_2]	LC3 48_3	48_3_2
BAP/BSRC/SCC/BV-30-C [Config Broadcast, LC3 48_4_2]	LC3 48_4	48_4_2
BAP/BSRC/SCC/BV-31-C [Config Broadcast, LC3 48_5_2]	LC3 48_5	48_5_2
BAP/BSRC/SCC/BV-32-C [Config Broadcast, LC3 48_6_2]	LC3 48_6	48_6_2
BAP/BSRC/SCC/BV-33-C [Config Broadcast, VS]	TSPX_Vendor_Specific_Codec_ID	NA

Table 4.73: Broadcast Source Configures Broadcast Audio Stream test cases

- Test Procedure

  1. The Upper Tester orders the IUT to configure a broadcast Audio Stream using the broadcast Audio Stream Config Settings from Table 4.73 and the Codec Specific Configuration values for the corresponding Codec Setting value in Table 4.73.
  2. The Upper Tester orders the IUT to enter Periodic Advertising mode with configured BASE information in the AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs.
  3. The IUT enters Periodic Advertising Synchronizability mode including Service Data AD data type containing the Broadcast Audio Announcement Service UUID and Broadcast_ID in the service data.
  4. The Lower Tester synchronizes to the PA associated with the broadcast Audio Stream established by the IUT by using the Periodic Advertising Synchronization Establishment procedure.

- Expected Outcome

  Pass verdict

  In Step 2, the AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs contains the configured BASE information.

  In Step 3, the IUT transmits the PA synchronization information in the SyncInfo field of the Extended Header field of AUX_ADV_IND PDUs. The AUX_ADV_IND PDUs include the Service Data AD Type in the AdvData field with the Service UUID equal to the Broadcast Audio Announcement Service UUID. The additional service data includes Broadcast_ID.

  Each value included in the Codec_Specific_Configuration is formatted in an LTV structure with the length, type, and value specified in Table 4.74.

  Type values is defined in Bluetooth Assigned Numbers [9].

Parameter	Length	Value
Sampling_Frequency	0x02	From corresponding column in Table 4.73
Frame_Duration	0x02	From corresponding column in Table 4.73
Audio_Channel_Allocation	0x05	TSPX_Audio_Channel_Allocation
Octets_Per_Codec_Frame	0x03	From corresponding column in Table 4.73
Codec_Frame_Blocks_Per_SDU	0x02	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.74: LTV structures for Codec_Specific_Configuration parameters

BAP/BSRC/SCC/BV-34-C [Reconfigures Broadcast]

- Test Purpose

  Verify that a Broadcast Source IUT can reconfigure the broadcast Audio Stream and update the BASE configuration.

- Reference

  [3] 6.3.1, 6.3.3

- Initial Condition

  - The IUT is a Broadcast Source and has configured a broadcast Audio Stream using BAP/BSRC/SCC/BV-01-C [Config Broadcast, LC3 8_1_1], or by other means.

- Test Procedure

  1. The Upper Tester orders the IUT to reconfigure a broadcast stream using values of the TSPX_BASE_UPDATE IXIT entry.
  2. The IUT updates its Periodic Advertising mode with the BASE information in the AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs.
  3. The Lower Tester synchronizes to the PA associated with the broadcast Audio Stream established by the IUT by using the Periodic Advertising Synchronization Establishment procedure.

- Expected Outcome

  Pass verdict

  The IUT sends AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs with values from the BASE information in Step 1. The AdvData field of AUX_SYNC_IND contains updated BASE information.

  BIGInfo data is not present in the PA.

BAP/BSRC/SCC/BV-35-C [Establishes Broadcast]

- Test Purpose

  Verify that a Broadcast Source IUT can establish a broadcast Audio Stream.

- Reference

  [3] 6.3.2

- Initial Condition

  - The IUT is a Broadcast Source and has configured a broadcast Audio Stream using BAP/BSRC/SCC/BV-01-C [Config Broadcast, LC3 8_1_1], or by other means.

- Test Procedure

  1. The Upper Tester orders the IUT to enter Broadcast Isochronous Broadcasting mode.
  2. The Upper Tester orders the IUT to enter Broadcast Isochronous Synchronizability mode. The IUT sends AUX_SYNC_IND PDUs with BIGInfo in the ACAD field of the Extended Header field in the PA.
  3. The Upper Tester orders the IUT to set up the audio data path.
  4. The Lower Tester synchronizes to the PA associated with the broadcast Audio Stream established by the IUT using the Periodic Advertising Synchronization Establishment procedure.
  5. The Upper Tester orders the IUT to send BIS Data PDUs over the established broadcast Audio Stream.

- Expected Outcome

  Pass verdict

  The IUT sends AUX_SYNC_IND PDUs with an Extended Header containing BIGInfo in the ACAD field.

  The IUT sends BIS Data PDUs over the broadcast Audio Stream.

BAP/BSRC/SCC/BV-36-C [Disables Broadcast]

- Test Purpose

  Verify that a Broadcast Source IUT can disable a broadcast Audio Stream.

- Reference

  [3] 6.3.4

- Initial Condition

  - The IUT is a Broadcast Source and has established a broadcast Audio Stream using BAP/BSRC/SCC/BV-01-C [Config Broadcast, LC3 8_1_1], or by other means.

- Test Procedure

  1. The Upper Tester orders the IUT to disable the broadcast Audio Stream.

- Expected Outcome

  Pass verdict

  The IUT sends a BIG_TERMINATE_IND PDU in Step 1.

BAP/BSRC/SCC/BV-37-C [Releases Broadcast]

- Test Purpose

  Verify that a Broadcast Source IUT can release a broadcast Audio Stream and transition from Configured state to Idle state.

- Reference

  [3] 6.3.5

- Initial Condition

  - The IUT is a Broadcast Source.
  - The IUT has disabled a broadcast Audio Stream using BAP/BSRC/SCC/BV-36-C [Disables Broadcast], or by other means.

- Test Procedure

  1. The Lower Tester synchronizes to the PA associated with the broadcast Audio Stream established by the IUT.
  2. The Upper Tester orders the IUT to release the broadcast Audio Stream.

- Expected Outcome

  Pass verdict

  The IUT stops transmitting periodic advertising.

BAP/BSRC/SCC/BV-38-C [Multi BIG Configuration]

- Test Purpose

  Verify that a Broadcast Source IUT can configure two broadcast Audio Streams over two BIGs that have different Broadcast_ID.

- Reference

  [3] 3.7.2.1, 6.3

- Initial Condition
  - The IUT is a Broadcast Source and has a BASE set to the TSPX_BASE IXIT entry in [7].
  - The IUT can create multiple BIGs.
  - The Lower Tester is a Broadcast Sink.
- Test Procedure

  1. The Upper Tester orders the IUT to configure at least two broadcast audio streams in different BIGs using the broadcast Audio Stream Config Settings 16_2 and the Codec Specific Configuration values 16_2_1.
  2. The Upper Tester orders the IUT to enter Periodic Advertising mode with configured BASE information in the AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs for each BIG.
  3. The IUT enters Periodic Advertising Synchronizability mode including Service Data AD data type containing the Broadcast Audio Announcement Service UUID and Broadcast_ID in the service data for each BIG.
  4. The Lower Tester scans for advertisements with the Broadcast Audio Announcement Service UUID.

  For each advertisement train discovered from the IUT:

  5. The Lower Tester synchronizes to the PA associated with the broadcast Audio Stream established by the IUT by using the Periodic Advertising Synchronization Establishment procedure.
- Expected Outcome

  Pass verdict

  In Step 2, the AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs contains the configured BASE information.

  In Step 3, the IUT transmits the PA synchronization information in the SyncInfo field of the Extended Header field of AUX_ADV_IND PDUs.

  - The AUX_ADV_IND PDUs include the Service Data AD Type in the AdvData field with the Service UUID equal to the Broadcast Audio Announcement Service UUID.
  - The additional service data includes Broadcast_ID which is different for each BIG.

4.13.2 Broadcast Sink Synchronizes to PA

- Test Purpose

  Verify that a Broadcast Sink IUT can synchronize to the PA associated with a broadcast Audio Stream transmitted by a Broadcast Source. The verification is performed one Codec Setting and Broadcast Audio Stream Configuration Setting at a time, as enumerated in the test cases in Table 4.75.
- Reference

  [3] 6.4

- Initial Condition
  - The IUT is a Broadcast Sink and supports the broadcast Audio Stream Config Settings specified in Table 4.75.
  - The Lower Tester is a Broadcast Source with a BASE structure configured with the configuration setting values in Table 4.75.
  - The Lower Tester contains a Broadcast Audio Immediate Rendering Flag LTV (see Section 6.12.6 [9]) and an unknown LTV in the Metadata Parameter of the BASE structure.
- Test Configuration

Test Case ID	Codec Setting (Section A.6)	Broadcast Audio Stream Config Setting (Section A.7)
BAP/BSNK/SCC/BV-04-C [Sync to PA, LC3 16_2_1]	LC3 16_2	16_2_1
BAP/BSNK/SCC/BV-06-C [Sync to PA, LC3 24_2_1]	LC3 24_2	24_2_1
BAP/BSNK/SCC/BV-20-C [Sync to PA, LC3 16_2_2]	LC3 16_2	16_2_2
BAP/BSNK/SCC/BV-22-C [Sync to PA, LC3 24_2_2]	LC3 24_2	24_2_2
BAP/BSNK/SCC/BV-33-C [Sync to PA, VS]	TSPX_Vendor_Specific_Codec_ID	N/A
BAP/BSNK/SCC/BV-34-C [Sync to PA, Unknown]	Unknown Codec	Unknown Config

Table 4.75: Broadcast Sink Synchronizes to PA test cases

- Test Procedure
  1. The Lower Tester configures a broadcast Audio Stream using the broadcast Audio Stream Config Settings referenced in Table 4.75 and the Codec Specific Configuration values for the corresponding Codec Setting value referenced in Table 4.75.
  2. The Lower Tester enters Periodic Advertising mode with configured BASE information in the AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs.
  3. The Lower Tester enters Periodic Advertising Synchronizability mode including Service Data AD data type and the Broadcast Audio Announcement Service UUID and the Broadcast_ID in the service data.
  4. The Upper Tester orders the IUT to begin scanning for advertising events.
  5. The Upper Tester orders the IUT to synchronize to the PA associated with the broadcast Audio Stream established by the Lower Tester by using the Periodic Advertising Synchronization Establishment procedure.
  6. The Upper Tester verifies that the BASE is correctly received.
- Expected Outcome

  Pass verdict

  In Step 6, the Upper Tester verifies that the received AdvData field of AUX_SYNC_IND and optionally AUX_CHAIN_IND PDUs contains the configured BASE information as specified in Table 4.75.

  The IUT correctly parses the entire BASE structure in Step 6.

4.13.3 Broadcast Advertising

- Test Purpose

  Verify that an IUT acting as either a Broadcast Sink or Broadcast Assistant can receive Basic Audio Announcements. The verification is performed for each role specified in Table 4.76 below.

- Reference

  [3] 6.4

- Initial Condition
  - The IUT is in the role specified in the IUT column in Table 4.76.
  - The Lower Tester is a Broadcast Source.
  - The Lower Tester contains a Broadcast Audio Immediate Rendering Flag LTV (see Section 6.12.6 [9]) and an unknown LTV in the Metadata Parameter of the BASE structure.
  - The Lower Tester has configured one BIS.
- Test Case Configuration

Test Case ID	IUT
BAP/BSNK/ADV/BV-01-C [BSNK Receives Basic Audio Announcements]	Broadcast Sink
BAP/BA/ADV/BV-01-C [BA Receives Basic Audio Announcements]	Broadcast Assistant

Table 4.76: Broadcast Advertising test cases

- Test Procedure
  1. The Upper Tester orders the IUT to begin scanning for advertising events.
  2. The Upper Tester orders the IUT to synchronize to the PA using the Periodic Advertising Synchronization Establishment procedure (e.g., using the procedure in Volume 3, Part C, Section 9.5.3 in [1]).
  3. The Upper Tester verifies that BASE information is received.
- Expected Outcome

  Pass verdict

  The IUT receives the AUX_SYNC_IND and AUX_CHAIN_IND PDUs and properly parses the AdvData field, which contains the BASE information.

  The AUX_ADV_IND PDUs have the Service Data AD Type in the AdvData field and the Broadcast Audio Announcement Service UUID in the service data.

  The IUT correctly parses the entire BASE structure in Step 3.

4.13.4 BASS

4.13.4.1 Broadcast BASS Advertisements

- Test Purpose

  Verify that a Scan Delegator IUT can broadcast BASS advertisements.
- Reference

  [3] 6.5.2
- Initial Condition
  - The IUT is a Scan Delegator including an instance of the Broadcast Audio Scan Service.

- Test Case Configuration

Test Case	Type	CTKD
BAP/SDE/BASS/BV-01-C [Broadcast BASS Advertisements]	LE	N/A
BAP/SDE/BASS/BV-02-C [Broadcast BASS Advertisements, BR/EDR/LE]	BR/EDR/LE	Y
BAP/SDE/BASS/BV-03-C [Broadcast BASS Advertisements, BR/EDR/LE, No CTKD]	BR/EDR/LE	N

Table 4.77: Broadcast BASS Advertisements test cases

- Test Procedure

1. Perform alternative 1A if the IUT is BR/EDR/LE as indicated in Table 4.77.
   Alternative 1A:
   1A.1 The Upper Tester orders the IUT to be discoverable over BR/EDR.
   1A.2 The Lower Tester performs BR/EDR Inquiry to discover the IUT.
   1A.3 The IUT sends an Inquiry response message.
2. The Upper Tester orders the IUT to start transmitting extended advertising PDUs containing the following fields:
   - Service Data AD data type
   - Broadcast Audio Scan Service UUID
3. The Lower Tester scans for advertisements.

- Expected Outcome

  Pass verdict

  The IUT sends extended advertising events containing the Broadcast Audio Scan Service.

  If the IUT is BR/EDR/LE as indicated in Table 4.77, then the IUT is discoverable over both BR/EDR and LE.

  If the IUT is BR/EDR/LE and CTKD is not used as indicated in Table 4.77, then the BD_ADDR in Inquiry response is the same as the Public Device Address of the extended advertising PDU used to expose discoverable mode.

BAP/BA/BASS/BV-01-C [Receives Extended Advertisements]

- Test Purpose

  Verify that a Broadcast Assistant IUT can receive Scan Delegator extended advertisements.

- Reference

  [3] 6.5.2

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - The Lower Tester has an instance of BASS with one Broadcast Receive State characteristic.
  - The Lower Tester is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.

- Test Procedure

1. The Upper Tester orders the IUT to discover Scan Delegators.
2. The Upper Tester confirms that the IUT discovered the Lower Tester.

- Expected Outcome

  Pass verdict

  The Upper Tester confirms that the IUT receives extended advertising events.

BAP/BA/BASS/BV-02-C [Initiate Remote Scan Start Operation]

- Test Purpose

  Verify that a Broadcast Assistant IUT can initiate a Remote Scan Start operation.

- Reference

  [3] 6.5.3

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - The Lower Tester has an instance of Published Audio Capabilities Service and instantiates and exposes at least one Sink PAC characteristic.
  - The Lower Tester has an instance of BASS and instantiates one Broadcast Receive State characteristic.
  - The Lower Tester is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has discovered the Lower Tester by executing BAP/BA/BASS/BV-01-C [Receives Extended Advertisements], or by other means.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered the Broadcast Audio Scan Service and Characteristics and has saved the handle ranges.

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode set to 0x01 (Remote Scan Start).

- Expected Outcome

  Pass verdict

  The IUT successfully writes the Remote Scan Start opcode to the Broadcast Audio Scan Control Point.

BAP/BA/BASS/BV-03-C [Initiate Remote Scan Stop Operation]

- Test Purpose

  Verify that a Broadcast Assistant IUT can stop Remote Scanning for the Lower Tester.

- Reference

  [3] 6.5.3

- Initial Condition
  - The IUT is a Broadcast Assistant.
  - The Lower Tester includes an instantiation of the Published Audio Capabilities Service with at least one instance of the Sink PAC characteristic.
  - The Lower Tester has an instance of Broadcast Audio Scan Service with one Broadcast Receive State characteristic.
  - The Lower Tester is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has discovered the Lower Tester by executing BAP/BA/BASS/BV-01-C [Receives Extended Advertisements], or by other means.
  - Establish a Bearer connection between the Lower Tester and the IUT as described in Section 4.4.1, if using ATT over an LE transport, or Section 4.4.2 if using ATT over a BR/EDR transport, or Section 4.4.3 if using EATT over an LE transport, or Section 4.4.4 if using EATT over a BR/EDR transport.
  - The IUT has discovered the Broadcast Audio Scan Service and Characteristics and has saved the handle ranges.
- Test Procedure
  1. The Upper Tester orders the IUT to execute the GATT Write Characteristic Value sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode value set to 0x00 (Remote Scan Stop).
- Expected Outcome

  Pass verdict

  The IUT successfully writes the Remote Scan Stop opcode to the Broadcast Audio Scan Control Point.

BAP/BA/BASS/BV-04-C [Initiate Add Source Operation]

- Test Purpose

  Verify that a Broadcast Assistant IUT can add a Broadcast Source to a Scan Delegator.
- Reference

  [3] 6.5.4
- Initial Condition
  - The IUT is a Broadcast Assistant.
  - Lower Tester 2 is a Broadcast Source advertising on a random Advertising Address Type with one BIS.
  - Lower Tester 1 is a Scan Delegator including an instantiation of the Published Audio Capabilities Service with at least one instance of the Sink PAC characteristic.
  - Lower Tester 1 has an instance of BASS with one Broadcast Receive State characteristic.
  - Lower Tester 1 is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has discovered Lower Tester 2 by executing BAP/BA/ADV/BV-01-C [BA Receives Basic Audio Announcements], or by other means.

- The IUT has discovered Lower Tester 1 by executing BAP/BA/BASS/BV-01-C [Receives Extended Advertisements], or by other means.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Broadcast Receive State CCCD.

- Test Procedure

  1. The Upper Tester orders the IUT to add the broadcast source on Lower Tester 1.
  2. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode value set to 0x02 (Add Source) and:
     - Advertising_Address_Type, Advertiser_Address, and Advertising_SID fields set to those discovered from Lower Tester 2
     - Broadcast_ID set to the Broadcast_ID retrieved from Lower Tester 2
     - PA_Sync set to 0x01 or 0x02
     - PA_Interval set to the SyncInfo field Interval value
     - Num_Subgroups set to 0x01
     - BIS_Sync[0] set to 0x00000001 or 0xFFFFFFFF
     - Metadata_Length and Metadata set to valid values
  3. The Lower Tester sends the IUT a notification of the Broadcast Receive State characteristic.

- Expected Outcome

  Pass verdict

  The IUT successfully writes the Add Source opcode to the Broadcast Audio Scan Control Point characteristic with the parameters being broadcast from Lower Tester 2.

BAP/BA/BASS/BV-05-C [Initiate Modify Source Operation]

- Test Purpose

  Test that Broadcast Assistant IUT can modify the Broadcast Source on a Scan Delegator.

- Reference

  [3] 6.5.5

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - Lower Tester 2 is a Broadcast Source transmitting a broadcast Audio Stream on a random Advertising Address Type.
  - Lower Tester 1 is a Scan Delegator including an instantiation of the Published Audio Capabilities Service with at least one instance of the Sink PAC characteristic.
  - Lower Tester 1 has an instance of BASS with one Broadcast Receive State characteristic.
  - Lower Tester 1 is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has added Lower Tester 2 as a source by executing BAP/BA/BASS/BV-04-C [Initiate Add Source Operation], or by other means.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Broadcast Receive State CCCD.

- Test Procedure

  1. The Upper Tester orders the IUT to modify the broadcast source on Lower Tester 2.
  2. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode value set to 0x03 (Modify Source) and:
     - PA_Sync set to 0x00
     - BIS_Sync[0] set to 0x00000000
     - All other required fields set to valid values
  3. Lower Tester 1 sends the IUT a notification of the Broadcast Receive State Characteristic with the PA_Sync_State set to 0x00 and BIS_Sync_State set to 0x00000000.

- Expected Outcome

  Pass verdict

  The IUT successfully writes the Modify Source opcode to the Broadcast Audio Scan Control Point characteristic with the parameters being broadcast from Lower Tester 2.

BAP/BA/BASS/BV-06-C [Initiates Remove Source Operation]

- Test Purpose

  Test that a Broadcast Assistant IUT can remove the Broadcast Source on the Scan Delegator.

- Reference

  [3] 6.5.8

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - Lower Tester 1 is a Scan Delegator that includes an instantiation of the Published Audio Capabilities Service with at least one instance of the Sink PAC characteristic.
  - Lower Tester 2 is a Broadcast Source transmitting a broadcast Audio Stream on a random BIS index and random Advertising Address Type.
  - Lower Tester 1 has an instance of BASS with one Broadcast Receive State characteristic. The values of the PA_Sync_State and BIS_Sync_State fields are set to 0 by executing BAP/BA/BASS/BV-05-C [Initiate Modify Source Operation], or by other means. The Num_Subgroups field is set to the Num_Subgroups parameter value of the BASE.
  - Lower Tester 1 is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has added Lower Tester 2 as a source by executing BAP/BA/BASS/BV-04-C [Initiate Add Source Operation], or by other means.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Broadcast Receive State CCCD.

- Test Procedure

  1. The Upper Tester orders the IUT to remove the Broadcast Source on Lower Tester 1.
  2. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode set to 0x05 (Remove Source) and:
     - Source_ID set to the Source ID of the Broadcast Receive State characteristic of Lower Tester 2
  3. Lower Tester 1 sends the IUT a notification of the Broadcast Receive State Characteristic with all fields set to zero except Source_ID. BIS_Sync_State, Metadata_Length, and Metadata fields are not present.

- Expected Outcome

  Pass verdict

  The IUT successfully writes the Remove Source opcode to the Broadcast Audio Scan Control Point characteristic with the specified Source_ID value.

BAP/BA/BASS/BV-07-C [Set Broadcast Code]

- Test Purpose

  Test that a Broadcast Assistant IUT can set a Broadcast Code for an encrypted BIG so that a Scan Delegator can decrypt.

- Reference

  [3] 6.5.7

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - Lower Tester 2 is a Broadcast Source transmitting an encrypted broadcast Audio Stream.
  - Lower Tester 1 is a Scan Delegator and includes an instantiation of the Published Audio Capabilities Service with at least one instance of the Sink PAC characteristic.
  - Lower Tester 1 has an instance of BASS with one Broadcast Receive State characteristic.
  - Lower Tester 1 is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has discovered Lower Tester 2 by executing BAP/BA/ADV/BV-01-C [BA Receives Basic Audio Announcements], or by other means.
  - The IUT has discovered Lower Tester 1 by executing BAP/BA/BASS/BV-01-C [Receives Extended Advertisements], or by other means.
  - The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Broadcast Receive State CCCD.

- Test Procedure

  1. The Upper Tester orders the IUT to add the broadcast source on Lower Tester 1.
  2. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode set to 0x02 (Add Source) and:
     - Advertising_Address_Type, Advertiser_Address, and Advertising_SID fields set to values discovered from Lower Tester 2
     - Broadcast_ID set to the value of the Broadcast_ID retrieved from Lower Tester 2
     - PA_Sync set to 0x01 or 0x02
     - BIS_Sync[0] set to 0x00000001
  3. The Lower Tester sends the IUT a notification of the Broadcast Receive State characteristic with the PA_Sync_State = 0x02 and BIS_Sync_State = 0x0 and BIG_Encryption = 0x01.
  4. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode set to 0x04 (Set Broadcast Code) and:
     - Source_ID of the Broadcast Receive State characteristic
     - Broadcast Code set to the TSPX_Broadcast_Code IXIT entry
  5. The Lower Tester sends the IUT a notification of the Broadcast Receive State characteristic with:
     - PA_Sync_State set to 0x02
     - BIS_Sync_State set to the 0x00000001
     - BIG_Encryption set to 0x02

- Expected Outcome

  Pass verdict

  In Step 4, the IUT successfully writes the Set Broadcast Code opcode to the Broadcast Audio Scan Control Point characteristic with the specified parameters.

BAP/BA/BASS/BV-08-C [Transfers SyncInfo Data to Scan Delegator]

- Test Purpose

  Test that a Broadcast Assistant IUT can transfer SyncInfo data to a Scan Delegator using the PAST procedure.

- Reference

  [3] 6.5.6

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - Lower Tester 2 is a Broadcast Source transmitting an encrypted broadcast Audio Stream.
  - Lower Tester 1 is a Scan Delegator and includes an instantiation of the Published Audio Capabilities Service with at least one instance of the Sink PAC characteristic.
  - Lower Tester 1 has an instance of BASS with one Broadcast Receive State characteristic.
  - Lower Tester 1 is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has discovered Lower Tester 2 by executing BAP/BA/ADV/BV-01-C [BA Receives Basic Audio Announcements], or by other means.

- The IUT has discovered Lower Tester 1 by executing BAP/BA/BASS/BV-01-C [Receives Extended Advertisements], or by other means.
- The IUT enables notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the Broadcast Receive State CCCD.

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Write Without Response sub-procedure for the Broadcast Audio Scan Control Point characteristic with the opcode set to 0x02 (Add Source) and:
     - Advertiser_Address_Type, Advertiser_Address, and Advertising_SID fields set to values discovered from Lower Tester 2
     - Broadcast_ID set to the value of the Broadcast_ID retrieved from Lower Tester 2
     - PA_Sync set to 0x01
     - BIS_Sync[0] set to 0x00000001
  2. Lower Tester 1 sends a notification of the Broadcast Receive State Characteristic with:
     - Source_Address_Type set to the Address Type value of Lower Tester 2
     - Source_Adv_SID set to the Advertising_SID value of Lower Tester 2
     - PA_Sync_State set to 0x01
     - Num_Subgroups set to the number of subgroups
     - BIS_Sync set to 0x00000000
     - Metadata_Length set to length of Metadata field
     - Metadata set to valid LTV-formatted Metadata
  3. The IUT sends an LL_PERIODIC_SYNC_IND PDU to Lower Tester 1 containing the SyncInfo data of Lower Tester 2.

- Expected Outcome

  Pass verdict

  In Step 3, the IUT sends an LL_PERIODIC_SYNC_IND PDU.

BAP/BA/BASS/BV-09-C [Discover Sink Audio Locations]

- Test Purpose

  Verify that a Broadcast Assistant IUT can discover Published Audio Capabilities Service characteristics on a Broadcast Sink.

- Reference

  [3] 3.10, 6.5.1

- Initial Condition

  - The IUT is a Broadcast Assistant.
  - The Lower Tester is a Broadcast Sink including an instantiation of the Published Audio Capabilities Service with an instance of the Sink Audio Locations characteristic.
  - The Lower Tester is transmitting extended advertising PDUs including the following fields: Service Data AD data type, Broadcast Audio Scan Service UUID.
  - The IUT has discovered the Lower Tester by executing BAP/BA/BASS/BV-01-C [Receives Extended Advertisements], or by other means.

- Test Procedure

  1. The Upper Tester orders the IUT to execute the GATT Discover All Characteristics of a Service sub-procedure or the GATT Discover Characteristics by Characteristic UUID sub-procedure to discover the Sink Audio Location characteristic and its CCCD.
  2. The Upper Tester orders the IUT to enable notification by writing the value 0x0001 using the GATT Write Characteristic Descriptors sub-procedure for the retrieved in Step 1.
  3. The Lower Tester sends a notification of the Sink Audio Locations characteristic.

- Expected Outcome

  Pass verdict

  The IUT discovers the Sink Audio Locations characteristic and enables notifications successfully.

4.14 Broadcast Audio Streaming

4.14.1 Broadcast Audio Stream with One BIS – Source

- Test Purpose

  Verify that a Broadcast Source IUT can stream one BIS to a Broadcast Sink. The verification is performed for each Config Settings in turn, as specified in Table 4.78.

- Reference

  [3] 3.7.1, 4.2, 4.5

- Initial Condition

  - The IUT is a Broadcast Source transmitting a broadcast Audio Stream using BAP/BSRC/SCC/BV-03-C [Config Broadcast, LC3 16_1_1], or by other means.
  - The Lower Tester is a Broadcast Sink.
  - The BASE contains Codec Specific Capabilities with the Config Settings referenced in Table 4.78. If testing a Vendor-specific codec, the parameters contain the values in TSPX_VS_Codec_Specific_Configuration.

- Test Case Configuration

Test Case ID	Config Settings (Section A.6)
BAP/BSRC/STR/BV-01-C [BSRC, LC3 8_1]	LC3 8_1
BAP/BSRC/STR/BV-02-C [BSRC, LC3 8_2]	LC3 8_2
BAP/BSRC/STR/BV-03-C [BSRC, LC3 16_1]	LC3 16_1
BAP/BSRC/STR/BV-04-C [BSRC, LC3 16_2]	LC3 16_2
BAP/BSRC/STR/BV-05-C [BSRC, LC3 24_1]	LC3 24_1
BAP/BSRC/STR/BV-06-C [BSRC, LC3 24_2]	LC3 24_2
BAP/BSRC/STR/BV-07-C [BSRC, LC3 32_1]	LC3 32_1
BAP/BSRC/STR/BV-08-C [BSRC, LC3 32_2]	LC3 32_2
BAP/BSRC/STR/BV-09-C [BSRC, LC3 44.1_1]	LC3 441_1
BAP/BSRC/STR/BV-10-C [BSRC, LC3 44.1_2]	LC3 441_2
BAP/BSRC/STR/BV-11-C [BSRC, LC3 48_1]	LC3 48_1
BAP/BSRC/STR/BV-12-C [BSRC, LC3 48_2]	LC3 48_2
BAP/BSRC/STR/BV-13-C [BSRC, LC3 48_3]	LC3 48_3
BAP/BSRC/STR/BV-14-C [BSRC, LC3 48_4]	LC3 48_4

Test Case ID	Config Settings (Section A.6)
BAP/BSRC/STR/BV-15-C [BSRC, LC3 48_5]	LC3 48_5
BAP/BSRC/STR/BV-16-C [BSRC, LC3 48_6]	LC3 48_6
BAP/BSRC/STR/BV-17-C [BSRC, VS]	TSPX_VS_Codec_ID

Table 4.78: Broadcast Audio Stream with One BIS – Source test cases

- Test Procedure

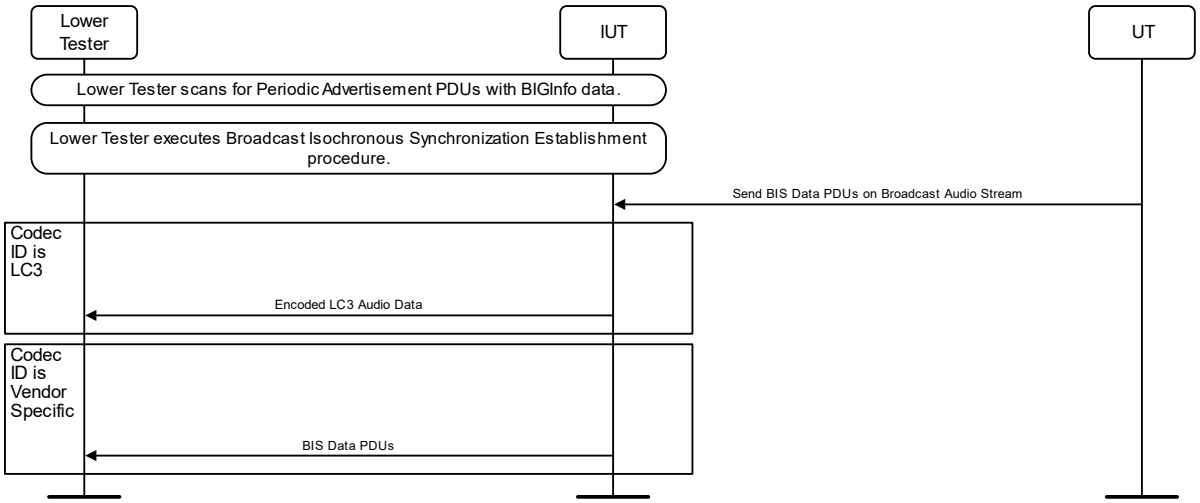


Figure 4.32: Broadcast Audio Stream with One BIS – Source MSC

1. The Lower Tester scans for the Periodic Advertisements PDUs with BIGInfo data.
2. The Lower Tester executes the Broadcast Isochronous Synchronization Establishment procedure defined in [1].
3. The Upper Tester orders the IUT to send BIS Data PDUs on the broadcast Audio Stream.
4. If the Codec ID is LC3:
   - The IUT sends encoded LC3 audio data over the broadcast Audio Stream.
5. If the Codec ID is a vendor-specific Codec ID:
   - The IUT sends BIS Data PDUs.
6. The Lower Tester receives BIS Data PDUs on the broadcast Audio Stream.

- Expected Outcome

  Pass verdict

  If the Codec ID is LC3, the IUT sends encoded LC3 audio data in BIS Data PDUs on the broadcast Audio Stream. The audio data is formatted using the LC3 Media Packet format defined in [3].

  If the Codec ID is a vendor-specific Codec ID, the IUT sends BIS Data PDUs on the broadcast Audio Stream. The parameters included in the Codec_Specific_Configuration data are as defined in TSPX_VS_Codec_Specific_Configuration.

  If the Codec ID is LC3, each parameter included in Codec_Specific_Configuration data is formatted in an LTV structure with the length, type, and value specified in Table 4.79.

  Type Values defined in Bluetooth Assigned Numbers [9].

Parameter	Length	Value
Sampling_Frequency	0x02	Corresponding value referenced in Table 4.78
Frame_Durations	0x02	Corresponding value referenced in Table 4.78
Audio_Channel_Allocation	0x05	TSPX_Audio_Channel_Allocation
Octets_Per_Codec_Frame	0x03	Corresponding value referenced in Table 4.78
Codec_Frame_Blocks_Per_SDU	0x02	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.79: LTV structures for codec specific configuration parameters

4.14.2 Broadcast Audio Stream with One BIS – Sink

- Test Purpose

  Verify that a Broadcast Sink IUT can stream one BIS from a Broadcast Source. Verification is performed for each set of codec specific capabilities in turn, as specified in Table 4.80.

- Reference

  [3] 4.2, 4.5

- Initial Condition

  - The IUT is a Broadcast Sink.
  - The Lower Tester is a Broadcast Source transmitting on a random BIS index and a randomly chosen Advertising Address Type.
  - The BASE contains Codec Specific Capabilities with the parameters referenced in Table 4.80. If testing a vendor-specific codec, the parameters contain the values in TSPX_Codec_Specific_Configuration.

- Test Case Configuration

Test Case ID	Codec ID	Broadcast Audio Config Settings (Section A.7)
BAP/BSNK/STR/BV-01-C [BSNK, LC3 8_1_1]	LC3	LC3 8_1_1
BAP/BSNK/STR/BV-02-C [BSNK, LC3 8_2_1]	LC3	LC3 8_2_1
BAP/BSNK/STR/BV-03-C [BSNK, LC3 16_1_1]	LC3	LC3 16_1_1
BAP/BSNK/STR/BV-04-C [BSNK, LC3 16_2_1]	LC3	LC3 16_2_1
BAP/BSNK/STR/BV-05-C [BSNK, LC3 24_1_1]	LC3	LC3 24_1_1
BAP/BSNK/STR/BV-06-C [BSNK, LC3 24_2_1]	LC3	LC3 24_2_1
BAP/BSNK/STR/BV-07-C [BSNK, LC3 32_1_1]	LC3	LC3 32_1_1
BAP/BSNK/STR/BV-08-C [BSNK, LC3 32_2_1]	LC3	LC3 32_2_1
BAP/BSNK/STR/BV-09-C [BSNK, LC3 44.1_1_1]	LC3	LC3 441_1_1
BAP/BSNK/STR/BV-10-C [BSNK, LC3 44.1_2_1]	LC3	LC3 441_2_1
BAP/BSNK/STR/BV-11-C [BSNK, LC3 48_1_1]	LC3	LC3 48_1_1
BAP/BSNK/STR/BV-12-C [BSNK, LC3 48_2_1]	LC3	LC3 48_2_1
BAP/BSNK/STR/BV-13-C [BSNK, LC3 48_3_1]	LC3	LC3 48_3_1
BAP/BSNK/STR/BV-14-C [BSNK, LC3 48_4_1]	LC3	LC3 48_4_1
BAP/BSNK/STR/BV-15-C [BSNK, LC3 48_5_1]	LC3	LC3 48_5_1
BAP/BSNK/STR/BV-16-C [BSNK, LC3 48_6_1]	LC3	LC3 48_6_1
BAP/BSNK/STR/BV-35-C [BSNK, LC3 8_1_2]	LC3	LC3 8_1_2

Test Case ID	Codec ID	Broadcast Audio Config Settings (Section A.7)
BAP/BSNK/STR/BV-36-C [BSNK, LC3 8_2_2]	LC3	LC3 8_2_2
BAP/BSNK/STR/BV-37-C [BSNK, LC3 16_1_2]	LC3	LC3 16_1_2
BAP/BSNK/STR/BV-38-C [BSNK, LC3 16_2_2]	LC3	LC3 16_2_2
BAP/BSNK/STR/BV-39-C [BSNK, LC3 24_1_2]	LC3	LC3 24_1_2
BAP/BSNK/STR/BV-40-C [BSNK, LC3 24_2_2]	LC3	LC3 24_2_2
BAP/BSNK/STR/BV-41-C [BSNK, LC3 32_1_2]	LC3	LC3 32_1_2
BAP/BSNK/STR/BV-42-C [BSNK, LC3 32_2_2]	LC3	LC3 32_2_2
BAP/BSNK/STR/BV-43-C [BSNK, LC3 44.1_1_2]	LC3	LC3 441_1_2
BAP/BSNK/STR/BV-44-C [BSNK, LC3 44.1_2_2]	LC3	LC3 441_2_2
BAP/BSNK/STR/BV-45-C [BSNK, LC3 48_1_2]	LC3	LC3 48_1_2
BAP/BSNK/STR/BV-46-C [BSNK, LC3 48_2_2]	LC3	LC3 48_2_2
BAP/BSNK/STR/BV-47-C [BSNK, LC3 48_3_2]	LC3	LC3 48_3_2
BAP/BSNK/STR/BV-48-C [BSNK, LC3 48_4_2]	LC3	LC3 48_4_2
BAP/BSNK/STR/BV-49-C [BSNK, LC3 48_5_2]	LC3	LC3 48_5_2
BAP/BSNK/STR/BV-50-C [BSNK, LC3 48_6_2]	LC3	LC3 48_6_2
BAP/BSNK/STR/BV-17-C [BSNK, VS]	TSPX_Vendor_Specific_Codec_ID	N/A

Table 4.80: Broadcast Audio Stream with One BIS – Sink test cases

- Test Procedure

  1. The Upper Tester orders the IUT to scan for Periodic Advertisements PDUs with BIGInfo data.
  2. The Upper Tester orders the IUT to synchronize to the periodic advertising train of the Lower Tester.
  3. The IUT executes the Broadcast Isochronous Synchronization Establishment procedure defined in [1].
  4. The Upper Tester confirms that the IUT synchronizes to the Lower Tester.

- Expected Outcome

  Pass verdict

  The IUT synchronizes to the Lower Tester (the Link Layer receives a BIS Data PDU). The host on the IUT receives an LE BIG Sync Established event.

  If the Codec ID is LC3, the IUT receives BIS Data PDUs on the broadcast Audio Stream containing encoded LC3 audio data formatted using the LC3 Media Packet format defined in [3].

  If the Codec ID is a vendor-specific Codec ID, the IUT receives BIS Data PDUs on the broadcast Audio Stream. The parameters included in the Codec_Specific_Configuration data are as defined in TSPX_VS_Codec_Specific_Configuration.

  If the Codec ID is LC3, each parameter included in Codec_Specific_Configuration data is formatted in an LTV structure with the length, type, and value specified in Table 4.81.

  Type Values defined in Bluetooth Assigned Numbers [9].

Parameter	Length	Value
Sampling_Frequency	0x02	From corresponding column in Table 4.80
Frame_Durations	0x02	From corresponding column in Table 4.80

Parameter	Length	Value
Audio_Channel_Allocation	0x05	TSPX_Audio_Channel_Allocation
Octets_Per_Codec_Frame	0x03	From corresponding column in Table 4.80
Codec_Frame_Blocks_Per_SDU	0x02	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.81: LTV structures for codec specific configuration parameters

4.14.3 Broadcast Audio Stream with Multiple BISes – Source

- Test Purpose

  Verify that a Broadcast Source IUT can stream multiple BISes to a Broadcast Sink. The verification is performed for each set of parameters in turn, as specified in Table 4.82.

- Reference

  [3] 3.7.1, 4.2, 4.5

- Initial Condition

  - The Lower Tester is a Broadcast Sink.
  - The IUT is a Broadcast Source transmitting periodic advertising PDUs containing the BASE info in TSPX_BASE_Multiple_BISes and the Codec Specific Configuration parameters specified in Table 4.82. If testing a vendor-specific codec, the Codec Specific Configuration parameters contain the values in TSPX_VS_Codec_Specific_Configuration.

- Test Case Configuration

Test Case ID	Codec ID	Codec Setting (Section A.6)
BAP/BSRC/STR/BV-18-C [BSRC, Multiple BISes, LC3 8_1]	LC3	8_1
BAP/BSRC/STR/BV-19-C [BSRC, Multiple BISes, LC3 8_2]	LC3	8_2
BAP/BSRC/STR/BV-20-C [BSRC, Multiple BISes, LC3 16_1]	LC3	16_1
BAP/BSRC/STR/BV-21-C [BSRC, Multiple BISes, LC3 16_2]	LC3	16_2
BAP/BSRC/STR/BV-22-C [BSRC, Multiple BISes, LC3 24_1]	LC3	24_1
BAP/BSRC/STR/BV-23-C [BSRC, Multiple BISes, LC3 24_2]	LC3	24_2
BAP/BSRC/STR/BV-24-C [BSRC, Multiple BISes – LC3 32_1]	LC3	32_1
BAP/BSRC/STR/BV-25-C [BSRC, Multiple BISes, LC3 32_2]	LC3	32_2
BAP/BSRC/STR/BV-26-C [BSRC, Multiple BISes, LC3 44.1_1]	LC3	441_1
BAP/BSRC/STR/BV-27-C [BSRC, Multiple BISes, LC3 44.1_2]	LC3	441_2
BAP/BSRC/STR/BV-28-C [BSRC, Multiple BISes, LC3 48_1]	LC3	48_1
BAP/BSRC/STR/BV-29-C [BSRC, Multiple BISes, LC3 48_2]	LC3	48_2
BAP/BSRC/STR/BV-30-C [BSRC, Multiple BISes, LC3 48_3]	LC3	48_3
BAP/BSRC/STR/BV-31-C [BSRC, Multiple BISes, LC3 48_4]	LC3	48_4
BAP/BSRC/STR/BV-32-C [BSRC, Multiple BISes, LC3 48_5]	LC3	48_5
BAP/BSRC/STR/BV-33-C [BSRC, Multiple BISes, LC3 48_6]	LC3	48_6
BAP/BSRC/STR/BV-34-C [BSRC, Multiple BISes, VS]	TSPX_Vendor_Specific_Codec_ID	

Table 4.82: Broadcast Audio Stream with Multiple BISes – Source test cases

- Test Procedure

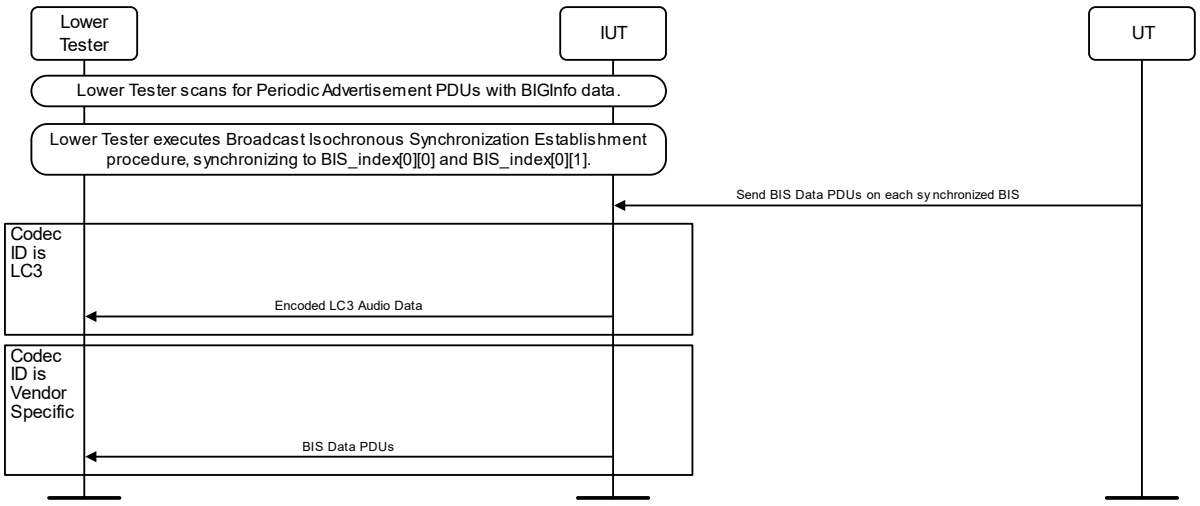


Figure 4.33: Broadcast Audio Stream with Multiple BISes – Source MSC

1. The Lower Tester scans for the Periodic Advertisements PDUs with BIGInfo data.
2. The Lower Tester executes the Broadcast Isochronous Synchronization Establishment procedure defined in [1], synchronizing to BIS_index[0][0], BIS_index[0][1].
3. The Upper Tester orders the IUT to send BIS Data PDUs on each synchronized BIS.
4. If the Codec ID is LC3:
   - The IUT sends encoded LC3 audio data over the broadcast Audio Stream.
5. If the Codec ID is a vendor-specific Codec ID:
   - The IUT sends BIS Data PDUs.
6. The Lower Tester receives BIS Data PDUs on each synchronized BIS.

- Expected Outcome

Pass verdict

If the Codec ID is LC3, the IUT sends encoded LC3 audio data in BIS Data PDUs on each synchronized BIS. The audio data is formatted using the LC3 Media Packet format defined in [3].

If the Codec ID is a vendor-specific Codec ID, the IUT sends BIS Data PDUs on each synchronized BIS. The parameters included in the Codec_Specific_Configuration data are as defined in TSPX_VS_Codec_Specific_Configuration.

If the Codec ID is LC3, each parameter included in Codec_Specific_Configuration data is formatted in an LTV structure with the length, type, and value specified in Table 4.83.

Type Values defined in Bluetooth Assigned Numbers [9].

Parameter	Length	Value
Sampling_Frequency	0x02	From corresponding column in Table 4.82
Frame_Durations	0x02	From corresponding column in Table 4.82
Audio_Channel_Allocation	0x05	TSPX_Audio_Channel_Allocation
Octets_Per_Codec_Frame	0x03	From corresponding column in Table 4.82
Codec_Frame_Blocks_Per_SDU	0x02	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.83: LTV structures for codec specific configuration parameters

4.14.4 Broadcast Audio Stream with Multiple BISes – Sink

- Test Purpose

  Verify that a Broadcast Sink IUT can receive audio data over multiple BISes from a Broadcast Source. The verification is performed for each set of parameters in turn, as specified in Table 4.84.

- Reference

  [3] 4.2, 4.5

- Initial Condition

  - The IUT is a Broadcast Sink.
  - The Lower Tester is a Broadcast Source, transmitting periodic advertising PDUs containing the BASE info in TSPX_BASE_Multiple_BISes and the Codec Specific Configuration parameters specified in Table 4.84. If testing a vendor-specific codec, the Codec Specific Configuration parameters contain the values in TSPX_VS_Codec_Specific_Configuration.

- Test Case Configuration

Test Case ID	Codec ID	Broadcast Audio Config Settings (Section A.7)
BAP/BSNK/STR/BV-18-C [BSNK, Multiple BISes, LC3 8_1_1]	LC3	LC3 8_1_1
BAP/BSNK/STR/BV-19-C [BSNK, Multiple BISes, LC3 8_2_1]	LC3	LC3 8_2_1
BAP/BSNK/STR/BV-20-C [BSNK, Multiple BISes, LC3 16_1_1]	LC3	LC3 16_1_1
BAP/BSNK/STR/BV-21-C [BSNK, Multiple BISes, LC3 16_2_1]	LC3	LC3 16_2_1
BAP/BSNK/STR/BV-22-C [BSNK, Multiple BISes, LC3 24_1_1]	LC3	LC3 24_1_1
BAP/BSNK/STR/BV-23-C [BSNK, Multiple BISes, LC3 24_2_1]	LC3	LC3 24_2_1
BAP/BSNK/STR/BV-24-C [BSNK, Multiple BISes, LC3 32_1_1]	LC3	LC3 32_1_1
BAP/BSNK/STR/BV-25-C [BSNK, Multiple BISes, LC3 32_2_1]	LC3	LC3 32_2_1
BAP/BSNK/STR/BV-26-C [BSNK, Multiple BISes, LC3 44.1_1_1]	LC3	LC3 441_1_1
BAP/BSNK/STR/BV-27-C [BSNK, Multiple BISes, LC3 44.1_2_1]	LC3	LC3 441_2_1
BAP/BSNK/STR/BV-28-C [BSNK, Multiple BISes, LC3 48_1_1]	LC3	LC3 48_1_1
BAP/BSNK/STR/BV-29-C [BSNK, Multiple BISes, LC3 48_2_1]	LC3	LC3 48_2_1
BAP/BSNK/STR/BV-30-C [BSNK, Multiple BISes, LC3 48_3_1]	LC3	LC3 48_3_1
BAP/BSNK/STR/BV-31-C [BSNK, Multiple BISes, LC3 48_4_1]	LC3	LC3 48_4_1
BAP/BSNK/STR/BV-32-C [BSNK, Multiple BISes, LC3 48_5_1]	LC3	LC3 48_5_1
BAP/BSNK/STR/BV-33-C [BSNK, Multiple BISes, LC3 48_6_1]	LC3	LC3 48_6_1
BAP/BSNK/STR/BV-51-C [BSNK, Multiple BISes, LC3 8_1_2]	LC3	LC3 8_1_2
BAP/BSNK/STR/BV-52-C [BSNK, Multiple BISes, LC3 8_2_2]	LC3	LC3 8_2_2
BAP/BSNK/STR/BV-53-C [BSNK, Multiple BISes, LC3 16_1_2]	LC3	LC3 16_1_2
BAP/BSNK/STR/BV-54-C [BSNK, Multiple BISes, LC3 16_2_2]	LC3	LC3 16_2_2
BAP/BSNK/STR/BV-55-C [BSNK, Multiple BISes, LC3 24_1_2]	LC3	LC3 24_1_2
BAP/BSNK/STR/BV-56-C [BSNK, Multiple BISes, LC3 24_2_2]	LC3	LC3 24_2_2
BAP/BSNK/STR/BV-57-C [BSNK, Multiple BISes, LC3 32_1_2]	LC3	LC3 32_1_2
BAP/BSNK/STR/BV-58-C [BSNK, Multiple BISes, LC3 32_2_2]	LC3	LC3 32_2_2
BAP/BSNK/STR/BV-59-C [BSNK, Multiple BISes, LC3 44.1_1_2]	LC3	LC3 441_1_2
BAP/BSNK/STR/BV-60-C [BSNK, Multiple BISes, LC3 44.1_2_2]	LC3	LC3 441_2_2
BAP/BSNK/STR/BV-61-C [BSNK, Multiple BISes, LC3 48_1_2]	LC3	LC3 48_1_2
BAP/BSNK/STR/BV-62-C [BSNK, Multiple BISes, LC3 48_2_2]	LC3	LC3 48_2_2

Test Case ID	Codec ID	Broadcast Audio Config Settings (Section A.7)
BAP/BSNK/STR/BV-63-C [BSNK, Multiple BISes, LC3 48_3_2]	LC3	LC3 48_3_2
BAP/BSNK/STR/BV-64-C [BSNK, Multiple BISes, LC3 48_4_2]	LC3	LC3 48_4_2
BAP/BSNK/STR/BV-65-C [BSNK, Multiple BISes, LC3 48_5_2]	LC3	LC3 48_5_2
BAP/BSNK/STR/BV-66-C [BSNK, Multiple BISes, LC3 48_6_2]	LC3	LC3 48_6_2
BAP/BSNK/STR/BV-34-C [BSNK, Multiple BISes, VS]	TSPX_Vendor_Specific_Codec_ID	

Table 4.84: Broadcast Sink Receives Audio Data Over Multiple BISes test cases

- Test Procedure

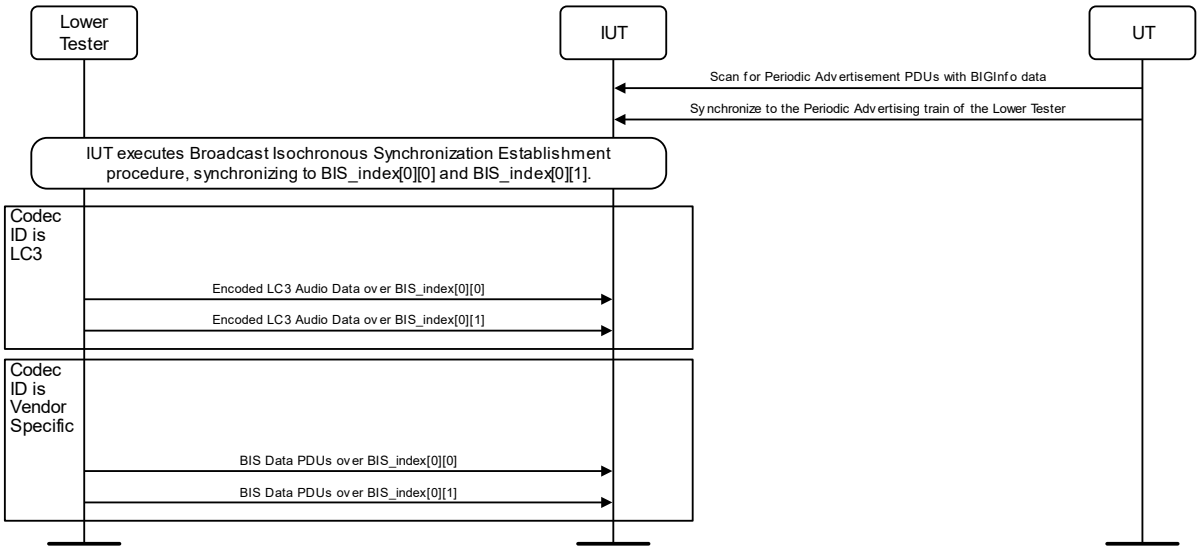


Figure 4.34: Broadcast Sink Receives Audio Data Over Multiple BISes MSC

1. The Upper Tester orders the IUT to scan for Periodic Advertisements PDUs with BIGInfo data.
2. The Upper Tester orders the IUT to synchronize to the periodic advertising train of the Lower Tester.
3. The IUT executes the Broadcast Isochronous Synchronization Establishment procedure defined in [1], synchronizing to the BISes at BIS_index[0][0], BIS_index[0][1].
4. If the Codec ID is LC3:
   - The Lower Tester sends encoded LC3 audio data over each synchronized BIS.
5. If the Codec ID is a vendor-specific Codec ID:
   - The Lower Tester sends BIS Data PDUs.
6. The IUT receives BIS Data PDUs on each synchronized BIS.

- Expected Outcome

Pass verdict

The IUT synchronizes to the Lower Tester (the Link Layer receives a BIS Data PDU). The host on the IUT receives an LE BIG Sync Established event.

If the Codec ID is LC3, the IUT receives encoded LC3 audio data in BIS Data PDUs on each synchronized BIS. The audio data is formatted using the LC3 Media Packet format defined in [3].

If the Codec ID is a vendor-specific Codec ID, the IUT receives BIS Data PDUs on each synchronized BIS. The parameters included in the Codec_Specific_Configuration data are as defined in TSPX_VS_Codec_Specific_Configuration.

If the Codec ID is LC3, each parameter included in Codec_Specific_Configuration data is formatted in an LTV structure with the length, type, and value specified in Table 4.85.

Type Values defined in Bluetooth Assigned Numbers [9].

Parameter	Length	Value
Sampling_Frequency	0x02	From corresponding column in Table 4.84
Frame_Durations	0x02	From corresponding column in Table 4.84
Audio_Channel_Allocation	0x05	TSPX_Audio_Channel_Allocation
Octets_Per_Codec_Frame	0x03	From corresponding column in Table 4.84
Codec_Frame_Blocks_Per_SDU	0x02	TSPX_Codec_Frame_Blocks_Per_SDU

Table 4.85: LTV structures for codec specific configuration parameters

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 BAP [4].

If a test case is mandatory within the respective layer, then the y/x reference is omitted.

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 [2].

For the purpose and structure of the ICS/IXIT, refer to [2].

Item	Feature	Test Case(s)
BAP 28/3 OR BAP 28/4 OR BAP 85/3 OR BAP 85/4	Published Audio Capabilities Service	BAP/CL/CGGIT/SER/BV-01-C
BAP 32/1 OR BAP 87/1	Sink PAC Characteristic	BAP/CL/CGGIT/CHA/BV-01-C
BAP 32/2 OR BAP 87/2	Sink Audio Locations Characteristic	BAP/CL/CGGIT/CHA/BV-02-C
BAP 33/3	Source PAC Characteristic	BAP/CL/CGGIT/CHA/BV-03-C
BAP 33/4	Source Audio Locations Characteristic	BAP/CL/CGGIT/CHA/BV-04-C
BAP 32/5	Available Audio Contexts Characteristic	BAP/CL/CGGIT/CHA/BV-05-C
BAP 32/6	Supported Audio Contexts Characteristic	BAP/CL/CGGIT/CHA/BV-06-C
BAP 28/1 OR BAP 28/2	Audio Stream Control Service	BAP/UCL/CGGIT/SER/BV-01-C
BAP 31/1	Sink ASE Characteristic	BAP/UCL/CGGIT/CHA/BV-01-C
BAP 31/2	Source ASE Characteristic	BAP/UCL/CGGIT/CHA/BV-02-C
BAP 31/3	ASE Control Point Characteristic	BAP/UCL/CGGIT/CHA/BV-03-C
BAP 85/1 OR BAP 85/2	Broadcast Audio Scan Service	BAP/BA/CGGIT/SER/BV-01-C
BAP 86/1	Broadcast Audio Scan Control Point Characteristic	BAP/BA/CGGIT/CHA/BV-01-C
BAP 86/2	Broadcast Receive State Characteristic	BAP/BA/CGGIT/CHA/BV-02-C
Unicast Client – Discovery and Advertising		
BAP 29/2	Unicast Client – Discover Audio Sink Capabilities	BAP/UCL/DISC/BV-01-C
BAP 29/1	Unicast Client – Discover Audio Source Capabilities	BAP/UCL/DISC/BV-02-C
BAP 31/6	Unicast Client – Discover Sink ASE_ID	BAP/UCL/DISC/BV-03-C

Item	Feature	Test Case(s)
BAP 31/7	Unicast Client – Discover Source ASE_ID	BAP/UCL/DISC/BV-04-C
BAP 32/9	Unicast Client performs Supported Audio Contexts Discovery	BAP/UCL/DISC/BV-05-C
BAP 32/10	Unicast Client performs Available Audio Contexts Discovery	BAP/UCL/DISC/BV-06-C BAP/UCL/ADV/BV-01-C
BAP 29/2	Unicast Client Behavior – Sink Role	BAP/UCL/PD/BV-03-C
BAP 29/1	Unicast Client Behavior – Source Role	BAP/UCL/PD/BV-04-C
BAP 29/2 AND BAP 30/1	Presentation Delay with multiple servers - Sink	BAP/UCL/PD/BV-01-C
BAP 29/1 AND BAP 30/1	Presentation Delay with multiple servers - Source	BAP/UCL/PD/BV-02-C
Discovery and Advertising		
BAP 8/1	Unicast Server – Expose Audio Sink Capabilities	BAP/USR/DISC/BV-01-C
BAP 8/2	Unicast Server – Expose Audio Source Capabilities	BAP/USR/DISC/BV-02-C
BAP 8/1 AND NOT BAP 8/2	Unicast Server – Expose Sink ASE_ID	BAP/USR/DISC/BV-03-C
BAP 8/2 AND NOT BAP 8/1	Unicast Server – Expose Source ASE_ID	BAP/USR/DISC/BV-04-C
BAP 8/1 AND BAP 8/2	Unicast Server – Expose Sink and Source ASE_ID	BAP/USR/DISC/BV-05-C
BAP 9/5	Unicast Server – Expose Available Audio Contexts	BAP/USR/DISC/BV-06-C
BAP 9/6	Unicast Server – Expose Supported Audio Contexts	BAP/USR/DISC/BV-07-C
BAP 25/2 AND NOT BAP 3/2 AND BAP 7/9	Unicast Server General Advertisements	BAP/USR/ADV/BV-01-C
BAP 25/2 AND BAP 3/2 AND BAP 23/12 AND BAP 7/9	Unicast Server LE Extended Advertising – BR/EDR/LE, General Advertisements	BAP/USR/ADV/BV-02-C
BAP 25/2 AND BAP 3/2 AND BAP 23/12 AND BAP 7/10	Unicast Server LE Extended Advertising – BR/EDR/LE, Targeted Advertisements	BAP/USR/ADV/BV-05-C
BAP 25/2 AND BAP 3/2 AND NOT BAP 23/12 AND BAP 7/9	Unicast Server LE Extended Advertising – No CTKD, General Advertisements	BAP/USR/ADV/BV-03-C
BAP 25/2 AND BAP 3/2 AND NOT BAP 23/12 AND BAP 7/10	Unicast Server LE Extended Advertising – No CTKD, Targeted Advertisements	BAP/USR/ADV/BV-06-C
BAP 25/2 AND NOT BAP 3/2 AND BAP 7/10	Unicast Server Targeted Advertisements	BAP/USR/ADV/BV-04-C
BAP 1/1 AND BAP 23/13 AND BAP 3/2	Unicast Server - CoD	BAP/USR/DEVD/BV-01-C

Item	Feature	Test Case(s)
BAP 1/4 AND BAP 74/18 AND BAP 3/2	Broadcast Sink - CoD	BAP/BSNK/DEVD/BV-01-C
BAP 1/5 AND BAP 80/19 AND BAP 3/2	Scan Delegator - CoD	BAP/SDE/DEVD/BV-01-C
BAP 1/3 AND BAP 60/5 AND BAP 3/2	Broadcast Source - CoD	BAP/BSRC/DEVD/BV-01-C
BAP 1/6 AND BAP 90/18 AND BAP 3/2	Broadcast Assistant - CoD	BAP/BA/DEVD/BV-01-C
Unicast Client – Generic		
AC.1, 2, 4, 10		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND BAP 44/2 AND BAP 33a/7	UCL Streaming – A.C.2: Generic	BAP/UCL/STR/BV-535-C BAP/UCL/STR/BV-552-C BAP/UCL/STR/BV-553-C BAP/UCL/STR/BV-554-C BAP/UCL/STR/BV-555-C BAP/UCL/STR/BV-569-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12	UCL Streaming – A.C.2: Generic w/ No A.C.10	BAP/UCL/STR/BV-568-C BAP/UCL/STR/BV-570-C

Item	Feature	Test Case(s)
OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/2 AND BAP 33a/7 AND NOT BAP 44/14		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND BAP 44/2 AND BAP 33a/8	UCL Streaming – A.C.2: Generic, QoS Config	BAP/UCL/STR/BV-539-C BAP/UCL/STR/BV-560-C BAP/UCL/STR/BV-561-C BAP/UCL/STR/BV-562-C BAP/UCL/STR/BV-563-C BAP/UCL/STR/BV-581-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR	UCL Streaming – A.C.2: Generic w/ No A.C.10 , QoS Config	BAP/UCL/STR/BV-580-C BAP/UCL/STR/BV-582-C

Item	Feature	Test Case(s)
BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/2 AND BAP 33a/8 AND NOT BAP 44/14		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND BAP 44/14 AND BAP 33a/7	UCL Streaming – A.C.10: Generic	BAP/UCL/STR/BV-536-C BAP/UCL/STR/BV-571-C BAP/UCL/STR/BV-572-C BAP/UCL/STR/BV-573-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND BAP 44/14 AND BAP 33a/8	UCL Streaming – A.C.10: Generic, QoS Config	BAP/UCL/STR/BV-540-C BAP/UCL/STR/BV-583-C BAP/UCL/STR/BV-584-C BAP/UCL/STR/BV-585-C
(BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR	UCL Streaming – A.C.1: Generic	BAP/UCL/STR/BV-537-C BAP/UCL/STR/BV-556-C

Item	Feature	Test Case(s)
BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/1 AND BAP 33a/3		BAP/UCL/STR/BV-557-C BAP/UCL/STR/BV-558-C BAP/UCL/STR/BV-559-C BAP/UCL/STR/BV-575-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/1 AND BAP 33a/3 AND NOT BAP 44/4	UCL Streaming – A.C.1: Generic w/ No A.C.4	BAP/UCL/STR/BV-574-C BAP/UCL/STR/BV-576-C
(BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR	UCL Streaming – A.C.1: Generic, QoS Config	BAP/UCL/STR/BV-541-C BAP/UCL/STR/BV-564-C

Item	Feature	Test Case(s)
BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/1 AND BAP 33a/6		BAP/UCL/STR/BV-565-C BAP/UCL/STR/BV-566-C BAP/UCL/STR/BV-567-C BAP/UCL/STR/BV-587-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/1 AND BAP 33a/6 AND NOT BAP 44/4	UCL Streaming – A.C.1: Generic, QoS Config w/ No A.C.4	BAP/UCL/STR/BV-586-C BAP/UCL/STR/BV-588-C

Item	Feature	Test Case(s)
(BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/4 AND BAP 33a/3	UCL Streaming – A.C.4: Generic	BAP/UCL/STR/BV-538-C BAP/UCL/STR/BV-577-C BAP/UCL/STR/BV-578-C BAP/UCL/STR/BV-579-C
(BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/4 AND BAP 33a/6	UCL Streaming – A.C.4: Generic, QoS Config	BAP/UCL/STR/BV-542-C BAP/UCL/STR/BV-589-C BAP/UCL/STR/BV-590-C BAP/UCL/STR/BV-591-C
A.C. 3, 5, 7(i)		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR	UCL Streaming – A.C.3: Generic	BAP/UCL/STR/BV-523-C

Item	Feature	Test Case(s)
BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/3 AND BAP 33a/1		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15	UCL Streaming – A.C.3: Generic, Enable, QoS	BAP/UCL/STR/BV-543-C

Item	Feature	Test Case(s)
OR BAP 41/16) AND BAP 44/3 AND BAP 33a/2		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/3 AND BAP 33a/4	UCL Streaming – A.C.3: Generic, QoS, Enable	BAP/UCL/STR/BV-546-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15	UCL Streaming – A.C.3: Generic, QoS, QoS	BAP/UCL/STR/BV-549-C

Item	Feature	Test Case(s)
OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/3 AND BAP 33a/5		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/5 AND BAP 33a/1	UCL Streaming – A.C.5: Generic	BAP/UCL/STR/BV-524-C

Item	Feature	Test Case(s)
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/5 AND BAP 33a/2	UCL Streaming – A.C.5: Generic, Enable, QoS	BAP/UCL/STR/BV-544-C

Item	Feature	Test Case(s)
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/5 AND BAP 33a/4	UCL Streaming – A.C.5: Generic, QoS, Enable	BAP/UCL/STR/BV-547-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/5 OR	UCL Streaming – A.C.5: Generic, QoS, QoS	BAP/UCL/STR/BV-550-C

Item	Feature	Test Case(s)
BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/5 AND BAP 33a/5		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/8 AND BAP 33a/1	UCL Streaming – A.C.7(i): Generic	BAP/UCL/STR/BV-525-C

Item	Feature	Test Case(s)
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/8 AND BAP 33a/2	UCL Streaming – A.C.7(i): Generic, Enable, QoS	BAP/UCL/STR/BV-545-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR	UCL Streaming – A.C.7(i): Generic, QoS, Enable	BAP/UCL/STR/BV-548-C

Item	Feature	Test Case(s)
BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/8 AND BAP 33a/4		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/8 AND BAP 33a/5	UCL Streaming – A.C.7(i): Generic, QoS, QoS	BAP/UCL/STR/BV-551-C

Item	Feature	Test Case(s)
Other A.C. Config		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/9	UCL Streaming – A.C.7(ii): Generic	BAP/UCL/STR/BV-526-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6	UCL Streaming – A.C.8(i): Generic	BAP/UCL/STR/BV-531-C

Item	Feature	Test Case(s)
OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/10		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/11	UCL Streaming – A.C.8(ii): Generic	BAP/UCL/STR/BV-532-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR	UCL Streaming – A.C.11(i): Generic	BAP/UCL/STR/BV-533-C

Item	Feature	Test Case(s)
BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/15		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND (BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR	UCL Streaming – A.C.11(ii): Generic	BAP/UCL/STR/BV-534-C

Item	Feature	Test Case(s)
BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/16		
Sink Only		
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND BAP 44/6	UCL Streaming – A.C.6(i): Generic	BAP/UCL/STR/BV-527-C
(BAP 38/1 OR BAP 38/2 OR BAP 38/3 OR BAP 38/4 OR BAP 38/5 OR BAP 38/6 OR BAP 38/7 OR BAP 38/8 OR BAP 38/9 OR BAP 38/10 OR BAP 38/11 OR BAP 38/12 OR BAP 38/13 OR BAP 38/14 OR BAP 38/15 OR BAP 38/16 OR BAP 40/1 OR BAP 40/2 OR BAP 40/3 OR BAP 40/4 OR BAP 40/5 OR BAP 40/6 OR BAP 40/7 OR BAP 40/8 OR BAP 40/9 OR BAP 40/10 OR BAP 40/11 OR BAP 40/12 OR BAP 40/13 OR BAP 40/14 OR BAP 40/15 OR BAP 40/16) AND BAP 44/7	UCL Streaming – A.C.6(ii): Generic	BAP/UCL/STR/BV-528-C

Item	Feature	Test Case(s)
Source Only		
(BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/12	UCL Streaming – A.C.9(i): Generic	BAP/UCL/STR/BV-529-C
(BAP 39/1 OR BAP 39/2 OR BAP 39/3 OR BAP 39/4 OR BAP 39/5 OR BAP 39/6 OR BAP 39/8 OR BAP 39/7 OR BAP 39/9 OR BAP 39/10 OR BAP 39/11 OR BAP 39/12 OR BAP 39/13 OR BAP 39/14 OR BAP 39/15 OR BAP 39/16 OR BAP 41/1 OR BAP 41/2 OR BAP 41/3 OR BAP 41/4 OR BAP 41/5 OR BAP 41/6 OR BAP 41/7 OR BAP 41/8 OR BAP 41/9 OR BAP 41/10 OR BAP 41/11 OR BAP 41/12 OR BAP 41/13 OR BAP 41/14 OR BAP 41/15 OR BAP 41/16) AND BAP 44/13	UCL Streaming – A.C.9(ii): Generic	BAP/UCL/STR/BV-530-C
Unicast Client – LC3 8_1		
BAP 36/1	Unicast Client as Audio Sink Initiates Config Codec – LC3 8_1	BAP/UCL/SCC/BV-017-C
BAP 38/1	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 8_1_1	BAP/UCL/SCC/BV-051-C
BAP 40/1	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 8_1_2	BAP/UCL/SCC/BV-083-C
BAP 37/1	Unicast Client as Audio Source initiates Config Codec – LC3 8_1	BAP/UCL/SCC/BV-001-C

Item	Feature	Test Case(s)
BAP 39/1	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 8_1_1	BAP/UCL/SCC/BV-035-C
BAP 41/1	QoS Configuration – Unicast Client as Audio Source - LC3 – High Reliability – 8_1_2	BAP/UCL/SCC/BV-067-C
Unicast Client – LC3 8_2		
BAP 36/2	Unicast Client as Audio Sink Initiates Config Codec – LC3 8_2	BAP/UCL/SCC/BV-018-C
BAP 38/2	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 8_2_1	BAP/UCL/SCC/BV-052-C
BAP 40/2	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 8_2_2	BAP/UCL/SCC/BV-084-C
BAP 37/2	Unicast Client as Audio Source initiates Config Codec – LC3 8_2	BAP/UCL/SCC/BV-002-C
BAP 39/2	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 8_2_1	BAP/UCL/SCC/BV-036-C
BAP 41/2	QoS Configuration – Unicast Client as Audio Source - LC3 – High Reliability – 8_2_2	BAP/UCL/SCC/BV-068-C
Unicast Client – LC3 16_1		
BAP 36/3	Unicast Client as Audio Sink Initiates Config Codec – LC3 16_1	BAP/UCL/SCC/BV-019-C
BAP 38/3	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 16_1_1	BAP/UCL/SCC/BV-053-C
BAP 40/3	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 16_1_2	BAP/UCL/SCC/BV-085-C
BAP 37/3	Unicast Client as Audio Source initiates Config Codec – LC3 16_1	BAP/UCL/SCC/BV-003-C
BAP 39/3	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 16_1_1	BAP/UCL/SCC/BV-037-C
BAP 41/3	QoS Configuration – Unicast Client as Audio Source - LC3 – High Reliability – 16_1_2	BAP/UCL/SCC/BV-069-C
Unicast Client – LC3 16_2		
BAP 36/4	Unicast Client as Audio Sink Initiates Config Codec – LC3 16_2	BAP/UCL/SCC/BV-020-C
BAP 38/4	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 16_2_1	BAP/UCL/SCC/BV-054-C

Item	Feature	Test Case(s)
BAP 40/4	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 16_2_2	BAP/UCL/SCC/BV-086-C
BAP 37/4	Unicast Client as Audio Source initiates Config Codec – LC3 16_2	BAP/UCL/SCC/BV-004-C
BAP 39/4	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 16_2_1	BAP/UCL/SCC/BV-038-C
BAP 41/4	QoS Configuration – Unicast Client as Audio Source - LC3 – High Reliability – 16_2_2	BAP/UCL/SCC/BV-070-C
Unicast Client – LC3 24_1		
BAP 36/5	Unicast Client as Audio Sink Initiates Config Codec – LC3 24_1	BAP/UCL/SCC/BV-021-C
BAP 38/5	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 24_1_1	BAP/UCL/SCC/BV-055-C
BAP 41/5	QoS Configuration – Unicast Client as Audio Source - LC3 - High Reliability - 24_1_2	BAP/UCL/SCC/BV-071-C
BAP 37/5	Unicast Client as Audio Source initiates Config Codec – LC3 24_1	BAP/UCL/SCC/BV-005-C
BAP 39/5	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 24_1_1	BAP/UCL/SCC/BV-039-C
BAP 40/5	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 24_1_2	BAP/UCL/SCC/BV-087-C
Unicast Client – LC3 24_2		
BAP 36/6	Unicast Client as Audio Sink Initiates Config Codec – LC3 24_2	BAP/UCL/SCC/BV-022-C
BAP 38/6	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 24_2_1	BAP/UCL/SCC/BV-056-C
BAP 40/6	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 24_2_2	BAP/UCL/SCC/BV-088-C
BAP 37/6	Unicast Client as Audio Source initiates Config Codec – LC3 24_2	BAP/UCL/SCC/BV-006-C

Item	Feature	Test Case(s)
BAP 39/6	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 24_2_1	BAP/UCL/SCC/BV-040-C
BAP 41/6	QoS Configuration – Unicast Client as Audio Source - LC3 – High Reliability – 24_2_2	BAP/UCL/SCC/BV-072-C
Unicast Client – LC3 32_1		
BAP 36/7	Unicast Client as Audio Sink Initiates Config Codec with LC3 32_1	BAP/UCL/SCC/BV-023-C
BAP 38/7	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 32_1_1	BAP/UCL/SCC/BV-057-C
BAP 40/7	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 32_1_2	BAP/UCL/SCC/BV-089-C
BAP 37/7	Unicast Client as Audio Source initiates Config Codec – LC3 32_1	BAP/UCL/SCC/BV-007-C
BAP 39/7	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 32_1_1	BAP/UCL/SCC/BV-041-C
BAP 41/7	QoS – Unicast Client as Audio Source - LC3 – High Reliability – 32_1_2	BAP/UCL/SCC/BV-073-C
Unicast Client – LC3 32_2		
BAP 36/8	Unicast Client as Audio Sink Initiates Config Codec with LC3 32_2	BAP/UCL/SCC/BV-024-C
BAP 38/8	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 32_2_1	BAP/UCL/SCC/BV-058-C
BAP 40/8	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 32_2_2	BAP/UCL/SCC/BV-090-C
BAP 37/8	Unicast Client as Audio Source initiates Config Codec – LC3 32_2	BAP/UCL/SCC/BV-008-C
BAP 39/8	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 32_2_1	BAP/UCL/SCC/BV-042-C
BAP 41/8	QoS Configuration – Unicast Client as Audio Source - LC3 – High Reliability – 32_2_2	BAP/UCL/SCC/BV-074-C

Item	Feature	Test Case(s)
Unicast Client – LC3 441_1		
BAP 36/9	Unicast Client as Audio Sink Initiates Config Codec with LC3 441_1	BAP/UCL/SCC/BV-025-C
BAP 38/9	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 441_1_1	BAP/UCL/SCC/BV-059-C
BAP 40/9	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 441_1_2	BAP/UCL/SCC/BV-091-C
BAP 37/9	Unicast Client as Audio Source initiates Config Codec – LC3 441_1	BAP/UCL/SCC/BV-009-C
BAP 39/9	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 441_1_1	BAP/UCL/SCC/BV-043-C
BAP 41/9	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 441_1_2	BAP/UCL/SCC/BV-075-C
Unicast Client – LC3 441_2		
BAP 36/10	Unicast Client as Audio Sink Initiates Config Codec with LC3 441_2	BAP/UCL/SCC/BV-026-C
BAP 38/10	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 441_2_1	BAP/UCL/SCC/BV-060-C
BAP 40/10	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 441_2_2	BAP/UCL/SCC/BV-092-C
BAP 37/10	Unicast Client as Audio Source initiates Config Codec – LC3 441_2	BAP/UCL/SCC/BV-010-C
BAP 39/10	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 441_2_1	BAP/UCL/SCC/BV-044-C
BAP 41/10	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 441_2_2	BAP/UCL/SCC/BV-076-C
Unicast Client – LC3 48_1		
BAP 36/11	Unicast Client as Audio Sink Initiates Config Codec with LC3 48_1	BAP/UCL/SCC/BV-027-C
BAP 38/11	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 48_1_1	BAP/UCL/SCC/BV-061-C
BAP 40/11	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 48_1_2	BAP/UCL/SCC/BV-093-C

Item	Feature	Test Case(s)
BAP 37/11	Unicast Client as Audio Source initiates Config Codec – LC3 48_1	BAP/UCL/SCC/BV-011-C
BAP 39/11	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 48_1_1	BAP/UCL/SCC/BV-045-C
BAP 41/11	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 48_1_2	BAP/UCL/SCC/BV-077-C
Unicast Client – LC3 48_2		
BAP 36/12	Unicast Client as Audio Sink Initiates Config Codec with LC3 48_2	BAP/UCL/SCC/BV-028-C
BAP 38/12	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 48_2_1	BAP/UCL/SCC/BV-062-C
BAP 40/12	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 48_2_2	BAP/UCL/SCC/BV-094-C
BAP 37/12	Unicast Client as Audio Source initiates Config Codec – LC3 48_2	BAP/UCL/SCC/BV-012-C
BAP 39/12	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 48_2_1	BAP/UCL/SCC/BV-046-C
BAP 41/12	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 48_2_2	BAP/UCL/SCC/BV-078-C
Unicast Client – LC3 48_3		
BAP 36/13	Unicast Client as Audio Sink Initiates Config Codec with LC3 48_3	BAP/UCL/SCC/BV-029-C
BAP 38/13	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 48_3_1	BAP/UCL/SCC/BV-063-C
BAP 40/13	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 48_3_2	BAP/UCL/SCC/BV-095-C
BAP 37/13	Unicast Client as Audio Source initiates Config Codec – LC3 48_3	BAP/UCL/SCC/BV-013-C
BAP 39/13	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 48_3_1	BAP/UCL/SCC/BV-047-C
BAP 41/13	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 48_3_2	BAP/UCL/SCC/BV-079-C

Item	Feature	Test Case(s)
Unicast Client – LC3 48_4		
BAP 36/14	Unicast Client as Audio Sink Initiates Config Codec with LC3 48_4	BAP/UCL/SCC/BV-030-C
BAP 38/14	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 48_4_1	BAP/UCL/SCC/BV-064-C
BAP 40/14	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 48_4_2	BAP/UCL/SCC/BV-096-C
BAP 37/14	Unicast Client as Audio Source initiates Config Codec – LC3 48_4	BAP/UCL/SCC/BV-014-C
BAP 39/14	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 48_4_1	BAP/UCL/SCC/BV-048-C
BAP 41/14	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 48_4_2	BAP/UCL/SCC/BV-080-C
Unicast Client – LC3 48_5		
BAP 36/15	Unicast Client as Audio Sink Initiates Config Codec LC3 Setting 48_5	BAP/UCL/SCC/BV-031-C
BAP 38/15	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 48_5_1	BAP/UCL/SCC/BV-065-C
BAP 40/15	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 48_5_2	BAP/UCL/SCC/BV-097-C
BAP 37/15	Unicast Client as Audio Source initiates Config Codec – LC3 48_5	BAP/UCL/SCC/BV-015-C
BAP 39/15	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 48_5_1	BAP/UCL/SCC/BV-049-C
BAP 41/15	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 48_5_2	BAP/UCL/SCC/BV-081-C
Unicast Client – LC3 48_6		
BAP 36/16	Unicast Client as Audio Sink Initiates Config Codec – LC3 Setting 48_6	BAP/UCL/SCC/BV-032-C
BAP 38/16	QoS Configuration – Unicast Client as Audio Sink – LC3 – Low Latency - 48_6_1	BAP/UCL/SCC/BV-066-C
BAP 40/16	QoS Configuration – Unicast Client as Audio Sink – LC3 – High Reliability – 48_6_2	BAP/UCL/SCC/BV-098-C

Item	Feature	Test Case(s)
BAP 37/16	Unicast Client as Audio Source initiates Config Codec – LC3 48_6	BAP/UCL/SCC/BV-016-C
BAP 39/16	QoS Configuration – Unicast Client as Audio Source – LC3 – Low Latency - 48_6_1	BAP/UCL/SCC/BV-050-C
BAP 41/16	QoS Configuration – Unicast Client as Audio Source – LC3 – High Reliability – 48_6_1	BAP/UCL/SCC/BV-082-C
Unicast Client – Vendor Specific		
BAP 37/17	Unicast Client as Audio Source – Config Codec – Vendor-Specific Codec Setting	BAP/UCL/SCC/BV-033-C
BAP 43/1	QoS Configuration – Unicast Client as Audio Source – Vendor-Specific Codec Settings	BAP/UCL/SCC/BV-100-C
BAP 36/17	Unicast Client is Audio Sink – Config Codec – Vendor-Specific Codec Setting	BAP/UCL/SCC/BV-034-C
BAP 42/1	QoS Configuration – Unicast Client as Audio Sink – Vendor-Specific Codec Settings	BAP/UCL/SCC/BV-099-C
BAP 36/17 AND BAP 44/1	UCL Source Streaming A.C.1 - 1 Server 1 Stream 1 Channel – VS Codec	BAP/UCL/STR/BV-129-C
BAP 36/17 AND BAP 44/4	UCL Source Streaming A.C.4 - 1 Server 1 Stream 2 Channels – VS Codec	BAP/UCL/STR/BV-130-C
BAP 37/17 AND BAP 44/2	UCL Sink Streaming A.C.2 - 1 Server 1 Stream 1 Channel – VS Codec	BAP/UCL/STR/BV-131-C
BAP 37/17 AND BAP 44/14	UCL Sink Streaming A.C.10 - 1 Server 1 Stream 2 Channels – VS Codec	BAP/UCL/STR/BV-132-C
BAP 42/1 AND BAP 43/1 AND BAP 44/3	UCL Streaming – A.C.3: 1 Server, 1 Sink ASE, 1 Source ASE, 2 Sink Channels, 2 Streams Vendor-specific Codec Settings	BAP/UCL/STR/BV-229-C
BAP 42/1 AND BAP 43/1 AND BAP 44/5	UCL Streaming A.C.5 - 1 Server 2 Streams 1 Sink 1 Source – VS Codec	BAP/UCL/STR/BV-230-C
BAP 42/1 AND BAP 43/1 AND BAP 44/8	UCL Streaming A.C.7(i) 1 Server 2 Streams 1 Sink 1 Source – VS Codec	BAP/UCL/STR/BV-231-C
BAP 42/1 AND BAP 43/1 AND BAP 44/6	UCL Streaming – A.C.6(i): 1 Server, 2 Sink ASEs, 2 CISes, 2 Streams – VS Codec	BAP/UCL/STR/BV-296-C

Item	Feature	Test Case(s)
BAP 42/1 AND BAP 43/1 AND BAP 44/7	UCL Streaming – A.C.6(ii): 2 Server, 2 Source ASEs, 2 CISes, 2 Streams – VS Codec	BAP/UCL/STR/BV-329-C
BAP 42/1 AND BAP 43/1 AND BAP 44/16	UCL Streaming – A.C.11(ii): 2 Servers, 2 CISes, 4 streams – VS Codec	BAP/UCL/STR/BV-522-C
Unicast Server		
Unicast Server - Generic		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/1 AND BAP 9a/3	USR Streaming – A.C.1: Generic	BAP/USR/STR/BV-367-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR	USR Streaming – A.C.1: Generic, QoS	BAP/USR/STR/BV-371-C

Item	Feature	Test Case(s)
BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/1 AND BAP 9a/6		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13	USR Streaming – A.C.4: Generic	BAP/USR/STR/BV-368-C

Item	Feature	Test Case(s)
OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/4 AND BAP 9a/3		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/4 AND BAP 9a/6	USR Streaming – A.C.4: Generic, QoS	BAP/USR/STR/BV-372-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2	USR Streaming – A.C.2: Generic	BAP/USR/STR/BV-369-C

Item	Feature	Test Case(s)
OR BAP 15/3 OR BAP 16/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/2 AND BAP 9a/7		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 16/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/2 AND BAP 9a/8	USR Streaming – A.C.2: Generic, QoS	BAP/USR/STR/BV-373-C

Item	Feature	Test Case(s)
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/10 AND BAP 9a/7	USR Streaming – A.C.10: Generic	BAP/USR/STR/BV-370-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6	USR Streaming – A.C.10: Generic, QoS	BAP/USR/STR/BV-374-C

Item	Feature	Test Case(s)
OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/10 AND BAP 9a/8		
A.C. 3, 5, and 7(i)		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/3 AND BAP 9a/1	USR Streaming – A.C.3: Generic	BAP/USR/STR/BV-360-C

Item	Feature	Test Case(s)
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/3 AND BAP 9a/2	USR Streaming – A.C.3: Generic, Enable, QoS	BAP/USR/STR/BV-375-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6	USR Streaming – A.C.3: Generic, QoS, Enable	BAP/USR/STR/BV-378-C

Item	Feature	Test Case(s)
OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/3 AND BAP 9a/4		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/3 AND BAP 9a/5	USR Streaming – A.C.3: Generic, QoS, QoS	BAP/USR/STR/BV-381-C

Item	Feature	Test Case(s)
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/5 AND BAP 9a/1	USR Streaming – A.C.5: Generic	BAP/USR/STR/BV-361-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6	USR Streaming – A.C.5: Generic, Enable, QoS	BAP/USR/STR/BV-376-C

Item	Feature	Test Case(s)
OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/5 AND BAP 9a/2		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/5 AND BAP 9a/4	USR Streaming – A.C.5: Generic, QoS, Enable	BAP/USR/STR/BV-379-C

Item	Feature	Test Case(s)
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/5 AND BAP 9a/5	USR Streaming – A.C.5: Generic, QoS, QoS	BAP/USR/STR/BV-382-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6	USR Streaming – A.C.7(i): Generic	BAP/USR/STR/BV-362-C

Item	Feature	Test Case(s)
OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/7 AND BAP 9a/1		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/7 AND BAP 9a/2	USR Streaming – A.C.7(i): Generic, Enable, QoS	BAP/USR/STR/BV-377-C

Item	Feature	Test Case(s)
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/7 AND BAP 9a/4	USR Streaming – A.C.7(i): Generic, QoS, Enable	BAP/USR/STR/BV-380-C
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6	USR Streaming – A.C.7(i): Generic, QoS, QoS	BAP/USR/STR/BV-383-C

Item	Feature	Test Case(s)
OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/7 AND BAP 9a/5		
Other A.C.s		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/8	USR Streaming – A.C.8(i): Generic	BAP/USR/STR/BV-364-C

Item	Feature	Test Case(s)
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND (BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/11	USR Streaming – A.C.11(i): Generic	BAP/USR/STR/BV-366-C
Sink Only		
(BAP 14/1 OR BAP 14/2 OR BAP 14/3 OR BAP 14/4 OR BAP 14/5 OR BAP 14/6 OR BAP 14/7 OR BAP 14/8 OR BAP 14/9 OR BAP 14/10 OR BAP 14/11 OR BAP 14/12 OR BAP 14/13 OR BAP 14/14 OR BAP 14/15 OR BAP 14/16 OR BAP 16/1 OR BAP 16/2 OR BAP 16/3 OR BAP 16/4 OR BAP 16/5 OR BAP 16/6 OR BAP 16/7 OR BAP 16/8 OR BAP 16/9 OR BAP 16/10 OR BAP 16/11 OR BAP 16/12 OR BAP 16/13 OR BAP 16/14 OR BAP 16/15 OR BAP 16/16) AND BAP 20/6	USR Streaming – A.C.6(i): Generic	BAP/USR/STR/BV-363-C

Item	Feature	Test Case(s)
Source Only		
(BAP 15/1 OR BAP 15/2 OR BAP 15/3 OR BAP 15/4 OR BAP 15/5 OR BAP 15/6 OR BAP 15/7 OR BAP 15/8 OR BAP 15/9 OR BAP 15/10 OR BAP 15/11 OR BAP 15/12 OR BAP 15/13 OR BAP 15/14 OR BAP 15/15 OR BAP 15/16 OR BAP 17/1 OR BAP 17/2 OR BAP 17/3 OR BAP 17/4 OR BAP 17/5 OR BAP 17/6 OR BAP 17/7 OR BAP 17/8 OR BAP 17/9 OR BAP 17/10 OR BAP 17/11 OR BAP 17/12 OR BAP 17/13 OR BAP 17/14 OR BAP 17/15 OR BAP 17/16) AND BAP 20/9	USR Streaming – A.C.9(i): Generic	BAP/USR/STR/BV-365-C
Unicast Server – LC3 – 8_1		
BAP 12/1	Unicast Server – Server as Audio Sink – LC3 Setting 8_1	BAP/USR/SCC/BV-001-C
BAP 12/1 AND BAP 7/4	Unicast Server – Server as Audio Sink – LC3 Setting 8_1 Autonomous	BAP/USR/SCC/BV-035-C
BAP 14/1	QoS Configuration – Unicast Server as Audio Sink - LC3 -Low Latency - 8_1_1	BAP/USR/SCC/BV-069-C
BAP 16/1	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 8_1_2	BAP/USR/SCC/BV-101-C
BAP 13/1	Unicast Server – Server as Audio Source – LC3 Setting 8_1	BAP/USR/SCC/BV-017-C
BAP 13/1 AND BAP 7/4	Unicast Server – Server as Audio Source – LC3 Setting 8_1 Autonomous	BAP/USR/SCC/BV-051-C
BAP 15/1	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 8_1_1	BAP/USR/SCC/BV-085-C
BAP 17/1	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 8_1_2	BAP/USR/SCC/BV-117-C
Unicast Server – LC3 – 8_2		
BAP 12/2	Unicast Server - Server Is Sink - LC3 Setting 8_2	BAP/USR/SCC/BV-002-C
BAP 12/2 AND BAP 7/4	Unicast Server - Server Is Sink - LC3 Setting 8_2 Autonomous	BAP/USR/SCC/BV-036-C
BAP 14/2	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 8_2_1	BAP/USR/SCC/BV-070-C

Item	Feature	Test Case(s)
BAP 16/2	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 8_2_2	BAP/USR/SCC/BV-102-C
BAP 13/2	Unicast Server - Server as Audio Source - LC3 Setting 8_2	BAP/USR/SCC/BV-018-C
BAP 13/2 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 8_2 Autonomous	BAP/USR/SCC/BV-052-C
BAP 15/2	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 8_2_1	BAP/USR/SCC/BV-086-C
BAP 17/2	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 8_2_2	BAP/USR/SCC/BV-118-C
Unicast Server – LC3 – 16_1		
BAP 12/3	Unicast Server - Server as Audio Sink - LC3 Setting 16_1	BAP/USR/SCC/BV-003-C
BAP 12/3 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 16_1 Autonomous	BAP/USR/SCC/BV-037-C
BAP 14/3	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 16_1_1	BAP/USR/SCC/BV-071-C
BAP 16/3	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 16_1_2	BAP/USR/SCC/BV-103-C
BAP 13/3	Unicast Server - Server as Audio Source - LC3 Setting 16_1	BAP/USR/SCC/BV-019-C
BAP 13/3 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 16_1 Autonomous	BAP/USR/SCC/BV-053-C
BAP 15/3	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 16_1_1	BAP/USR/SCC/BV-087-C
BAP 17/3	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 16_1_2	BAP/USR/SCC/BV-119-C
Unicast Server – LC3 – 16_2		
BAP 12/4	Unicast Server - Server as Audio Sink - LC3 Setting 16_2	BAP/USR/SCC/BV-004-C
BAP 12/4 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 16_2 Autonomous	BAP/USR/SCC/BV-038-C
BAP 14/4	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 16_2_1	BAP/USR/SCC/BV-072-C
BAP 16/4	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 16_2_2	BAP/USR/SCC/BV-104-C

Item	Feature	Test Case(s)
BAP 13/4	Unicast Server - Server as Audio Source - LC3 Setting 16_2	BAP/USR/SCC/BV-020-C
BAP 13/4 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 16_2 Autonomous	BAP/USR/SCC/BV-054-C
BAP 15/4	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 16_2_1	BAP/USR/SCC/BV-088-C
BAP 17/4	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 16_2_2	BAP/USR/SCC/BV-120-C
Unicast Server – LC3 – 24_1		
BAP 12/5	Unicast Server - Server as Audio Sink - LC3 Setting 24_1	BAP/USR/SCC/BV-005-C
BAP 12/5 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 24_1 Autonomous	BAP/USR/SCC/BV-039-C
BAP 14/5	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 24_1_1	BAP/USR/SCC/BV-073-C
BAP 16/5	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 24_1_2	BAP/USR/SCC/BV-105-C
BAP 13/5	Unicast Server - Server as Audio Source - LC3 Setting 24_1	BAP/USR/SCC/BV-021-C
BAP 13/5 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 24_1 Autonomous	BAP/USR/SCC/BV-055-C
BAP 15/5	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 24_1_1	BAP/USR/SCC/BV-089-C
BAP 17/5	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 24_1_2	BAP/USR/SCC/BV-121-C
Unicast Server – LC3 – 24_2		
BAP 12/6	Unicast Server - Server as Audio Sink - LC3 Setting 24_2	BAP/USR/SCC/BV-006-C
BAP 12/6 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 24_2 Autonomous	BAP/USR/SCC/BV-040-C
BAP 14/6	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 24_2_1	BAP/USR/SCC/BV-074-C
BAP 16/6	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 24_2_2	BAP/USR/SCC/BV-106-C
BAP 13/6	Unicast Server - Server as Audio Source - LC3 Setting 24_2	BAP/USR/SCC/BV-022-C

Item	Feature	Test Case(s)
BAP 13/6 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 24_2 Autonomous	BAP/USR/SCC/BV-056-C
BAP 15/6	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 24_2_1	BAP/USR/SCC/BV-090-C
BAP 17/6	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 24_2_2	BAP/USR/SCC/BV-122-C
Unicast Server – LC3 – 32_1		
BAP 12/7	Unicast Server - Server as Audio Sink - LC3 Setting 32_1	BAP/USR/SCC/BV-007-C
BAP 12/7 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 32_1 Autonomous	BAP/USR/SCC/BV-041-C
BAP 14/7	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 32_1_1	BAP/USR/SCC/BV-075-C
BAP 16/7	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 32_1_2	BAP/USR/SCC/BV-107-C
BAP 13/7	Unicast Server - Server as Audio Source - LC3 Setting 32_1	BAP/USR/SCC/BV-023-C
BAP 13/7 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 32_1 Autonomous	BAP/USR/SCC/BV-057-C
BAP 15/7	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 32_1_1	BAP/USR/SCC/BV-091-C
BAP 17/7	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 32_1_2	BAP/USR/SCC/BV-123-C
Unicast Server – LC3 – 32_2		
BAP 12/8	Unicast Server - Server as Audio Sink - LC3 Setting 32_2	BAP/USR/SCC/BV-008-C
BAP 12/8 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 32_2 Autonomous	BAP/USR/SCC/BV-042-C
BAP 14/8	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 32_2_1	BAP/USR/SCC/BV-076-C
BAP 16/8	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 32_2_2	BAP/USR/SCC/BV-108-C
BAP 13/8	Unicast Server - Server as Audio Source - LC3 Setting 32_2	BAP/USR/SCC/BV-024-C
BAP 13/8 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 32_2 Autonomous	BAP/USR/SCC/BV-058-C

Item	Feature	Test Case(s)
BAP 15/8	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 32_2_1	BAP/USR/SCC/BV-092-C
BAP 17/8	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 32_2_2	BAP/USR/SCC/BV-124-C
Unicast Server – LC3 – 441_1		
BAP 12/9	Unicast Server - Server as Audio Sink - LC3 Setting 441_1	BAP/USR/SCC/BV-009-C
BAP 12/9 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 441_1 Autonomous	BAP/USR/SCC/BV-043-C
BAP 14/9	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 441_1_1	BAP/USR/SCC/BV-077-C
BAP 16/9	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 441_1_2	BAP/USR/SCC/BV-109-C
BAP 13/9	Unicast Server - Server as Audio Source - LC3 Setting 441_1	BAP/USR/SCC/BV-025-C
BAP 13/9 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 441_1 Autonomous	BAP/USR/SCC/BV-059-C
BAP 15/9	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 441_1_1	BAP/USR/SCC/BV-093-C
BAP 17/9	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 441_1_2	BAP/USR/SCC/BV-125-C
Unicast Server – LC3 – 441_2		
BAP 12/10	Unicast Server - Server as Audio Sink - LC3 Setting 441_2	BAP/USR/SCC/BV-010-C
BAP 12/10 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 441_2 Autonomous	BAP/USR/SCC/BV-044-C
BAP 14/10	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 441_2_1	BAP/USR/SCC/BV-078-C
BAP 16/10	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 441_2_2	BAP/USR/SCC/BV-110-C
BAP 13/10	Unicast Server - Server as Audio Source - LC3 Setting 441_2	BAP/USR/SCC/BV-026-C
BAP 13/10 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 441_2 Autonomous	BAP/USR/SCC/BV-060-C

Item	Feature	Test Case(s)
BAP 15/10	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 441_2_1	BAP/USR/SCC/BV-094-C
BAP 17/10	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 441_2_2	BAP/USR/SCC/BV-126-C
Unicast Server – LC3 – 48_1		
BAP 12/11	Unicast Server - Server as Audio Sink - LC3 Setting 48_1	BAP/USR/SCC/BV-011-C
BAP 12/11 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 48_1 Autonomous	BAP/USR/SCC/BV-045-C
BAP 14/11	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 48_1_1	BAP/USR/SCC/BV-079-C
BAP 16/11	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 48_1_2	BAP/USR/SCC/BV-111-C
BAP 13/11	Unicast Server - Server as Audio Source - LC3 Setting 48_1	BAP/USR/SCC/BV-027-C
BAP 13/11 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 48_1 Autonomous	BAP/USR/SCC/BV-061-C
BAP 15/11	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 48_1_1	BAP/USR/SCC/BV-095-C
BAP 17/11	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 48_1_2	BAP/USR/SCC/BV-127-C
Unicast Server – LC3 – 48_2		
BAP 12/12	Unicast Server - Server as Audio Sink - LC3 Setting 48_2	BAP/USR/SCC/BV-012-C
BAP 12/12 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 48_2 Autonomous	BAP/USR/SCC/BV-046-C
BAP 14/12	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 48_2_1	BAP/USR/SCC/BV-080-C
BAP 16/12	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 48_2_2	BAP/USR/SCC/BV-112-C
BAP 13/12	Unicast Server - Server as Audio Source - LC3 Setting 48_2	BAP/USR/SCC/BV-028-C
BAP 13/12 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 48_2 Autonomous	BAP/USR/SCC/BV-062-C

Item	Feature	Test Case(s)
BAP 15/12	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 48_2_1	BAP/USR/SCC/BV-096-C
BAP 17/12	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 48_2_2	BAP/USR/SCC/BV-128-C
Unicast Server – LC3 – 48_3		
BAP 12/13	Unicast Server - Server Is Sink - LC3 Setting 48_3	BAP/USR/SCC/BV-013-C
BAP 12/13 AND BAP 7/4	Unicast Server - Server Is Sink - LC3 Setting 48_3 Autonomous	BAP/USR/SCC/BV-047-C
BAP 14/13	QoS Configuration – Unicast Server Is Sink - LC3 - Low Latency - 48_3_1	BAP/USR/SCC/BV-081-C
BAP 16/13	QoS Configuration – Unicast Server Is Sink - LC3 - High Reliability - 48_3_2	BAP/USR/SCC/BV-113-C
BAP 13/13	Unicast Server - Server as Audio Source - LC3 Setting 48_3	BAP/USR/SCC/BV-029-C
BAP 13/13 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 48_3 Autonomous	BAP/USR/SCC/BV-063-C
BAP 15/13	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 48_3_1	BAP/USR/SCC/BV-097-C
BAP 17/13	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 48_3_2	BAP/USR/SCC/BV-129-C
Unicast Server – LC3 – 48_4		
BAP 12/14	Unicast Server - Server as Audio Sink - LC3 Setting 48_4	BAP/USR/SCC/BV-014-C
BAP 12/14 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 48_4 Autonomous	BAP/USR/SCC/BV-048-C
BAP 14/14	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 48_4_1	BAP/USR/SCC/BV-082-C
BAP 16/14	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 48_4_2	BAP/USR/SCC/BV-114-C
BAP 13/14	Unicast Server - Server as Audio Source - LC3 Setting 48_4	BAP/USR/SCC/BV-030-C
BAP 13/14 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 48_4 Autonomous	BAP/USR/SCC/BV-064-C
BAP 15/14	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 48_4_1	BAP/USR/SCC/BV-098-C

Item	Feature	Test Case(s)
BAP 17/14	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 48_4_2	BAP/USR/SCC/BV-130-C
Unicast Server – LC3 – 48_5		
BAP 12/15	Unicast Server - Server as Audio Sink - LC3 Setting 48_5	BAP/USR/SCC/BV-015-C
BAP 12/15 AND BAP 7/4	Unicast Server - Server as Audio Sink - LC3 Setting 48_5 Autonomous	BAP/USR/SCC/BV-049-C
BAP 14/15	QoS Configuration – Unicast Server as Audio Sink - LC3 - Low Latency - 48_5_1	BAP/USR/SCC/BV-083-C
BAP 16/15	QoS Configuration – Unicast Server as Audio Sink - LC3 - High Reliability - 48_5_2	BAP/USR/SCC/BV-115-C
BAP 13/15	Unicast Server - Server as Audio Source - LC3 Setting 48_5	BAP/USR/SCC/BV-031-C
BAP 13/15 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 48_5 Autonomous	BAP/USR/SCC/BV-065-C
BAP 15/15	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 48_5_1	BAP/USR/SCC/BV-099-C
BAP 17/15	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 48_5_2	BAP/USR/SCC/BV-131-C
Unicast Server – LC3 – 48_6		
BAP 12/16	Unicast Server - Server Is Sink - LC3 Setting 48_6	BAP/USR/SCC/BV-016-C
BAP 12/16 AND BAP 7/4	Unicast Server - Server Is Sink - LC3 Setting 48_6 Autonomous	BAP/USR/SCC/BV-050-C
BAP 14/16	QoS Configuration – Unicast Server Is Sink - LC3 - Low Latency - 48_6_1	BAP/USR/SCC/BV-084-C
BAP 16/16	QoS Configuration – Unicast Server Is Sink - LC3 - High Reliability - 48_6_2	BAP/USR/SCC/BV-116-C
BAP 13/16	Unicast Server - Server as Audio Source - LC3 Setting 48_6	BAP/USR/SCC/BV-032-C
BAP 13/16 AND BAP 7/4	Unicast Server - Server as Audio Source - LC3 Setting 48_6 Autonomous	BAP/USR/SCC/BV-066-C
BAP 15/16	QoS Configuration – Unicast Server as Audio Source - LC3 - Low Latency - 48_6_1	BAP/USR/SCC/BV-100-C
BAP 17/16	QoS Configuration – Unicast Server as Audio Source - LC3 - High Reliability - 48_6_2	BAP/USR/SCC/BV-132-C

Item	Feature	Test Case(s)
Unicast Server – Vendor Specific		
BAP 12/17	Unicast Server - Server Is Sink – Vendor-Specific Codec Setting	BAP/USR/SCC/BV-033-C BAP/USR/SCC/BV-067-C
BAP 18/1	QoS Configuration – Unicast Server Is Sink - Vendor-Specific	BAP/USR/SCC/BV-133-C
BAP 18/1 AND BAP 20/1	USR Sink Streaming A.C.1 -1 Stream 1 Channel – VS Codec	BAP/USR/STR/BV-129-C
BAP 18/1 AND BAP 20/4	USR Sink Streaming A.C.4 1 Stream 2 Channels – VS Codec	BAP/USR/STR/BV-130-C
BAP 13/17	Unicast Server - Server as Audio Source – Vendor-Specific Codec Setting	BAP/USR/SCC/BV-034-C BAP/USR/SCC/BV-068-C
BAP 19/1	QoS Configuration – Unicast Server as Audio Source - Vendor-Specific	BAP/USR/SCC/BV-134-C
BAP 19/1 AND BAP 20/2	USR Source Streaming A.C.2 - 1 Stream 1 Channel – VS Codec	BAP/USR/STR/BV-131-C
BAP 19/1 AND BAP 20/10	USR Source Streaming A.C.10 - 1 Stream 2 Channels – VS Codec	BAP/USR/STR/BV-132-C
BAP 18/1 AND BAP 19/1 AND BAP 20/3	USR Streaming – A.C.3: 1 Sink ASE, 1 Source ASE, 2 Sink Channels, 2 Streams – Vendor-specific Codec Settings	BAP/USR/STR/BV-229-C
BAP 18/1 AND BAP 19/1 AND BAP 20/5	USR Streaming – A.C.5: Transmits and Receives Audio Data on Two ASEs – Vendor-specific	BAP/USR/STR/BV-230-C
BAP 18/1 AND BAP 19/1 AND BAP 20/8	USR Streaming – A.C.7(i): USR Transmits and Receives Audio Data on Two ASEs – Vendor-specific	BAP/USR/STR/BV-231-C
Unicast Client Configuration		
BAP 29/1 AND BAP 33/1 AND BAP 33/3 AND BAP 33/5 AND BAP 33/6 AND BAP 33/8	Unicast Client as Audio Sink initiates ASE Control operations	BAP/UCL/SCC/BV-102-C BAP/UCL/SCC/BV-103-C BAP/UCL/SCC/BV-105-C BAP/UCL/SCC/BV-106-C BAP/UCL/SCC/BV-108-C BAP/UCL/SCC/BV-110-C BAP/UCL/SCC/BV-112-C BAP/UCL/SCC/BV-116-C
BAP 29/2 AND BAP 33/3 AND BAP 33/5 AND BAP 33/6 AND BAP 33/8	Unicast Client as Audio Source initiates ASE Control operations	BAP/UCL/SCC/BV-101-C BAP/UCL/SCC/BV-104-C BAP/UCL/SCC/BV-107-C BAP/UCL/SCC/BV-109-C BAP/UCL/SCC/BV-111-C BAP/UCL/SCC/BV-113-C BAP/UCL/SCC/BV-115-C BAP/UCL/SCC/BV-117-C

Item	Feature	Test Case(s)
Unicast Server Configuration		
(BAP 6/1 OR BAP 6/2) AND (BAP 6/3 OR BAP 6/4) AND BAP 8/1	Unicast Server as Audio Sink Performs ASE Control operations	BAP/USR/SCC/BV-135-C BAP/USR/SCC/BV-138-C BAP/USR/SCC/BV-144-C BAP/USR/SCC/BV-146-C BAP/USR/SCC/BV-148-C BAP/USR/SCC/BV-162-C BAP/USR/SCC/BV-167-C
(BAP 6/1 OR BAP 6/2) AND (BAP 6/3 OR BAP 6/4) AND BAP 8/2	Unicast Server as Audio Source Performs ASE Control operations	BAP/USR/SCC/BV-136-C BAP/USR/SCC/BV-137-C BAP/USR/SCC/BV-139-C BAP/USR/SCC/BV-143-C BAP/USR/SCC/BV-145-C BAP/USR/SCC/BV-147-C BAP/USR/SCC/BV-149-C BAP/USR/SCC/BV-150-C BAP/USR/SCC/BV-161-C BAP/USR/SCC/BV-163-C BAP/USR/SCC/BV-168-C
(BAP 6/1 OR BAP 6/2) AND BAP 7/8	Unicast Server as Audio Sink initiates Release operation autonomously	BAP/USR/SCC/BV-153-C BAP/USR/SCC/BV-155-C BAP/USR/SCC/BV-157-C BAP/USR/SCC/BV-159-C
(BAP 6/1 OR BAP 6/2) AND BAP 7/7	Unicast Server as Audio Sink initiates Update Metadata operation autonomously	BAP/USR/SCC/BV-165-C
(BAP 6/1 OR BAP 6/2) AND (BAP 6/3 OR BAP 6/4) AND BAP 7/8	Unicast Server as Audio Source initiates Release operation autonomously	BAP/USR/SCC/BV-152-C BAP/USR/SCC/BV-154-C BAP/USR/SCC/BV-156-C BAP/USR/SCC/BV-158-C
(BAP 6/1 OR BAP 6/2) AND (BAP 6/3 OR BAP 6/4) AND BAP 7/7	Unicast Server as Audio Source initiates Update Metadata operations autonomously	BAP/USR/SCC/BV-164-C BAP/USR/SCC/BV-166-C
(BAP 6/1 OR BAP 6/2) AND BAP 7/6	Unicast Server as Audio Sink initiates Disable operation autonomously	BAP/USR/SCC/BV-141-C
(BAP 6/1 OR BAP 6/2) AND (BAP 6/3 OR BAP 6/4) AND BAP 7/6	Unicast Server as Audio Source initiates Disable operation autonomously	BAP/USR/SCC/BV-140-C BAP/USR/SCC/BV-142-C
Unicast Server – Error Handling		
(BAP 6/1 OR BAP 6/2) AND (BAP 6/3 OR BAP 6/4)	Unicast Server Performs ASE Control operations – Error Conditions	BAP/USR/SPE/BI-01-C BAP/USR/SPE/BI-02-C BAP/USR/SPE/BI-03-C BAP/USR/SPE/BI-04-C BAP/USR/SPE/BI-05-C

Item	Feature	Test Case(s)
Broadcast		
BAP 1/3	Broadcast Configuration	BAP/BSRC/SCC/BV-35-C BAP/BSRC/SCC/BV-36-C BAP/BSRC/SCC/BV-37-C
BAP 1/3 AND BAP 51/2	Broadcast Reconfiguration	BAP/BSRC/SCC/BV-34-C
BAP 1/3 AND BAP 51/7	Multi BIG Broadcast Configuration	BAP/BSRC/SCC/BV-38-C
BAP 1/4	Broadcast Sink	BAP/BSNK/ADV/BV-01-C
BAP 1/6	Receive Basic Audio Announcements – Broadcast Assistant	BAP/BA/ADV/BV-01-C BAP/BA/BASS/BV-01-C
BAP 1/6 AND BAP 88/1	Broadcast Assistant – Remote Scan Start	BAP/BA/BASS/BV-02-C
BAP 1/6 AND BAP 88/2	Broadcast Assistant – Remote Scan Stop	BAP/BA/BASS/BV-03-C
BAP 1/6 AND BAP 88/3	Broadcast Assistant – Add Source	BAP/BA/BASS/BV-04-C
BAP 1/6 AND BAP 88/4	Broadcast Assistant – Modify Source	BAP/BA/BASS/BV-05-C
BAP 1/6 AND BAP 88/7	Broadcast Assistant – Remove Source	BAP/BA/BASS/BV-06-C
BAP 1/6 AND BAP 88/6	Broadcast Assistant – Set Broadcast Code	BAP/BA/BASS/BV-07-C
BAP 1/6 AND BAP 88/5	Broadcast Assistant – SyncInfo Transfer	BAP/BA/BASS/BV-08-C
BAP 1/6 AND BAP 85/4	Broadcast Assistant discovers Sink Audio Locations	BAP/BA/BASS/BV-09-C
BAP 1/5	Broadcast BASS Advertisements	BAP/SDE/BASS/BV-01-C
BAP 1/5 AND BAP 3/2 AND BAP 80/12	Broadcast BASS Advertisements, BR/EDR/LE	BAP/SDE/BASS/BV-02-C
BAP 1/5 AND BAP 3/2 AND NOT BAP 80/12	Broadcast BASS Advertisements, No CTKD	BAP/SDE/BASS/BV-03-C
Broadcast Source		
BAP 55/1	Broadcast Source – Configures Broadcast – LC3 8_1_1	BAP/BSRC/SCC/BV-01-C
BAP 55/2	Broadcast Source – Configures Broadcast – LC3 8_2_1	BAP/BSRC/SCC/BV-02-C
BAP 55/3	Broadcast Source – Configures Broadcast – LC3 16_1_1	BAP/BSRC/SCC/BV-03-C
BAP 55/4	Broadcast Source – Configures Broadcast – LC3 16_2_1	BAP/BSRC/SCC/BV-04-C
BAP 55/5	Broadcast Source – Configures Broadcast – LC3 24_1_1	BAP/BSRC/SCC/BV-05-C
BAP 55/6	Broadcast Source – Configures Broadcast – LC3 24_2_1	BAP/BSRC/SCC/BV-06-C

Item	Feature	Test Case(s)
BAP 55/7	Broadcast Source – Configures Broadcast – LC3 32_1_1	BAP/BSRC/SCC/BV-07-C
BAP 55/8	Broadcast Source – Configures Broadcast – LC3 32_2_1	BAP/BSRC/SCC/BV-08-C
BAP 55/9	Broadcast Source – Configures Broadcast – LC3 441_1_1	BAP/BSRC/SCC/BV-09-C
BAP 55/10	Broadcast Source – Configures Broadcast – LC3 441_2_1	BAP/BSRC/SCC/BV-10-C
BAP 55/11	Broadcast Source – Configures Broadcast – LC3 48_1_1	BAP/BSRC/SCC/BV-11-C
BAP 55/12	Broadcast Source – Configures Broadcast – LC3 48_2_1	BAP/BSRC/SCC/BV-12-C
BAP 55/13	Broadcast Source – Configures Broadcast – LC3 48_3_1	BAP/BSRC/SCC/BV-13-C
BAP 55/14	Broadcast Source – Configures Broadcast – LC3 48_4_1	BAP/BSRC/SCC/BV-14-C
BAP 55/15	Broadcast Source – Configures Broadcast – LC3 48_5_1	BAP/BSRC/SCC/BV-15-C
BAP 55/16	Broadcast Source – Configures Broadcast – LC3 48_6_1	BAP/BSRC/SCC/BV-16-C
BAP 56/1	Broadcast Source – Configures Broadcast – LC3 8_1_2	BAP/BSRC/SCC/BV-17-C
BAP 56/2	Broadcast Source – Configures Broadcast – LC3 8_2_2	BAP/BSRC/SCC/BV-18-C
BAP 56/3	Broadcast Source – Configures Broadcast – LC3 16_1_2	BAP/BSRC/SCC/BV-19-C
BAP 56/4	Broadcast Source – Configures Broadcast – LC3 16_2_2	BAP/BSRC/SCC/BV-20-C
BAP 56/5	Broadcast Source – Configures Broadcast – LC3 24_1_2	BAP/BSRC/SCC/BV-21-C
BAP 56/6	Broadcast Source – Configures Broadcast – LC3 24_2_2	BAP/BSRC/SCC/BV-22-C
BAP 56/7	Broadcast Source – Configures Broadcast – LC3 32_1_2	BAP/BSRC/SCC/BV-23-C
BAP 56/8	Broadcast Source – Configures Broadcast – LC3 32_2_2	BAP/BSRC/SCC/BV-24-C
BAP 56/9	Broadcast Source – Configures Broadcast – LC3 441_1_2	BAP/BSRC/SCC/BV-25-C
BAP 56/10	Broadcast Source – Configures Broadcast – LC3 441_2_2	BAP/BSRC/SCC/BV-26-C
BAP 56/11	Broadcast Source – Configures Broadcast – LC3 48_1_2	BAP/BSRC/SCC/BV-27-C
BAP 56/12	Broadcast Source – Configures Broadcast – LC3 48_2_2	BAP/BSRC/SCC/BV-28-C
BAP 56/13	Broadcast Source – Configures Broadcast – LC3 48_3_2	BAP/BSRC/SCC/BV-29-C

Item	Feature	Test Case(s)
BAP 56/14	Broadcast Source – Configures Broadcast – LC3 48_4_2	BAP/BSRC/SCC/BV-30-C
BAP 56/15	Broadcast Source – Configures Broadcast – LC3 48_5_2	BAP/BSRC/SCC/BV-31-C
BAP 56/16	Broadcast Source – Configures Broadcast – LC3 48_6_2	BAP/BSRC/SCC/BV-32-C
BAP 54/17	Broadcast Source – Streaming – Vendor-specific Codec setting	BAP/BSRC/SCC/BV-33-C BAP/BSRC/STR/BV-17-C BAP/BSRC/STR/BV-34-C
BAP 54/1	Broadcast Source – Streaming – LC3 8_1	BAP/BSRC/STR/BV-01-C BAP/BSRC/STR/BV-18-C
BAP 54/2	Broadcast Source – Streaming – LC3 8_2	BAP/BSRC/STR/BV-02-C BAP/BSRC/STR/BV-19-C
BAP 54/3	Broadcast Source – Streaming – LC3 16_1	BAP/BSRC/STR/BV-03-C BAP/BSRC/STR/BV-20-C
BAP 54/4	Broadcast Source – Streaming – LC3 16_2	BAP/BSRC/STR/BV-04-C BAP/BSRC/STR/BV-21-C
BAP 54/5	Broadcast Source – Streaming – LC3 24_1	BAP/BSRC/STR/BV-05-C BAP/BSRC/STR/BV-22-C
BAP 54/6	Broadcast Source – Streaming – LC3 24_2	BAP/BSRC/STR/BV-06-C BAP/BSRC/STR/BV-23-C
BAP 54/7	Broadcast Source – Streaming – LC3 32_1	BAP/BSRC/STR/BV-07-C BAP/BSRC/STR/BV-24-C
BAP 54/8	Broadcast Source – Streaming – LC3 32_2	BAP/BSRC/STR/BV-08-C BAP/BSRC/STR/BV-25-C
BAP 54/9	Broadcast Source – Streaming – LC3 441_1	BAP/BSRC/STR/BV-09-C BAP/BSRC/STR/BV-26-C
BAP 54/10	Broadcast Source – Streaming – LC3 441_2	BAP/BSRC/STR/BV-10-C BAP/BSRC/STR/BV-27-C
BAP 54/11	Broadcast Source – Streaming – LC3 48_1	BAP/BSRC/STR/BV-11-C BAP/BSRC/STR/BV-28-C
BAP 54/12	Broadcast Source – Streaming – LC3 48_2	BAP/BSRC/STR/BV-12-C BAP/BSRC/STR/BV-29-C
BAP 54/13	Broadcast Source – Streaming – LC3 48_3	BAP/BSRC/STR/BV-13-C BAP/BSRC/STR/BV-30-C
BAP 54/14	Broadcast Source – Streaming – LC3 48_4	BAP/BSRC/STR/BV-14-C BAP/BSRC/STR/BV-31-C
BAP 54/15	Broadcast Source – Streaming – LC3 48_5	BAP/BSRC/STR/BV-15-C BAP/BSRC/STR/BV-32-C
BAP 54/16	Broadcast Source – Streaming – LC3 48_6	BAP/BSRC/STR/BV-16-C BAP/BSRC/STR/BV-33-C

Item	Feature	Test Case(s)
Broadcast Sink – Low Latency		
BAP 69/1	Broadcast Sink – Streaming – LC3 8_1_1	BAP/BSNK/STR/BV-01-C
BAP 69/2	Broadcast Sink – Streaming – LC3 8_2_1	BAP/BSNK/STR/BV-02-C
BAP 69/3	Broadcast Sink – Streaming – LC3 16_1_1	BAP/BSNK/STR/BV-03-C
BAP 69/4	Broadcast Sink – Streaming – LC3 16_2_1	BAP/BSNK/SCC/BV-04-C BAP/BSNK/STR/BV-04-C
BAP 69/5	Broadcast Sink – Streaming – LC3 24_1_1	BAP/BSNK/STR/BV-05-C
BAP 69/6	Broadcast Sink – Streaming – LC3 24_2_1	BAP/BSNK/SCC/BV-06-C BAP/BSNK/STR/BV-06-C
BAP 69/7	Broadcast Sink – Streaming – LC3 32_1_1	BAP/BSNK/STR/BV-07-C
BAP 69/8	Broadcast Sink – Streaming – LC3 32_2_1	BAP/BSNK/STR/BV-08-C
BAP 69/9	Broadcast Sink – Streaming – LC3 441_1_1	BAP/BSNK/STR/BV-09-C
BAP 69/10	Broadcast Sink – Streaming – LC3 441_2_1	BAP/BSNK/STR/BV-10-C
BAP 69/11	Broadcast Sink – Streaming – LC3 48_1_1	BAP/BSNK/STR/BV-11-C
BAP 69/12	Broadcast Sink – Streaming – LC3 48_2_1	BAP/BSNK/STR/BV-12-C
BAP 69/13	Broadcast Sink – Streaming – LC3 48_3_1	BAP/BSNK/STR/BV-13-C
BAP 69/14	Broadcast Sink – Streaming – LC3 48_4_1	BAP/BSNK/STR/BV-14-C
BAP 69/15	Broadcast Sink – Streaming – LC3 48_5_1	BAP/BSNK/STR/BV-15-C
BAP 69/16	Broadcast Sink – Streaming – LC3 48_6_1	BAP/BSNK/STR/BV-16-C
BAP 68/17	Broadcast Sink – Streaming – Vendor-specific Codec setting	BAP/BSNK/SCC/BV-33-C BAP/BSNK/STR/BV-17-C
BAP 69/1 AND BAP 66/1	Broadcast Sink – Streaming – LC3 8_1_1 - Multiple	BAP/BSNK/STR/BV-18-C
BAP 69/2 AND BAP 66/1	Broadcast Sink – Streaming – LC3 8_2_1 - Multiple	BAP/BSNK/STR/BV-19-C
BAP 69/3 AND BAP 66/1	Broadcast Sink – Streaming – LC3 16_1_1 - Multiple	BAP/BSNK/STR/BV-20-C
BAP 69/4 AND BAP 66/1	Broadcast Sink – Streaming – LC3 16_2_1 - Multiple	BAP/BSNK/STR/BV-21-C
BAP 69/5 AND BAP 66/1	Broadcast Sink – Streaming – LC3 24_1_1 - Multiple	BAP/BSNK/STR/BV-22-C
BAP 69/6 AND BAP 66/1	Broadcast Sink – Streaming – LC3 24_2_1 - Multiple	BAP/BSNK/STR/BV-23-C

Item	Feature	Test Case(s)
BAP 69/7 AND BAP 66/1	Broadcast Sink – Streaming – LC3 32_1_1 - Multiple	BAP/BSNK/STR/BV-24-C
BAP 69/8 AND BAP 66/1	Broadcast Sink – Streaming – LC3 32_2_1 - Multiple	BAP/BSNK/STR/BV-25-C
BAP 69/9 AND BAP 66/1	Broadcast Sink – Streaming – LC3 441_1_1 - Multiple	BAP/BSNK/STR/BV-26-C
BAP 69/10 AND BAP 66/1	Broadcast Sink – Streaming – LC3 441_2_1 - Multiple	BAP/BSNK/STR/BV-27-C
BAP 69/11 AND BAP 66/1	Broadcast Sink – Streaming – LC3 48_1_1 - Multiple	BAP/BSNK/STR/BV-28-C
BAP 69/12 AND BAP 66/1	Broadcast Sink – Streaming – LC3 48_2_1 - Multiple	BAP/BSNK/STR/BV-29-C
BAP 69/13 AND BAP 66/1	Broadcast Sink – Streaming – LC3 48_3_1 - Multiple	BAP/BSNK/STR/BV-30-C
BAP 69/14 AND BAP 66/1	Broadcast Sink – Streaming – LC3 48_4_1 - Multiple	BAP/BSNK/STR/BV-31-C
BAP 69/15 AND BAP 66/1	Broadcast Sink – Streaming – LC3 48_5_1 - Multiple	BAP/BSNK/STR/BV-32-C
BAP 69/16 AND BAP 66/1	Broadcast Sink – Streaming – LC3 48_6_1 - Multiple	BAP/BSNK/STR/BV-33-C
BAP 68/17 AND BAP 66/1	Broadcast Sink – Streaming – Vendor-specific Codec setting - Multiple	BAP/BSNK/STR/BV-34-C
(BAP 68/4 OR BAP 68/6 OR BAP 70/4 OR BAP 70/6)	Broadcast Sink – Sync to PA, Unknown	BAP/BSNK/SCC/BV-34-C
Broadcast Sink – High Reliability		
BAP 70/1	Broadcast Sink – LC3 8_1_2	BAP/BSNK/STR/BV-35-C
BAP 70/2	Broadcast Sink – LC3 8_2_2	BAP/BSNK/STR/BV-36-C
BAP 70/3	Broadcast Sink – LC3 16_1_2	BAP/BSNK/STR/BV-37-C
BAP 70/4	Broadcast Sink – LC3 16_2_2	BAP/BSNK/SCC/BV-20-C BAP/BSNK/STR/BV-38-C
BAP 70/5	Broadcast Sink – LC3 24_1_2	BAP/BSNK/STR/BV-39-C
BAP 70/6	Broadcast Sink – LC3 24_2_2	BAP/BSNK/SCC/BV-22-C BAP/BSNK/STR/BV-40-C
BAP 70/7	Broadcast Sink – LC3 32_1_2	BAP/BSNK/STR/BV-41-C
BAP 70/8	Broadcast Sink – LC3 32_2_2	BAP/BSNK/STR/BV-42-C
BAP 70/9	Broadcast Sink – LC3 441_1_2	BAP/BSNK/STR/BV-43-C
BAP 70/10	Broadcast Sink – LC3 441_2_2	BAP/BSNK/STR/BV-44-C
BAP 70/11	Broadcast Sink – LC3 48_1_2	BAP/BSNK/STR/BV-45-C
BAP 70/12	Broadcast Sink – LC3 48_2_2	BAP/BSNK/STR/BV-46-C
BAP 70/13	Broadcast Sink – LC3 48_3_2	BAP/BSNK/STR/BV-47-C
BAP 70/14	Broadcast Sink – LC3 48_4_2	BAP/BSNK/STR/BV-48-C
BAP 70/15	Broadcast Sink – LC3 48_5_2	BAP/BSNK/STR/BV-49-C
BAP 70/16	Broadcast Sink – LC3 48_6_2	BAP/BSNK/STR/BV-50-C

Item	Feature	Test Case(s)
BAP 70/1 AND BAP 66/1	Broadcast Sink – LC3 8_1_2 - Multiple	BAP/BSNK/STR/BV-51-C
BAP 70/2 AND BAP 66/1	Broadcast Sink – LC3 8_2_2- Multiple	BAP/BSNK/STR/BV-52-C
BAP 70/3 AND BAP 66/1	Broadcast Sink – LC3 16_1_2- Multiple	BAP/BSNK/STR/BV-53-C
BAP 70/4 AND BAP 66/1	Broadcast Sink – LC3 16_2_2- Multiple	BAP/BSNK/STR/BV-54-C
BAP 70/5 AND BAP 66/1	Broadcast Sink – LC3 24_1_2- Multiple	BAP/BSNK/STR/BV-55-C
BAP 70/6 AND BAP 66/1	Broadcast Sink – LC3 24_2_2- Multiple	BAP/BSNK/STR/BV-56-C
BAP 70/7 AND BAP 66/1	Broadcast Sink - LC3 32_1_2- Multiple	BAP/BSNK/STR/BV-57-C
BAP 70/8 AND BAP 66/1	Broadcast Sink - LC3 32_2_2- Multiple	BAP/BSNK/STR/BV-58-C
BAP 70/9 AND BAP 66/1	Broadcast Sink - LC3 441_1_2- Multiple	BAP/BSNK/STR/BV-59-C
BAP 70/10 AND BAP 66/1	Broadcast Sink - LC3 441_2_2- Multiple	BAP/BSNK/STR/BV-60-C
BAP 70/11 AND BAP 66/1	Broadcast Sink - LC3 48_1_2- Multiple	BAP/BSNK/STR/BV-61-C
BAP 70/12 AND BAP 66/1	Broadcast Sink - LC3 48_2_2- Multiple	BAP/BSNK/STR/BV-62-C
BAP 70/13 AND BAP 66/1	Broadcast Sink - LC3 48_3_2- Multiple	BAP/BSNK/STR/BV-63-C
BAP 70/14 AND BAP 66/1	Broadcast Sink - LC3 48_4_2- Multiple	BAP/BSNK/STR/BV-64-C
BAP 70/15 AND BAP 66/1	Broadcast Sink - LC3 48_5_2- Multiple	BAP/BSNK/STR/BV-65-C
BAP 70/16 AND BAP 66/1	Broadcast Sink - LC3 48_6_2- Multiple	BAP/BSNK/STR/BV-66-C

Table 5.1: Test case mapping

Appendix A LC3 Codec Settings

A.1 Introduction

The purpose of this appendix is to provide a common section for referencing LC3 Codec Setting values.

A.2 Codec Specific Capabilities Settings – Unicast Server

- Reference

  [3] 3.5.2

Codec Capability Setting	Codec ID	Supported Sampling Frequencies	Supported Frame Durations	Supported Octets per Codec Frame
8_1	LC3	0b000000001 (8 kHz)	0b01 (7.5 ms)	26
8_2	LC3	0b000000001 (8 kHz)	0b10 (10 ms)	30
16_1	LC3	0b000000100 (16 kHz)	0b01 (7.5 ms)	30
16_2	LC3	0b000000100 (16 kHz)	0b10 (10 ms)	40
24_1	LC3	0b000010000 (24 kHz)	0b01 (7.5 ms)	45
24_2	LC3	0b000010000 (24 kHz)	0b10 (10 ms)	60
32_1	LC3	0b000100000 (32 kHz)	0b01 (7.5 ms)	60
32_2	LC3	0b000100000 (32 kHz)	0b10 (10 ms)	80
441_1	LC3	0b001000000 (44.1 kHz)	0b01 (7.5 ms)	97
441_2	LC3	0b001000000 (44.1 kHz)	0b10 (10 ms)	130
48_1	LC3	0b010000000 (48 kHz)	0b01 (7.5 ms)	75
48_2	LC3	0b010000000 (48 kHz)	0b10 (10 ms)	100
48_3	LC3	0b010000000 (48 kHz)	0b01 (7.5 ms)	90
48_4	LC3	0b010000000 (48 kHz)	0b10 (10 ms)	120
48_5	LC3	0b010000000 (48 kHz)	0b01 (7.5 ms)	117
48_6	LC3	0b010000000 (48 kHz)	0b10 (10 ms)	155

Table A.1: Codec Specific Capabilities Settings – Unicast Server

A.3 Codec Specific Config Settings – Unicast Client

- Reference

  [3] 3.6.7

Codec Configuration Setting	Codec ID	Sampling Frequency Value	Frame Duration Value	Octets per Codec Frame Value
8_1	LC3	0x01 (8 kHz)	0b01 (7.5ms)	26
8_2	LC3	0x01 (8 kHz)	0b10 (10ms)	30
16_1	LC3	0x03 (16 kHz)	0b01 (7.5ms)	30
16_2	LC3	0x03 (16 kHz)	0b10 (10ms)	40
24_1	LC3	0x05 (24 kHz)	0b01 (7.5ms)	45
24_2	LC3	0x05 (24 kHz)	0b10 (10ms)	60

Codec Configuration Setting	Codec ID	Sampling Frequency Value	Frame Duration Value	Octets per Codec Frame Value
32_1	LC3	0x06 (32 kHz)	0b01 (7.5ms)	60
32_2	LC3	0x06 (32 kHz)	0b10 (10ms)	80
441_1	LC3	0x07 (44.1 kHz)	0b01 (7.5ms)	97
441_2	LC3	0x07 (44.1 kHz)	0b10 (10ms)	130
48_1	LC3	0x08 (48 kHz)	0b01 (7.5ms)	75
48_2	LC3	0x08 (48 kHz)	0b10 (10ms)	100
48_3	LC3	0x08 (48 kHz)	0b01 (7.5ms)	90
48_4	LC3	0x08 (48 kHz)	0b10 (10ms)	120
48_5	LC3	0x08 (48 kHz)	0b01 (7.5ms)	117
48_6	LC3	0x08 (48 kHz)	0b10 (10ms)	155

Table A.2: Codec Specific Config Settings – Unicast Client

A.4 QoS Config Settings – Unicast

- Reference

  [3] 4.6.2

Set Name	SDU Interval (µs)	Framing	Maximum SDU Size (octets)	Retransmission Number	Max Transport Latency (ms)
8_1_1	7500	0x00	26	2	8
8_2_1	10000	0x00	30	2	10
16_1_1	7500	0x00	30	2	8
16_2_1	10000	0x00	40	2	10
24_1_1	7500	0x00	45	2	8
24_2_1	10000	0x00	60	2	10
32_1_1	7500	0x00	60	2	8
32_2_1	10000	0x00	80	2	10
441_1_1	8163	0x01	97	5	24
441_2_1	10884	0x01	130	5	31
48_1_1	7500	0x00	75	5	15
48_2_1	10000	0x00	100	5	20
48_3_1	7500	0x00	90	5	15
48_4_1	10000	0x00	120	5	20
48_5_1	7500	0x00	117	5	15
48_6_1	10000	0x00	155	5	20
8_1_2	7500	0x00	26	13	75
8_2_2	10000	0x00	30	13	95
16_1_2	7500	0x00	30	13	75
16_2_2	10000	0x00	40	13	95
24_1_2	7500	0x00	45	13	75

Set Name	SDU Interval (µs)	Framing	Maximum SDU Size (octets)	Retransmission Number	Max Transport Latency (ms)
24_2_2	10000	0x00	60	13	95
32_1_2	7500	0x00	60	13	75
32_2_2	10000	0x00	80	13	95
441_1_2	8163	0x01	97	13	80
441_2_2	10884	0x01	130	13	85
48_1_2	7500	0x00	75	13	75
48_2_2	10000	0x00	100	13	95
48_3_2	7500	0x00	90	13	75
48_4_2	10000	0x00	120	13	100
48_5_2	7500	0x00	117	13	75
48_6_2	10000	0x00	155	13	100

Table A.3: QoS Config Settings – Unicast

A.5 Codec Specific Capabilities Settings – Broadcast Sink

- Reference

  [3] 3.8.2

Codec Capability Setting	Codec ID	Supported Sampling Frequencies	Supported Frame Durations	Supported Octets per Codec Frame	Audio Channel Counts
8_1	LC3	0b000000001 (8 kHz)	0b01 (7.5ms)	26	0x01
8_2	LC3	0b000000001 (8 kHz)	0b10 (10ms)	30	0x01
16_1	LC3	0b000000100 (16 kHz)	0b01 (7.5ms)	30	0x01
16_2	LC3	0b000000100 (16 kHz)	0b10 (10ms)	40	0x01
24_1	LC3	0b000010000 (24 kHz)	0b01 (7.5ms)	45	0x01
24_2	LC3	0b000010000 (24 kHz)	0b10 (10ms)	60	0x01
32_1	LC3	0b000100000 (32 kHz)	0b01 (7.5ms)	60	0x01
32_2	LC3	0b000100000 (32 kHz)	0b10 (10ms)	80	0x01
441_1	LC3	0b001000000 (44.1 kHz)	0b01 (7.5ms)	97	0x01
441_2	LC3	0b001000000 (44.1 kHz)	0b10 (10ms)	130	0x01
48_1	LC3	0b010000000 (48 kHz)	0b01 (7.5ms)	75	0x01
48_2	LC3	0b010000000 (48 kHz)	0b10 (10ms)	100	0x01
48_3	LC3	0b010000000 (48 kHz)	0b01 (7.5ms)	90	0x01
48_4	LC3	0b010000000 (48 kHz)	0b10 (10ms)	120	0x01
48_5	LC3	0b010000000 (48 kHz)	0b01 (7.5ms)	117	0x01
48_6	LC3	0b010000000 (48 kHz)	0b10 (10ms)	155	0x01

Table A.4: Codec Specific Capabilities Settings – Broadcast Sink

A.6 Codec Specific Config Settings – Broadcast Source

- Reference

  [3] 3.7.1

Codec Setting	Sampling Frequency Value	Frame Duration Value	Octets per Codec Frame Value
LC3 8_1	0x01 (8 kHz)	0x00 (7.5ms)	26
LC3 8_2	0x01 (8 kHz)	0x01 (10ms)	30
LC3 16_1	0x03 (16 kHz)	0x00 (7.5ms)	30
LC3 16_2	0x03 (16 kHz)	0x01 (10ms)	40
LC3 24_1	0x05 (24 kHz)	0x00 (7.5ms)	45
LC3 24_2	0x05 (24 kHz)	0x01 (10ms)	60
LC3 32_1	0x06 (32 kHz)	0x00 (7.5ms)	60
LC3 32_2	0x06 (32 kHz)	0x01 (10ms)	80
LC3 441_1	0x07 (44.1 kHz)	0x00 (7.5ms)	97
LC3 441_2	0x07 (44.1 kHz)	0x01 (10ms)	130
LC3 48_1	0x08 (48 kHz)	0x00 (7.5ms)	75
LC3 48_2	0x08 (48 kHz)	0x01(10ms)	100
LC3 48_3	0x08 (48 kHz)	0x00 (7.5ms)	90
LC3 48_4	0x08 (48 kHz)	0x01 (10ms)	120
LC3 48_5	0x08 (48 kHz)	0x00 (7.5ms)	117
LC3 48_6	0x08 (48 kHz)	0x01 (10ms)	155

Table A.5: Codec Specific Config Settings – Broadcast Source

A.7 Broadcast Audio Stream Config Settings

- Reference

  [3] 6.3

Set Name	Codec Setting	SDU Interval (µs)	Framing	Max SDU (octets)	RTN	Max Transport Latency (ms)
8_1_1	LC3 8_1	7500	0x00	26	2	8
8_2_1	LC3 8_2	10000	0x00	30	2	10
16_1_1	LC3 16_1	7500	0x00	30	2	8
16_2_1	LC3 16_2	10000	0x00	40	2	10
24_1_1	LC3 24_1	7500	0x00	45	2	8
24_2_1	LC3 24_2	10000	0x00	60	2	10
32_1_1	LC3 32_1	7500	0x00	60	2	8
32_2_1	LC3 32_2	10000	0x00	80	2	10
441_1_1	LC3 441_1	8163	0x01	97	4	24
441_2_1	LC3 441_2	10884	0x01	130	4	31
48_1_1	LC3 48_1	7500	0x00	75	4	15
48_2_1	LC3 48_2	10000	0x00	100	4	20

Set Name	Codec Setting	SDU Interval (µs)	Framing	Max SDU (octets)	RTN	Max Transport Latency (ms)
48_3_1	LC3 48_3	7500	0x00	90	4	15
48_4_1	LC3 48_4	10000	0x00	120	4	20
48_5_1	LC3 48_5	7500	0x00	117	4	15
48_6_1	LC3 48_6	10000	0x00	155	4	20
8_1_2	LC3 8_1	7500	0x00	26	4	45
8_2_2	LC3 8_2	10000	0x00	30	4	60
16_1_2	LC3 16_1	7500	0x00	30	4	45
16_2_2	LC3 16_2	10000	0x00	40	4	60
24_1_2	LC3 24_1	7500	0x00	45	4	45
24_2_2	LC3 24_2	10000	0x00	60	4	60
32_1_2	LC3 32_1	7500	0x00	60	4	45
32_2_2	LC3 32_2	10000	0x00	80	4	60
441_1_2	LC3 441_1	8163	0x01	97	4	54
441_2_2	LC3 441_2	10884	0x01	130	4	60
48_1_2	LC3 48_1	7500	0x00	75	4	50
48_2_2	LC3 48_2	10000	0x00	100	4	65
48_3_2	LC3 48_3	7500	0x00	90	4	50
48_4_2	LC3 48_4	10000	0x00	120	4	65
48_5_2	LC3 48_5	7500	0x00	117	4	50
48_6_2	LC3 48_6	10000	0x00	155	4	65

Table A.6: Broadcast Audio Stream Config Settings

6 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	p0	2021-09-21	Approved by BTI on 2021-09-10. Basic Audio Profile (BAP) v1.0 adopted by the BoD on 2021-09-14. Prepared for initial publication.
	p1r00–r02	2021-09-30 – 2021-12-08	TSE 17562 (rating 4): To address E17453, which deals with the fact that the BAP.TS goes beyond the BAP spec when utilizing multiple-channel LC3 configurations, made updates to tests in the Unicast Client Streaming and Unicast Server Streaming sections. **Affected** test cases: BAP/UCL/STR/BV-142-C – -144-C, -235-C, -267-C, -300-C, -333-C, -365-C, -397-C, -429-C, -461-C, -493-C, and -522-C and BAP/USR/STR/BV-142-C – -144-C, -235-C, -267-C, -299-C, and -331-C. **Deleted** test cases: BAP/UCL/STR/BV-133-C – -141-C, -145-C – -228-C, -232-C – -234-C, -236-C – -266-C, -268-C – -295-C, -297-C – -299-C, -301-C – -328-C, -330-C – -332-C, -334-C – -364-C, -366-C – -396-C, -398-C – -428-C, -430-C – -460-C, -462-C – -492-C, and -494-C – -521-C, and BAP/USR/STR/BV-133-C – -141-C, -145-C – -228-C, -232-C – -234-C, -236-C – -266-C, -268-C – -298-C, -300-C – -330-C, and -332-C – -359-C. **Added** test cases: BAP/UCL/STR/BV-523-C – -534-C and BAP/USR/STR/BV-360-C – -366-C. Updated TCMT and TCRL accordingly. (Note: Restored BAP/UCL/STR/BV-071-C, -072-C, -103-C, and -104-C to the TCMT. Those test cases were indicated for TCMT deletion in the original CR, but the associated test cases are still active.) TSE 17590 (rating 1): Corrected the TCMT entries for BAP/UCL/SCC/BV-100-C and BAP/UCL/SCC/BV-099-C. TSE 17594 (rating 2): Minor changes to the CoD testing section with BAP/USR/DEVD/BV-01-C, BAP/BSRC/DEVD/BV-01-C, BAP/BSNK/DEVD/BV-01-C, BAP/BA/DEVD/BV-01-C, and BAP/SDE/DEVD/BV-01-C to highlight that the intent of the tests is for checking LE Audio Major Service Class in the CoD. TSE 17603 (rating 2): Corrected the TCMT entries for BAP/UCL/SCC/BV-055-C – -66-C. TSE 17605 (rating 2): Corrected the TCMT entries for BAP/USR/STR/BV-264-C – -295-C. TSE 17607 (rating 2): Corrected the TCMT entries for BAP/USR/SCC/BV-016-C, -032-C, -050-C, -066-C, -084-C, -100-C, -116-C, and -132-C and BAP/USR/STR/BV-031-C, -032-C, -063-C, -064-C, -095-C, -096-C, -127-C, -128-C, -178-C – -180-C, and -226-C – -228-C.

Publication Number	Revision Number	Date	Comments
			Performed template-related fixes. Updated the introduction text before the TCMT to align with the template. Updated copyright page to align with v2 of the DNMD.
1	p1	2022-01-25	Approved by BTI on 2021-12-15. Prepared for TCRL 2021-2 publication.
	p2r00–r04	2022-02-11 – 2022-05-25	TSE 18138 (rating 3): Made editorial corrections related to a Sink/Source typo in the Rounds tables for the sections containing BAP/UCL/STR/BV-429-C and -532-C and BAP/UCL/STR/BV-493-C, -522-C, and -534-C. Corrected codec parameter values for the section containing BAP/USR/STR/BV-331-C and -366-C. TSE 18692 (rating 1): Removed duplicated tables from Appendix B and replaced related references to B.2 with the spec ref “Table 4.1: Unicast LC3 Audio Configurations in [3]”; updated fields throughout doc accordingly. TSE 18938 (rating 4): To accommodate EE 18556, updated the section previously containing only BAP/USR/ADV/BV-01-C by adding new TCs BAP/USR/ADV/BV-02-C and -03-C and updating the initial condition, test procedure, and pass verdict, and updated the section previously containing only BAP/SDE/BASS/BV-01-C by adding new TCs BAP/SDE/BASS/BV-02-C and -03-C and updating the test procedure and pass verdict. Updated the TCMT accordingly.
2	p2	2022-06-28	Approved by BTI on 2022-06-20. BAP v1.0.1 and EE 18556 adopted by the BoD on 2022-06-21. Prepared for TCRL 2022-1 publication.
	p2ed2r00	2022-07-18	TSE 18761 (rating 1): Updated test steps for BAP/BSRC/SCC/BV-36-C (also updated reference) and -37-C. Editorials, including removing draft entries from the revision history to align with current conventions.
	p2 edition 2	2022-08-22	Approved by BTI on 2022-08-22. Prepared for edition 2 publication.
	p3r00	2022-08-25	TSE 19005 (rating 2): Updated the TCMT entries for BAP/USR/STR/BV-064-C and -127-C. TSE 19290 (rating 2): Updated the TCMT entry for BAP/USR/STR/BV-363-C.
3	p3	2023-02-07	Approved by BTI on 2022-12-19. Prepared for TCRL 2022-2 publication.
	p4r00–r07	2023-04-06 – 2023-05-27	TSE 22387 (rating 4): Added new TCs BAP/USR/ADV/BV-04-C – -05-C and modified the test configuration table for BAP/USR/ADV/BV-01-C – -03-C, including the test descriptions for -02-C and -03-C. Updated the TCMT accordingly.

Publication Number	Revision Number	Date	Comments
			TSE 22655 (rating 4): Deleted BAP/UCL/STR/BV-001-C – -128-C and BAP/USR/STR/BV-001-C – -128-C and added BAP/UCL/STR/BV-535-C – -538-C and BAP/USR/STR/BV-367-C – -370-C; removed the Codec/Config and QoS columns from the TC Config table and updated the Test Purpose, test steps, and Pass verdict for those sections. Removed the Codec, QoS, and Symmetric columns from the TC Config tables and updated the Pass verdicts: affected test cases BAP/UCL/STR/BV-522-C – -534-C and BAP/USR/STR/BV-360-C – -366-C; deleted test cases BAP/UCL/STR/BV-142-C – -144-C, -235-C, -267-C, -300-C, -333-C, -365-C, -397-C, -429-C, -461-C, and -493-C and BAP/USR/STR/BV-142-C – -144-C, -235-C, -267-C, -299-C, and -331-C. Updated the TCMT accordingly. TSE 22831 (rating 4): To support Expedited Erratum 19096: For the “Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – LC3” section, added new TCs BAP/UCL/STR/BV-539-C – -542-C and a new TC config column for CIS Establishment (affecting BAP/UCL/STR/BV-535-C – -538-C), and updated the test steps and the MSC. For the “Unicast Client Streaming – 1 Unicast Server, 2 Streams, 1 Sink ASE, 1 Source ASE – LC3” section, corrected an Initial Condition, added new TCs BAP/UCL/STR/BV-543-C – -551-C and new TC config columns for CIS Establishment states (affecting BAP/UCL/STR/BV-523-C – -525-C), and updated the test steps and the MSC. For the “Unicast Server Streaming – 1 Stream, 1 CIS – LC3” section, added new TCs BAP/USR/STR/BV-371-C – -374-C and a new TC config column for CIS Establishment (affecting BAP/USR/STR/BV-367-C – -370-C), and updated the test steps and the MSC. For the “Unicast Server Streaming – 2 Streams, 1 Sink ASE, 1 Source ASE – LC3” section, added new TCs BAP/USR/STR/BV-375-C – -383-C and new TC config columns for CIS Establishment states (affecting BAP/USR/STR/BV-360-C – -362-C), and updated the test steps and the MSC. Updated the TCMT accordingly. TSE 22846 (rating 2): Corrected the TCMT entries for BAP/UCL/SCC/BV-071-C and -087-C. TSE 22852 (rating 1): Corrected a test step for the section containing BAP/BSNK/SCC/BV-01-C – -33-C.
4	p4	2023-06-29	Approved by BTI on 2023-06-05. Prepared for TCRL 2023-1 publication.

Publication Number	Revision Number	Date	Comments
	p5r00–r02	2023-11-06 – 2023-11-16	TSE 24322 (rating 4): Per EE 22266, updated the Initial Condition with tables for Source ASE and Sink ASE bit settings defined, adding new Mono TCs BAP/UCL/STR/BV-552-C – -567-C, and updated the Pass verdict, outlining behavior for the Mono TCIDs. Updated the TCMT accordingly. Subsequently updated the bit settings in the table for the “Unicast Client Streaming – 1 Unicast Server, 1 Stream, 1 CIS – LC3” section based on the CR in comment 1001991.
5	p5	2023-12-20	Approved by BTI on 2023-11-22. EE 22266 adopted by the BoD on 2023-12-19. Prepared for TCRL 2023-1-addition publication.
	p6r00–r01	2024-01-02 – 2024-01-03	TSE 23073 (rating 3): Added an initial condition and updated the Pass verdict for the section containing BAP/USR/ADV/BV-01-C – -06-C to clarify how the Lower Tester retrieves the Supported Audio Contexts value. TSE 23921 (rating 2): Corrected the codec config settings for the section containing BAP/BSRC/SCC/BV-01-C – -33-C.
6	p6	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p7r00–r01	2024-08-13 – 2024-09-05	TSE 24995 (rating 4): Added new test case BAP/BSRC/SCC/BV-38-C, and updated the TCMT accordingly.
7	p7	2024-10-08	Approved by BTI on 2024-09-11. BAP v1.0.2 adopted by the BoD on 2024-10-01. Prepared for TCRL 2024-2-addition publication.
	p8r00–04	2024-10-24 – 2024-12-12	TSE 24862 (rating 3): Per E23389, updated the initial condition and pass verdict for test cases BAP/BSNK/SCC/BV-01-C – -33-C, BAP/BSNK/ADV/BV-01-C, and BAP/BA/ADV/BV-01-C. TSE 24922 (rating 2): Updated the TCMT to support test cases BAP/BA/DEVD/BV-01-C, BAP/BSNK/DEVD/BV-01-C, BAP/BSRC/DEVD/BV-01-C, BAP/SDE/DEVD/BV-01-C, and BAP/USR/DEVD/BV-01-C. TSE 25031 (rating 4): Added new test cases BAP/BSNK/STR/BV-35-C – -66-C and BAP/BSNK/SCC/BV-34-C, deleted BAP/BSNK/SCC/BV-01-C – -03-C, BAP/BSNK/SCC/BV-05-C, BAP/BSNK/SCC/BV-07-C – -19-C, and BAP/BSNK/SCC/BV-21-C – -32-C, and updated the TCMT accordingly. Updated descriptions and settings for BAP/BSNK/STR/BV-01-C – -16-C. Updated Section 4.14.4 title and settings headings for Tables 4.80 and 4.84. TSE 25390 (rating 2): Updated the TCMT for BAP/UCL/ADV/BV-01-C, BAP/UCL/DISC/BV-06-C, and BAP/UCL/PD/BV-03-C and -04-C.

Publication Number	Revision Number	Date	Comments
			TSE 26333 (rating 2): Updated the initial condition for BAP/UCL/STR/BV-329-C, -522-C, -526-C, -528-C, -530-C, -532-C, and -534-C. TSE 26444 (rating 4): Per E24626, moved Audio Configuration content from Appendix B to Section 3.2.1. Added 24 new test cases: BAP/UCL/STR/BV-568-C – -591-C; updated the TCMT accordingly. TSE 26509 (rating 1): Replaced all instances of "Published Audio Control Service" (incorrect name) with "Published Audio Capabilities Service". Updated the TCMT introduction to align with the current TS template.
8	p8	2025-02-18	Approved by BTI on 2025-02-09. Prepared for TCRL 2025-1 publication.
	p9r00–r03	2025-02-17 – 2025-05-14	TSE 24253 (rating 3): Per E23538, updated the test procedure for BAP/UCL/STR/BV-523-C – -525-C, -535-C – -591-C and BAP/USR/STR/BV-360-C – -362-C, -367-C – -383-C. TSE 26913 (rating 2): Updated TCMT for test cases BAP/UCL/STR/BV-535-C – -542-C and BAP/UCL/STR/BV-552-C – -591-C. TSE 26915 (rating 1): Deleted the “Sampling Frequency”, “Frame Duration value”, and “Octets per Codec Frame Value” columns from the “Broadcast Audio Stream with Multiple BISs – Source” TCID table (BAP/BSRC/STR/BV-18-C – -33-C).
9	p9	2025-07-08	Approved by BTI on 2025-05-30. Prepared for TCRL pkg100 publication.
	p10r00–r01	2025-07-22 – 2025-08-07	TSE 27401 (rating 2): Updated the TCMT throughout to correct an issue with Audio Channel support. TSE 27605 (rating 2): Updated the TCMT entry for BAP/BSRC/SCC/BV-34-C. TSE 27805 (rating 2): Updated the TCMT entry for BAP/BA/BASS/BV-09-C. TSE 27806 (rating 1): Added diagrams to the Test Strategy section.
10	p10	2025-11-04	Approved by BTI on 2025-09-29. Prepared for TCRL pkg101 publication.

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