

Generic Object Exchange Profile (GOEP)

Bluetooth® Test Suite

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- **Group Prepared By:** BTI
- **Feedback Email:** bti-main@bluetooth.org

Abstract:

This document defines test structures and procedures for the conformance test of Bluetooth® products implementing the Generic Object Exchange Profile 2.0 or later.



Revision History

Revision History	Date	Comments
1.1.1r0	2010-03-10	First draft of GOEP test specification
1.1.1r1	2010-03-25	Removed duplicate test case RLS/BV-07 and updated SRM/BI-03 to run even if SRM is not claimed
1.1.1r2	2010-04-06	Removed test cases SRM/BV-02 and SRM/BV-06; incorporated errata #3547
1.1.1r3	2010-04-01	Added purpose to each test case, modified SRM/BI-01, SRM/BI-04 and CON/BV-02
1.1.1r4	2010-04-12	Clarified references
1.1.1r5	2010-04-18	Removed test cases SRM/BI-01 and SRM/BI-04, additional verdicts to BC/BV-01 and BC/BV-04; combined initial and test conditions for all test cases
1.1.1r6	2010-05-05	Added test cases to ensure Session/Action commands are rejected by the IUT that doesn't support those; fixed typos
1.1.1r7	2010-05-13	Updated ROB test cases; added GET simultaneous SRMP test case; added initial conditions in PUT test cases
1.1.1r8	2010-05-14	Add test case for SRMP header in GET Rsp, tidy up doc
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Contributors

Name	Company
Mandar Gokhale	Qualcomm
Sherry Smith	Broadcom
Kevin Hendrix	iAnywhere
Tim Howes	Nokia



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1 Scope

This Bluetooth document contains the Test Suite Structure (TSS) and Test Cases (TC) to test certain features of the GOEP and IrDA Interoperability profiles. The features tested are mapped from application profiles that reference those features.

The objective of this test suite is to provide a basis for interoperability tests for Bluetooth devices giving a high probability of air interface interoperability between different manufacturers' Bluetooth devices.

2 References, Definitions, and Abbreviations

2.1 References

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

- [1] Bluetooth Core Specification v2.0 or later
- [2] Bluetooth Test Strategy and Terminology Overview
- [3] Bluetooth GOEP Specification
- [4] Bluetooth GOEP-based Application Profile ICS
- [5] Bluetooth Specification Guidelines
- [6] ITU-T X.290 series, OSI CONFORMANCE TESTING METHODOLOGY AND FRAMEWORK
PROTOCOL RECOMMENDATIONS FOR ITU-T APPLICATIONS, ITU Recommendation X.290
series (equivalent to ISO 9646)
- [7] ITU-T Z.120, Formal description techniques (FDT) - Message Sequence Chart
- [8] IrDA Interoperability

2.2 Definitions

For the purpose of this Bluetooth document, the definitions in [1], [2] and [3] apply.

2.3 Abbreviations

For the purpose of this Bluetooth document, the abbreviations in [1], [2] and [3] apply.

3 Test Suite Structure (TSS)

3.1 Test Strategy

This specification consists of test cases to test features within the GOEP v2.0 or later specification. Historically there was not a test suite for tests common to all the OBEX-based profiles. It is expected that over time other test cases may be added to this test suite.

The test cases therefore cover much of OBEX, in particular those features that were added into the v2.0 or later versions of GOEP. These are the use of OBEX over L2CAP and enhancements to the IrOBEX protocol.

To allow efficient testing of many OBEX profiles this test suite contains the common test cases. The test case mappings of the application profiles, and the associated ICS, cause certain tests within this document to be run.

Note that the Backwards Compatibility test cases are mapped in only from the application profiles that require backwards compatibility with their previous versions based on earlier versions of GOEP. Future Application profiles will exclude these tests.

Application profile test suite structure

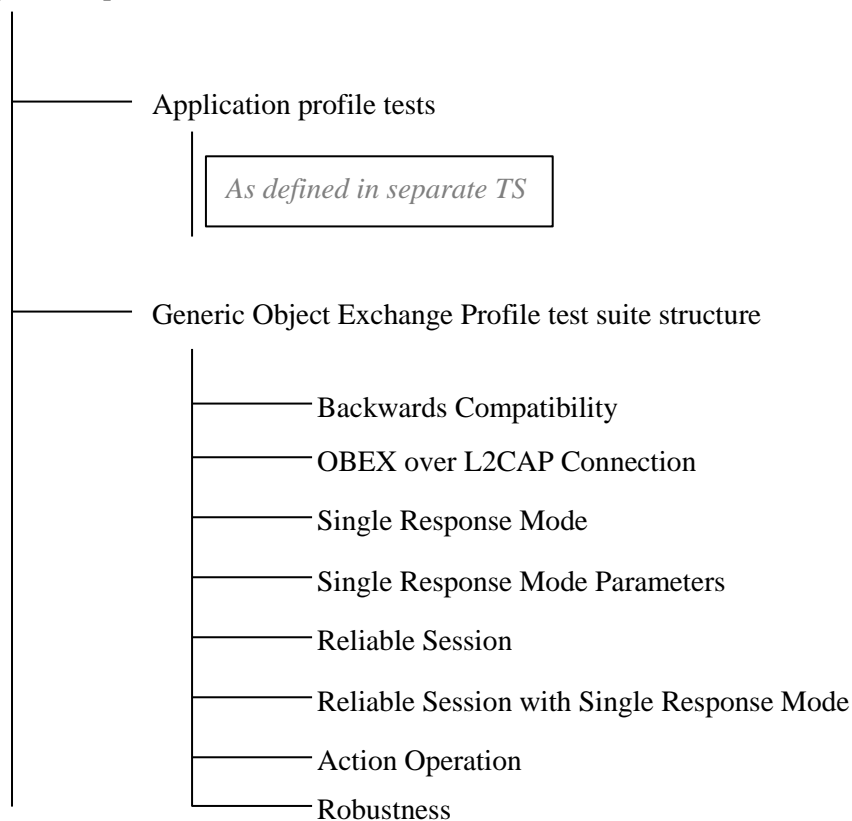


Figure 3.1: GOEP Test Suite Structure Representation

4 Test Cases (TC)

4.1 Introduction

4.1.1 Test Case Identification Conventions

Test cases shall be 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>**.

Bolded ID parts shall appear in the order prescribed. Non-bolded ID parts (if applicable) shall appear between the bolded parts. The order of the non-bolded parts may vary from test suite to test suite, but shall be consistent within each individual test suite.

Note: The IUT role is defined by a higher level profile incorporating these generic tests.

Identifier Abbreviation	Spec Identifier <spec abbreviation>
GOEP	Generic Object Exchange Profile
Identifier Abbreviation	Feature Identifier <feat>
BC	Backwards Compatibility
CON	OBEX over L2CAP Connection
SRM	Single Response Mode
SRMP	Single Response Mode Parameters
RLS	Reliable Session
SRS	Reliable Session with Single Response Mode
ACT	Action Operation
ROB	Robustness

Table 4.1: GOEP TC Class Naming Convention

4.1.2 Conformance

When conformance is claimed, all capabilities indicated as mandatory for this Specification shall be supported in the specified manner (process-mandatory). This also applies for all optional and conditional capabilities for which support is indicated. All mandatory capabilities, and optional and conditional capabilities for which support is indicated are subject to verification as part of the Bluetooth Qualification Program.

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 that are not excluded by the Specification, OR



- that capabilities enabled by the implementations are sustained over durations expected by the use case, OR
- that the implementation gracefully handles any quantity of data expected by the use case, OR
- that the implementation gracefully rejects any attempt to exercise capabilities which were declared as not supported. Graceful rejection means that the implementation demonstrates uninterrupted conformance to the specification immediately after rejecting such attempts without any need to be externally reset or adjusted, OR
- 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 OR
- that the implementation is immune to attempted security exploits.

A single execution of each of the required tests is required in order to constitute a pass verdict. However, it is noted that in order 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 Generator, 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 errata request such that the issue may be addressed.

4.1.3 Pass/Fail Verdict Conventions

Each test case has an Expected Outcome section, which outlines all the detailed pass criteria conditions that shall be met by the IUT to merit a Pass Verdict.

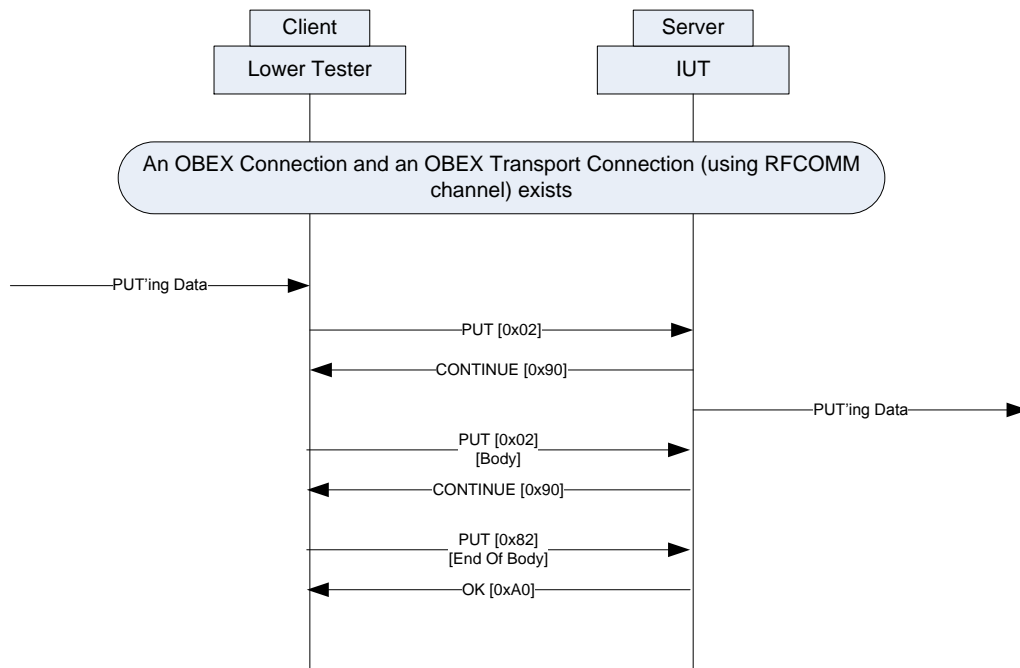
The convention in this test suite is that, unless there is a specific set of fail conditions outlined in the test case, the IUT fails the test case as soon as one of the pass criteria conditions cannot be met. If this occurs, the outcome of the test shall be the Fail Verdict.

4.2 Backwards Compatibility

4.2.1 GOEP/BC/BV-01-I [Process an incoming PUT request from a legacy device (OBEX over RFCOMM is used)]

- Test Purpose
Verify that the IUT is able to accept and process an incoming PUT request from a legacy device.
- Reference
[\[3\]](#) 8.2
- Initial Condition
An OBEX Connection and an OBEX Transport Connection (using RFCOMM channel) exists.

The PUT object is large enough to span multiple OBEX packets.
- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the PUT requests from the Lower Tester, the IUT responds with CONTINUE messages and does not try to enable SRM.
- The PUT operation completes successfully.

4.2.2 GOEP/BC/BV-02-I [Initiate a PUT request to a legacy device (OBEX over RFCOMM is used)]

- Test Purpose

Verify that the IUT is able to initiate and process a PUT request to a legacy device.

- Reference

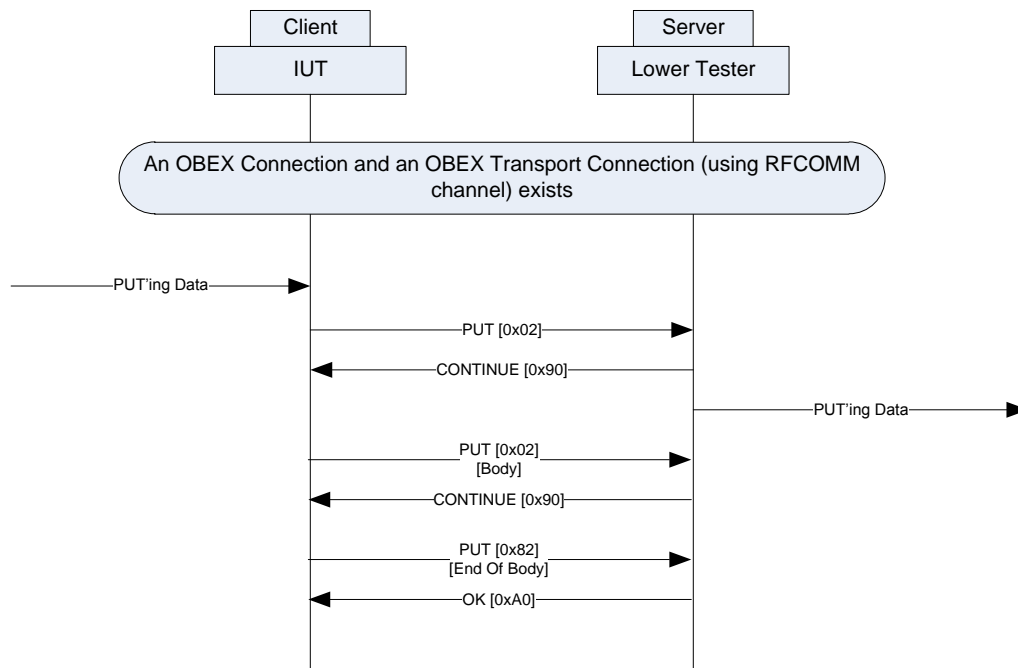
[3] 8.2

- Initial Condition

An OBEX Connection and an OBEX Transport Connection (using RFCOMM channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends *one or more* *PUT* [0x02 or 0x82] requests to the Lower Tester.
- The PUT operation completes successfully.

4.2.3 GOEP/BC/BV-03-I [Process an incoming GET request from a legacy device (OBEX over RFCOMM is used)]

- Test Purpose

Verify that the IUT is able to accept and process an incoming GET request from a legacy device.

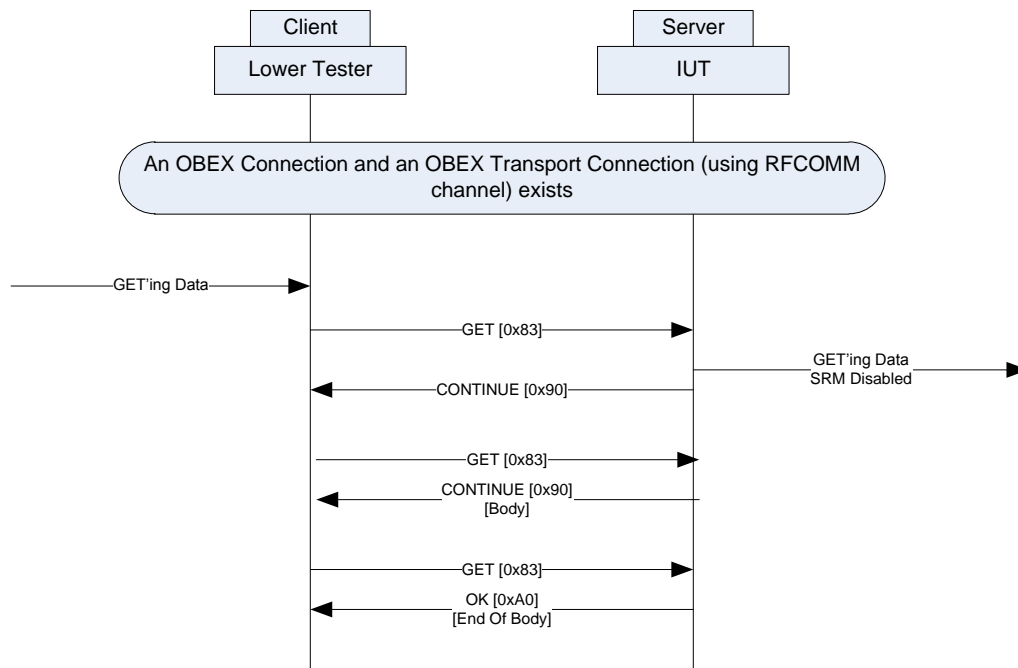
- Reference

[3] 8.2

- Initial Condition

An OBEX Connection and an OBEX Transport Connection (using RFCOMM channel) exists.

- Test Procedure



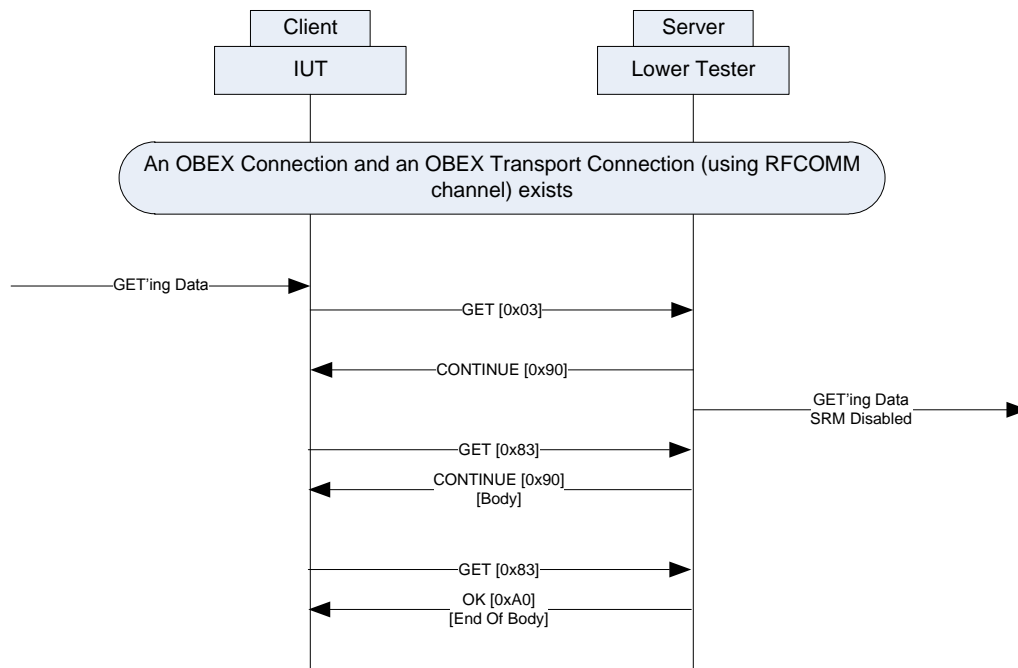
Expected Outcome

Pass Verdict:

- On receiving the GET requests from the Lower Tester, the IUT responds with CONTINUE messages.
- The GET operation completes successfully.

4.2.4 GOEP/BC/BV-04-I [Initiate a GET request to a legacy device (OBEX over RFCOMM is used)]

- Test Purpose
Verify that the IUT is able to initiate and process a GET request to a legacy device.
- Reference
[\[3\]](#) 8.2
- Initial Condition
An OBEX Connection and an OBEX Transport Connection (using RFCOMM channel) exists.
- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends GET [0x03] requests to the Lower Tester and does not try to enable SRM.
- The GET operation completes successfully.

4.3 OBEX over L2CAP Connection

4.3.1 GOEP/CON/BV-01-C [IUT issues an OBEX CONNECT request]

- Test Purpose

Verify that the Client issues an OBEX Connection request to the Server.

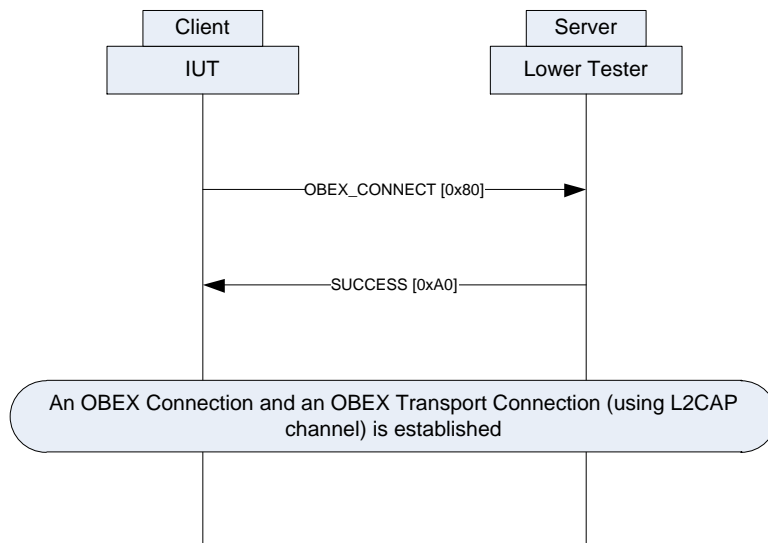
- Reference

[8] 3

- Initial Condition

None

- Test Procedure



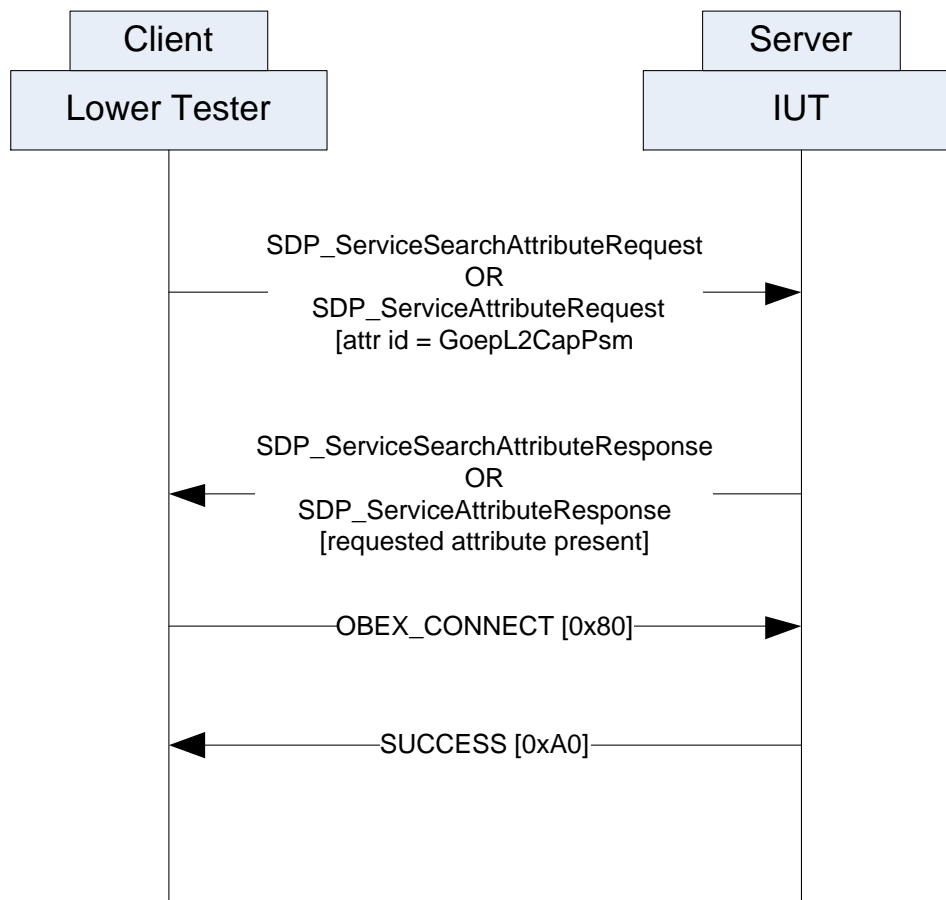
- Expected Outcome

Pass Verdict:

- The IUT sends an OBEX_CONNECT [0x80] request without a SRM header to the Lower Tester.
- On receiving a SUCCESS response from the Lower Tester, the IUT establishes an OBEX connection with the Lower Tester.

4.3.2 GOEP/CON/BV-02-C [GoepL2CapPsm attribute id present in the SDP record]

- Test Purpose
Verify that the GoepL2CapPsm attribute is present in IUT's SDP record.
- Reference
[\[8\]](#) 3.3
- Initial Condition
None
- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving either the SDP_ServiceSearchAttributeRequest or SDP_ServiceAttributeRequest PDU (refer the SDP Test Suite) from the Lower Tester with attribute id=GoepL2CapPsm, the IUT responds with an appropriate SDP response which contains the requested attribute containing the L2CAP PSM.
- On receiving an OBEX Connect [0x80] request, the IUT does not include a SRM header in the Connect response.

4.4 Single Response Mode

4.4.1 GOEP/SRM/BV-01-C [Server does not wish to use SRM during a PUT request]

- Test Purpose

Verify that Single Response Mode (SRM) is not used during a PUT request if the Server does not wish to use SRM.

- Reference

[3] 4.6

- Initial Condition

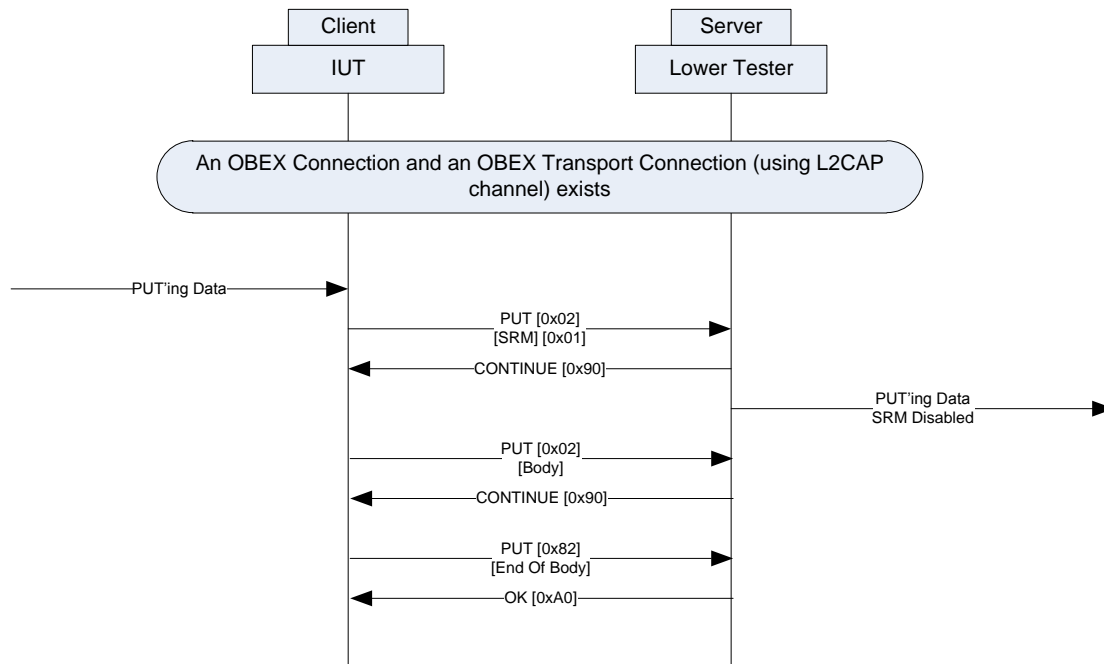


The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a PUT [0x02] request and a SRM header [0x01] indicating SRM to be enabled for the PUT request.
- On receiving the CONTINUE response from Lower Tester without a SRM header, the IUT proceeds with the PUT request with SRM disabled (assuming the object to be transferred is large enough to span multiple OBEX packets).
- The PUT operation completes successfully.

4.4.2 GOEP/SRM/BV-03-C [IUT issues a PUT request with SRM enabled – Initiate PUT]

- Test Purpose

Verify that the Client issues a PUT request with a valid SRM header value, i.e. 0x01, wanting SRM to be enabled for the PUT transaction.

- Reference

[3] 4.6, 5.5.1

- Initial Condition

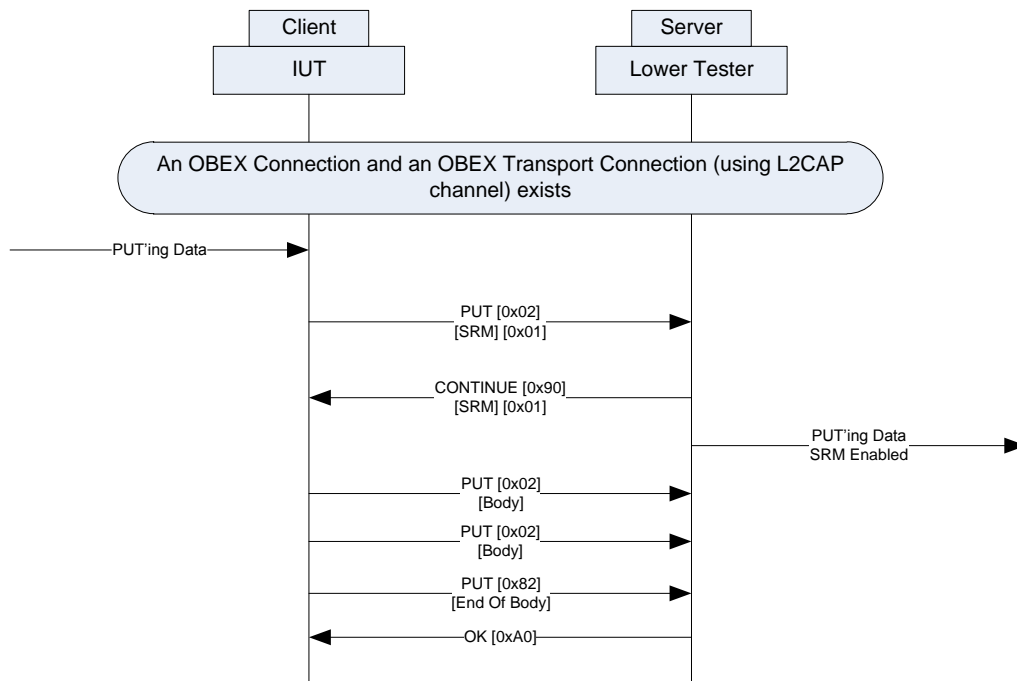
The IUT supports Single Response Mode (SRM).



An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a PUT [0x02] request with a SRM [0x01] header indicating SRM to be enabled for the PUT request.
- On receiving the CONTINUE response from the Lower Tester with a SRM [0x01] header, the IUT proceeds with the PUT request with SRM enabled (assuming the object to be transferred is large enough to span multiple OBEX packets).
- The PUT operation completes successfully.

4.4.3 GOEP/SRM/BV-04-C [IUT issues a PUT response with SRM enabled – Receive PUT]

- Test Purpose

Verify that the Server issues a PUT response with a valid SRM header value, i.e. 0x01, wanting SRM to be enabled for the PUT transaction.

- Reference

[3] 4.6, 5.5.1

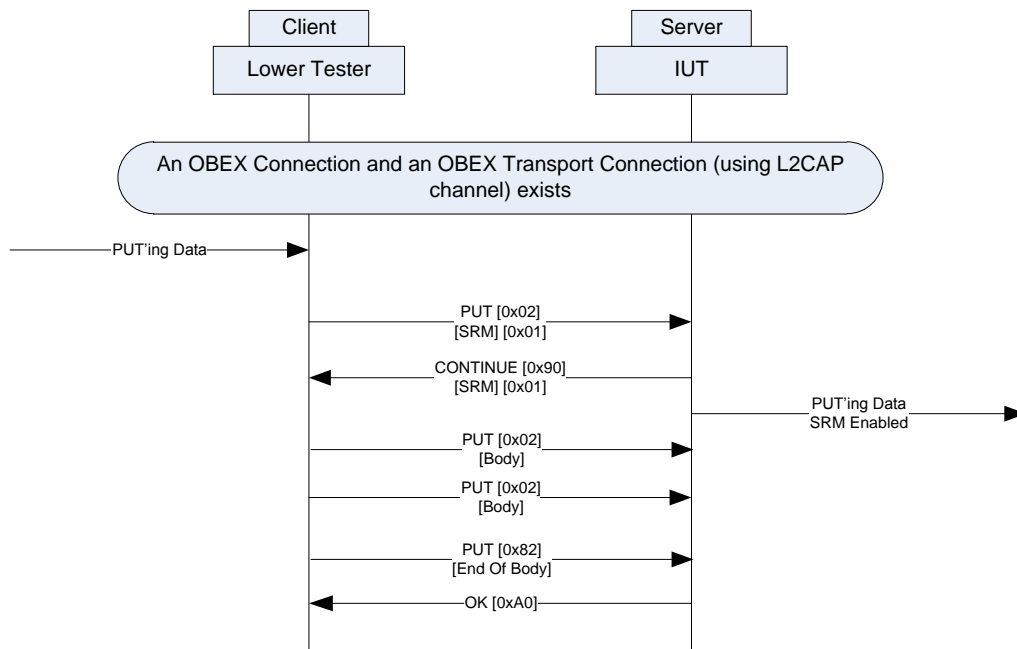
- Initial Condition

The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the PUT request from the Lower Tester with SRM [0x01] header value, the IUT sends a CONTINUE [0x90] response with a SRM [0x01] header.
- The IUT proceeds with the PUT request with SRM enabled.
- The PUT operation completes successfully.

4.4.4 GOEP/SRM/BV-05-C [Server does not wish to use SRM during a GET request]

- Test Purpose

Verify that Single Response Mode (SRM) is not used during a GET request if the Server does not wish to use SRM.

- Reference

[3] 4.6

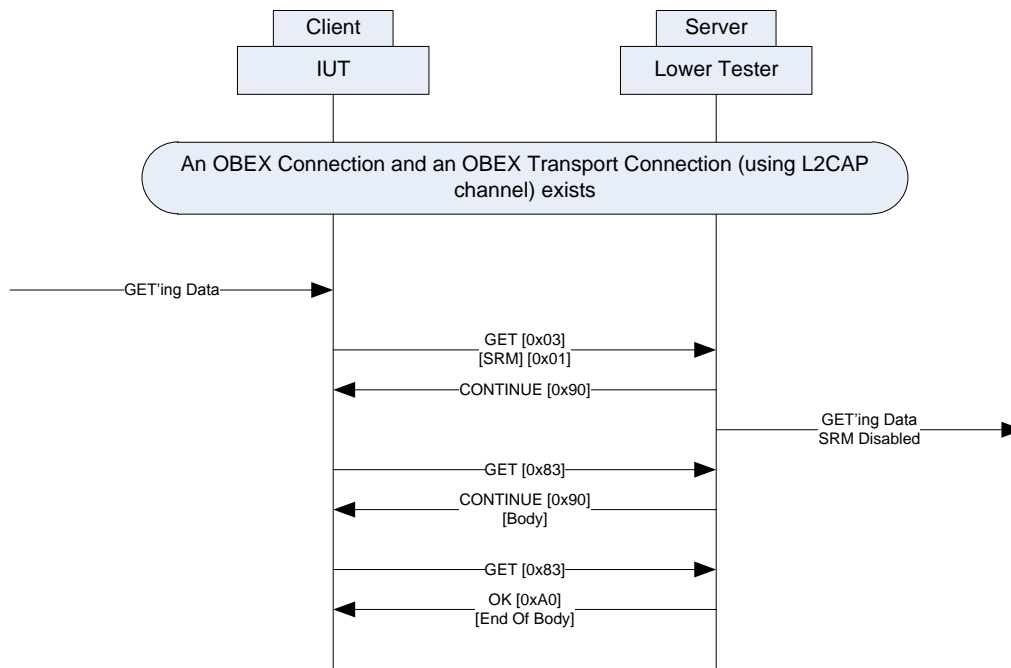
- Initial Condition

The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure





- Expected Outcome

Pass Verdict:

- The IUT sends a GET [0x03] request and a SRM header [0x01] indicating SRM to be enabled for the GET request.
- On receiving the CONTINUE response from the Lower Tester without a SRM header, the IUT proceeds with the GET request with SRM disabled.
- The GET operation completes successfully.

4.4.5 GOEP/SRM/BV-07-C [IUT issues a GET request with SRM enabled – Initiate GET]

- Test Purpose

Verify that the Client issues a GET request with a valid SRM header value, i.e. 0x01, wanting SRM to be enabled for the GET transaction.

- Reference

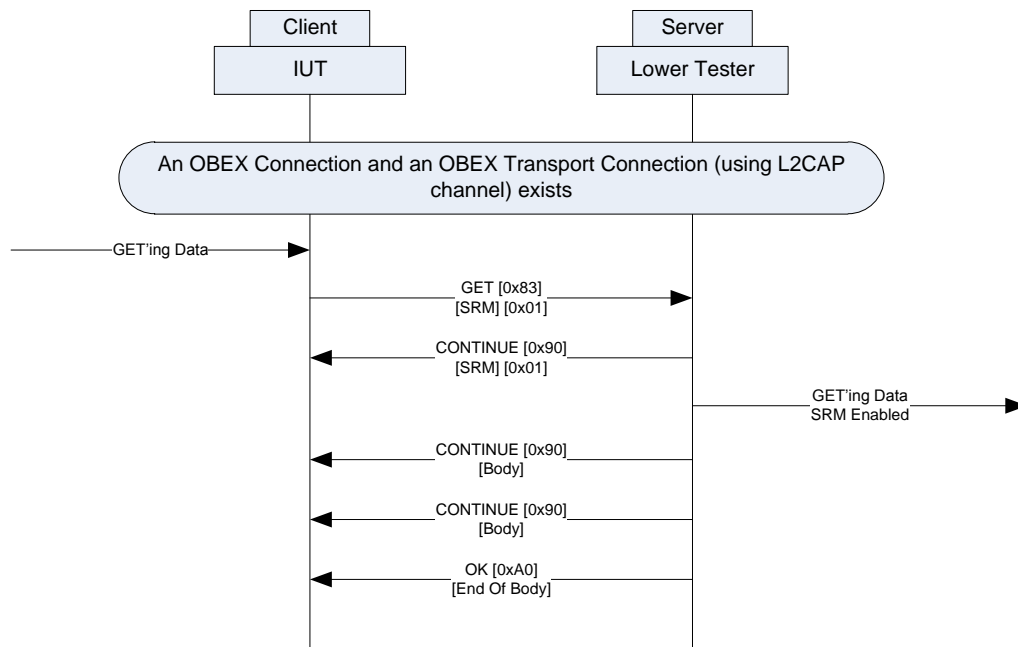
[3] 4.6, 5.6.1

- Initial Condition

The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a GET [0x83] request with a SRM [0x01] header requesting SRM to be enabled for the GET request.
- On receiving the CONTINUE response from the Lower Tester with a SRM [0x01] header, the IUT proceeds with the GET request with SRM enabled.
- The GET operation completes successfully.

4.4.6 GOEP/SRM/BV-08-C [IUT issues a GET response w/ SRM enabled – Receive GET]

- Test Purpose

Verify that the Server issues a GET response with a valid SRM header value, i.e. 0x01, wanting SRM to be enabled for the GET transaction.

- Reference

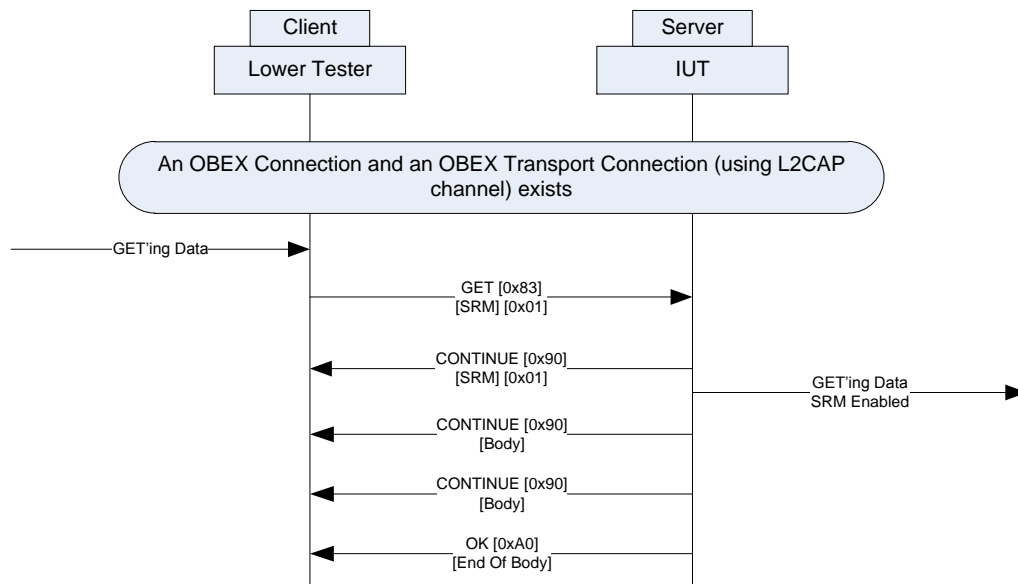
[3] 4.6, 5.6.1

- Initial Condition

The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the GET request from the Lower Tester with SRM [0x01] header value, the IUT sends a CONTINUE [0x90] response with a SRM [0x01] header.
- The IUT proceeds with the GET operation with SRM enabled (assuming the object to be transferred is large enough to span multiple OBEX packets).
- The GET operation completes successfully.

4.4.7 GOEP/SRM/BI-02-C [Process a PUT request with an invalid SRM header]

- Test Purpose

Verify that the Server ignores a SRM header with an invalid value in the PUT request and carries on with the PUT operation with SRM disabled.

- Reference

[3] 4.6

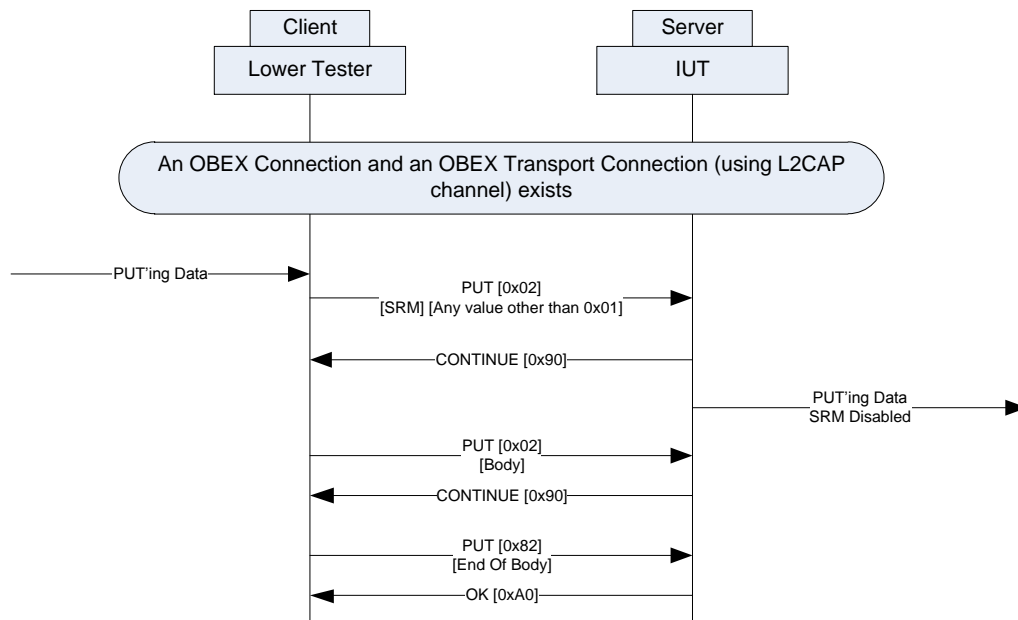
- Initial Condition

The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the PUT request from the Lower Tester with an invalid SRM header value, the IUT proceeds with the PUT request with SRM disabled.
- The PUT operation completes successfully.

4.4.8 GOEP/SRM/BI-03-C [Process an OBEX CONNECT request (incorrectly) containing a SRM header]

- Test Purpose

Verify that the Server accepts an OBEX Connection request from the Client that (incorrectly) includes a SRM header.

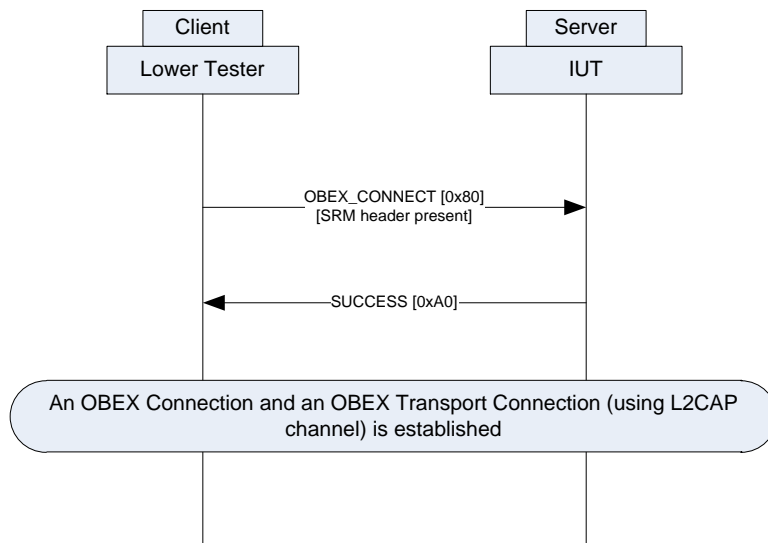
- Reference

[3] 4.6

- Initial Condition

None

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the invalid SRM header in the OBEX_CONNECT request, the IUT responds with a SUCCESS without a SRM header.
- OBEX/L2CAP channel is established.

4.4.9 GOEP/SRM/BI-05-C [Process a GET request with an invalid SRM header]

- Test Purpose

Verify that the Server ignores a SRM header with an invalid value in the GET request and carries on with the GET operation with SRM disabled.

- Reference

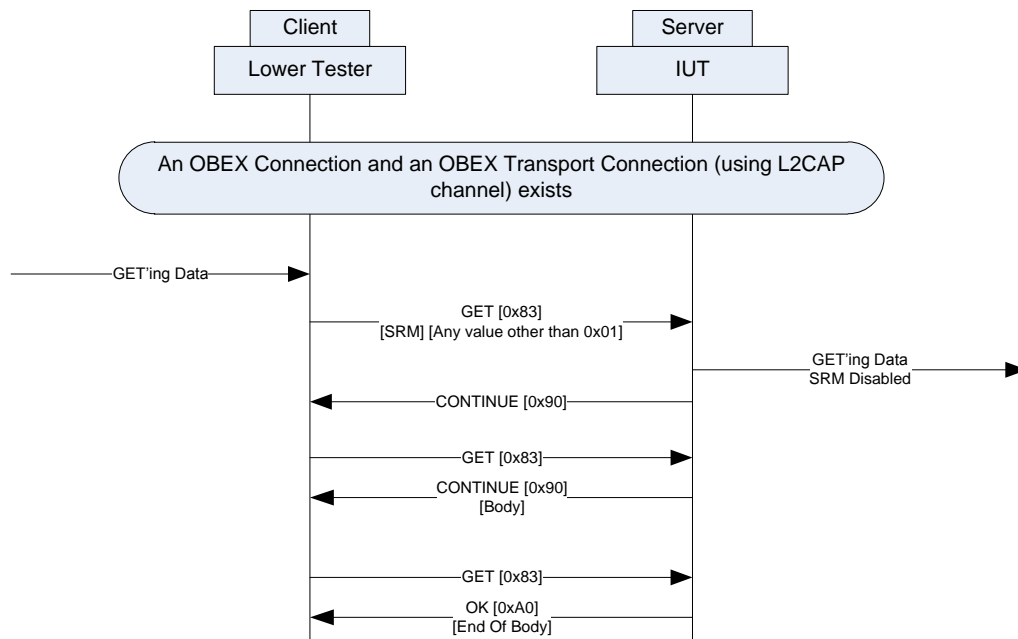
[3] 4.6

- Initial Condition

The IUT supports Single Response Mode (SRM).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the GET request from the Lower Tester with an invalid SRM header value, the IUT proceeds with the GET request with SRM disabled.
- The GET operation completes successfully.

4.5 Single Response Mode Parameters

4.5.1 GOEP/SRMP/BV-01-C [IUT receives a PUT response with SRM enabled and a SRMP wait header]

- Test Purpose

Verify that the Client keeps issuing PUT requests until the remote device stops sending SRMP wait headers.

- Reference

[3] 4.6.1, 4.6.2

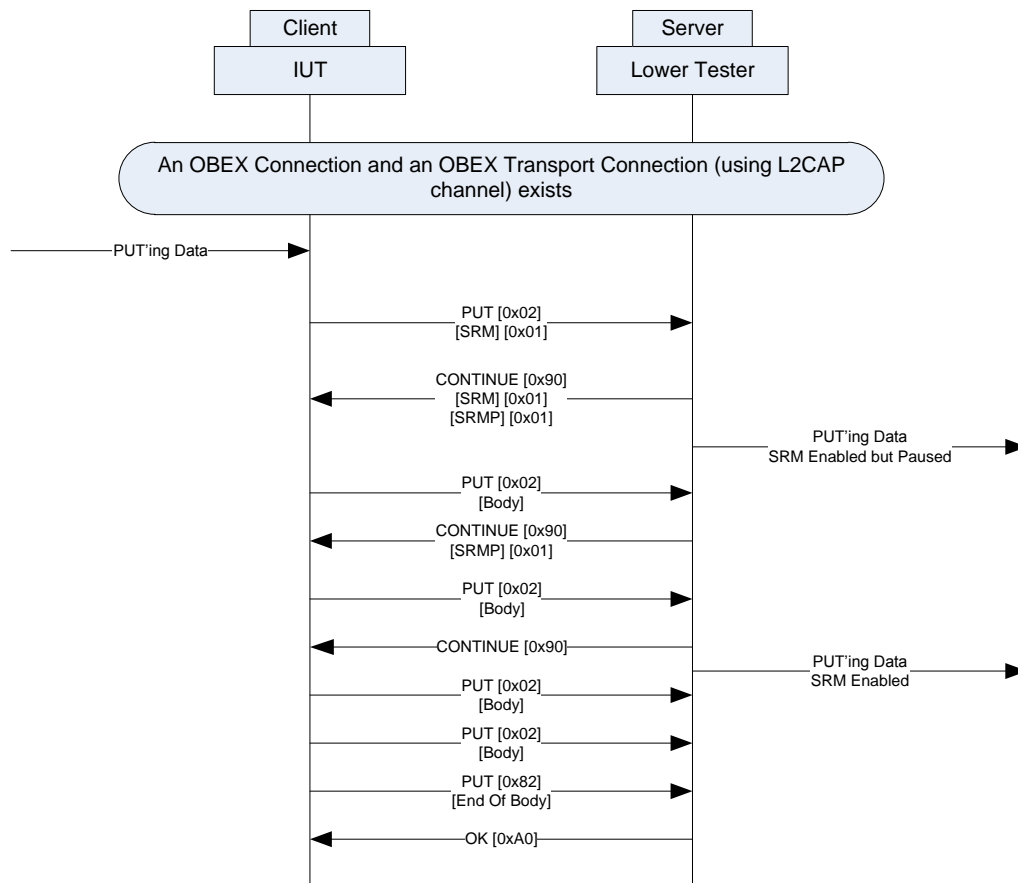
- Initial Condition

The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a PUT [0x02] request with a SRM [0x01] header.
- The IUT keeps sending PUT requests until the response from the Lower Tester does not contain a SRMP header; meaning that SRM is now enabled and can be used. Henceforth, the IUT sends remaining body/end-of-body headers without waiting for a response from the Lower Tester.
- The PUT operation completes successfully with SRM enabled.

4.5.2 GOEP/SRMP/BV-02-C [IUT receives a GET request with SRM enabled and a SRMP wait header]

- Test Purpose

Verify that the Server keeps waiting for GET requests until the remote device stops sending SRMP wait headers.

- Reference

[3] 4.6.1, 4.6.2

- Initial Condition

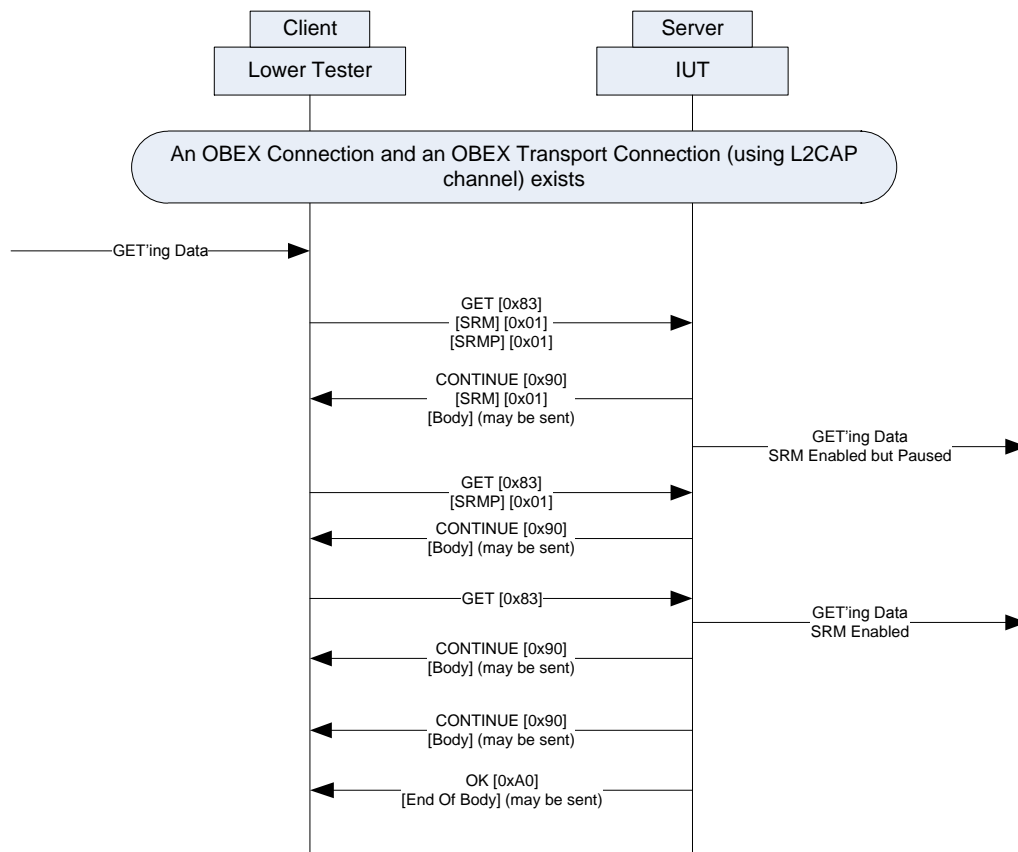
The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.



- Test Procedure

The test procedure below is derived from Table 4.3 in GOEP section 4.6.1 and represents how the SRMP “wait” header may be used.



- Expected Outcome

Pass Verdict:

- On receiving the GET [0x83] request from the Lower Tester with a SRM [0x01] header and a SRMP [0x01] header, the IUT responds with a CONTINUE [0x90] message with a SRM [0x01] header.
- The IUT keeps waiting for GET requests until the request from the Lower Tester does not contain a SRMP header; meaning that SRM is now enabled and can be used. Body data may be included and the IUT may send remaining body/end-of-body headers without waiting for a request from the Lower Tester.
- The GET operation completes successfully with SRM enabled.

4.5.3 GOEP/SRMP/BV-03-C [IUT does not include an invalid SRMP header in the PUT response]

- Test Purpose

Verify that the Server does not issue a PUT response containing a SRMP header with some value other than 0x01.

- Reference

[3] 4.6.1



- Initial Condition

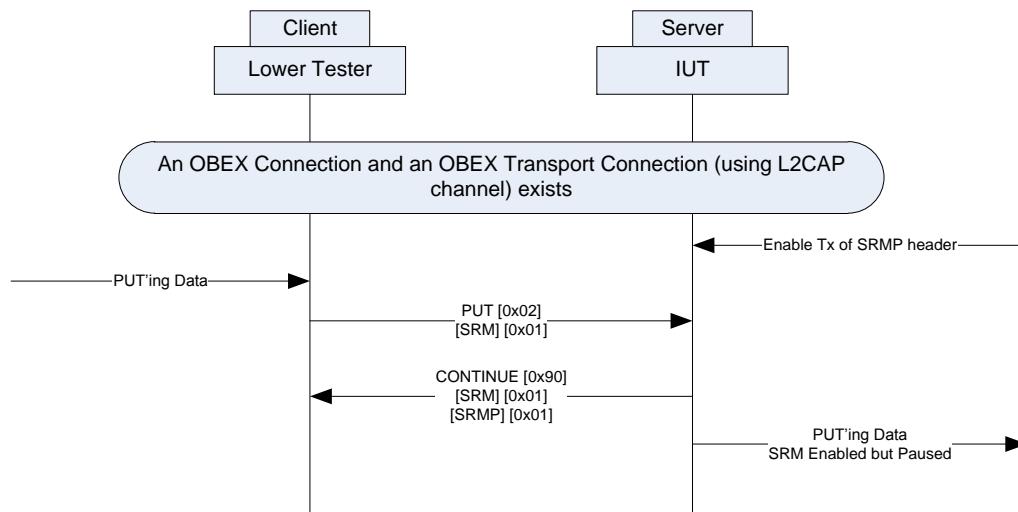
The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

The IUT supports sending a SRMP header, through its UI, when required.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the PUT [0x02] request with a SRM [0x01] header from the Lower Tester, the IUT sends a CONTINUE [0x90] response with a SRM [0x01] header. It also includes a SRMP header (through its UI) with a value of 0x01 asking the Lower Tester to hold off on starting SRM.

4.5.4 GOEP/SRMP/BV-04-C [IUT does not include an invalid SRMP header in the GET request]

- Test Purpose

Verify that the Client does not issue a GET request containing a SRMP header with some value other than 0x01.

- Reference

[3] 4.6.1

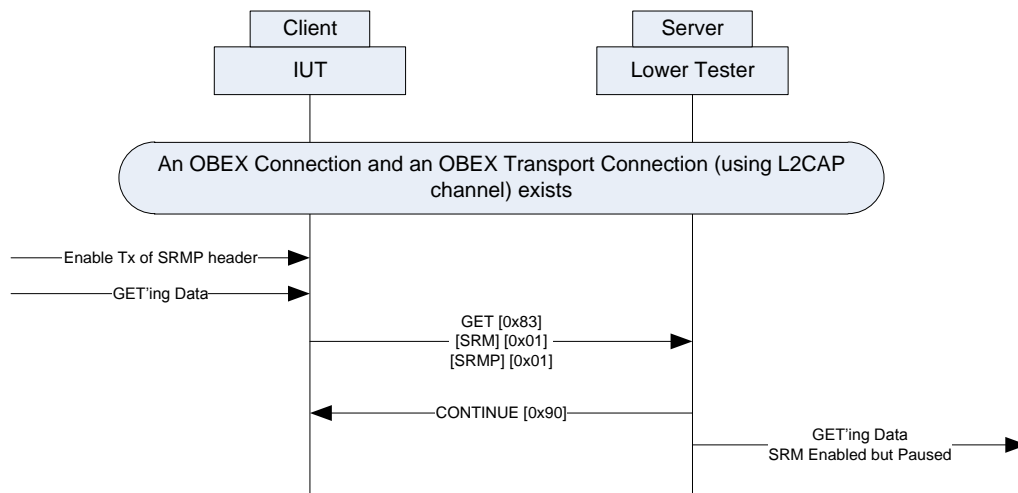
- Initial Condition

The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

The IUT supports sending a SRMP header, through its UI, when required.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a GET [0x83] request with a SRM [0x01] header. It also includes a SRMP header (through its UI) with a value of 0x01 asking the Lower Tester to hold off on starting SRM.

4.5.5 GOEP/SRMP/BV-05-C [IUT and Lower Tester include a SRMP header during the GET operation]

- Test Purpose

Verify that the Client can GET an object when both devices use SRMP.

- Reference

[3] 4.6.1

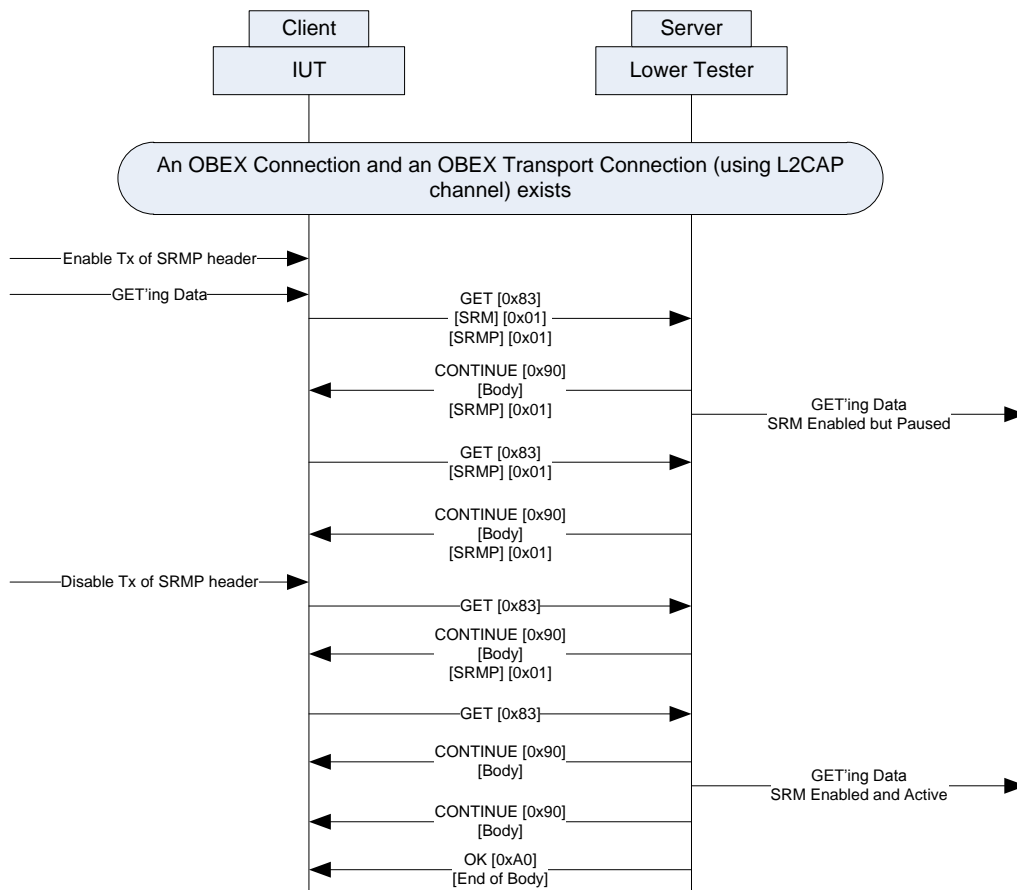
- Initial Condition

The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

The IUT supports sending a SRMP header, through its UI, when required.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a GET [0x83] request with a SRM [0x01] header and a SRMP [0x01] header.
- The IUT issues additional GET requests as long as the Lower Tester sends GET responses with a SRMP [0x01] header.
- The IUT transmits a GET request with an SRMP header after the IUT is commanded to enable transmission of SRMP headers.
- The GET operation completes successfully.

4.5.6 GOEP/SRMP/BV-06-C [IUT receives a GET response with SRM enabled and a SRMP wait header]

- Test Purpose

Verify that the Client keeps sending GET requests until the remote device stops sending SRMP wait headers in GET responses.

- Reference

[3] 4.6.1, 4.6.2

- Initial Condition

The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

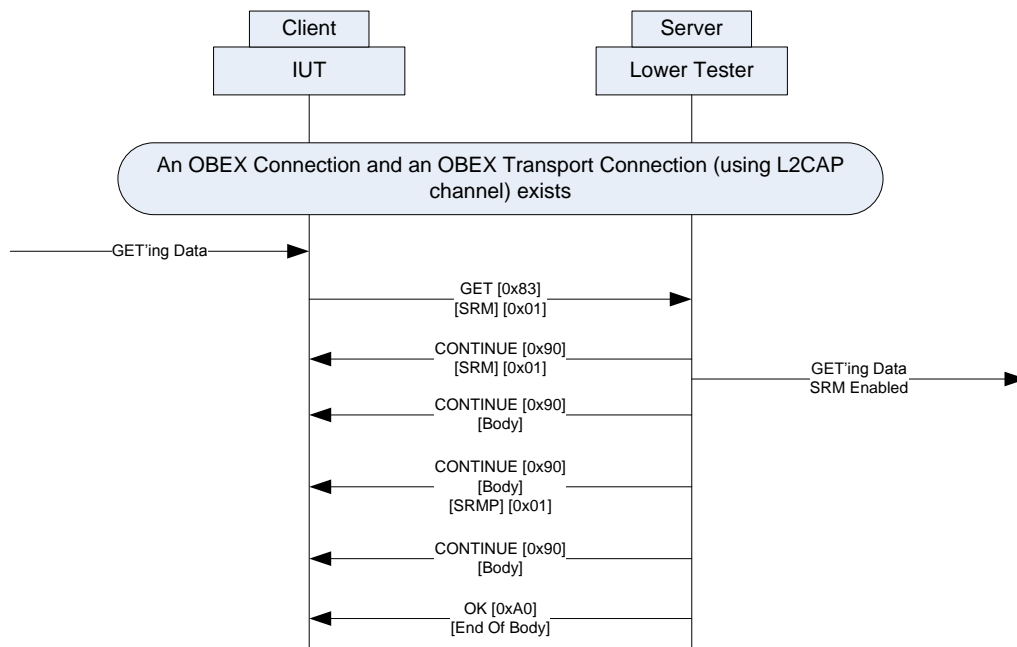


- Initial Condition

The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a GET [0x83] request with a SRM [0x01] header indicating SRM to be enabled for the GET operation.
- On receiving the CONTINUE response from Lower Tester with a SRM [0x01] header, the IUT proceeds with the GET operation with SRM enabled (assuming the object to be transferred is large enough to span multiple OBEX packets).
- On receiving a CONTINUE response from Lower Tester with an invalid SRMP [0x01] header, the IUT ignores the misplaced SRMP header and the GET operation completes successfully.

4.5.8 GOEP/SRMP/BI-02-C [IUT ignores an invalid SRMP header from the Client during a GET operation (SRM enabled)]

- Test Purpose

Verify that the IUT ignores an invalid SRMP header from the Lower Tester received while a GET operation (SRM enabled) is in progress and continues with the GET operation.

- Reference

[3] 4.6.1

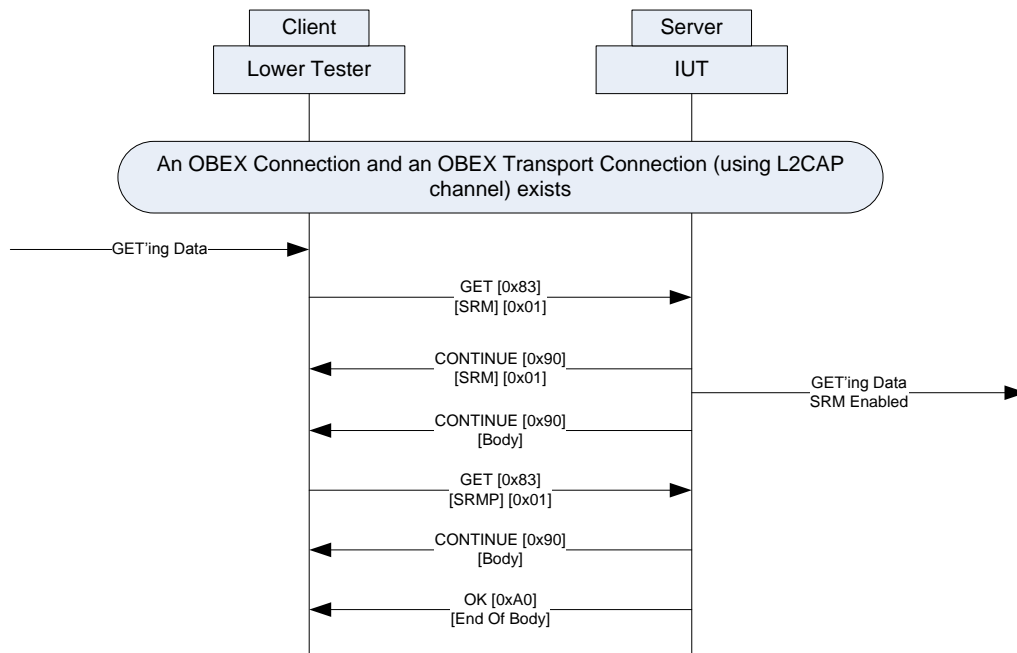
- Initial Condition



The IUT supports Single Response Mode (SRM) and Single Response Mode Parameters (SRMP).

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving the GET request from Lower Tester with SRM [0x01] header value, the IUT sends a CONTINUE [0x90] response with a SRM [0x01] header.
- The IUT proceeds with the GET operation with SRM enabled (assuming the object to be transferred is large enough to span multiple OBEX packets).
- On receiving a GET request from Lower Tester with an invalid SRMP [0x01] header, the IUT ignores the misplaced SRMP request and the GET operation completes successfully.

4.6 Reliable Session

4.6.1 GOEP/RLS/BV-01-C [IUT is able to create a Reliable OBEX Session]

- Test Purpose

Verify that the IUT is able to create a Reliable OBEX Session to the remote device.

- Reference

[3] 4.8

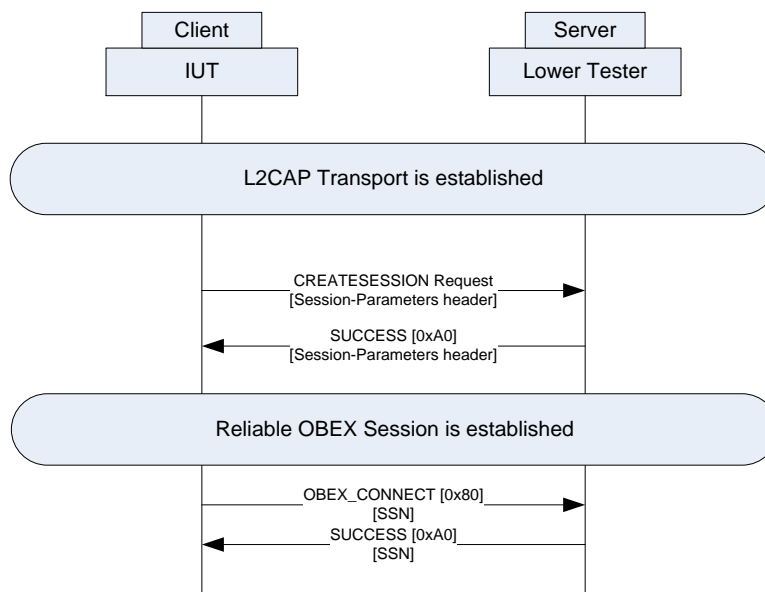
- Initial Condition

The IUT supports Reliable Sessions.

L2CAP transport connection has been established.



- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT issues a CREATESESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a SUCCESS [0xA0] for the CREATESESSION request, the IUT sends an OBEX_CONNECT [0x80] request with the SSN header, as the very first header, to be established within the Reliable Session.

4.6.2 GOEP/RLS/BV-02-C [IUT is able to accept a Reliable OBEX Create Session request]

- Test Purpose

Verify that the IUT is able to accept a Reliable OBEX Create Session request from the remote device.

- Reference

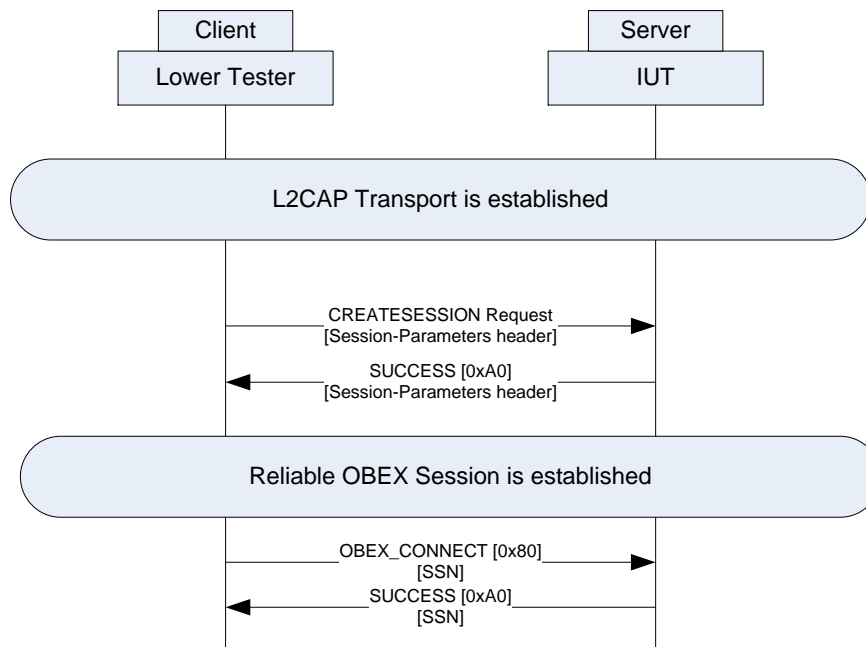
[3] 4.8, 5.9

- Initial Condition

The IUT supports Reliable Sessions.

L2CAP transport connection has been established.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a CREATESESSION request from Lower Tester, the IUT sends a SUCCESS [0xA0] response containing the Session Parameters header, as the very first header.
- On receiving an OBEX_CONNECT [0x80] request with the SSN header, as the very first header, from the Lower Tester, the IUT sends a SUCCESS [0xA0] response with the SSN header, as the very first header, and the OBEX Connection is established within the Reliable Session.

4.6.3 GOEP/RLS/BV-03-C [IUT rejects a Reliable OBEX Session request when an Active Session exists]

- Test Purpose

Verify that the IUT rejects a Reliable OBEX Session request when an Active Session already exists on the same transport.

- Reference

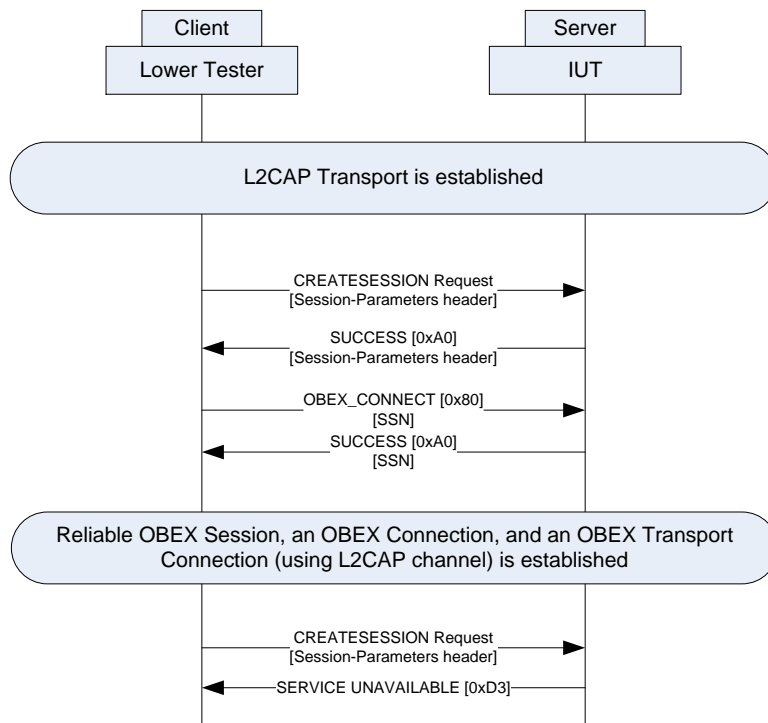
[3] 4.8, 5.9

- Initial Condition

The IUT supports Reliable Sessions.

L2CAP transport connection has been established.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a CREATESession request when an Active Session already exists, the IUT sends a SERVICE UNAVAILABLE [0xD3] response disallowing the second active Reliable Session to be created.

4.6.4 GOEP/RLS/BV-04-C [IUT is able to close a Reliable OBEX Session]

- Test Purpose

Verify that the IUT is able to close a Reliable OBEX Session to the remote device.

- Reference

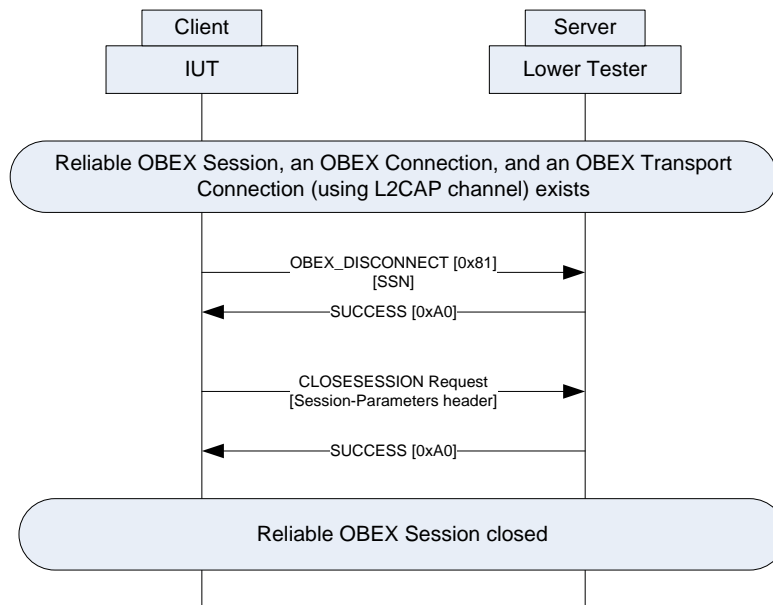
[3]4.8

- Initial Condition

The IUT supports Reliable Sessions.

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT issues an OBEX_DISCONNECT [0x81] request with the SSN header, as the very first header, to Lower Tester.
- On receiving a SUCCESS [0xA0] for the OBEX_DISCONNECT request, the IUT sends a CLOSESESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a SUCCESS [0xA0] for the CLOSESESSION request, the Reliable OBEX Session is closed.

4.6.5 GOEP/RLS/BV-05-C [IUT is able to Suspend/Resume a Reliable OBEX Session (no OBEX operation)]

- Test Purpose

Verify that the IUT is able to Suspend/Resume a Reliable OBEX Session without any ongoing OBEX operation.

- Reference

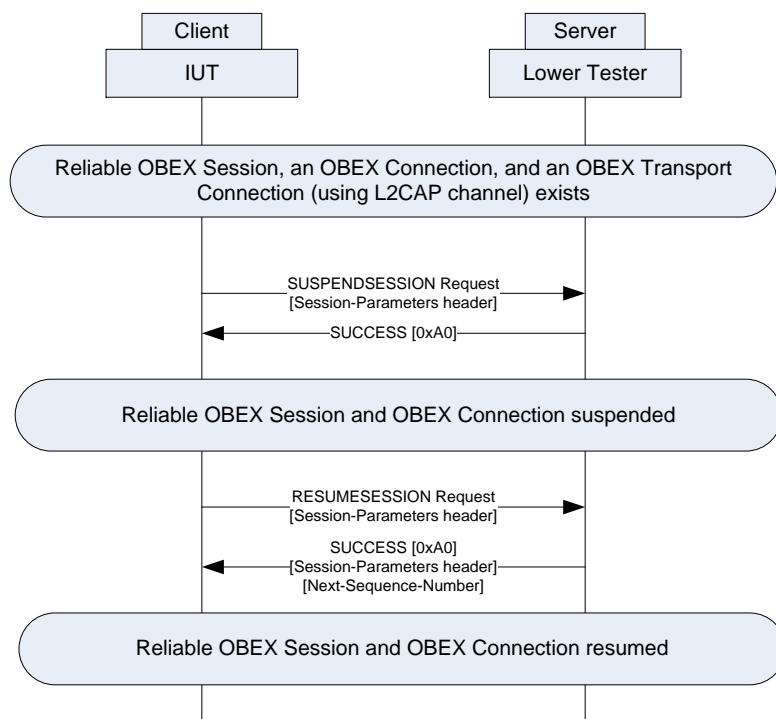
[3] 4.8, 5.9, 5.10

- Initial Condition

The IUT supports Reliable Sessions.

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT issues a *SUSPENDSESSION* request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a **SUCCESS [0xA0]** for the *SUSPENDSESSION* request, the Reliable OBEX Session and the OBEX Connection are suspended.
- The IUT issues a *RESUMESESSION* request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a **SUCCESS [0xA0]** for the *RESUMESESSION* request, the Reliable OBEX Session and the OBEX Connection are resumed.

4.6.6 GOEP/RLS/BV-06-C [IUT is able to accept Suspend/Resume of Reliable OBEX Session (no OBEX operation)]

- Test Purpose

Verify that the IUT is able to accept a Suspend/Resume of Reliable OBEX Session without any ongoing OBEX operation.

- Reference

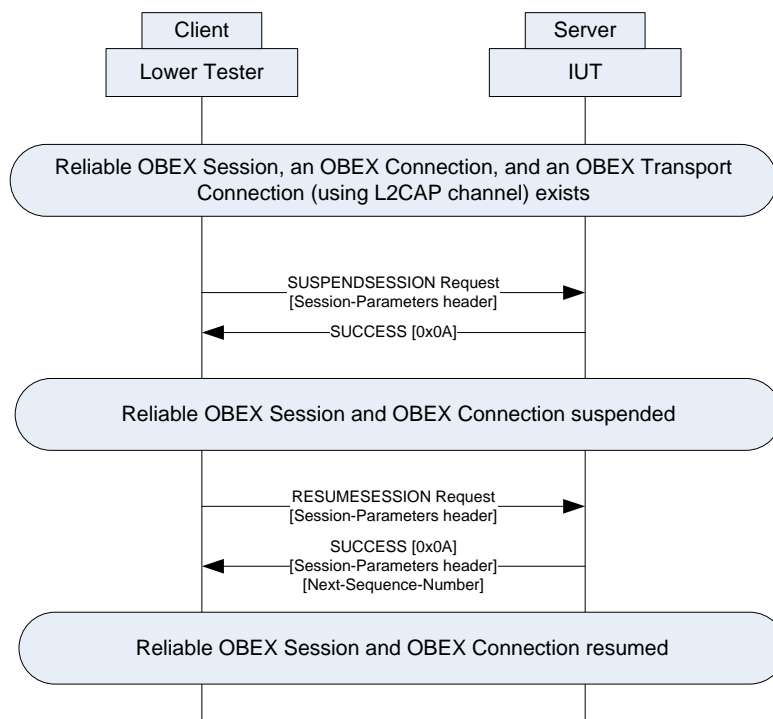
[3] 4.8, 5.9, 5.10

- Initial Condition

The IUT supports Reliable Sessions.

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a SUSPENDSESSION request containing the Session Parameters header, as the very first header, from the Lower Tester, the IUT sends a SUCCESS [0xA0] response and the Reliable OBEX Session and OBEX Connection is suspended.
- On receiving a RESUMESESSION request from the Lower Tester, the IUT sends a SUCCESS [0xA0] response containing the Session Parameters header, as the very first header, and the Reliable OBEX Session and OBEX Connection is correctly resumed.

4.6.7 GOEP/RLS/BV-08-C [IUT is able to accept a Reliable OBEX Close Session request]

- Test Purpose

Verify that the IUT is able to accept a Reliable OBEX Close Session request from the remote device.

- Reference

[3] 4.8, 5.11

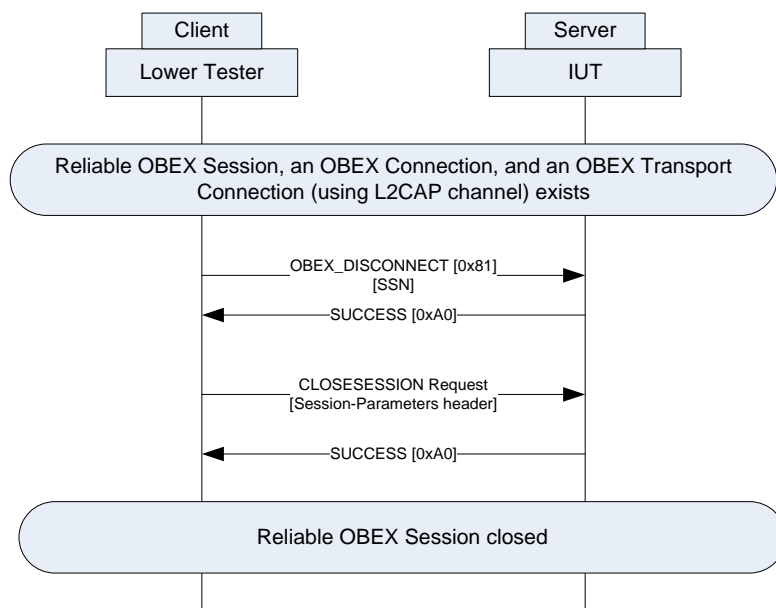
- Initial Condition

The IUT supports Reliable Sessions.

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure





- Expected Outcome

Pass Verdict:

- On receiving a CLOSESESSION request from Lower Tester, the IUT sends a SUCCESS [0xA0] response followed by a Session-Parameters header.
- On receiving an OBEX_DISCONNECT [0x81] request with the SSN header, as the very first header, from Lower Tester, the IUT sends a SUCCESS [0xA0] response.

4.6.8 GOEP/RLS/BV-09-C [IUT is able to Suspend/Resume a PUT operation when SRM is disabled]

- Test Purpose

Verify that the IUT is able to Suspend/Resume a PUT operation (SRM disabled) to the remote device.

- Reference

[3] 4.8, 5.9, 5.10

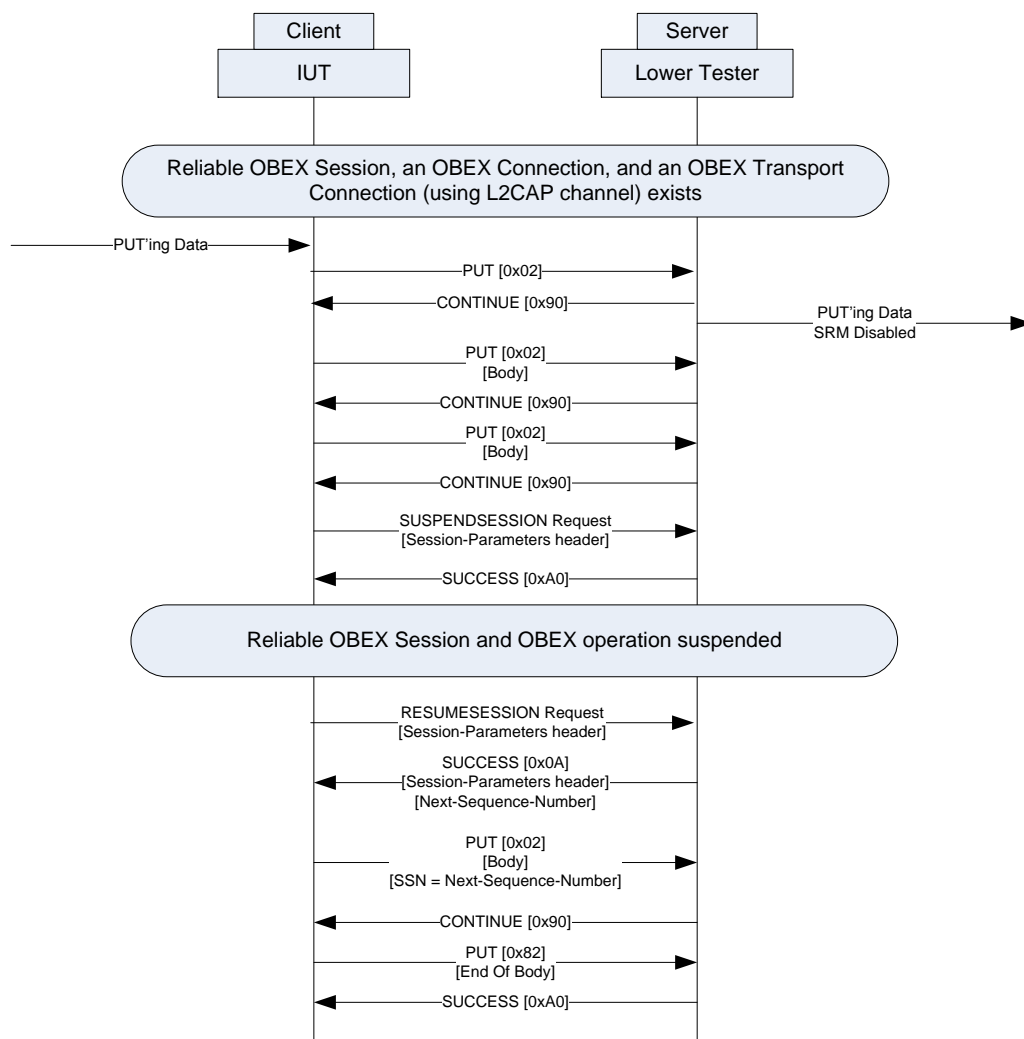
- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- When the PUT operation (with SRM disabled) is in progress, the IUT issues a SUSPENDSESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a SUCCESS [0xA0] for the SUSPENDSESSION request, the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.
- In order to resume the interrupted session, the IUT issues a RESUMESESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a SUCCESS [0xA0] for the RESUMESESSION request, the Reliable OBEX Session, OBEX Connection and the PUT operation (with SRM disabled) are correctly resumed i.e. the IUT uses the Next-Sequence-Number as the SSN in the immediately-following PUT request.

4.6.9 GOEP/RLS/BV-10-C [IUT is able to Suspend/Resume a GET operation when SRM is disabled]

- Test Purpose



Verify that the IUT is able to Suspend/Resume a GET operation (SRM disabled) to the remote device.

- Reference

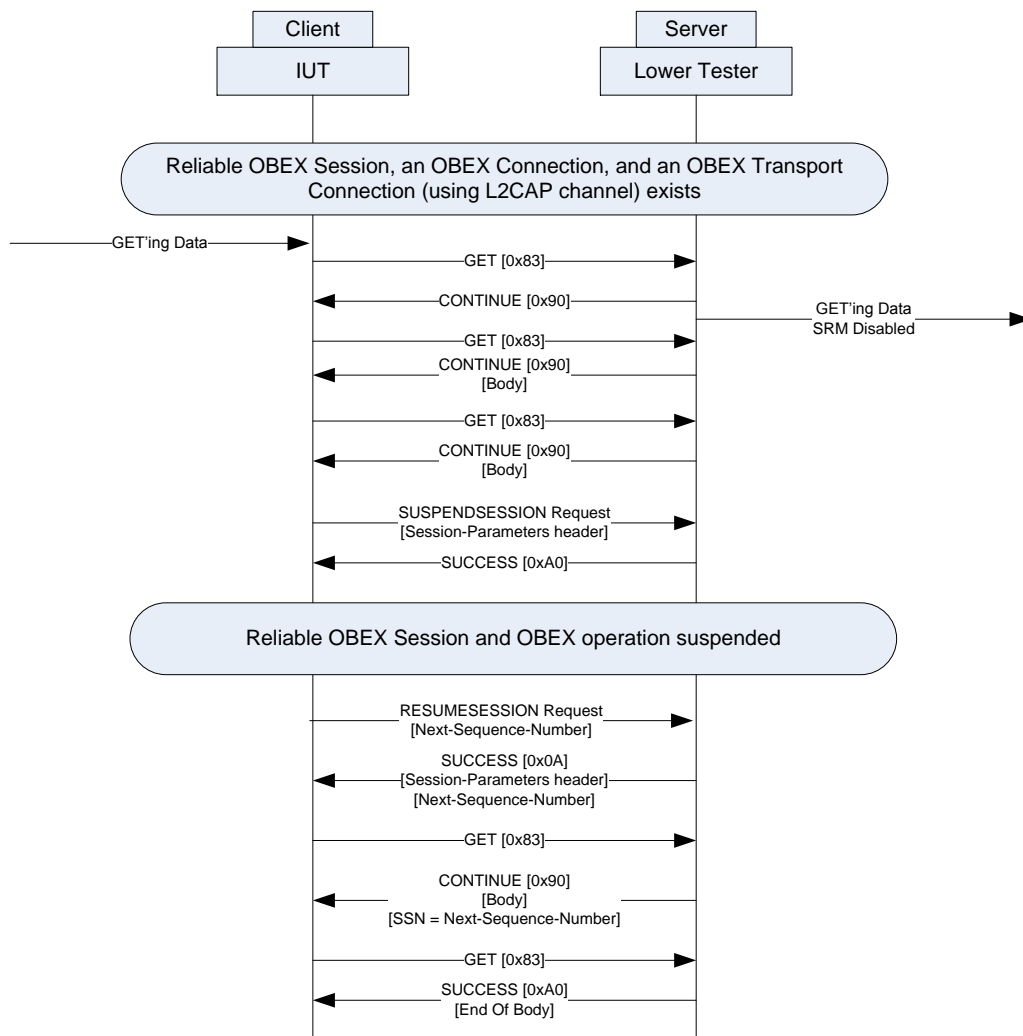
[3] 4.8, 5.9, 5.10

- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- When the GET operation (with SRM disabled) is in progress, the IUT issues a SUSPENSESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.

- On receiving a SUCCESS [0xA0] for the SUSPENDSESSION request, the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.
- In order to resume the interrupted session, the IUT issues a RESUMESESSION request containing the Next-Sequence-Number to the Lower Tester.
- The Reliable OBEX Session, OBEX Connection and the GET operation (with SRM disabled) are correctly resumed.

4.6.10 GOEP/RLS/BV-11-C [IUT is able to accept a Suspend/Resume of PUT operation with SRM disabled]

- Test Purpose

Verify that the IUT is able to accept a Suspend/Resume of PUT operation (SRM disabled) from the remote device.

- Reference

[3] 4.8, 5.9, 5.10

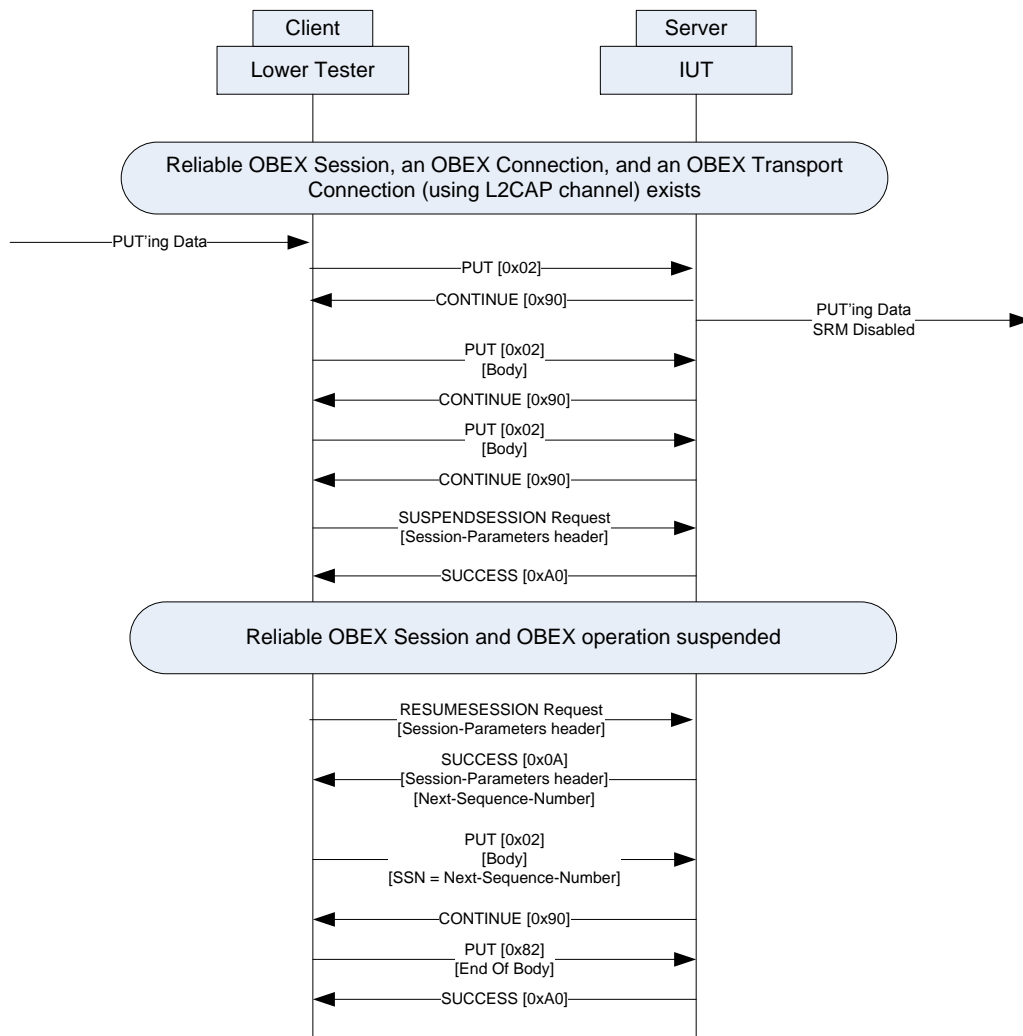
- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a SUSPENDSESSION request containing the Session Parameters header, as the very first header, from the Lower Tester, the IUT sends a SUCCESS [0xA0] response and the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.
- On receiving a RESUMESESSION request from the Lower Tester, the IUT sends a SUCCESS [0xA0] response containing the Session Parameters header, as the very first header, (that includes the Next-Sequence-Number) and the Reliable OBEX Session, OBEX Connection and the OBEX operation are resumed.
- The PUT operation completes successfully.

4.6.11 GOEP/RLS/BV-12-C [IUT is able to accept a Suspend/Resume of GET operation with SRM disabled]

- Test Purpose

Verify that the IUT is able to accept a Suspend/Resume of GET operation (SRM disabled) from the remote device.

- Reference

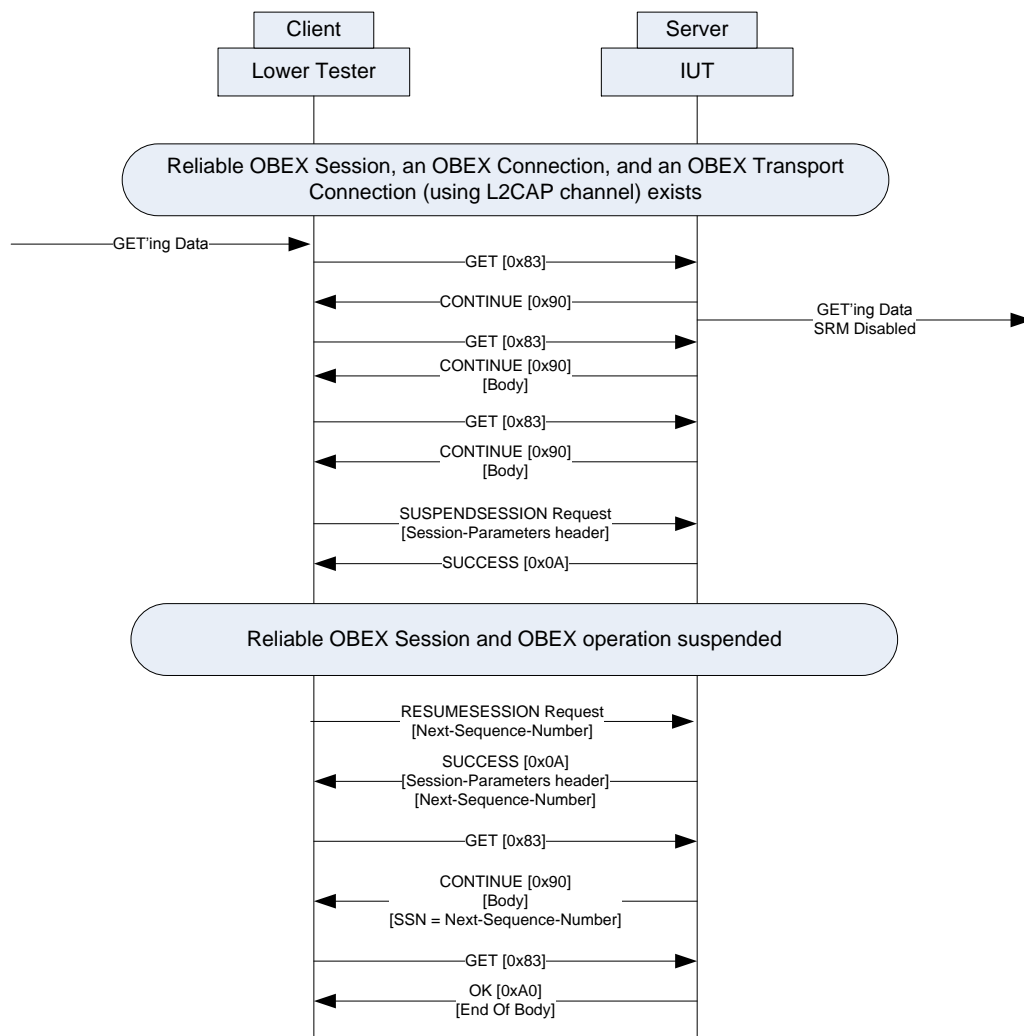
[3] 4.8, 5.9, 5.10

- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a SUSPENDSESSION request containing the Session Parameters header, as the very first header, from the Lower Tester, the IUT sends a SUCCESS [0x0A] response and the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.

- On receiving a RESUMESESSION request from the Lower Tester, the IUT sends a SUCCESS [0xA0] response containing the Session Parameters header, as the very first header, (that includes the Next-Sequence-Number that was received in the RESUMESESSION request) and the Reliable OBEX Session, OBEX Connection and the OBEX operation are resumed.
- The GET operation of the large object completes successfully.

4.7 Reliable Session with Single Response Mode

4.7.1 GOEP/SRS/BV-01-C [IUT is able to Suspend/Resume a PUT operation when SRM is enabled]

- Test Purpose

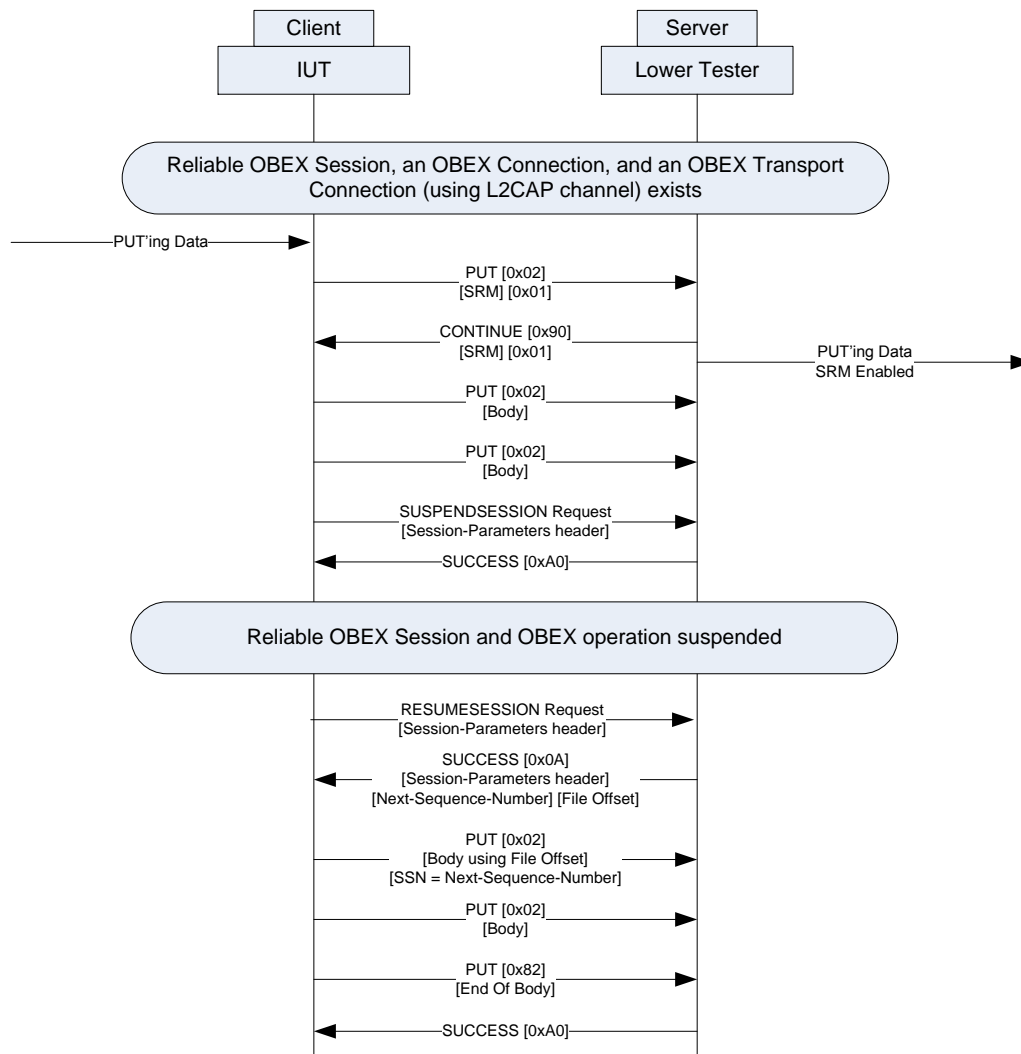
Verify that the IUT is able to Suspend/Resume a PUT operation (SRM enabled) to the remote device.
- Reference

[3] 4.6, 4.8, 5.9, 5.10
- Initial Condition

The IUT supports Reliable Sessions.

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.
- Test Procedure



- Expected Outcome

Pass Verdict:

- When the PUT operation of a large object (with SRM enabled) is in progress, the IUT issues a SUSPENDSESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a SUCCESS [0xA0] for the SUSPENDSESSION request, the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.
- In order to resume the interrupted session, the IUT issues a RESUMESESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.
- On receiving a SUCCESS [0xA0] for the RESUMESESSION request, the Reliable OBEX Session, OBEX Connection and the PUT operation (with SRM enabled) are correctly resumed i.e. the IUT uses the Next-Sequence-Number as the SSN in the immediately-following PUT request and the File Offset is used to trigger the next body headers' data.

4.7.2 GOEP/SRS/BV-02-C [IUT is able to Suspend/Resume a GET operation when SRM is enabled]

- Test Purpose



Verify that the IUT is able to Suspend/Resume a GET operation (SRM enabled) to the remote device.

- Reference

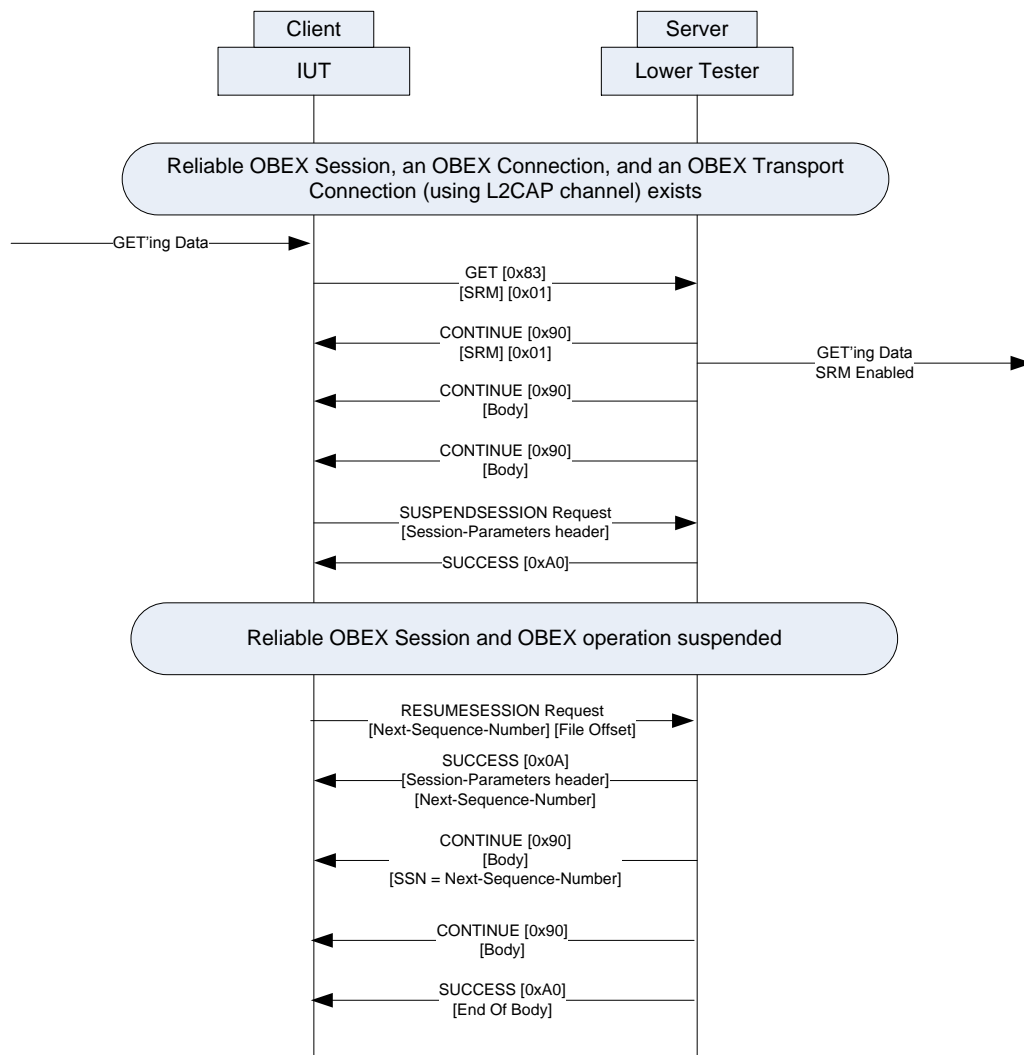
[3] 4.6, 4.8, 5.9, 5.10

- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- When the GET operation (with SRM enabled) is in progress, the IUT issues a SUSPENSESSION request containing the Session Parameters header, as the very first header, to the Lower Tester.

- On receiving a SUCCESS [0xA0] for the SUSPENDSESSION request, the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.
- In order to resume the interrupted session, the IUT issues a RESUMESESSION request containing the Next-Sequence-Number and File Offset to the Lower Tester.
- The Reliable OBEX Session, OBEX Connection and the GET operation (with SRM enabled) are correctly resumed.

4.7.3 GOEP/SRS/BV-03-C [IUT is able to accept a Suspend/Resume of PUT operation with SRM enabled]

- Test Purpose

Verify that the IUT is able to accept a Suspend/Resume of PUT operation (SRM enabled) from the remote device.

- Reference

[3] 4.6, 4.8, 5.9, 5.10

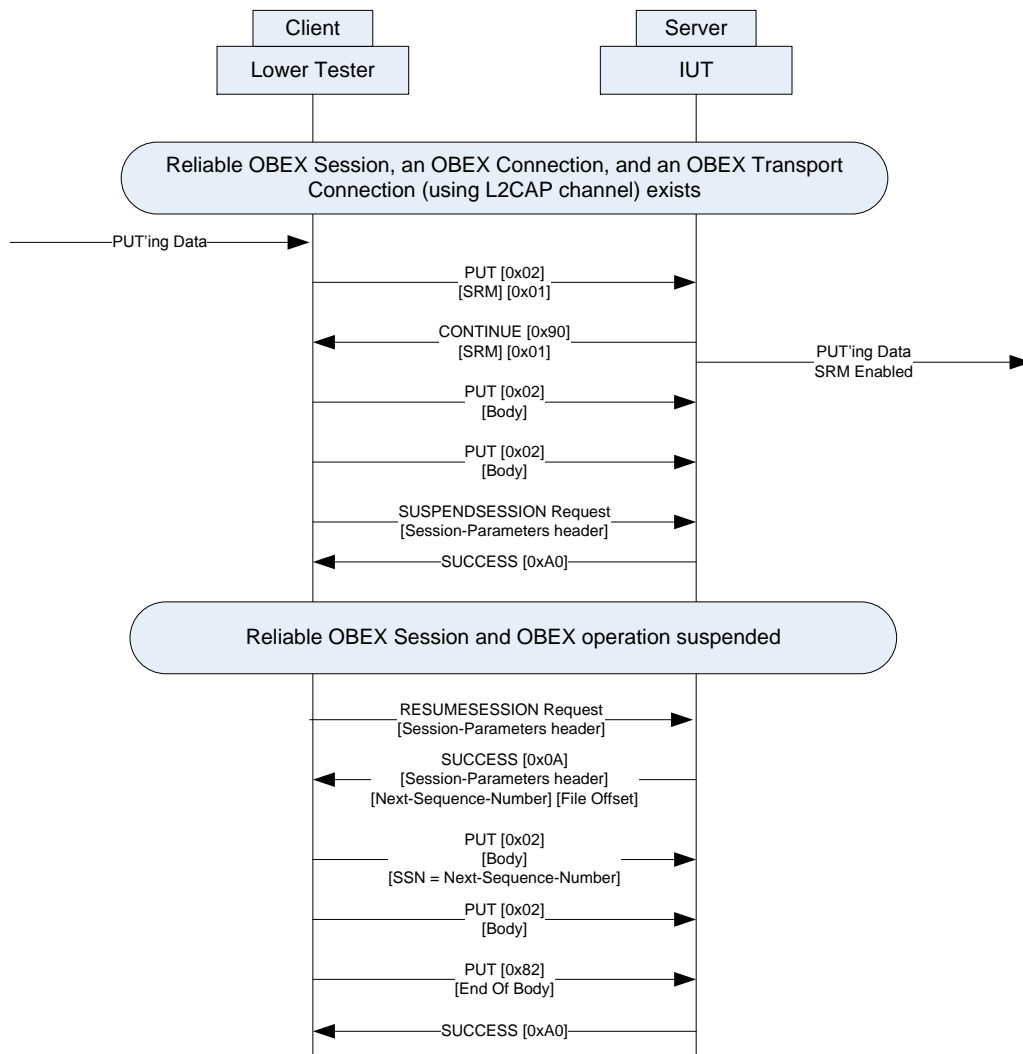
- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

The PUT object is large enough to span multiple OBEX packets.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a SUSPENDSESSION request containing the Session Parameters header, as the very first header, from the Lower Tester, the IUT sends a SUCCESS [0xA0] response and the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.
- On receiving a RESUMESESSION request from the Lower Tester, the IUT sends a SUCCESS [0xA0] response containing the Session Parameters header, as the very first header, (that includes the Next-Sequence-Number and File Offset) and the Reliable OBEX Session, OBEX Connection and the OBEX operation are resumed.
- The PUT operation completes successfully.

4.7.4 GOEP/SRS/BV-04-C [IUT is able to accept a Suspend/Resume of GET operation with SRM enabled]

- Test Purpose

Verify that the IUT is able to accept a Suspend/Resume of GET operation (SRM enabled) from the remote device.

- Reference

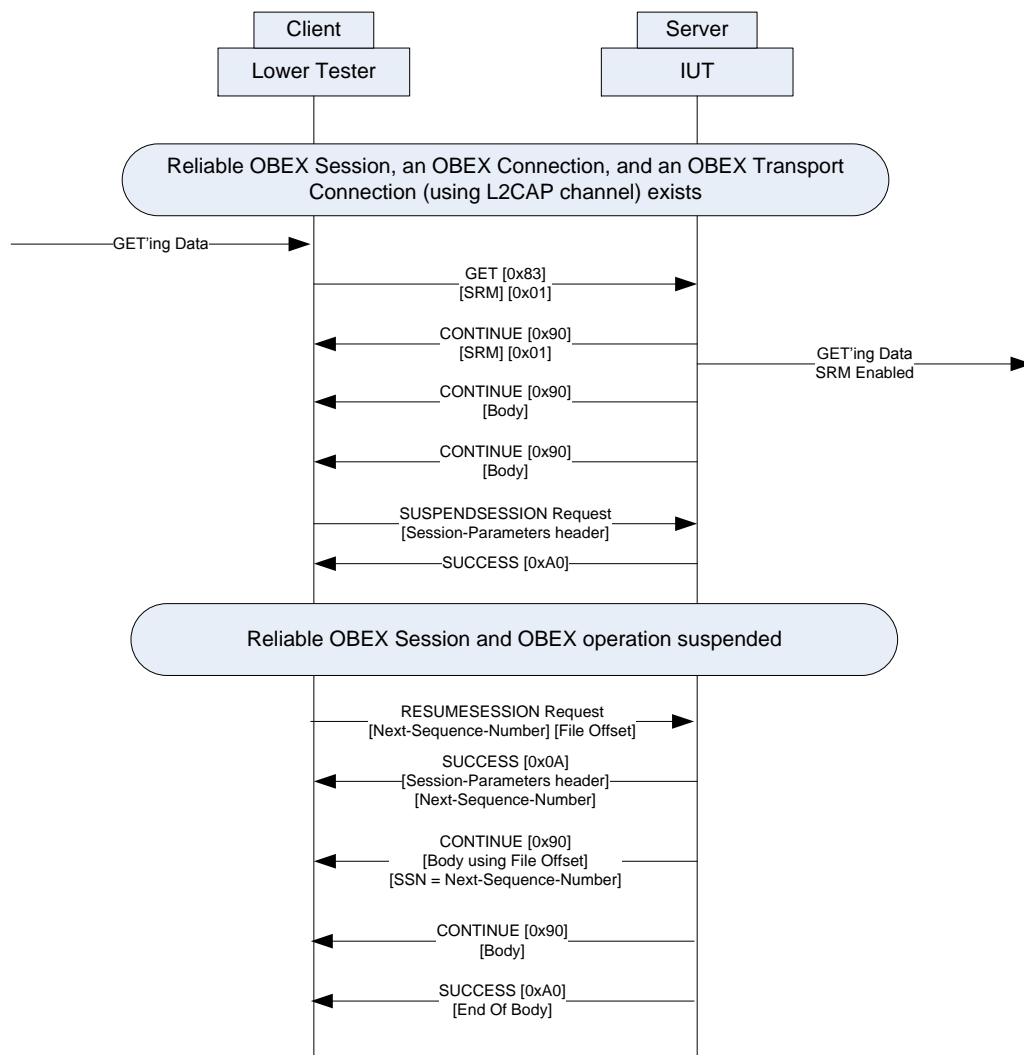
[3] 4.6, 4.8, 5.9, 5.10

- Initial Condition

The IUT supports Reliable Sessions and Single Response Mode (SRM).

Reliable OBEX Session, an OBEX Connection, and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a SUSPENSESSION request containing the Session Parameters header, as the very first header, from the Lower Tester, the IUT sends a SUCCESS [0xA0] response and the Reliable OBEX Session, OBEX Connection and the OBEX operation are suspended.

- On receiving a RESUMESESSION request from the Lower Tester, the IUT sends a SUCCESS [0xA0] response containing the Session Parameters header, as the very first header, (that includes the Next-Sequence-Number that was received in the RESUMESESSION request and the File Offset is used to trigger the next body headers' data) and the Reliable OBEX Session, OBEX Connection and the OBEX operation are resumed.
- The GET operation of the large object completes successfully.

4.8 Action Operation

4.8.1 GOEP/ACT/BV-01-C [IUT is able to issue a COPY command]

- Test Purpose

Verify that the IUT is able to issue a COPY command to the Lower Tester.

- Reference

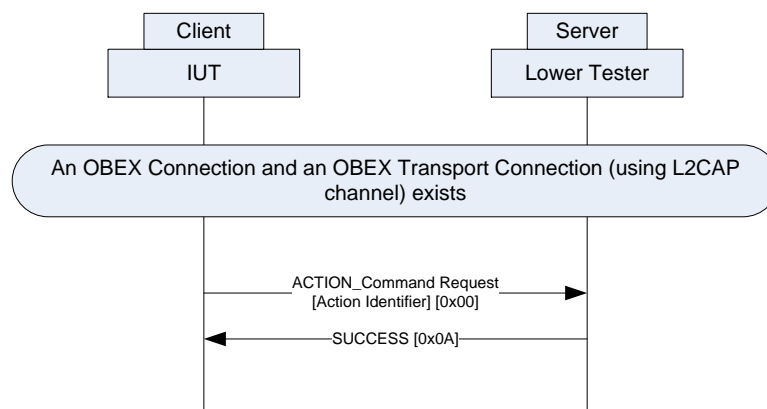
[3] 4.5, 5.7

- Initial Condition

The IUT supports Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a COPY command including an Action Identifier [0x00], as the very first header to the Lower Tester.
- The COPY command gets performed successfully.

4.8.2 GOEP/ACT/BV-02-C [IUT is able to process a COPY command]

- Test Purpose

Verify that the IUT is able to process a COPY command from the Lower Tester.

- Reference



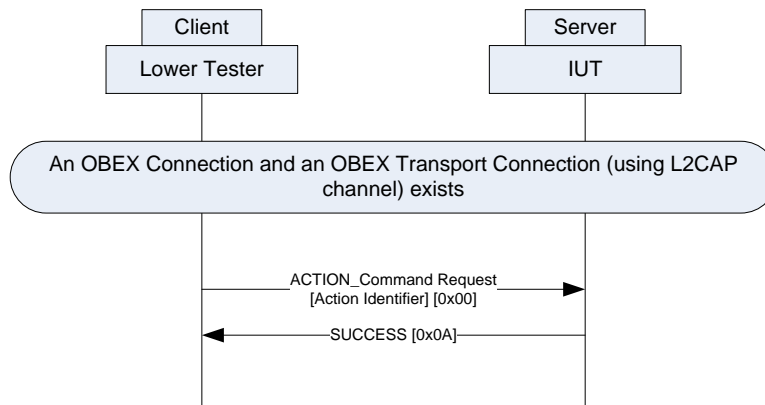
[3] 4.5, 5.7

- Initial Condition

The IUT supports Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a COPY command including an Action Identifier [0x00], as the very first header from the Lower Tester, the IUT creates a copy of the requested file and sends a SUCCESS [0xA0] response.

4.8.3 GOEP/ACT/BV-03-C [IUT is able to issue a MOVE/RENAME command]

- Test Purpose

Verify that the IUT is able to issue a MOVE/RENAME command to the Lower Tester.

- Reference

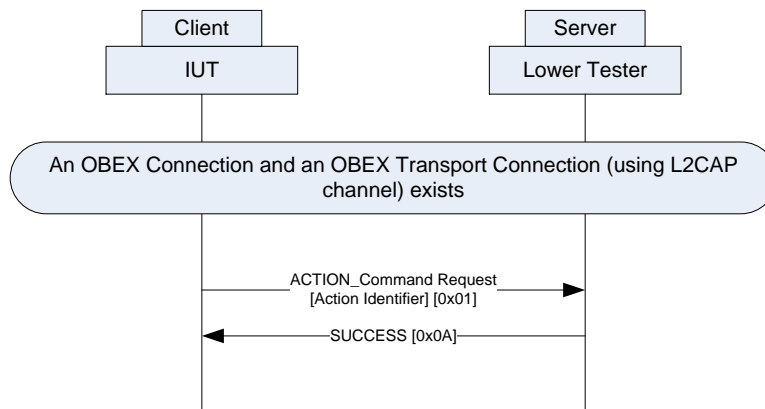
[3] 4.5, 5.7

- Initial Condition

The IUT supports Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a MOVE/RENAME command including an Action Identifier [0x01], as the very first header to the Lower Tester.
- The MOVE/RENAME command gets performed successfully.

4.8.4 GOEP/ACT/BV-04-C [IUT is able to process a MOVE/RENAME command]

- Test Purpose

Verify that the IUT is able to process a MOVE/RENAME command from the Lower Tester.

- Reference

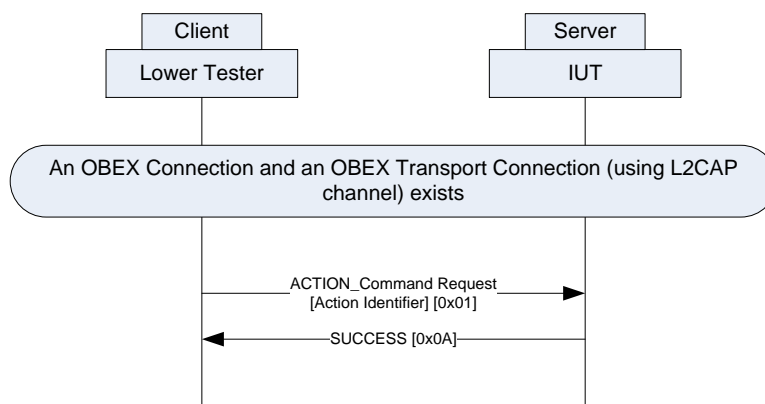
[3]4.5, 5.7

- Initial Condition

The IUT supports Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:



- On receiving a MOVE/RENAME command including an Action Identifier [0x01], as the very first header from the Lower Tester, the IUT moves/renames the requested file and sends a SUCCESS [0xA0] response.

4.8.5 GOEP/ACT/BV-05-C [IUT is able to issue a SET PERMISSIONS command]

- Test Purpose

Verify that the IUT is able to issue a SET PERMISSIONS command to the Lower Tester.

- Reference

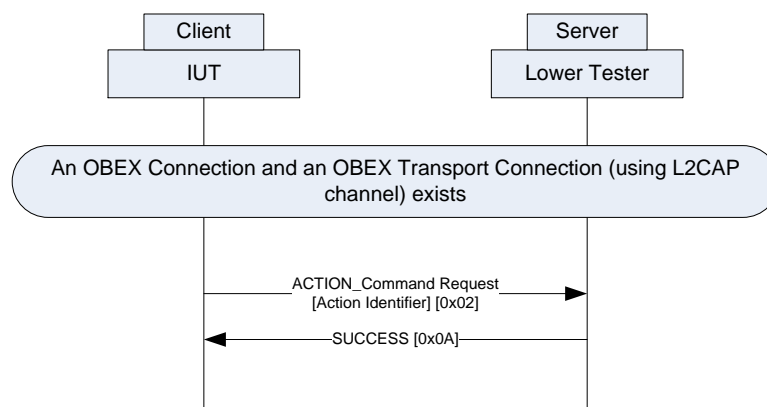
[3] 4.5, 5.7

- Initial Condition

The IUT supports Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- The IUT sends a SET PERMISSIONS command including an Action Identifier [0x02], as the very first header to the Lower Tester.
- The SET PERMISSIONS command gets performed successfully.

4.8.6 GOEP/ACT/BV-06-C [IUT is able to process a SET PERMISSIONS command]

- Test Purpose

Verify that the IUT is able to process a SET PERMISSIONS command from the Lower Tester.

- Reference

[3] 4.5, 5.7

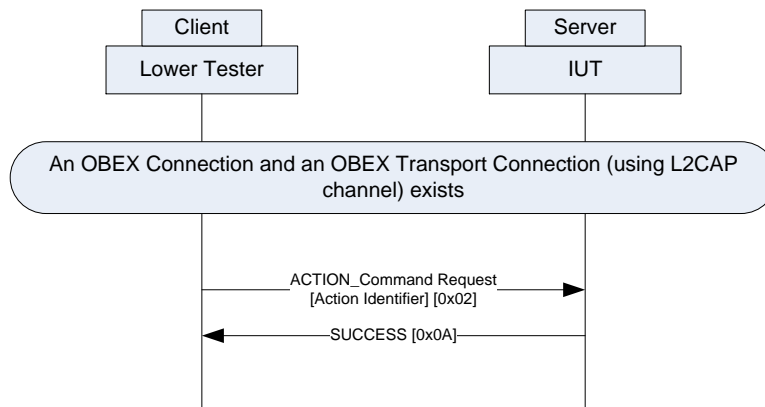
- Initial Condition



The IUT supports Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a SET PERMISSIONS command including an Action Identifier [0x02], as the very first header from the Lower Tester, the IUT sets the file permissions on requested object and sends a SUCCESS [0xA0] response.

4.9 Robustness

4.9.1 GOEP/ROB/BV-01-C [IUT (Action commands not supported) is able to reject an incoming ACTION command]

- Test Purpose

Verify that an IUT, that does not support Action Commands, is able to reject an incoming ACTION command.

- Reference

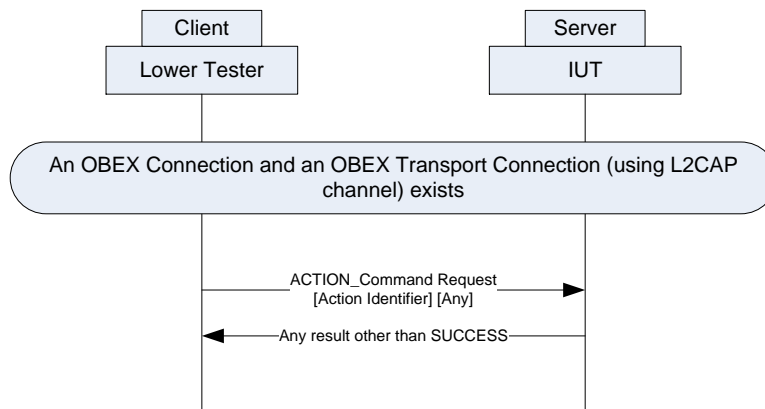
[3] 4.5, 5.7

- Initial Condition

The IUT does not support Action commands.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving an ACTION command from the Lower Tester, the IUT responds with any result other than a SUCCESS, to indicate that it does not support Action commands.

4.9.2 GOEP/ROB/BV-02-C [IUT (Reliable Sessions not supported) is able to reject the request to create a Reliable Session]

- Test Purpose

Verify that an IUT, that does not support Reliable Sessions, is able to reject an incoming request to create a Reliable Session.

- Reference

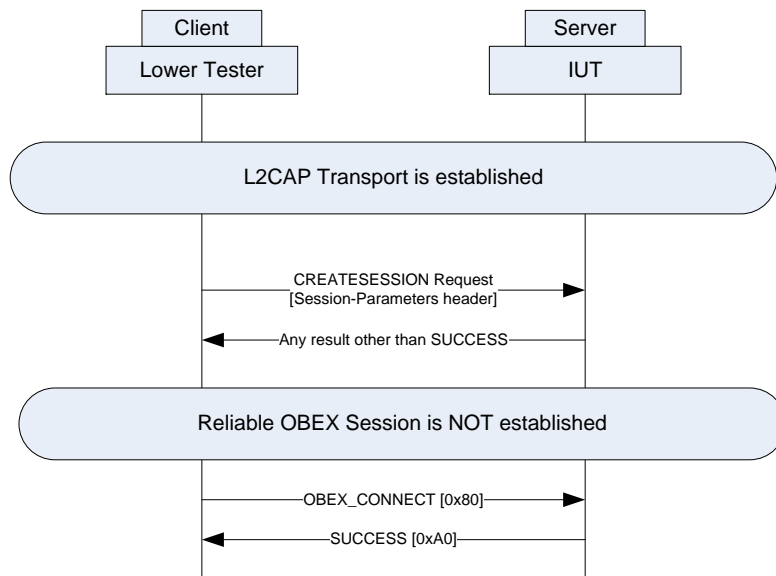
[3] 4.8, 5.9

- Initial Condition

The IUT does not support Reliable Sessions.

An OBEX Connection and an OBEX Transport Connection (using L2CAP channel) exists.

- Test Procedure



- Expected Outcome

Pass Verdict:

- On receiving a CREATESESSION request from the Lower Tester, the IUT responds with any result other than SUCCESS, to indicate that it does not support Reliable Sessions.
- On receiving an OBEX_CONNECT [0x80] request, the IUT sends a SUCCESS [0xA0] response and the OBEX Connection is established without the Reliable Session.

5 Test Case Mapping

The test case mappings are defined in the application profile test suites. Those map to test cases defined in this test suite.