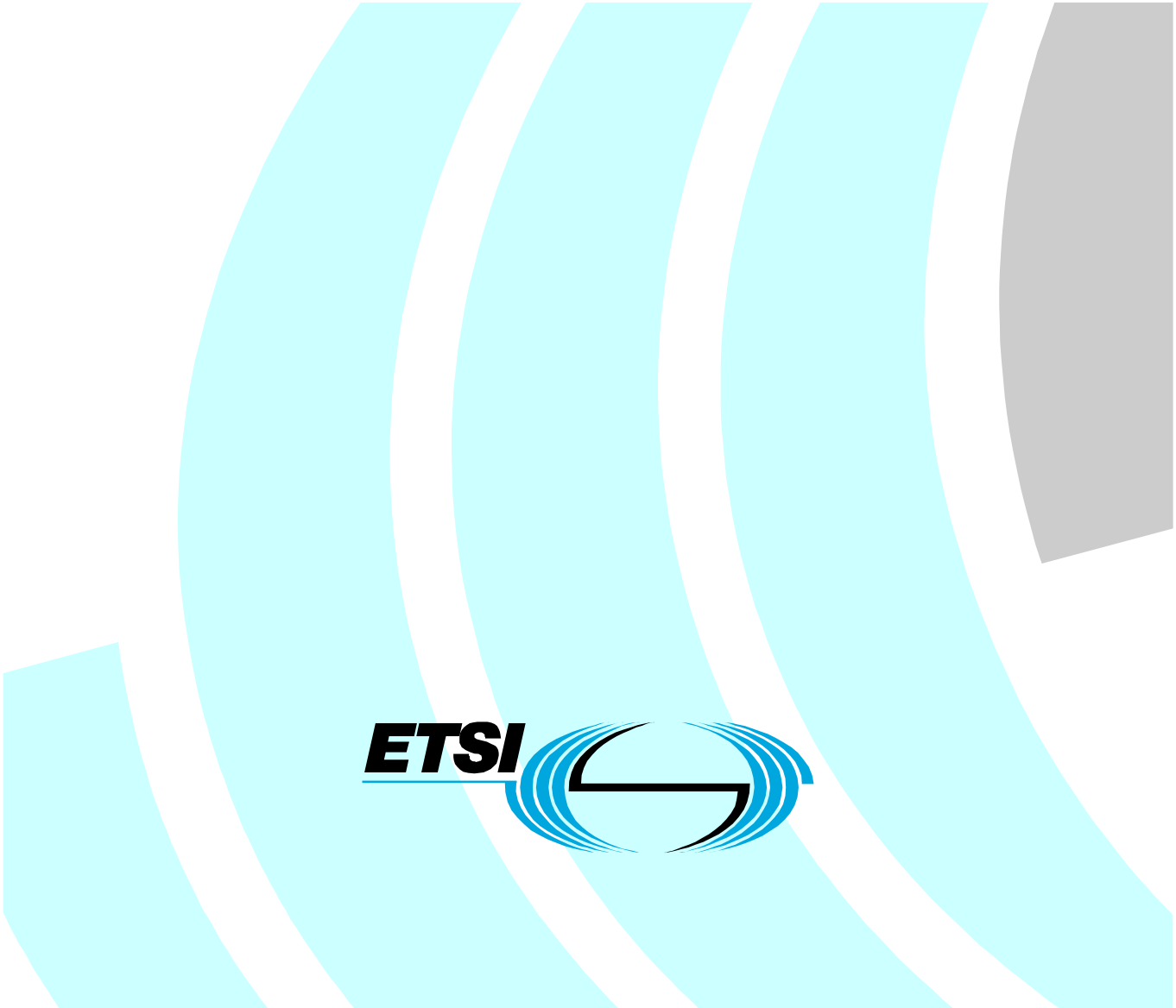
ETSI ES 202 388-8 V1.1.1 (2005-03)

ETSI Standard

Open Service Access (OSA);
Application Programming Interface (API);
Test Suite Structure and Test Purposes (TSS&TP);
Part 8: Data Session Control SCF
(Parlay 4)



Reference
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Keywords
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Contents

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 8 of a multi-part deliverable. Full details of the entire series can be found in part 1 [6].

To evaluate conformance of a particular implementation, it is necessary to have a set of test purposes to evaluate the dynamic behaviour of the Implementation Under Test (IUT). The specification containing those test purposes is called a Test Suite Structure and Test Purposes (TSS&TP) specification.

1 Scope

The present document provides the Test Suite Structure and Test Purposes (TSS&TP) specification for the Data Session Control SCF of the Application Programming Interface (API) for Open Service Access (OSA) defined in ES 202 915-8 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-2 [4] and ETS 300 406 [5].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] ETSI ES 202 915-8: "Open Service Access (OSA); Application Programming Interface (API); Part 8: Data Session Control SCF (Parlay 4)".

[2] ETSI ES 202 363: "Open Service Access (OSA); Application Programming Interface (API); Implementation Conformance Statement (ICS) proforma specification; (Parlay 4)".

[3] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[4] ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".

[5] ETSI ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[6] ETSI ES 202 388-1: "Open Service Access (OSA); Application Programming Interface (API); Test Suite Structure and Test Purposes (TSS&TP); Part 1: Overview (Parlay 4)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 915-8 [1], ISO/IEC 9646-1 [3], ISO/IEC 9646-2 [4] and the following apply:

abstract test case: Refer to ISO/IEC 9646-1 [3].

Abstract Test Method (ATM): Refer to ISO/IEC 9646-1 [3].

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [3].

Implementation Under Test (IUT): Refer to ISO/IEC 9646-1 [3].

Lower Tester (LT): Refer to ISO/IEC 9646-1 [3].

Implementation Conformance Statement (ICS): Refer to ISO/IEC 9646-1 [3].

ICS proforma: Refer to ISO/IEC 9646-1 [3].

Implementation eXtra Information for Testing (IXIT): Refer to ISO/IEC 9646-1 [3].

IXIT proforma: Refer to ISO/IEC 9646-1 [3].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [3].

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

API	Application Programming Interface
ATM	Abstract Test Method
ATS	Abstract Test Suite
CM	Control Manager
DS	Data Session
DSC	Data Session Control
ICS	Implementation Conformance Statement
IUT	Implementation Under Test
IXIT	Implementation eXtra Information for Testing
LT	Lower Tester
OSA	Open Service Access
SCF	Service Capability Feature
TP	Test Purpose
TSS	Test Suite Structure

4 Test Suite Structure (TSS)

Data Session Control SCF

- IpDataSessionControlManager (CM)
- IpDataSession (DS)

5 Test Purposes (TP)

5.1 Introduction

For each test requirement a TP is defined.

5.1.1 TP naming convention

TPs are numbered, starting at 01, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: <suite_id>_<group>_<nnn>		
<suite_id>	= SCF name:	"DSC" for **D**ata **S**ession **C**ontrol SCF
<group>	= group number:	two character field representing the group reference according to TSS
<nn>	= sequential number:	(01 to 99)

5.1.2 Source of TP definition

The TPs are based on ES 202 915-8 [1].

5.1.3 Test strategy

As the base standard ES 202 915-8 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the ICS specification ES 202 363 [2].

The TPs are only based on conformance requirements related to the externally observable behaviour of the IUT and are limited to conceivable situations to which a real implementation is likely to be faced (see ETS 300 406 [5]).

5.2 TPs for the Data Session Control SCF

All ICS items referred to in this clause are as specified in ES 202 363 [2] unless indicated otherwise by another numbered reference.

All parameters specified in method calls are valid unless specified.

The procedures to trigger the SCF to call methods in the application are dependant on the underlying network architecture and are out of the scope of this test specification. Those method calls are preceded by the words "Triggered action".

5.2.1 Data Session Control, SCF side

5.2.1.1 IpDataSessionControlManager

Test DSC_CM_01

Summary: **IpDataSessionControlManager**, mandatory methods, successful.

Reference: ES 202 915-8 [1], clause 8.4.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Check: valid value of TpAssignmentID is returned

2. Triggered Action: cause IUT to call **reportNotification()** method on the tester's (application's) IpAppDataSessionControlManager interface.
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **destroyNotification()**
   Parameters: assignmentID
   Check: no exception is returned

Test DSC_CM_02

Summary: **IpDataSessionControlManager**, all methods, successful.

Reference: ES 202 915-8 [1], clause 8.4.

Precondition: **changeNotification()** and **getNotifications()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Check: valid value of TpAssignmentID is returned

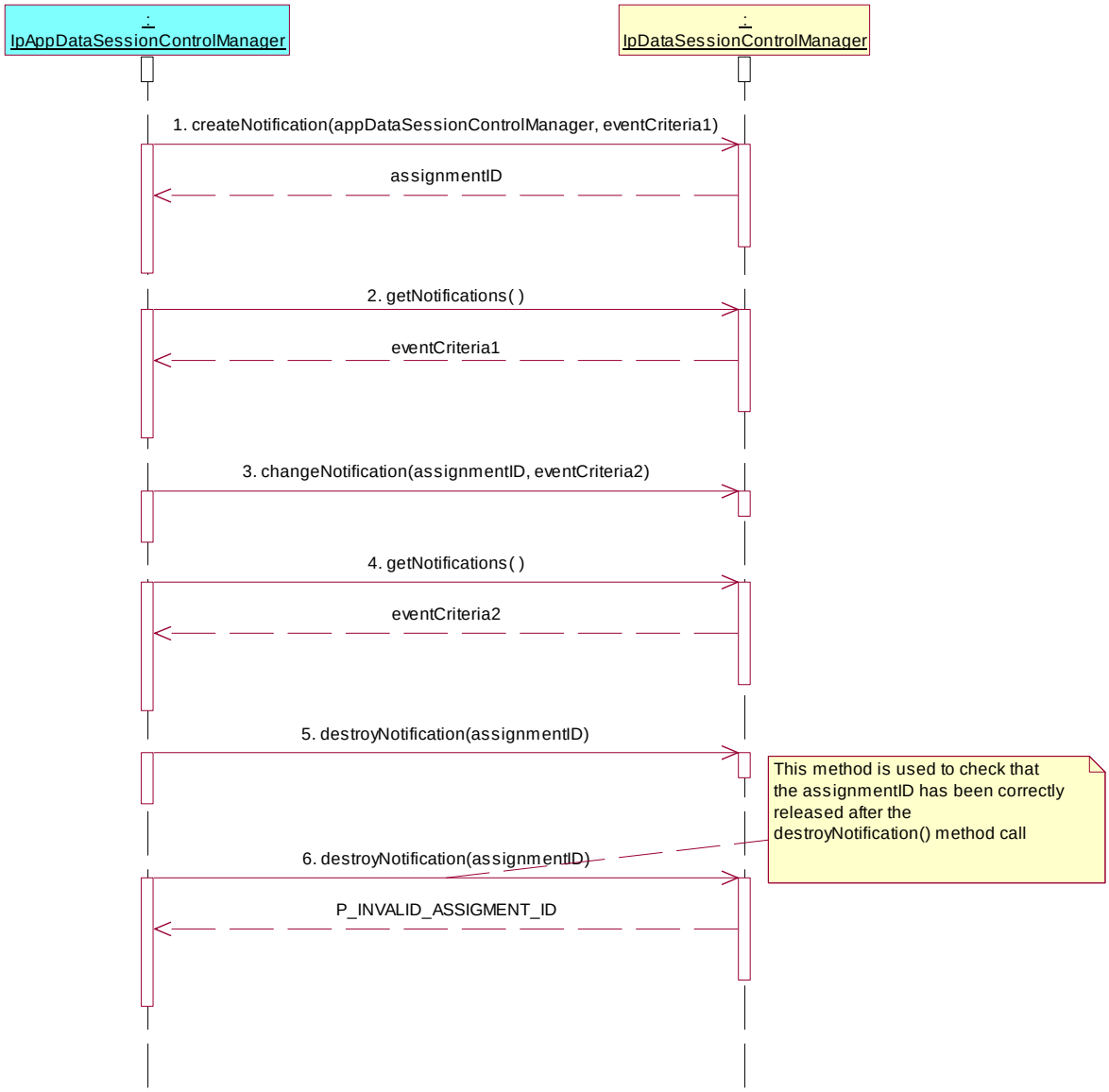
2. Method call **getNotifications()**
   Parameters: none
   Check: value of TpDataSessionEventCriteriaResultSet containing event criteria as specified in 1. is returned

3. Method call **changeNotification()**
   Parameters: assignmentID, eventCriteria (different to 1.)
   Check: no exception is returned

4. Method call **getNotifications()**
   Parameters: none
   Check: value of TpDataSessionEventCriteriaResultSet containing event criteria as specified in 3. is returned

5. Method call **destroyNotification()**
   Parameters: assignmentID
   Check: no exception is returned

6. Method call **destroyNotification()**
   Parameters: assignmentID as received in1. and destroyed in 5.
   Check: P_INVALID_ASSIGNMENT_ID is returned



Test DSC_CM_03

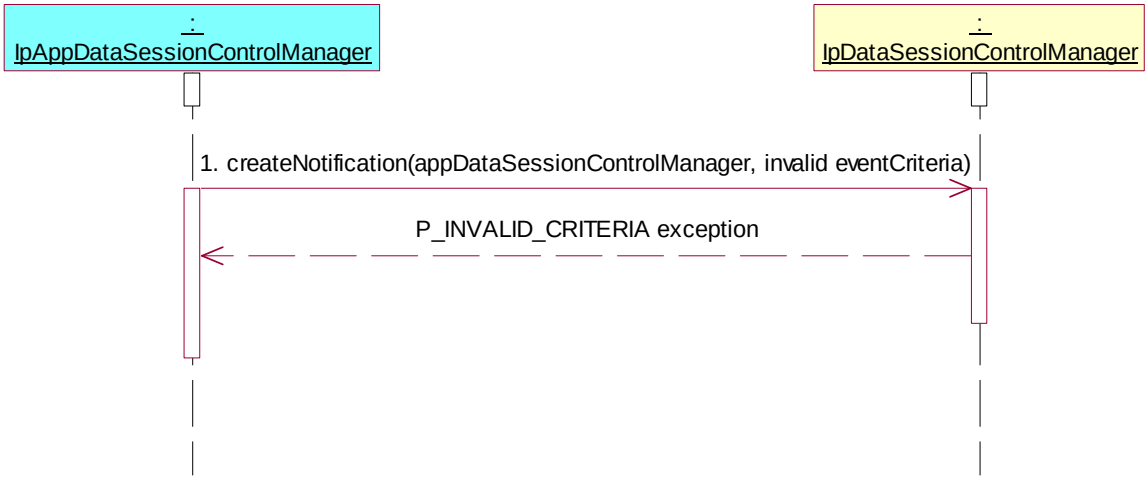
Summary: **IpDataSessionControlManager**, createNotification(), P_INVALID_CRITERIA exception.

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotification()**
   Parameters: appDataSessionControlManager (non-NULL), invalid eventCriteria
   Check: P_INVALID_CRITERIA is returned



Test DSC_CM_04

Summary: **IpDataSessionControlManager**, destroyNotification(), P_INVALID_ASSIGMENT_ID exception.

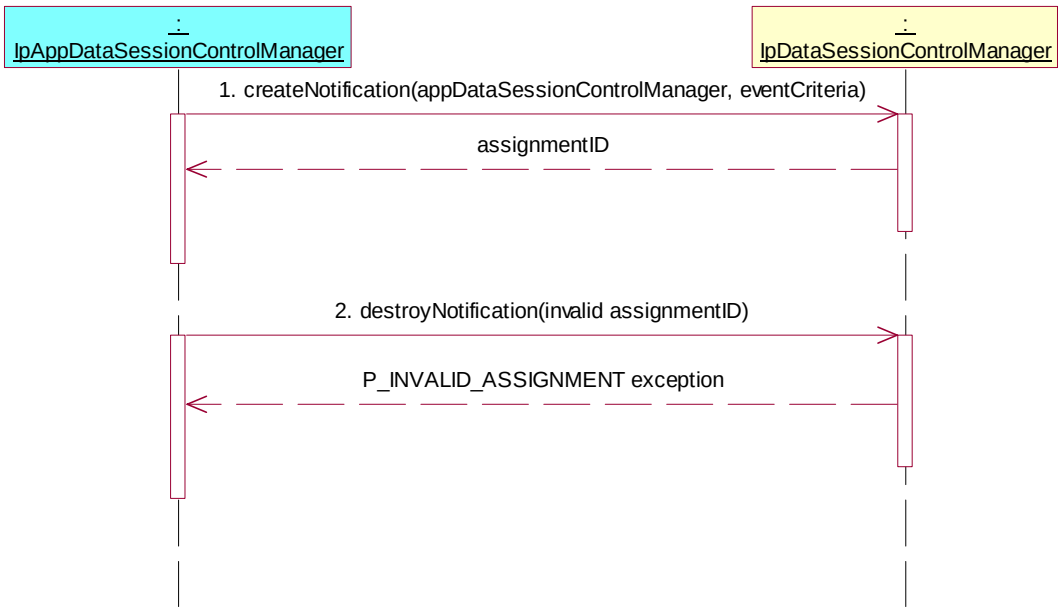
Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotification()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Check: valid value of TpAssignmentID is returned

2. Method call **destroyNotification()**
   Parameters: invalid assignmentID
   Check: P_INVALID_ASSIGMENT_ID is returned



Test DSC_CM_05

Summary: **IpDataSessionControlManager**, changeNotification(), P_INVALID_ASSIGMENT_ID exception.

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

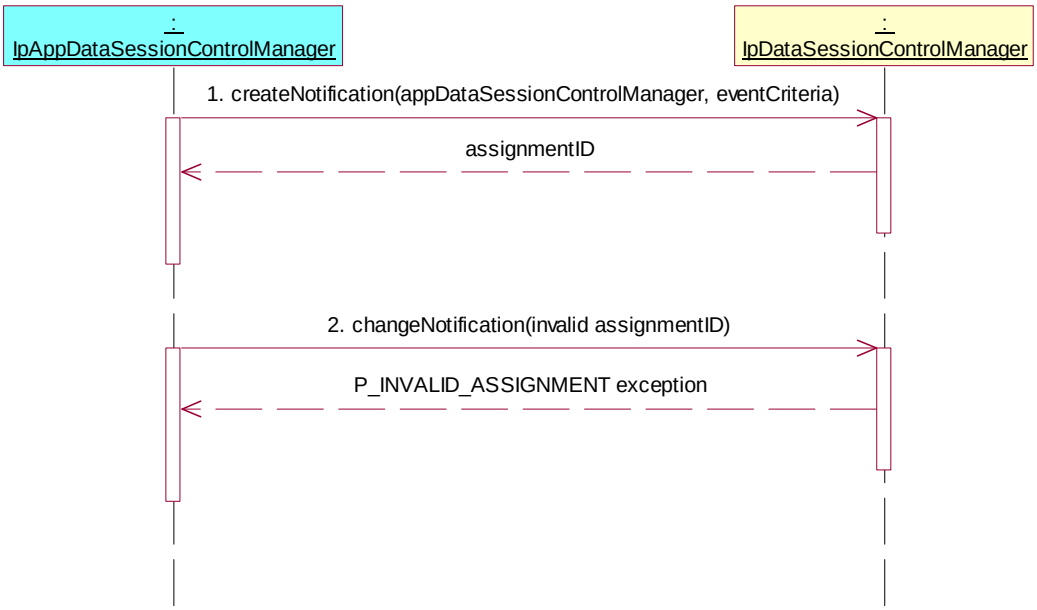
Precondition: **changeNotification()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotification()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Check: valid value of TpAssignmentID is returned

2. Method call **changeNotification()**
   Parameters: invalid assignmentID, eventCriteria
   Check: P_INVALID_ASSIGMENT_ID is returned



Test DSC_CM_06

Summary: **IpDataSessionControlManager**, changeNotification(), P_INVALID_CRITERIA exception.

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

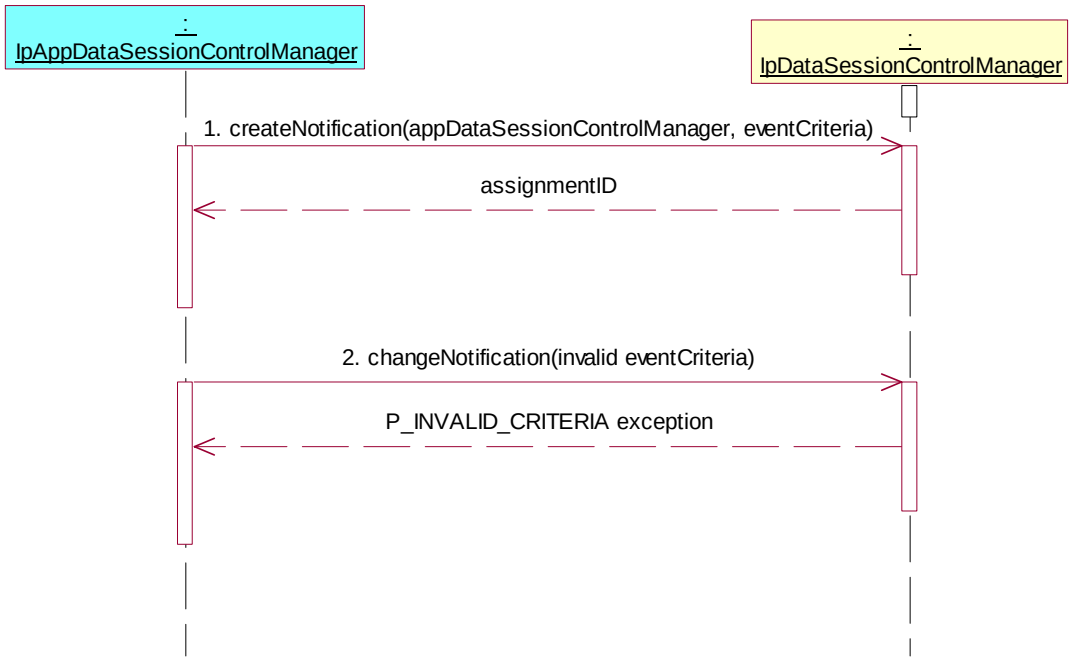
Precondition: **changeNotification()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotification()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Check: valid value of TpAssignmentID is returned

2. Method call **changeNotification()**
   Parameters: assignmentID, invalid eventCriteria
   Check: P_INVALID_CRITERIA is returned



Test DSC_CM_07

Summary: All methods, successful, two createNotification() method calls.

Reference: ES 202 915-8 [1], clause 8.4.

Precondition: **getNotifications()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Check: valid value of TpAssignmentID is returned

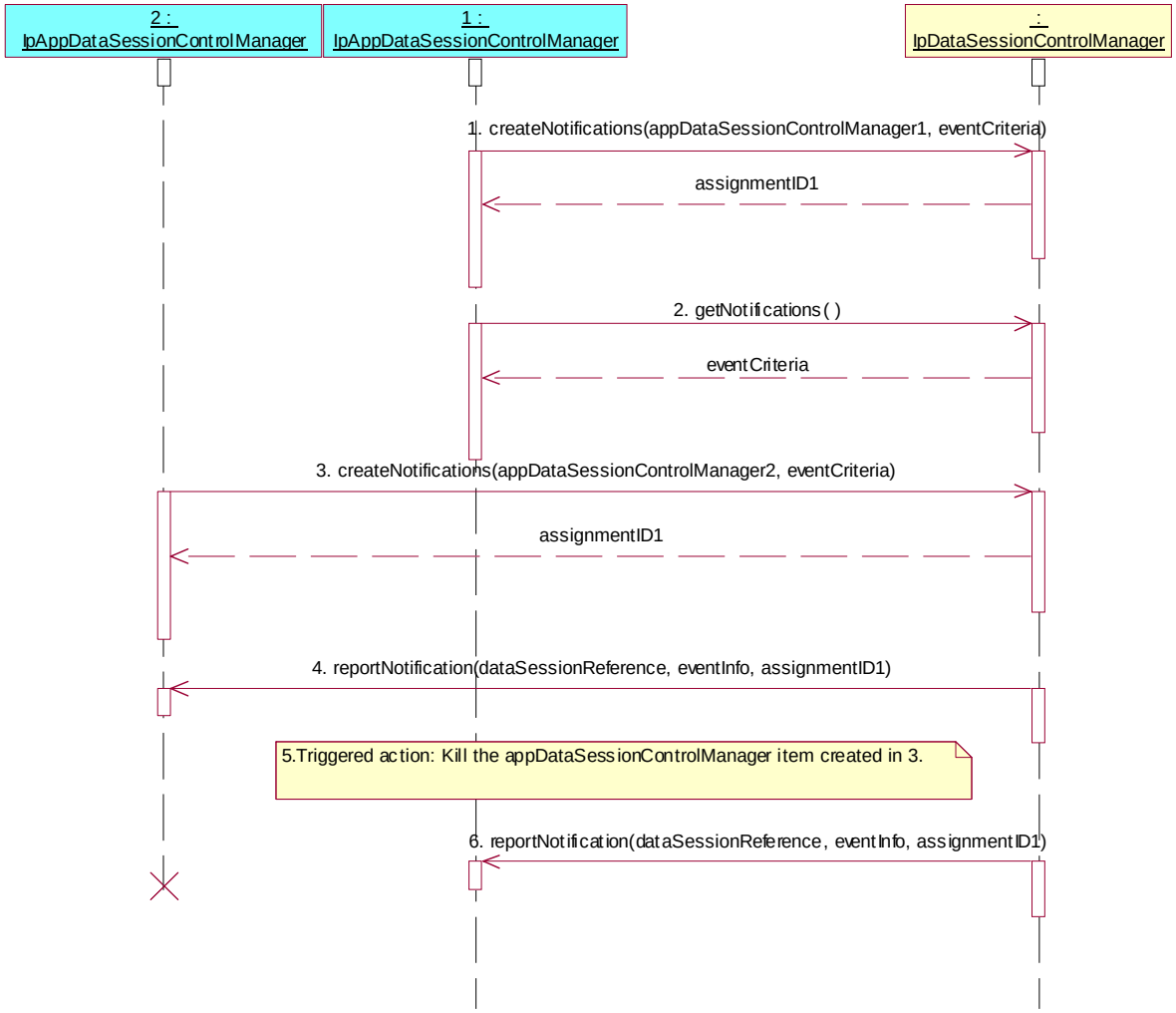
2. Method call **getNotifications()**
   Parameters: none
   Check: value of TpDataSessionEventCriteriaResultSet containing event criteria as specified in 1. is returned

3. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL) different from 1., eventCriteria same as in 1.
   Check: same value of TpAssignmentID as in 1. is returned

4. Triggered Action: cause IUT to call **reportNotification()** method on the tester's (application's) IpAppDataSessionControlManager interface
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: The interface given in 3. receives the event

5. Triggered action: Kill the appDataSessionControlManager item referenced in 3.

6. Triggered Action: cause IUT to call **reportNotification()** method on the tester's (application's) IpAppDataSessionControlManager interface.
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: The interface given in 1. receives the event.



Test DSC_CM_08

Summary: All methods, successful, two createNotifications() method calls.

Reference: ES 202 915-8 [1], clause 8.4

Precondition: **enableNotifications()** implemented

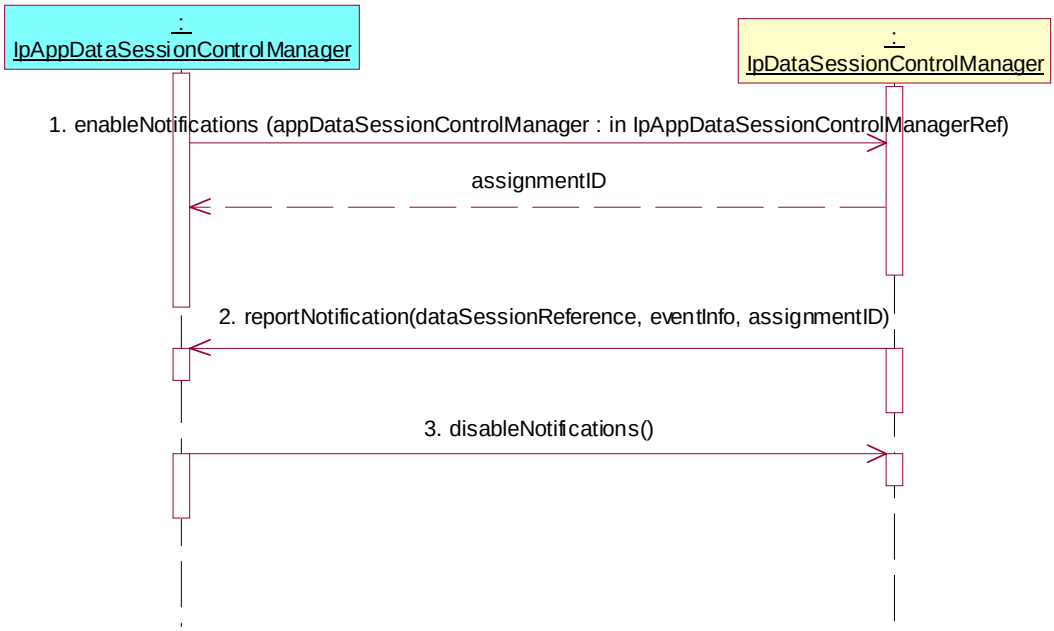
Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **enableNotifications()**
   Parameters: None
   Check: valid value of TpDataSessionEventCriteriaResultSet is returned

2. Triggered Action: cause IUT to call **reportNotification()** method on the tester's (application's) IpAppDataSessionControlManager interface
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **disableNotifications()**
   Parameters: None
   Check: no exception is returned



5.2.1.2 IpDataSession

Test DSC_DS_01

Summary: **IpDataSession**, release after connectReq(), successful with interrupt after reportNotification().

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

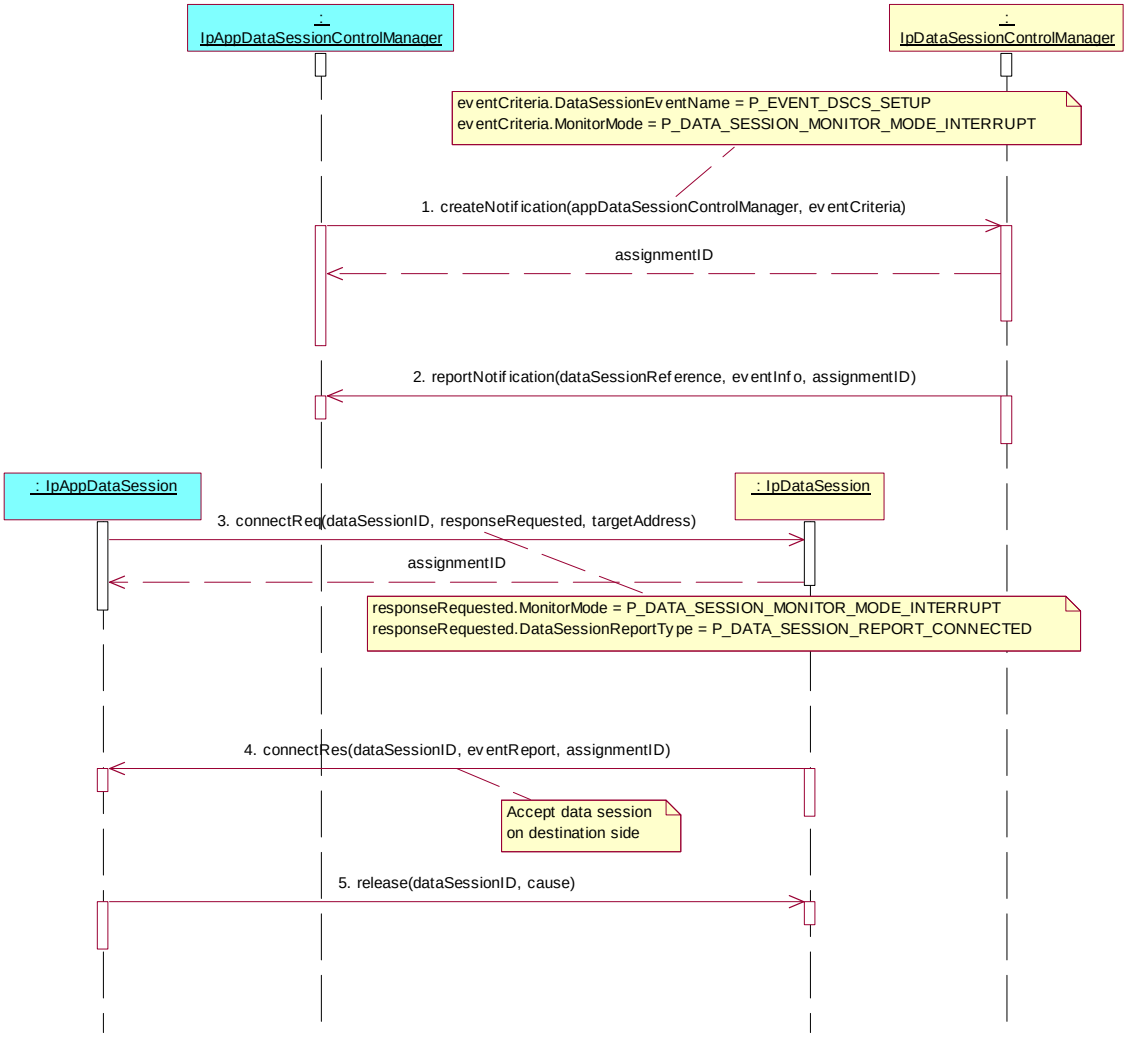
1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of TpAssignmentID is returned

2. Triggered action: cause IUT to call **reportNotification()** method on the tester's (application's) **IpAppDataSessionControlManager** interface, i.e. start to set-up data session
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **connectReq()**
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   Check: valid value of TpAssignmentID is returned

4. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. accept the data session on the destination side
   Parameters: dataSessionID, eventReport, assignmentID

5. Method call **release()**
   Parameters: dataSessionID, cause
   Check: no exception is returned



Test DSC_DS_02

Summary: **IpDataSession**, deassignDataSession() after connectReq(), successful.

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

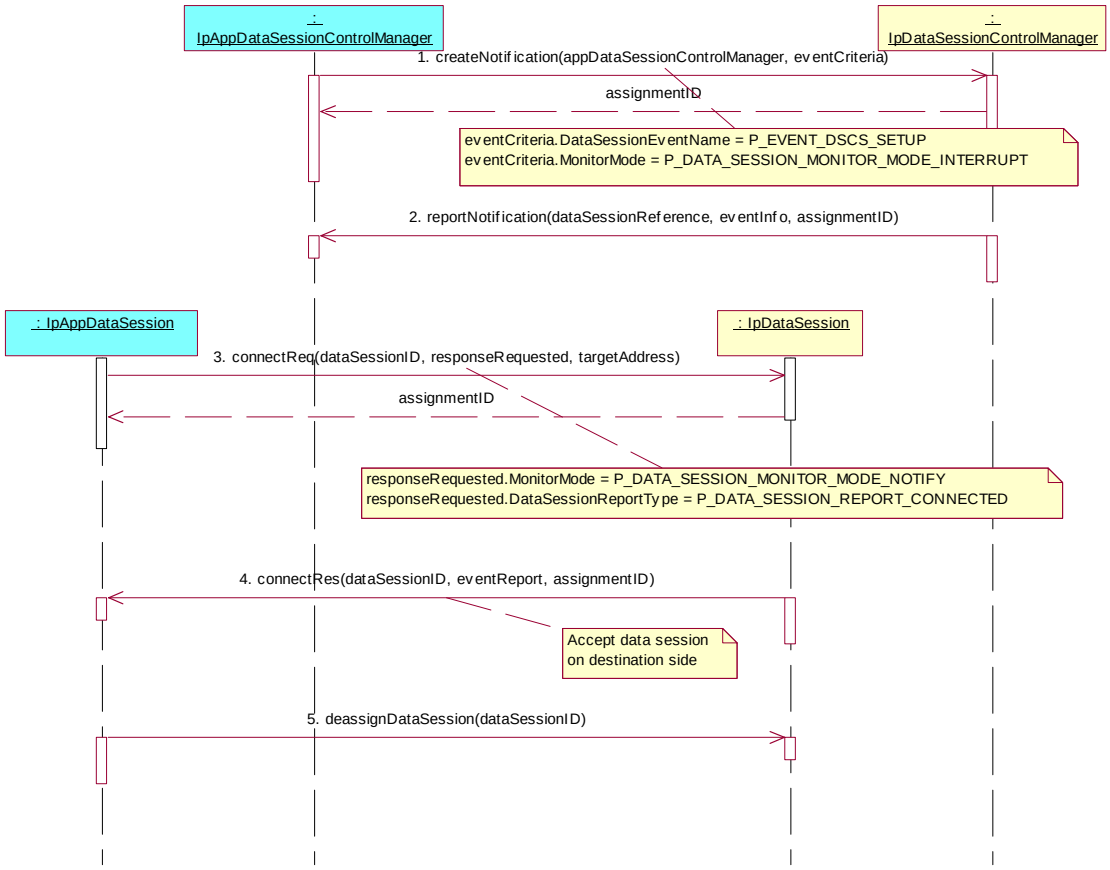
1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of TpAssignmentID is returned

2. Triggered action: cause IUT to call **reportNotification()** method on the tester's (application's) **IpAppDataSessionControlManager** interface, i.e. start to set-up data session
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **connectReq()**
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_NOTIFY
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   Check: valid value of TpAssignmentID is returned

4. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. accept the data session on the destination side
   Parameters: dataSessionID, eventReport, assignmentID

5. Method call **deassignDataSession()**
   Parameters: dataSessionID
   Check: no exception is returned



Test DSC_DS_03

Summary: **IpDataSession**, connectReq() with two trigger events, successful with interrupt after reportNotification().

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of TpAssignmentID is returned

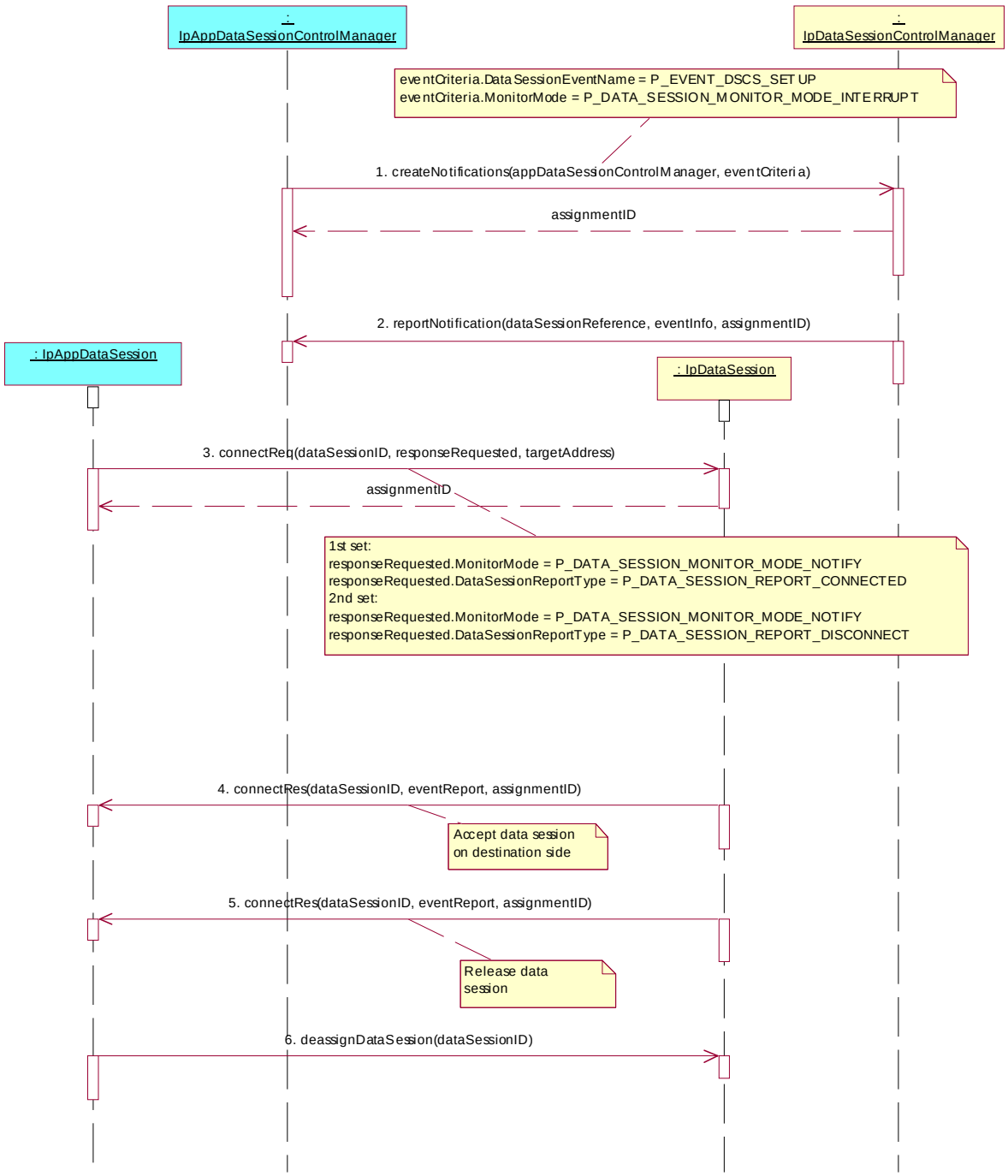
2. Triggered action: cause IUT to call **reportNotification()** method on the tester's (application's) **IpAppDataSessionControlManager** interface, i.e. start to set-up data session
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **connectReq()**
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   1st set
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_NOTIFY
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   2nd set
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_NOTIFY
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_DISCONNECT
   Check: valid value of TpAssignmentID is returned

4. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. accept the data session on the destination side
   Parameters: dataSessionID, eventReport, assignmentID

5. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. release the data session
   Parameters: dataSessionID, eventReport, assignmentID

6. Method call **deassignDataSession()**
   Parameters: dataSessionID
   Check: no exception is returned


: IpAppDataSessionControlManager
: IpDataSessionControlManager
eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
1. createNotifications(appDataSessionControlManager, eventCriteria)
assignmentID
2. reportNotification(dataSessionReference, eventInfo, assignmentID)
: IpAppDataSession
: IpDataSession
3. connectReq(dataSessionID, responseRequested, targetAddress)
assignmentID
1st set:
responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_NOTIFY
responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
2nd set:
responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_NOTIFY
responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_DISCONNECT
4. connectRes(dataSessionID, eventReport, assignmentID)
Accept data session on destination side
5. connectRes(dataSessionID, eventReport, assignmentID)
Release data session
6. deassignDataSession(dataSessionID)

Test DSC_DS_04

Summary: **IpDataSession**, superviseDataSessionReq().

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Precondition: **superviseDataSessionReq()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of TpAssignmentID is returned

2. Triggered action: cause IUT to call **reportNotification()** method on the tester's (application's) **IpAppDataSessionControlManager** interface, i.e. start to set-up data session
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **superviseDataSessionReq()**
   Parameters: dataSessionID, treatment, bytes
   Check: no exception is returned

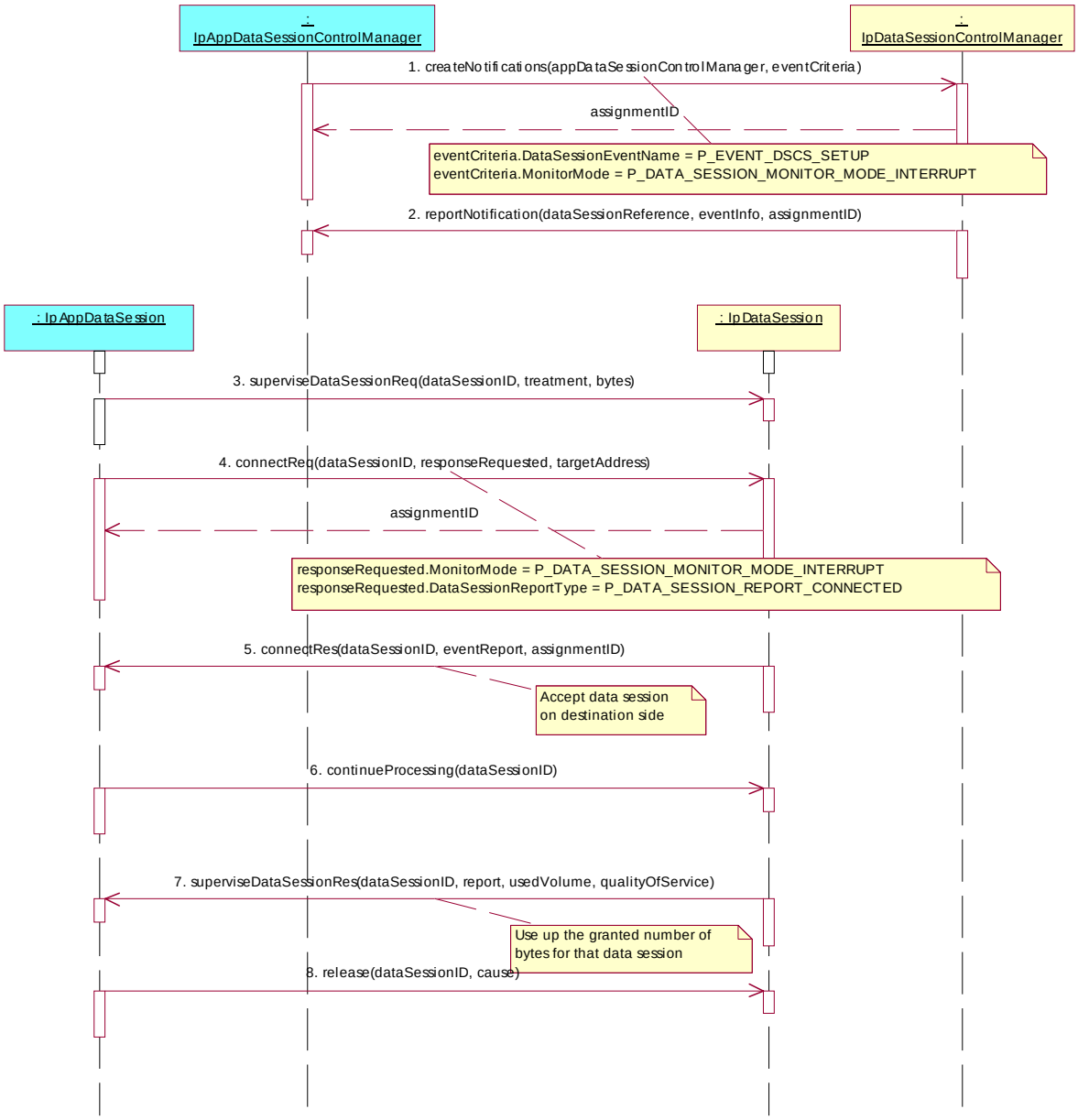
4. Method call **connectReq()**
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   Check: valid value of TpAssignmentID is returned

5. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. accept the data session on the destination side
   Parameters: dataSessionID, eventReport, assignmentID

6. Method call **continueProcessing()**
   Parameters: dataSessionID
   Check: no exception is returned

7. Triggered action: cause IUT to call **superviseDataSessionRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. use up the granted number of bytes for that data session
   Parameters: dataSessionID, report, usedVolume, qualityOfService

8. Method call **release()**
   Parameters: dataSessionID, cause
   Check: no exception is returned


: IpAppDataSessionControlManager
: IpDataSessionControlManager
1. createNotifications(appDataSessionControlManager, eventCriteria)
assignmentID
eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
2. reportNotification(dataSessionReference, eventInfo, assignmentID)
: IpAppDataSession
: IpDataSession
3. superviseDataSessionReq(dataSessionID, treatment, bytes)
4. connectReq(dataSessionID, responseRequested, targetAddress)
assignmentID
responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
5. connectRes(dataSessionID, eventReport, assignmentID)
Accept data session on destination side
6. continueProcessing(dataSessionID)
7. superviseDataSessionRes(dataSessionID, report, usedVolume, qualityOfService)
Use up the granted number of bytes for that data session
8. release(dataSessionID, cause)

Test DSC_DS_05

Summary: **IpDataSession**, setDataSessionChargePlan().

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Precondition: **setDataSessionChargePlan()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of TpAssignmentID is returned

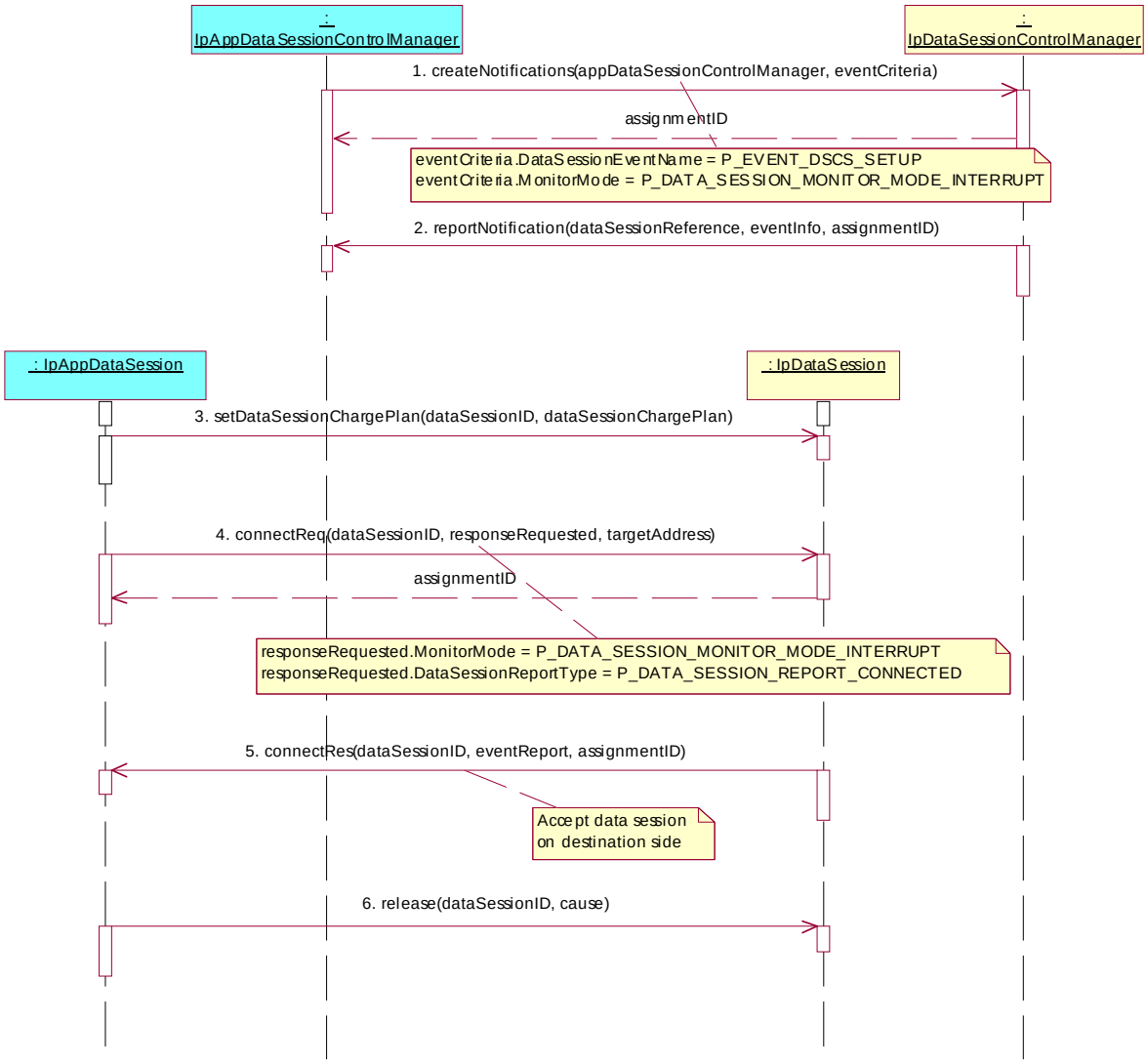
2. Triggered action: cause IUT to call **reportNotification()** method on the tester's (application's) **IpAppDataSessionControlManager** interface, i.e. start to set-up data session
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **setDataSessionChargePlan()**
   Parameters: dataSessionID, dataSessionChargePlan
   Check: no exception is returned

4. Method call **connectReq()**
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   Check: valid value of TpAssignmentID is returned

5. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. accept the data session on the destination side
   Parameters: dataSessionID, eventReport, assignmentID

6. Method call **release()**
   Parameters: dataSessionID, cause
   Check: no exception is returned


: IpAppDataSessionControlManager
: IpDataSessionControlManager
1. createNotifications(appDataSessionControlManager, eventCriteria)
assignmentID
eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
2. reportNotification(dataSessionReference, eventInfo, assignmentID)
: IpAppDataSession
: IpDataSession
3. setDataSessionChargePlan(dataSessionID, dataSessionChargePlan)
4. connectReq(dataSessionID, responseRequested, targetAddress)
assignmentID
responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
5. connectRes(dataSessionID, eventReport, assignmentID)
Accept data session
on destination side
6. release(dataSessionID, cause)

Test DSC_DS_06

Summary: **IpDataSession**, setAdviceOfCharge().

Reference: ES 202 915-8 [1], clauses 7.4.1 and 8.3.

Precondition: **setAdviceOfCharge()** implemented.

Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The tester must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Test Sequence:

1. Method call **createNotifications()**
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of TpAssignmentID is returned

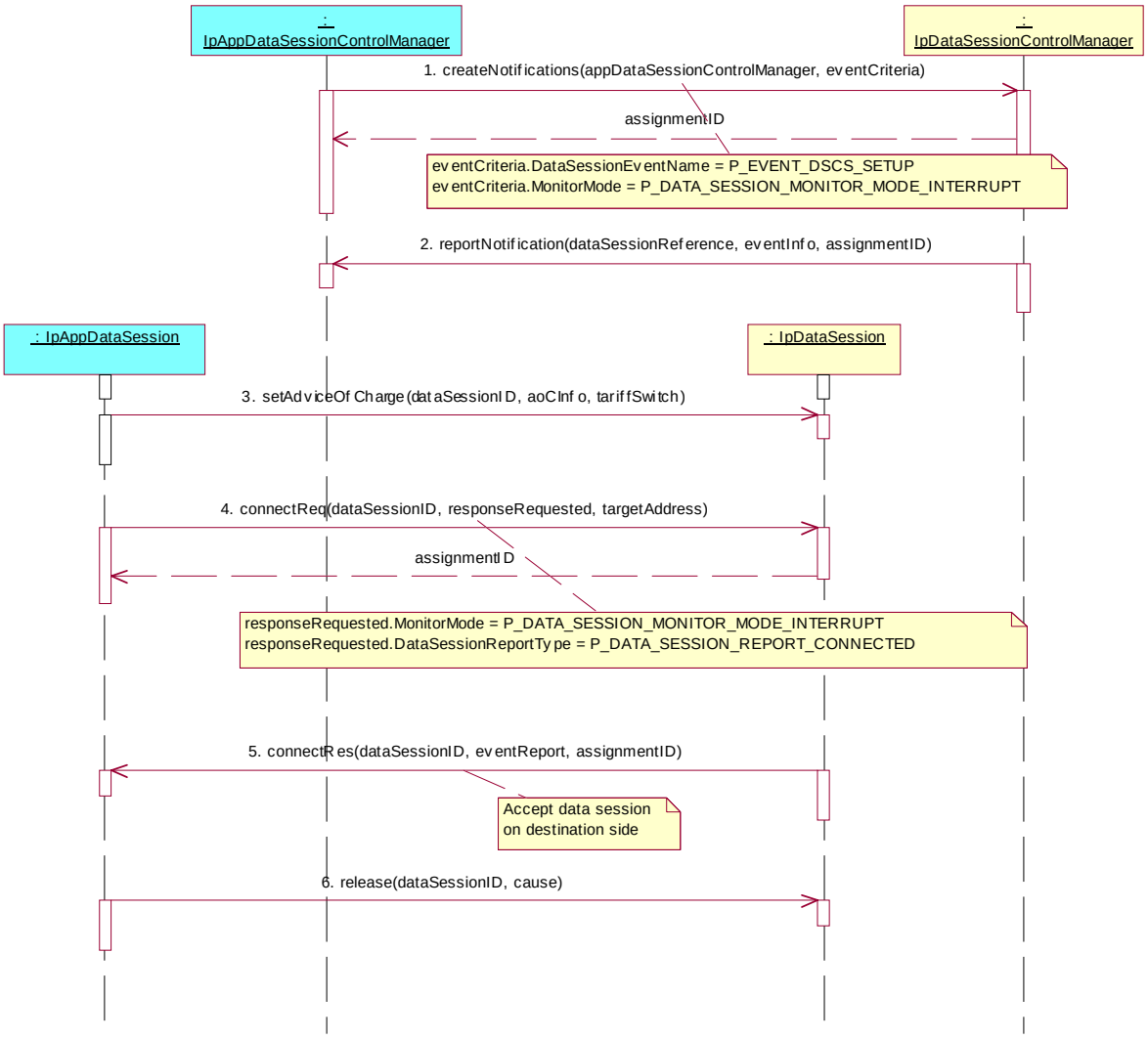
2. Triggered action: cause IUT to call **reportNotification()** method on the tester's (application's) **IpAppDataSessionControlManager** interface, i.e. start to set-up data session
   Parameters: dataSessionReference, eventInfo, assignmentID

3. Method call **setAdviceOfCharge()**
   Parameters: dataSessionID, aoCInfo, tariffswitch
   Check: no exception is returned

4. Method call **connectReq()**
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   Check: valid value of TpAssignmentID is returned

5. Triggered action: cause IUT to call **connectRes()** method on the tester's (application's) **IpAppDataSession** interface, i.e. accept the data session on the destination side
   Parameters: dataSessionID, eventReport, assignmentID

6. Method call **release()**
   Parameters: dataSessionID, cause
   Check: no exception is returned



5.2.2 Data Session Control, application side

In performing the tests for the application, it may be necessary to permit the application to perform any valid set of method exchanges with the tester in between the triggered actions or method calls indicated in the tests below. The tester shall respond to the application's method calls in conformance to the API specification and as required by the application. The requirements of the application should be made known to the tester's operator in advance.

5.2.2.1 IpAppDataSessionControlManager

Test DSC_APP_CM_01

Summary: **IpAppDataSessionControlManager**, mandatory methods, successful.

Reference: ES 202 915-8 [1], clauses 8.2 and 8.4.

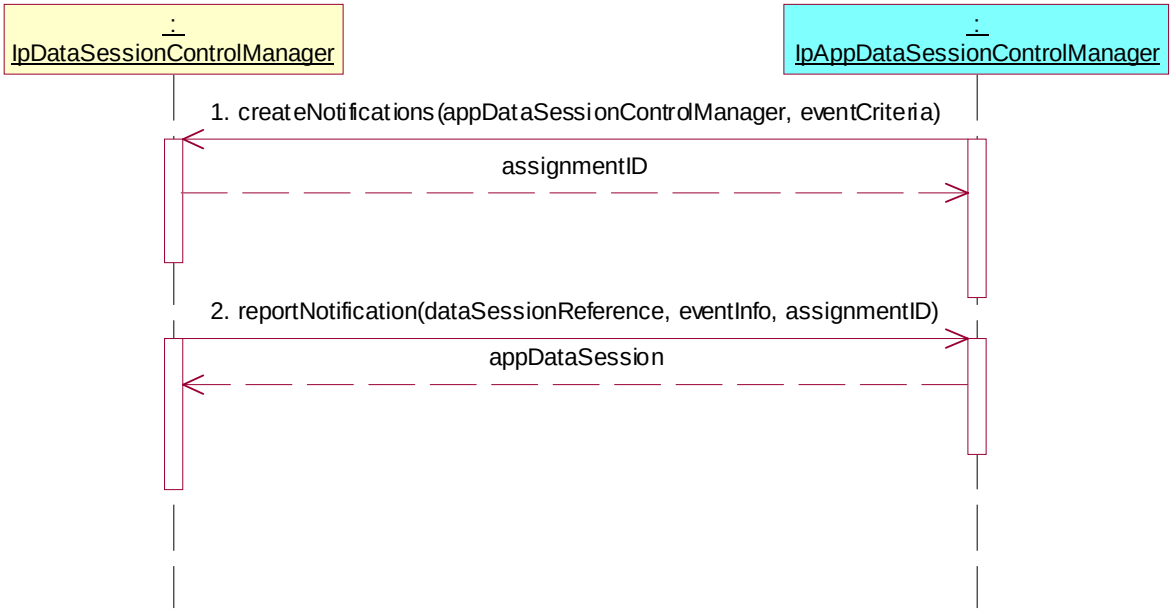
Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria

2. Method call **reportNotification()**
   Parameters: dataSessionReference, value depending on monitor mode of notification request, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned, depending on monitor mode of notification request



Test DSC_APP_CM_02

Summary: **IpAppDataSessionControlManager**, interrupt and continue data session notification, successful.

Reference: ES 202 915-8 [1], clause 8.2.

Precondition: **dataSessionNotificationInterrupted()** and **dataSessionNotificationContinued()** implemented.

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria

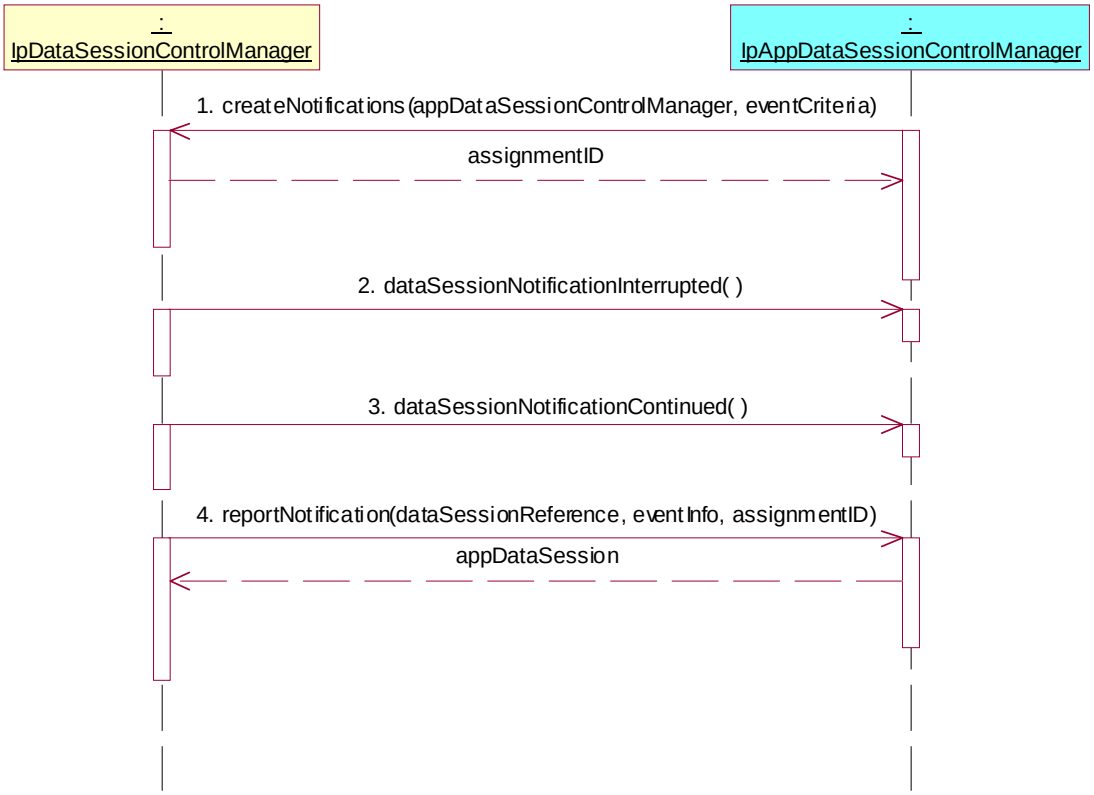
Delay between createNotifications and Interrupted

2. Method call **dataSessionNotificationInterrupted()**
   Parameters: none
   Check: no exception is returned

Delay between Interrupted and Continued

3. Method call **dataSessionNotificationContinued()**
   Parameters: none
   Check: no exception is returned

4. Method call **reportNotification()**
   Parameters: dataSessionReference, value depending on monitor mode of notification request, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned, depending on monitor mode of notification request



Test DSC_APP_CM_03

Summary: **IpAppDataSessionControlManager**, abort data session, successful.

Reference: ES 202 915-8 [1], clause 8.2.

Precondition: **dataSessionAborted()** implemented.

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

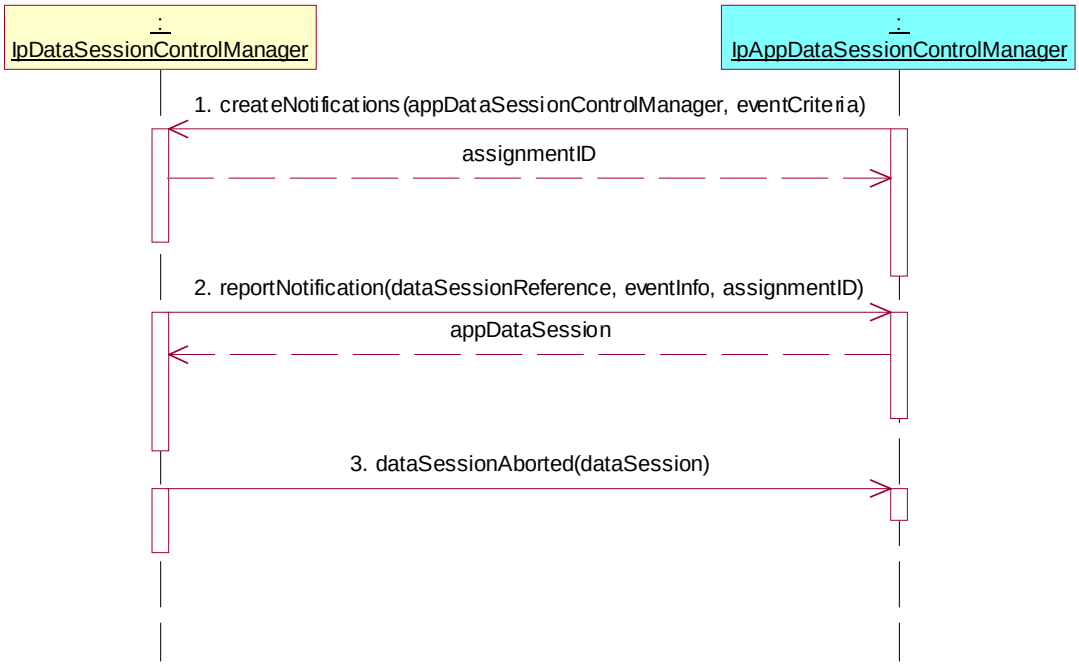
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Method call **dataSessionAborted()**
   Parameters: dataSessionID with same value as supplied in reportNotification.
   Check: no exception is returned



Test DSC_APP_CM_04

Summary: **IpAppDataSessionControlManager**, change event criteria, successful.

Reference: ES 202 915-8 [1], clause 8.4.

Precondition: IUT capable of invoking **changeNotification().**

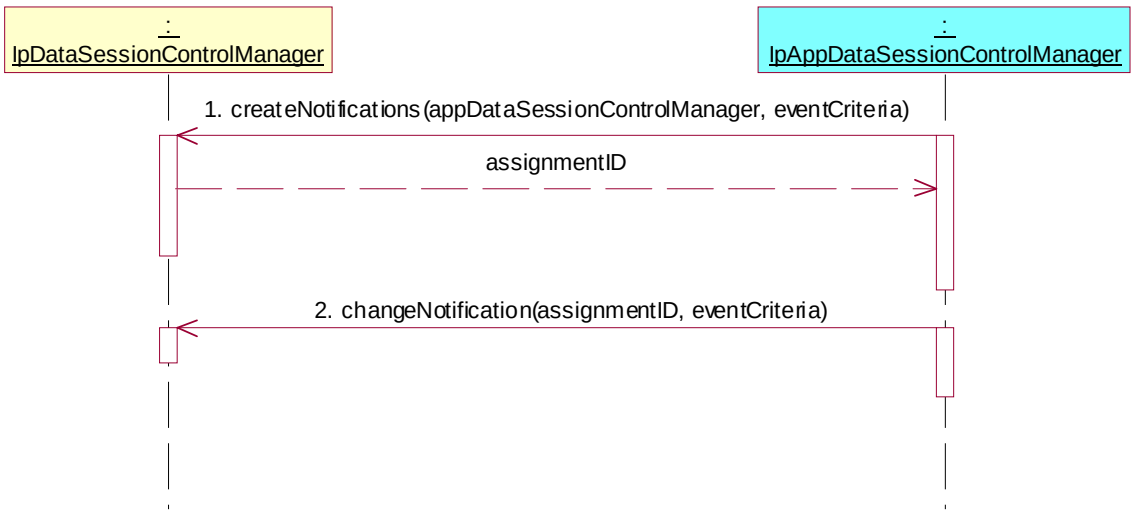
Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria

2. Triggered Action: cause IUT to call **changeNotification()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: assignmentID, eventCriteria



Test DSC_APP_CM_05

Summary: **IpAppDataSessionControlManager**, disable data session notifications, successful.

Reference: ES 202 915-8 [1], clause 8.4.

Precondition: IUT capable of invoking **destroyNotification().**

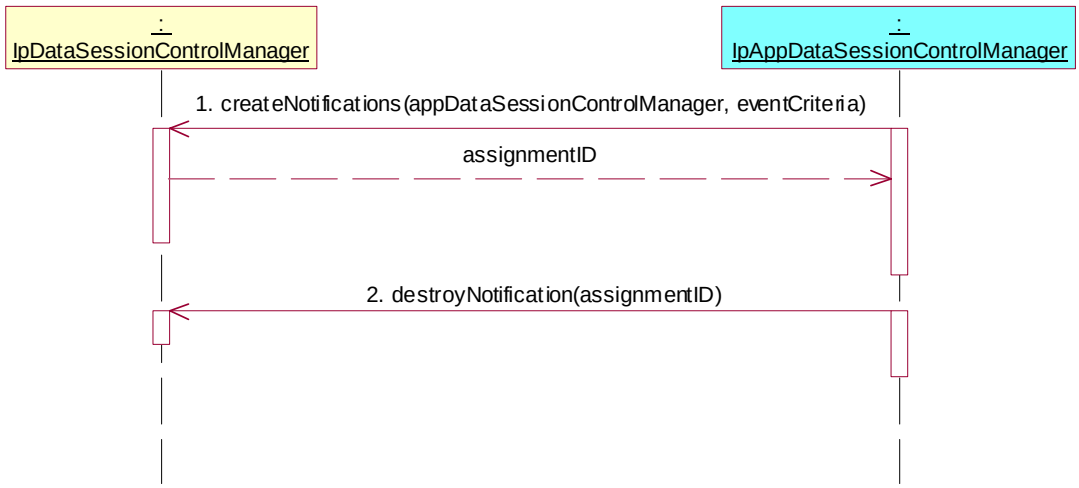
Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria

2. Triggered Action: cause IUT to call **destroyNotification()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: assignmentID



Test DSC_APP_CM_06

Summary: **IpAppDataSessionControlManager**, query event criteria set, successful.

Reference: ES 202 915-8 [1], clause 8.4.

Precondition: IUT capable of invoking **getNotifications().**

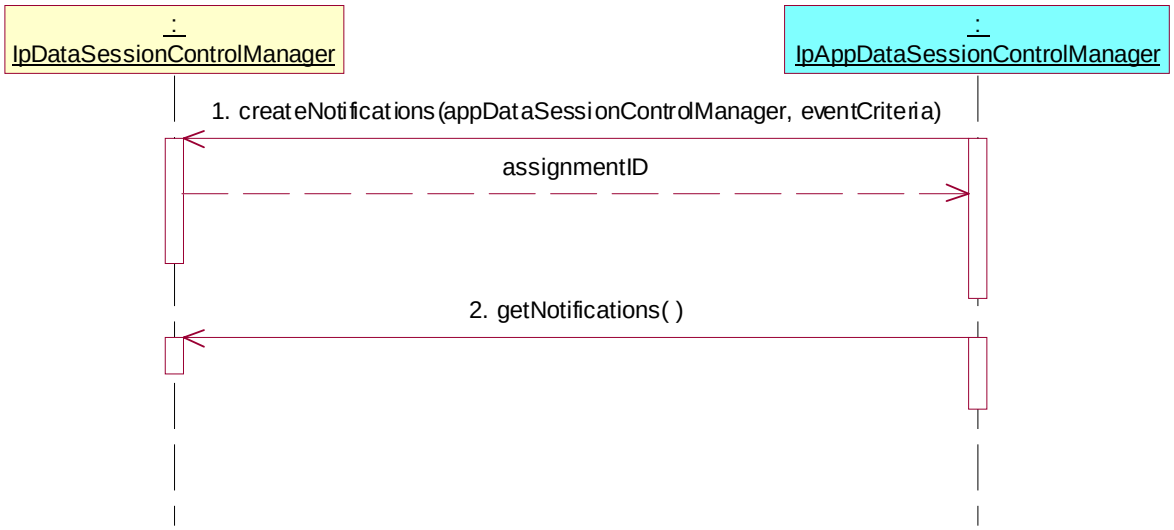
Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria

2. Triggered Action: cause IUT to call **getNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: none



Test DSC_APP_CM_07

Summary: **IpAppDataSessionControlManager**, query event criteria set, successful.

Reference: ES 202 915-8 [1], clause 8.4.

Precondition: IUT capable of invoking **enableNotifications ().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

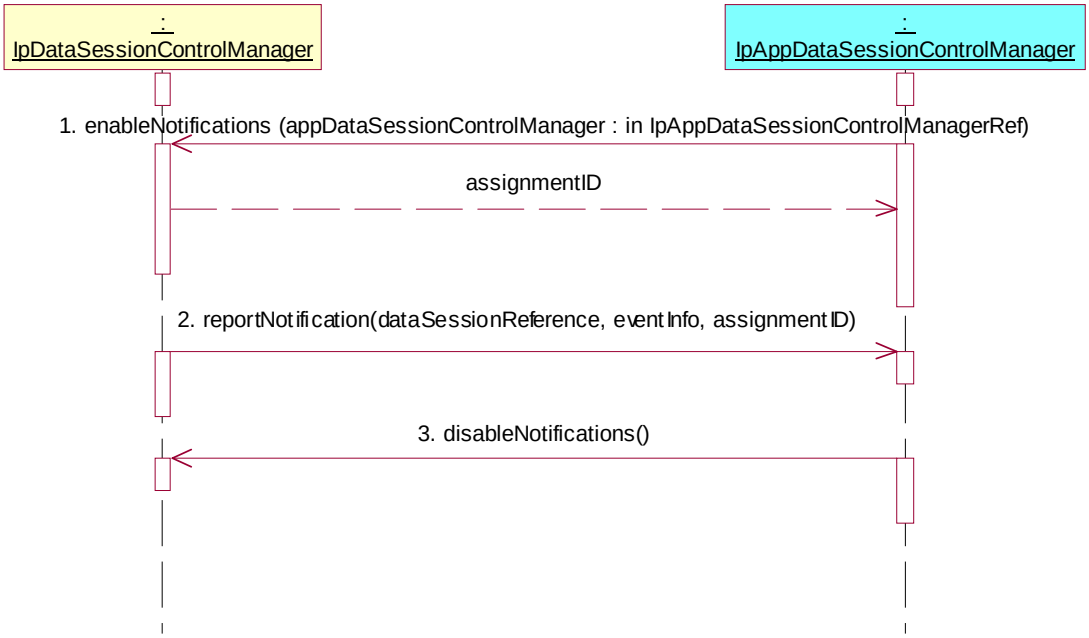
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **enableNotifications ()** method on the tester's (application's) IpAppDataSessionControlManager interface
   Parameters: None

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: no exception is returned

3. Triggered Action: cause IUT to call **disableNotifications()** method on the tester's (application's) IpAppDataSessionControlManager interface
   Parameters: None



5.2.2.2 IpAppDataSession

Applications need not be capable of performing each of the sequences below, even if they support the methods indicated below.

Reference: ES 202 915-8 [1], clauses 9.1.

Precondition: **IpAppDataSession** interface implemented.

5.2.2.2.1 General tests, Active state

NOTE: Tests DSC_APP_DS_01 to 05 do not specify the values of DataSessionEventName field in the eventCriteria parameter of the createNotifications() method expected from the IUT. This has been done intentionally to keep these basic tests simple. Note that the tester has to answer with parameter values that make sense in relation to the parameter values received from the IUT.

Test DSC_APP_DS_01

Summary: **IpAppDataSession**, supervise data session.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: IUT capable of invoking **superviseDataSessionReq().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

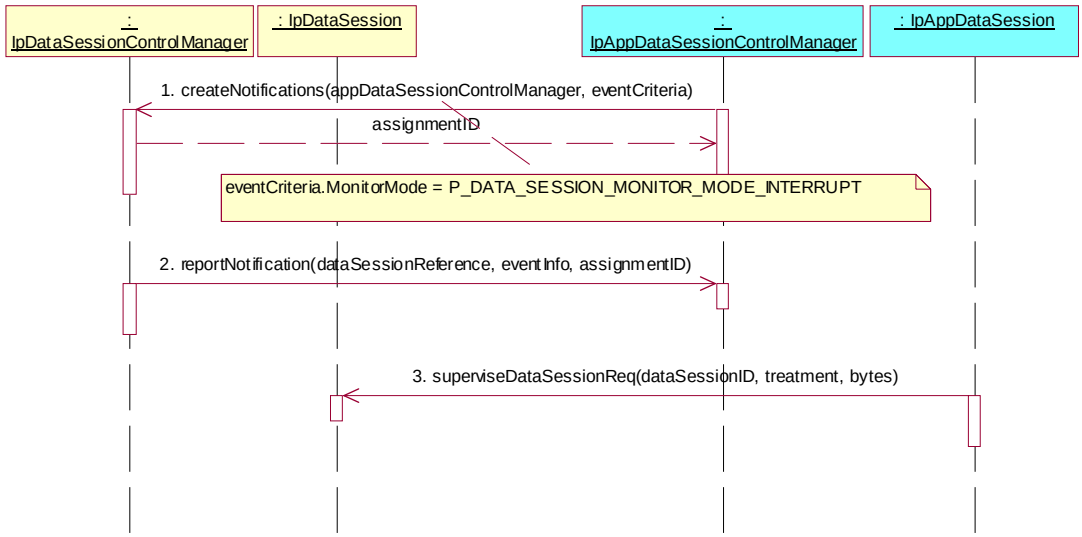
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Triggered Action: cause IUT to call **superviseDataSessionReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, treatment, bytes



Test DSC_APP_DS_02

Summary: **IpAppDataSession**, indication of a data session fault.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: **dataSessionFaultDetected()** implemented.

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

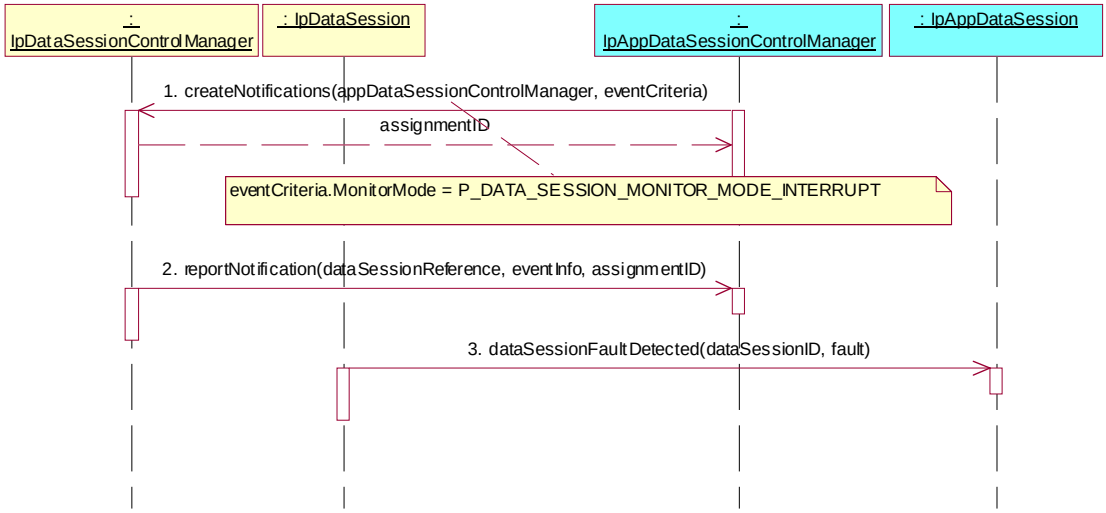
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Method call **dataSessionFaultDetected()**
   Parameters: dataSessionID, fault
   Check: no exception is returned



Test DSC_APP_DS_03

Summary: **IpAppDataSession**, determine charging information.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: IUT capable of invoking **setAdviceOfCharge().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

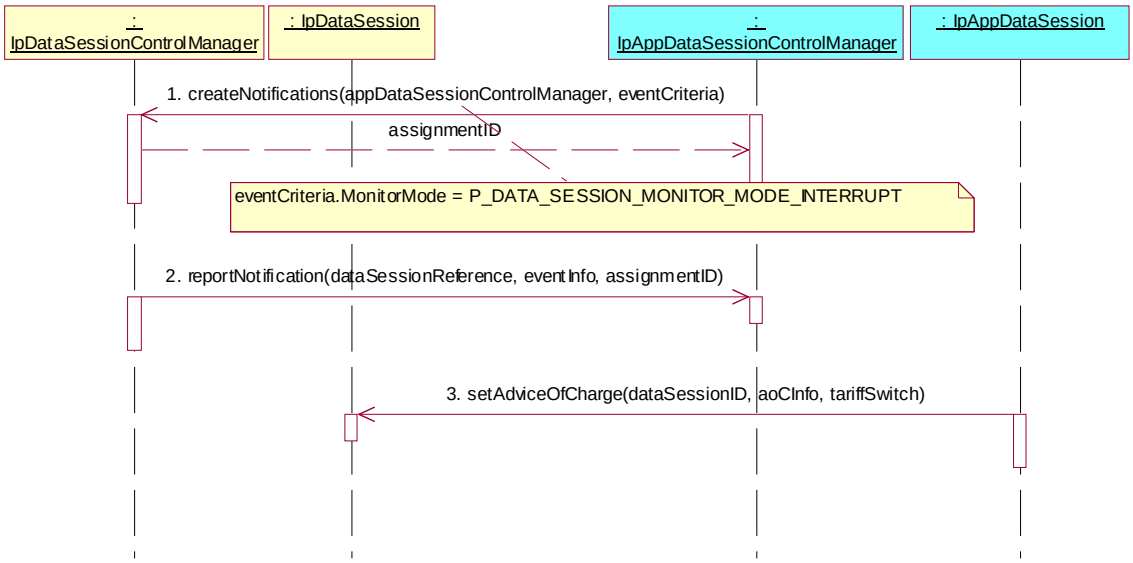
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Triggered Action: cause IUT to call **setAdviceOfCharge()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, aoCInfo, tariffSwitch



Test DSC_APP_DS_04

Summary: **IpAppDataSession**, include charging information.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: IUT capable of invoking **setDataSessionChargePlan().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

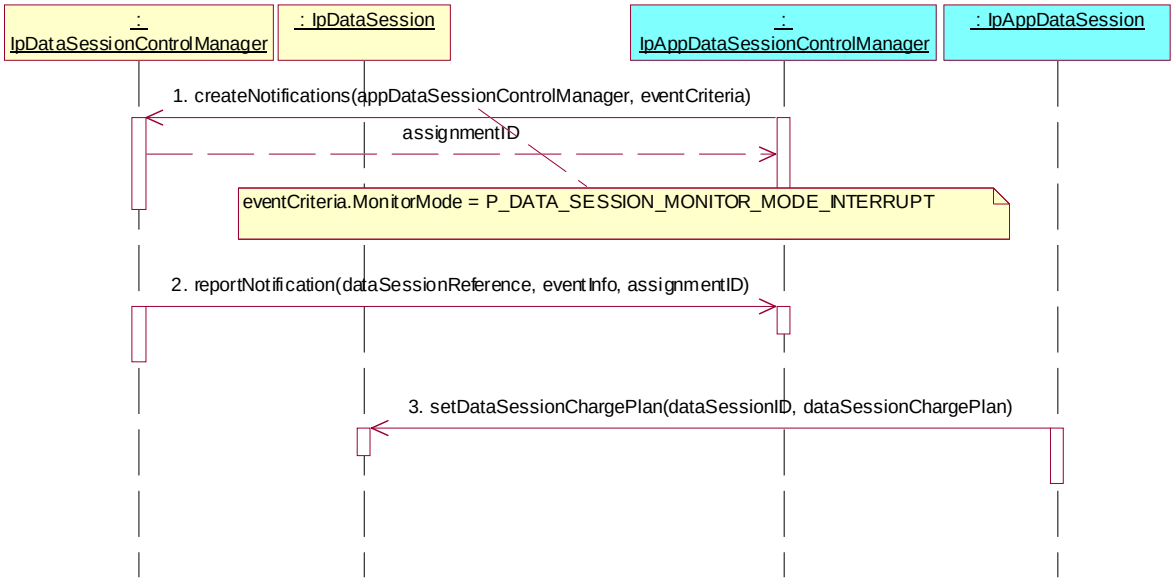
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Triggered Action: cause IUT to call **setDataSessionChargePlan()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, dataSessionChargePlan



Test DSC_APP_DS_05

Summary: **IpAppDataSession**, release data session.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: IUT capable of invoking **release().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

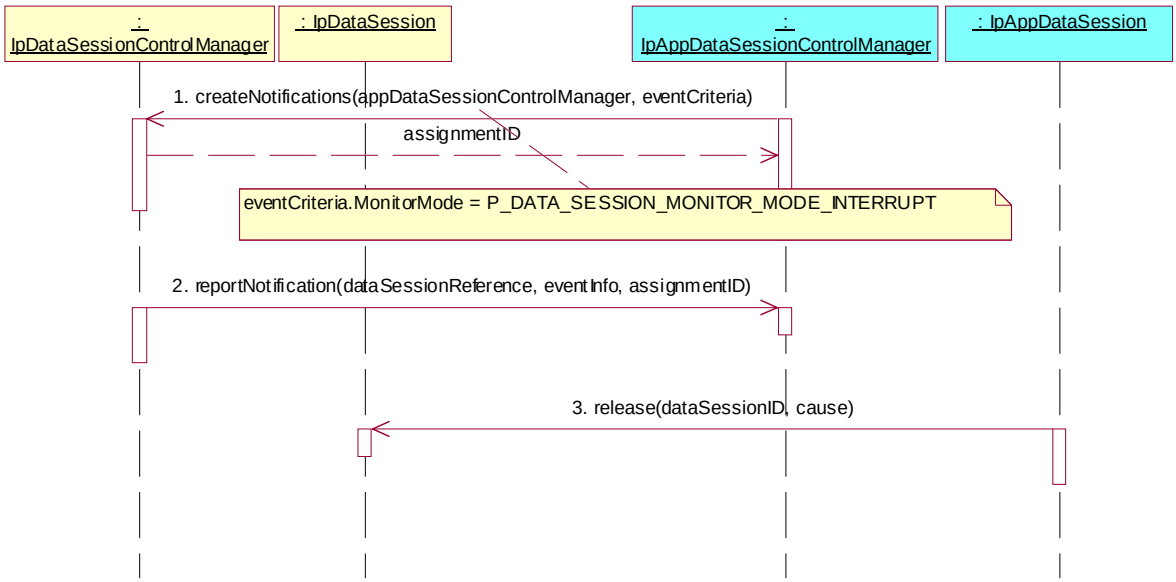
Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Triggered Action: cause IUT to call **release()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, cause



5.2.2.2.2 Active state, Setup Sub-state

NOTE: It will be necessary to create some kind of 'PIXIT' items to check, if the sending of the distinct parameter values in the following tests is supported by the IUT.

Preamble DSC_APP_DS_Active_Setup

Reference: ES 202 915-8 [1], clauses 9.1.

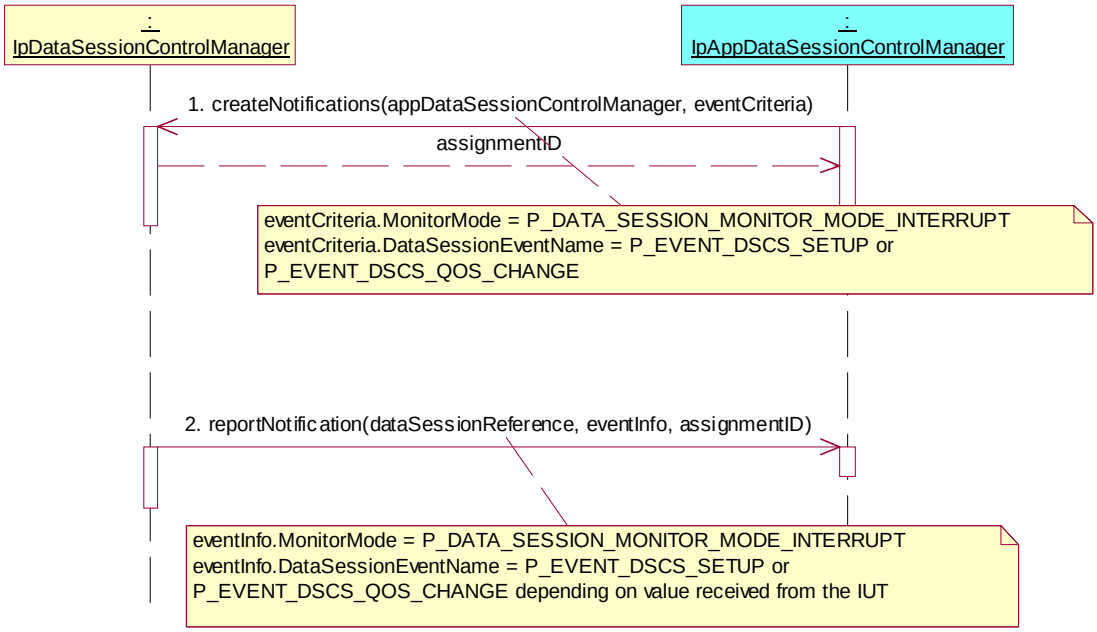
Pre-preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP or P_EVENT_DSCS_QOS_CHANGE
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Parameter values:
   eventInfo.DataSessionEventName = P_EVENT_DSCS_SETUP or P_EVENT_DSCS_QOS_CHANGE depending on value received from the IUT
   eventInfo.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of IpAppDataSessionRef is returned



Test DSC_APP_DS_06

Summary: **IpAppDataSession**, connect interrupted data session, wait for connected, successful.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

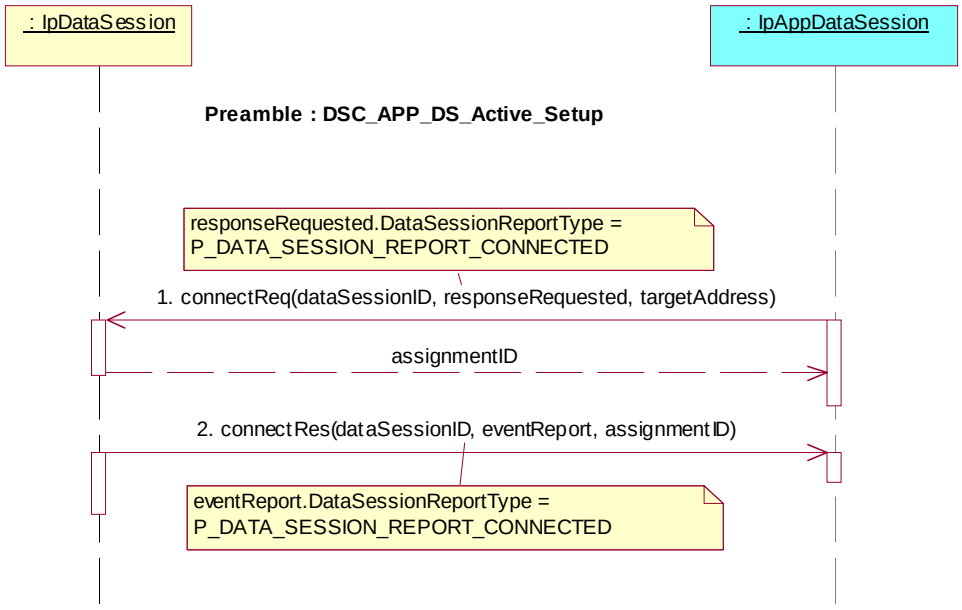
Precondition: IUT capable of invoking **connectReq().**

Preamble: **DSC_APP_DS_Active_Setup.**

Test Sequence:

1. Triggered Action: cause IUT to call **connectReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED

2. Method call **connectRes()**
   Parameters: dataSessionID, eventReport, assignmentID
   Parameter values:
   eventReport.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED
   Check: no exception is returned



Test DSC_APP_DS_07

Summary: **IpAppDataSession**, connect interrupted data session, wait for connected, unsuccessful.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

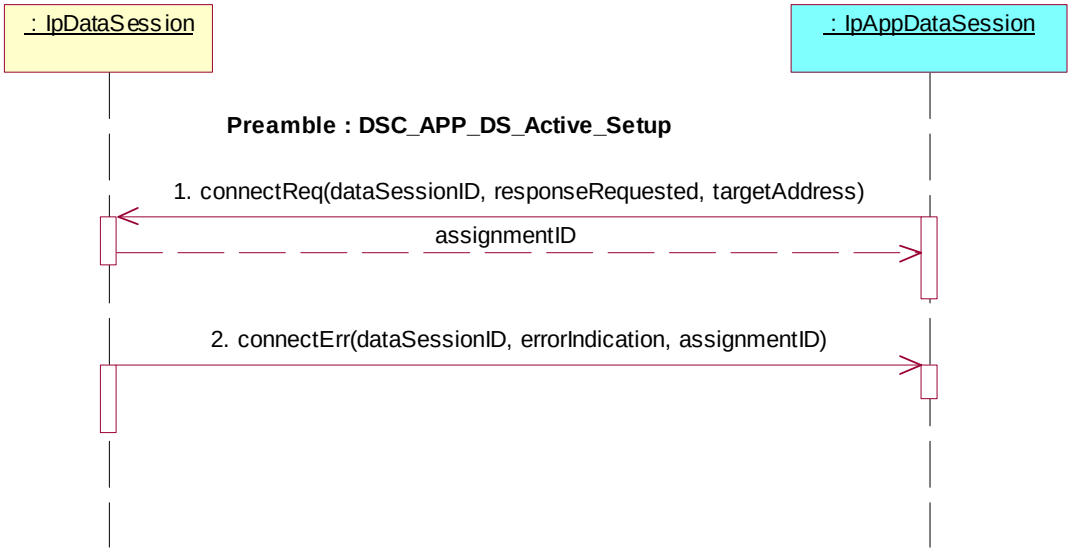
Precondition: IUT capable of invoking **connectReq().**

Preamble: **DSC_APP_DS_Active_Setup.**

Test Sequence:

1. Triggered Action: cause IUT to call **connectReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, responseRequested, targetAddress

2. Method call **connectErr()**
   Parameters: dataSessionID, errorIndication, assignmentID
   Check: no exception is returned



Test DSC_APP_DS_08

Summary: **IpAppDataSession**, connect interrupted data session, wait for disconnected, successful.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

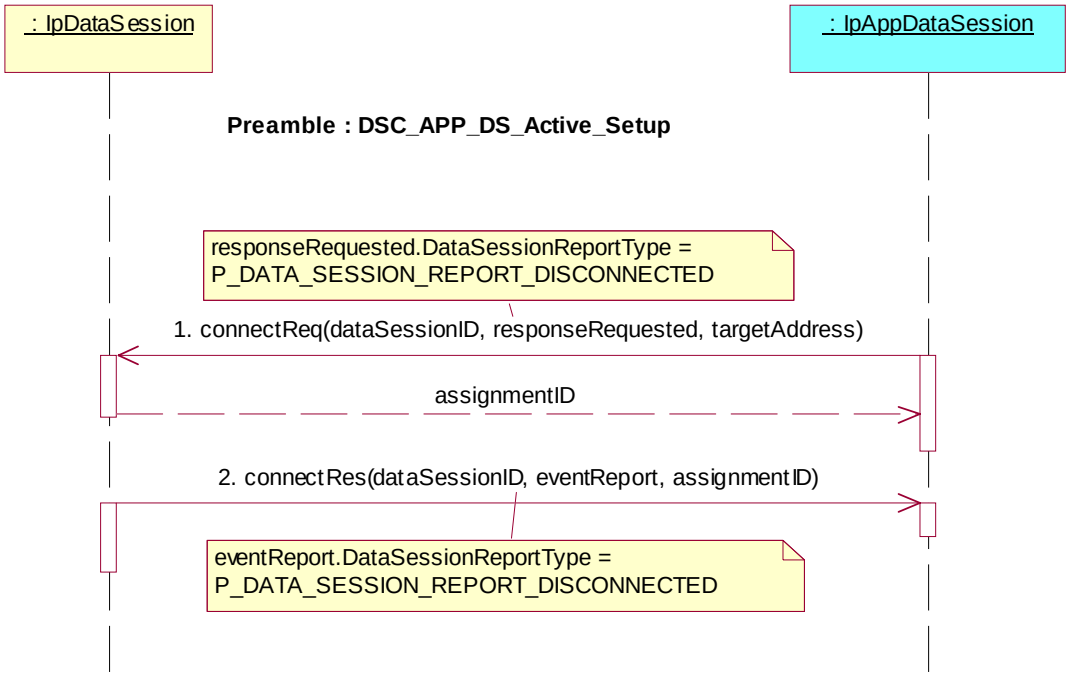
Precondition: IUT capable of invoking **connectReq().**

Preamble: **DSC_APP_DS_Active_Setup.**

Test Sequence:

1. Triggered Action: cause IUT to call **connectReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_DISCONNECT

2. Method call **connectRes()**
   Parameters: dataSessionID, eventReport, assignmentID
   Parameter values:
   eventReport.DataSessionReportType = P_DATA_SESSION_REPORT_DISCONNECT
   Check: no exception is returned



Test DSC_APP_DS_09

Summary: **IpAppDataSession**, continue interrupted data session.

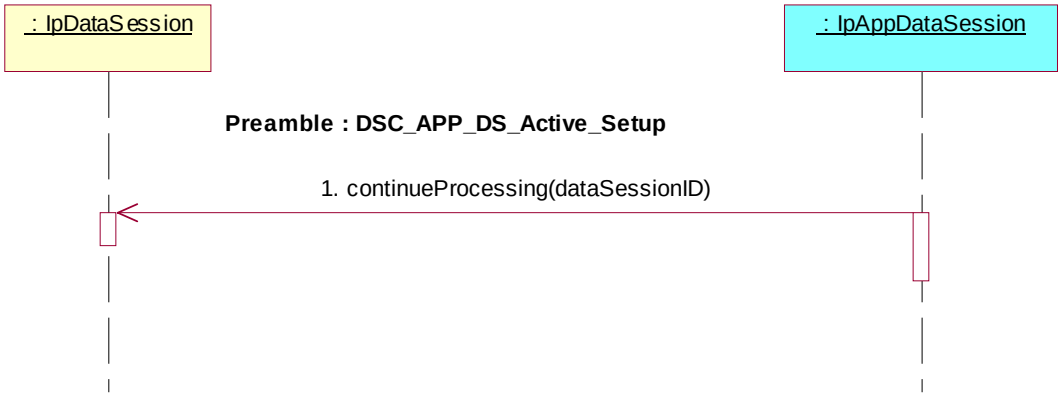
Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: IUT capable of invoking **continueProcessing().**

Preamble: **DSC_APP_DS_Active_Setup.**

Test Sequence:

1. Triggered Action: cause IUT to call **continueProcessing()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID



5.2.2.2.3 Active state, Established Sub-state

Preamble DSC_APP_DS_Active_Established

Reference: ES 202 915-8 [1], clauses 9.1.

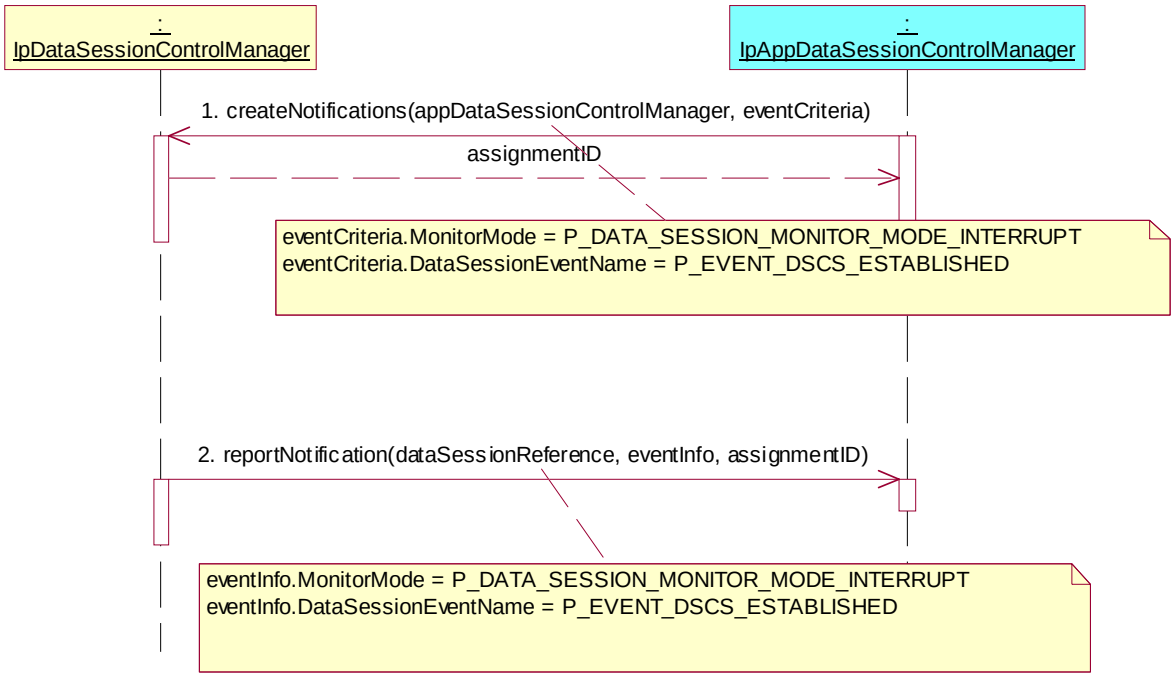
Pre-preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_ESTABLISHED
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Parameter values:
   eventInfo.DataSessionEventName = P_EVENT_DSCS_ESTABLISHED
   eventInfo.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of IpAppDataSessionRef is returned



Test DSC_APP_DS_10

Summary: **IpAppDataSession**, supervise data session, successful.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

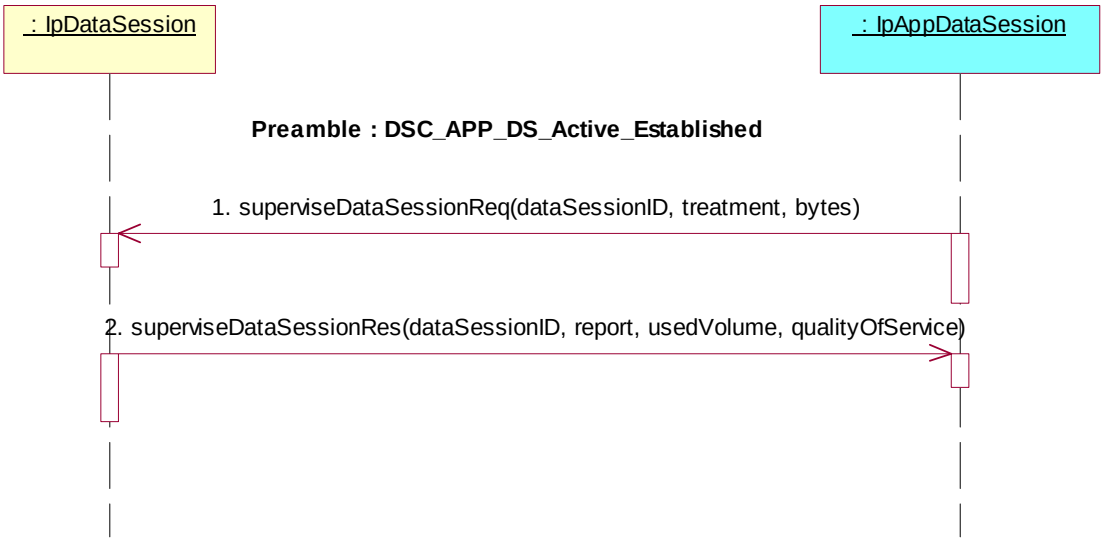
Precondition: IUT capable of invoking **superviseDataSessionReq().**

Preamble: **DSC_APP_DS_Active_Established.**

Test Sequence:

1. Triggered Action: cause IUT to call **superviseDataSessionReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, treatment, bytes

2. Method call **superviseDataSessionRes()**
   Parameters: dataSessionID, report, usedVolume, qualityOfService
   Check: no exception returned



Test DSC_APP_DS_11

Summary: **IpAppDataSession**, supervise data session, unsuccessful.

Reference: ES 202 915-8 [1], clauses 8.1 and 8.3.

Precondition: IUT capable of invoking **superviseDataSessionReq().**

Preamble: **DSC_APP_DS_Active_Established.**

Test Sequence:

1. Triggered Action: cause IUT to call **superviseDataSessionReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, treatment, bytes
2. Method call **superviseDataSessionErr()**
   Parameters: dataSessionID, erroIndication
   Check: no exception returned

5.2.2.2.4 Network Released and Finished state

NOTE: The following test is testing both the Network Released and the Finished state, as there is a direct state transition from the first to the latter state, when no supervision request has been sent by the application or when a sent supervision request is answered by the SCF.

Test DSC_APP_DS_12

Summary: **IpAppDataSession**, de-assign data session that has been released by the network for reasons of fault

Reference: ES 202 915-8 [1], clauses 8.1, 8.3 and 9.1

Precondition: **dataSessionFaultDetected()** implemented, IUT capable of invoking **deassignDataSession()**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

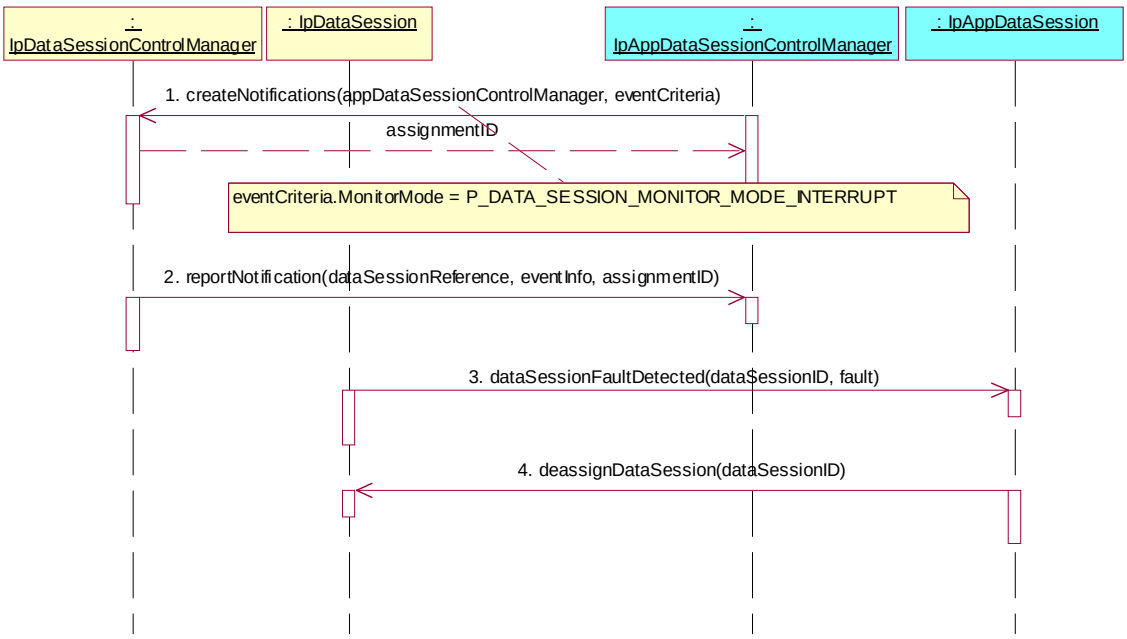
Test Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Check: valid value of IpAppDataSessionRef is returned

3. Method call **dataSessionFaultDetected()**
   Parameters: dataSessionID, fault
   Check: no exception is returned

4. Triggered Action: cause IUT to call **deassignDataSession()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID



Test DSC_APP_DS_13

Summary: **IpAppDataSession**, de-assign network released data session **after** receipt of supervision result.

Reference: ES 202 915-8 [1], clauses 8.1, 8.3 and 9.1.

Precondition: IUT capable of invoking **connectReq()**, **superviseDataSessionReq()** and **deassignDataSession().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Parameter values:
   eventInfo.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventInfo.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of IpAppDataSessionRef is returned

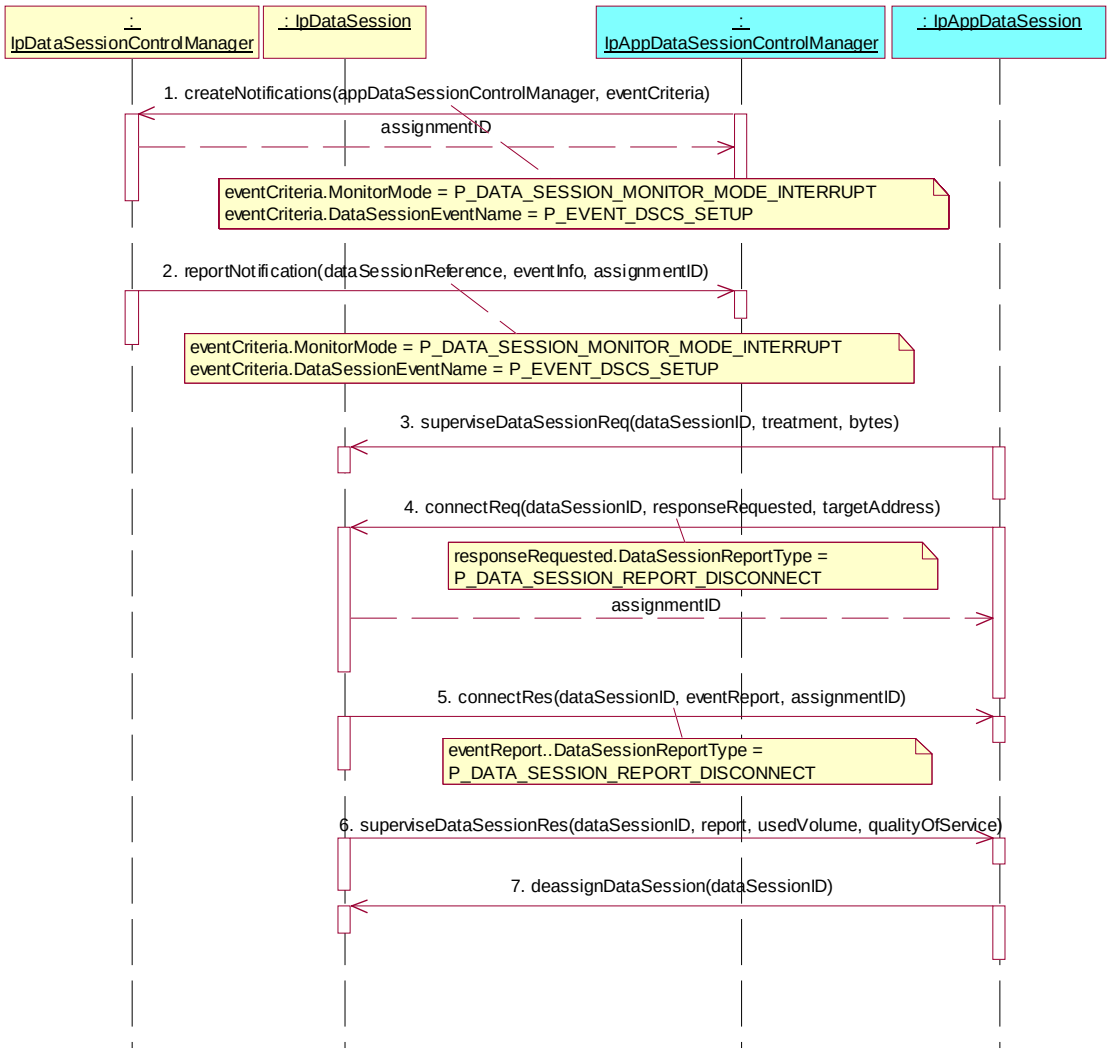
3. Triggered Action: cause IUT to call **superviseDataSessionReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, treatment, bytes

4. Triggered Action: cause IUT to call **connectReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   Parameter values:
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_DISCONNECT

5. Method call **connectRes()**
   Parameters: dataSessionID, eventReport, assignmentID
   Parameter values:
   eventReport.DataSessionReportType = P_DATA_SESSION_REPORT_DISCONNECT
   Check: no exception is returned

6. Method call **superviseDataSessionRes()**
   Parameters: dataSessionID, report, usedVolume, qualityOfService
   Check: no exception returned

7. Triggered Action: cause IUT to call **deassignDataSession()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID



5.2.2.2.5 Application Released state

Test DSC_APP_DS_14

Summary: **IpAppDataSession**, accept receipt of supervision result **after** release of data session by application.

Reference: ES 202 915-8 [1], clauses 8.1, 8.3 and 9.1.

Precondition: IUT capable of invoking **connectReq()**, **superviseDataSessionReq()** and **release().**

Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface through selecting that service and signing the required service agreement.

Instead of providing a valid value of its IpAppDataSessionControlManager interface reference in the createNotifications() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotifications().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotifications()** method on the tester's (SCF's) IpDataSessionControlManager interface.
   Parameters: appDataSessionControlManager (non-NULL), eventCriteria
   Parameter values:
   eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT

2. Method call **reportNotification()**
   Parameters: dataSessionReference, eventInfo, assignmentID
   Parameter values:
   eventInfo.DataSessionEventName = P_EVENT_DSCS_SETUP
   eventInfo.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
   Check: valid value of IpAppDataSessionRef is returned

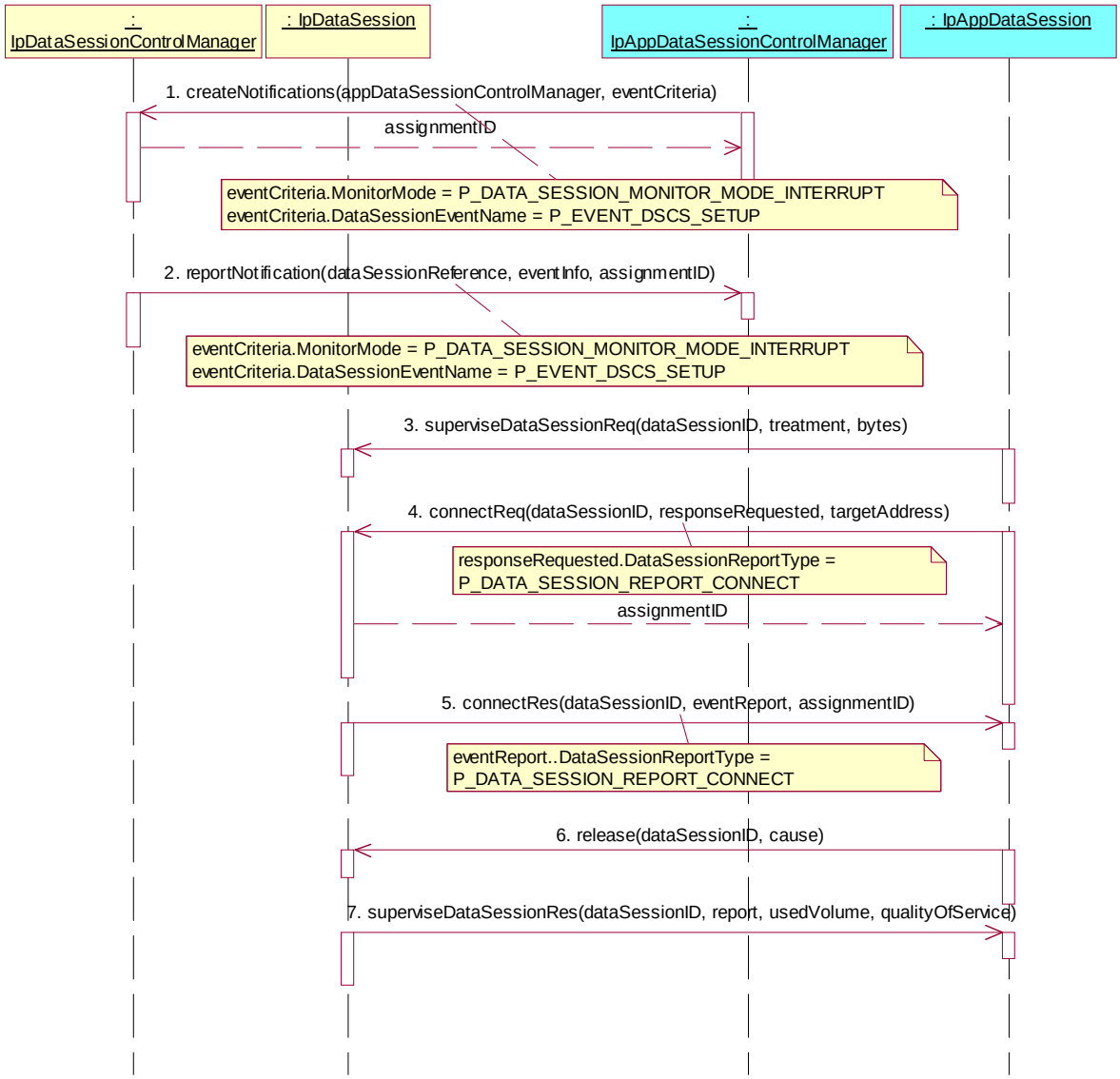
3. Triggered Action: cause IUT to call **superviseDataSessionReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, treatment, bytes

4. Triggered Action: cause IUT to call **connectReq()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, responseRequested, targetAddress
   Parameter values:
   Parameter values:
   responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECT

5. Method call **connectRes()**
   Parameters: dataSessionID, eventReport, assignmentID
   Parameter values:
   eventReport.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECT
   Check: no exception is returned

6. Triggered Action: cause IUT to call **release()** method on the tester's (SCF's) IpDataSession interface.
   Parameters: dataSessionID, cause

7. Method call **superviseDataSessionRes()**
   Parameters: dataSessionID, report, usedVolume, qualityOfService
   Check: no exception returned


: IpDataSessionControlManager
: IpDataSession
: IpAppDataSessionControlManager
: IpAppDataSession
1. createNotifications(appDataSessionControlManager, eventCriteria)
assignmentID
eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
2. reportNotification(dataSessionReference, eventInfo, assignmentID)
eventCriteria.MonitorMode = P_DATA_SESSION_MONITOR_MODE_INTERRUPT
eventCriteria.DataSessionEventName = P_EVENT_DSCS_SETUP
3. superviseDataSessionReq(dataSessionID, treatment, bytes)
4. connectReq(dataSessionID, responseRequested, targetAddress)
responseRequested.DataSessionReportType =
P_DATA_SESSION_REPORT_CONNECT
assignmentID
5. connectRes(dataSessionID, eventReport, assignmentID)
eventReport..DataSessionReportType =
P_DATA_SESSION_REPORT_CONNECT
6. release(dataSessionID, cause)
7. superviseDataSessionRes(dataSessionID, report, usedVolume, qualityOfService)

History

Document history		
V1.1.1	January 2005	Membership Approval Procedure MV 20050311: 2005-01-11 to 2005-03-11
V1.1.1	March 2005	Publication