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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 3)

Reference

RES/TISPAN-06005-08-OSA

Keywords

API, OSA, TSS&TP

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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 covering Open Service Access (OSA); Application Programming Interface (API); Test Suite Structure and Test Purposes (TSS&TP) for Parlay 3, as identified below:

Part 1:   "Overview";

Part 2:   "Common data definitions";

Part 3:   "Framework";

Part 4:   "Call control SCF";

Part 5:   "User interactions SCF";

Part 6:   "Mobility SCF";

Part 7:   "Terminal capabilities SCF";

Part 8:   "Data session control SCF";

Part 9:   "Generic messaging SCF";

Part 10:   "Connectivity manager SCF";

Part 11:   "Account management SCF";

Part 12:   "Charging SCF".

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 201 915-8 [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 201 915-8: "Open Service Access (OSA); Application Programming Interface (API); Part 8: Data Session Control SCF (Parlay 3)".

[2] ETSI ES 202 170: "Open Service Access (OSA); Application Programming Interface (API); Implementation Conformance Statement (ICS) proforma specification (Parlay 3)".

[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".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 201 915-8 [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].

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

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

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

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

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

Lower Tester (LT): 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
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 201 915-8 [1].

5.1.3   Test strategy

As the base standard ES 201 915-8 [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 202 170 [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 202 170[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 201 915-8 [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 **createNotification()**
        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

```
      ·                                                                    ·
IpAppDataSessionControlManager                          IpDataSessionControlManager
```

1. createNotification(appDataSessionControlManager, eventCriteria)

assignmentID

2. reportNotification(dataSessionReference, eventInfo, assignmentID)

appDataSession

3. destroyNotification(assignmentID)

Test DSC_CM_02

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

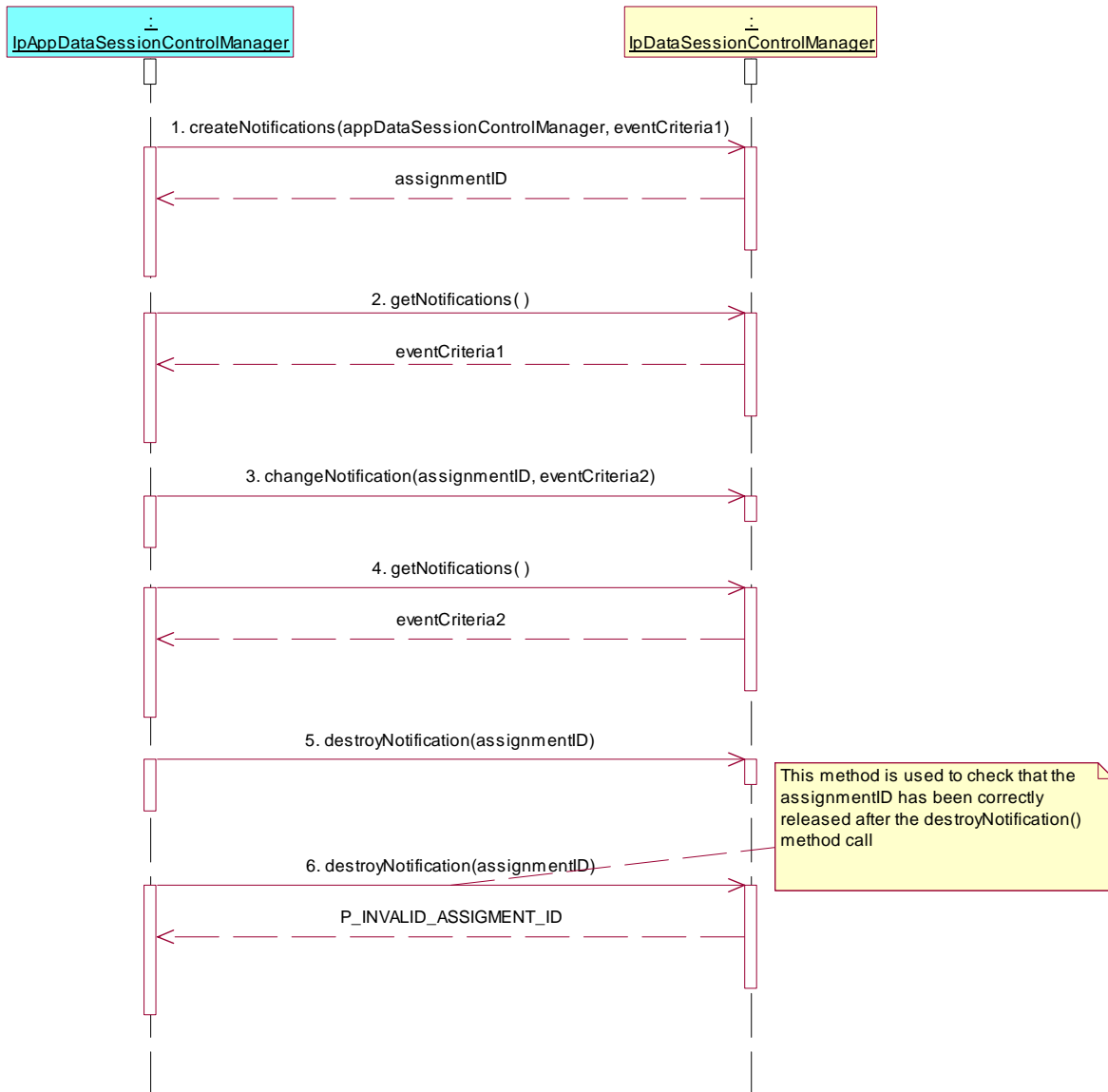Reference: ES 201 915-8 [1], clause 8.4

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 **createNotification()**
    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 201 915-8 [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 201 915-8 [1], clauses 7.4.1 and 8.3
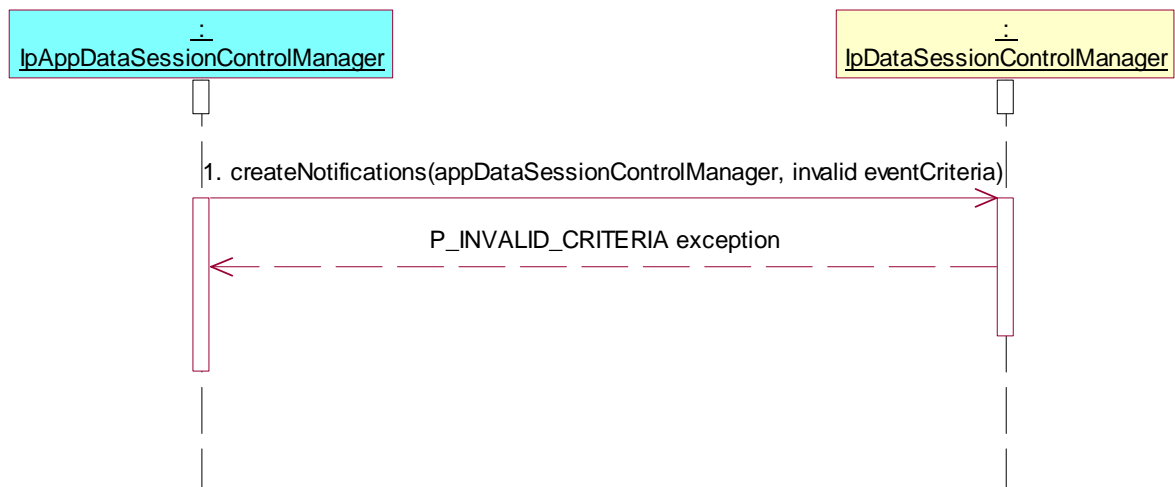
Preamble: Registration of the IUT (Data Session Control SCF) and the tester (application) to the framework. The
                 tester must have obtained a reference to an instance of the IpDataSessionControlManager interface
                 through selecting that service and signing the required service 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

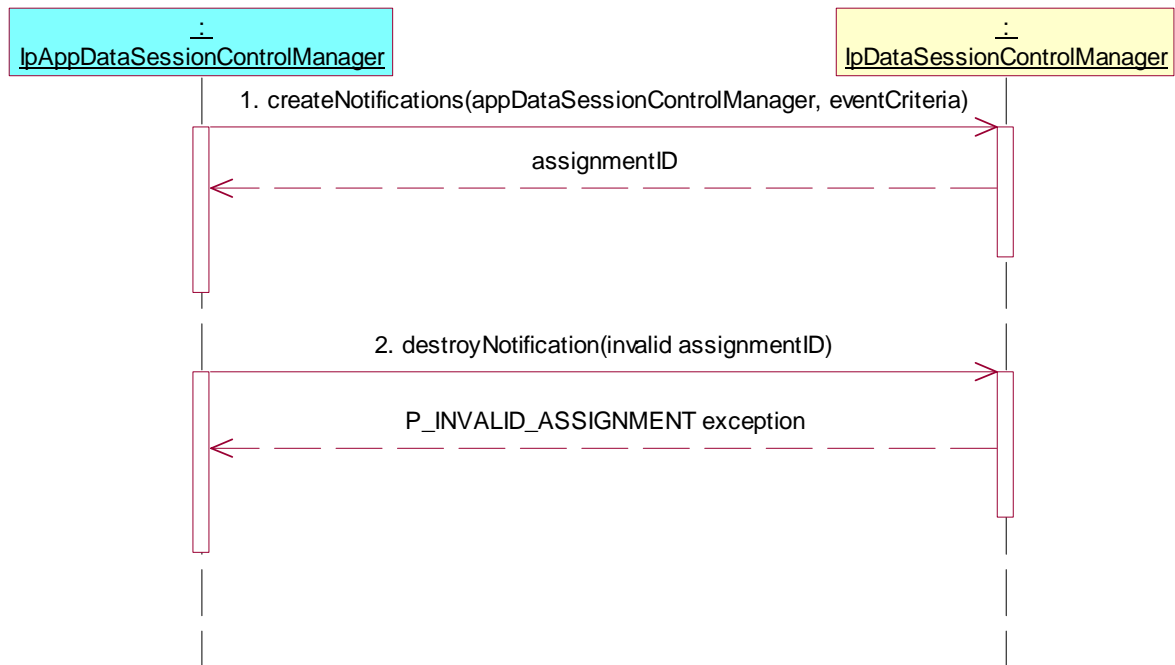Summary: **IpDataSessionControlManager**, changeNotification(), P_INVALID_ASSIGMENT_ID exception

Reference: ES 201 915-8 [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
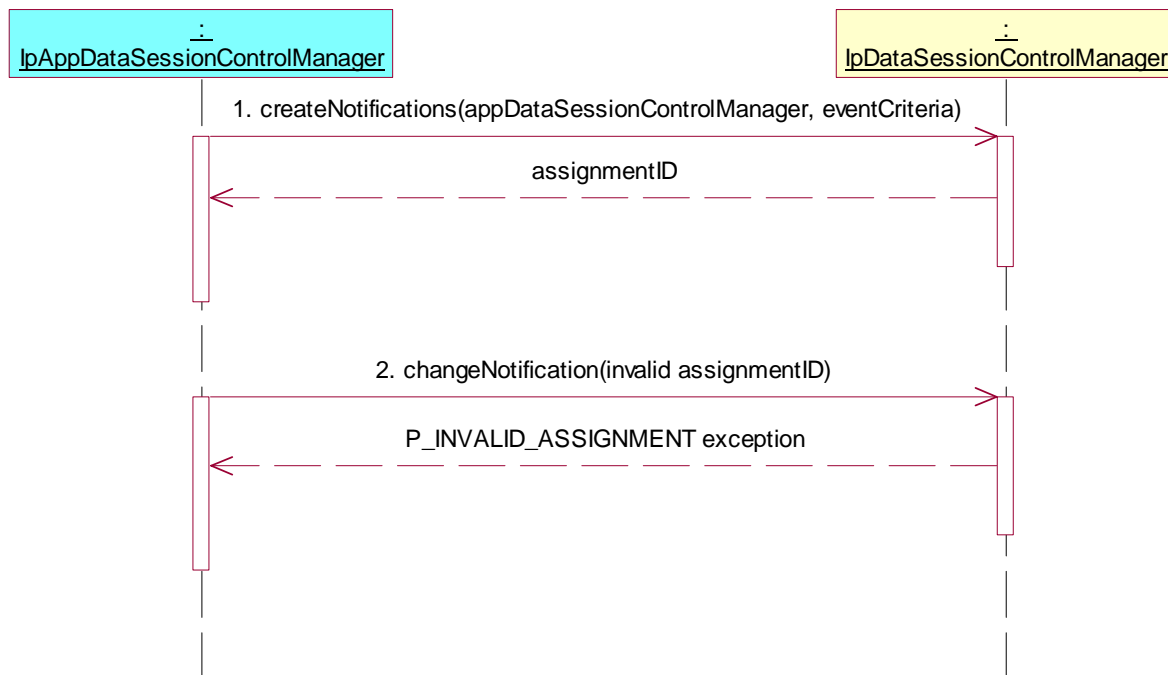
Reference: ES 201 915-8 [1], clauses 7.4.1 and 8.3

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

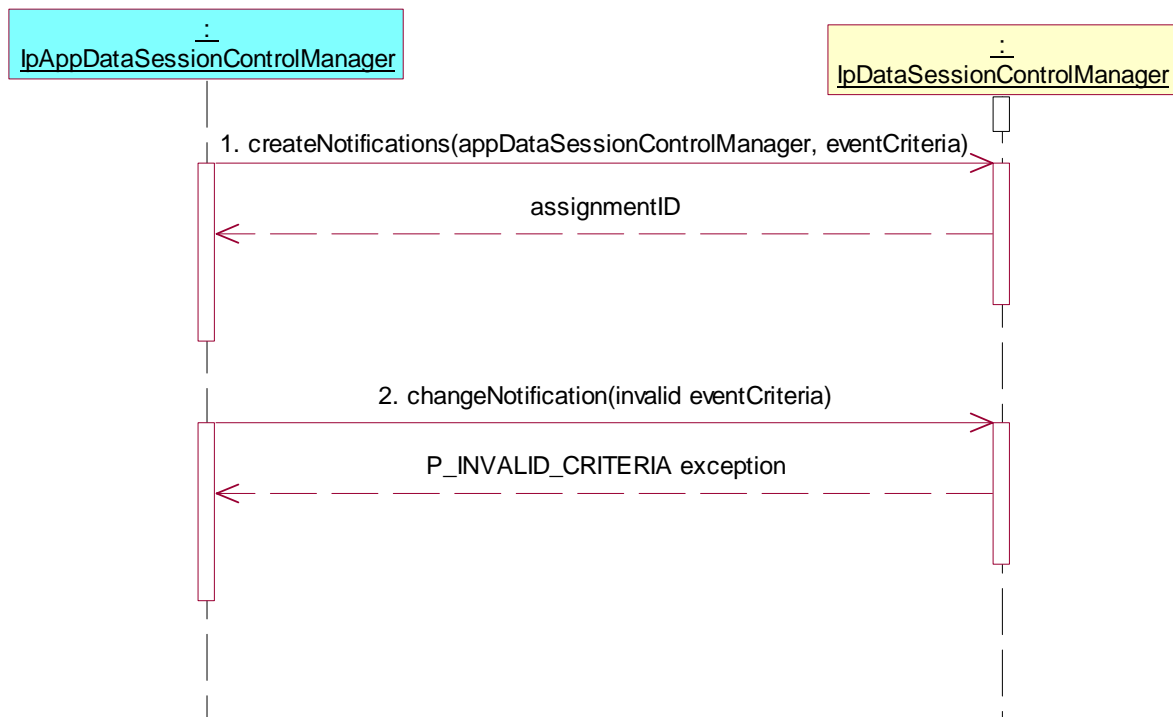Summary: all methods, successful, two createNotification() method calls
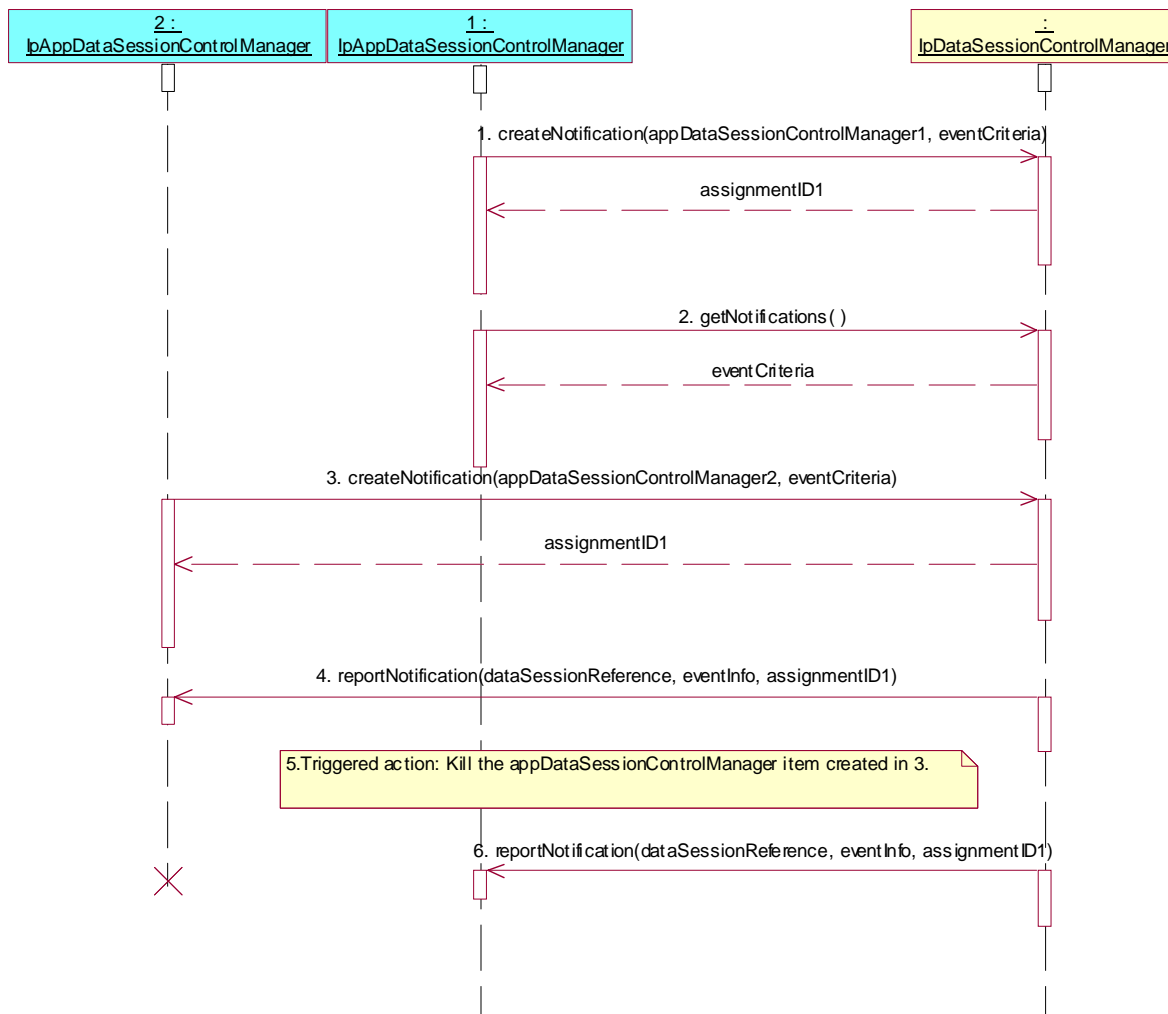
Reference: ES 201 915-8 [1], clause 8.4

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 **createNotification()**
    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 **createNotification()**
    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: dataSessionReferencer, 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.

5.2.1.2   IpDataSession

Test DSC_DS_01

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

Reference: ES 201 915-8 [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
      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.
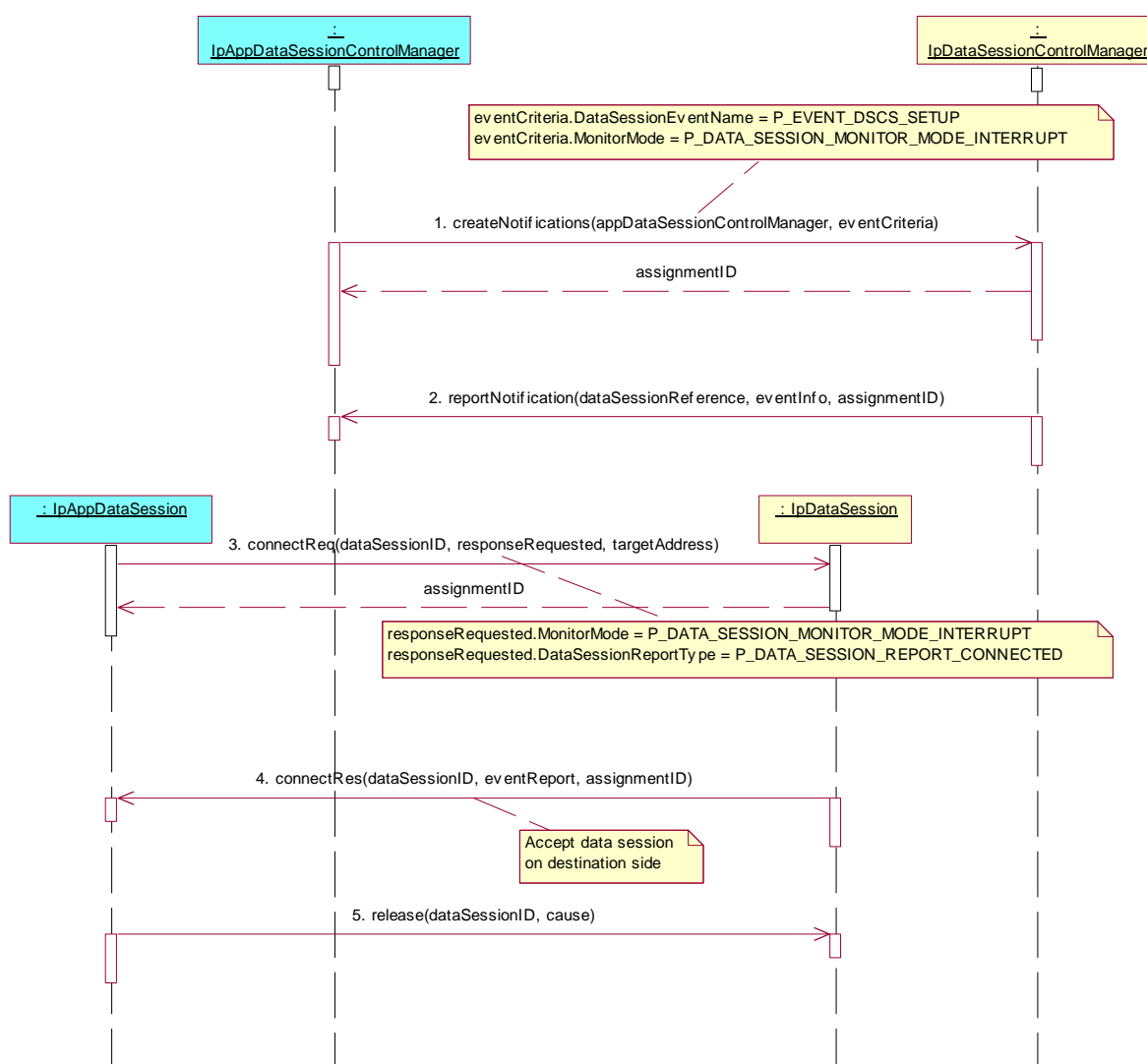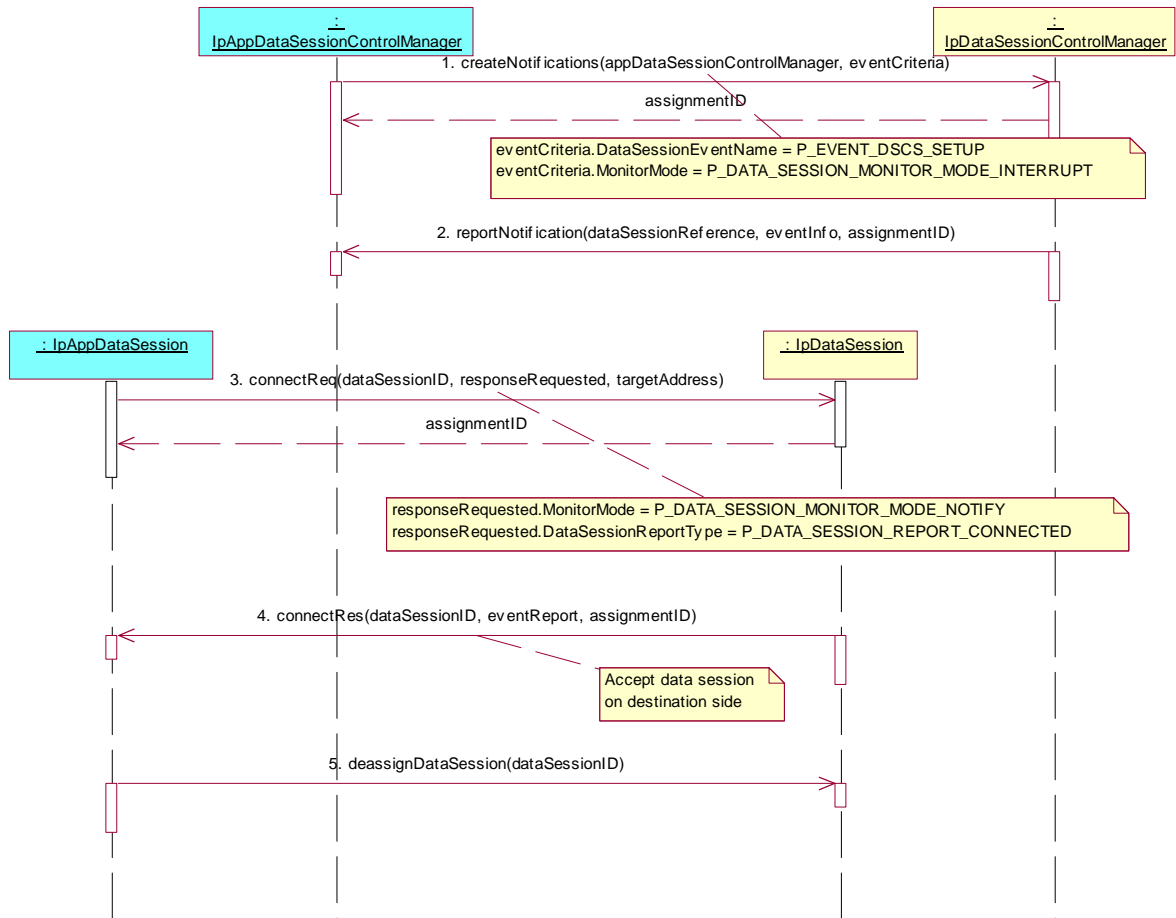
Reference: ES 201 915-8 [1], clauses 7.4.1 and 8.3

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
        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

```
        :                                                              :
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. connectReq(dataSessionID, responseRequested, targetAddress)

assignmentID

responseRequested.MonitorMode = P_DATA_SESSION_MONITOR_MODE_NOTIFY
responseRequested.DataSessionReportType = P_DATA_SESSION_REPORT_CONNECTED

4. connectRes(dataSessionID, eventReport, assignmentID)

Accept data session
on destination side

5. deassignDataSession(dataSessionID)
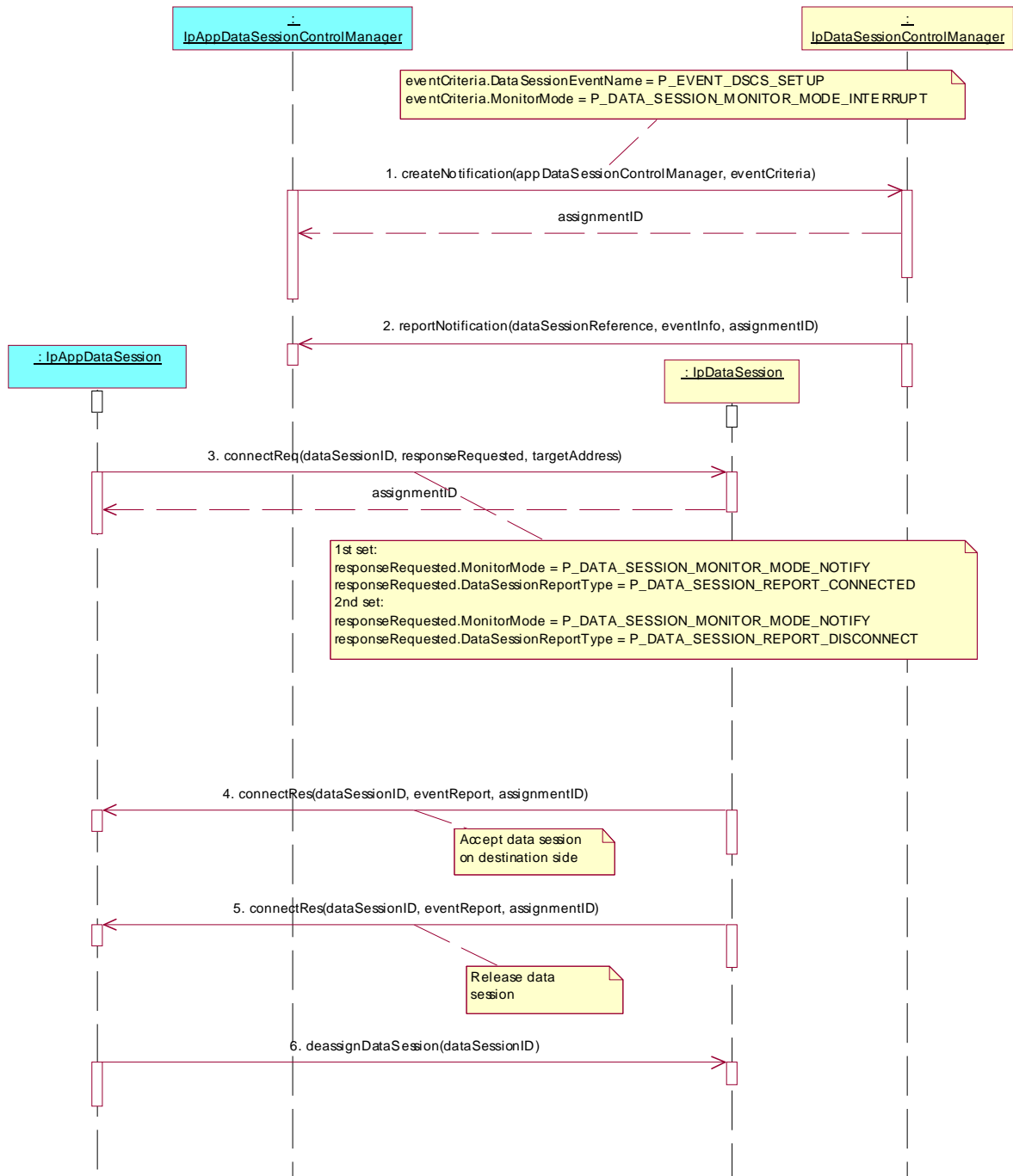
Test DSC_DS_03

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

Reference: ES 201 915-8 [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
   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

Test DSC_DS_04

Summary: **IpDataSession**, superviseDataSessionReq()
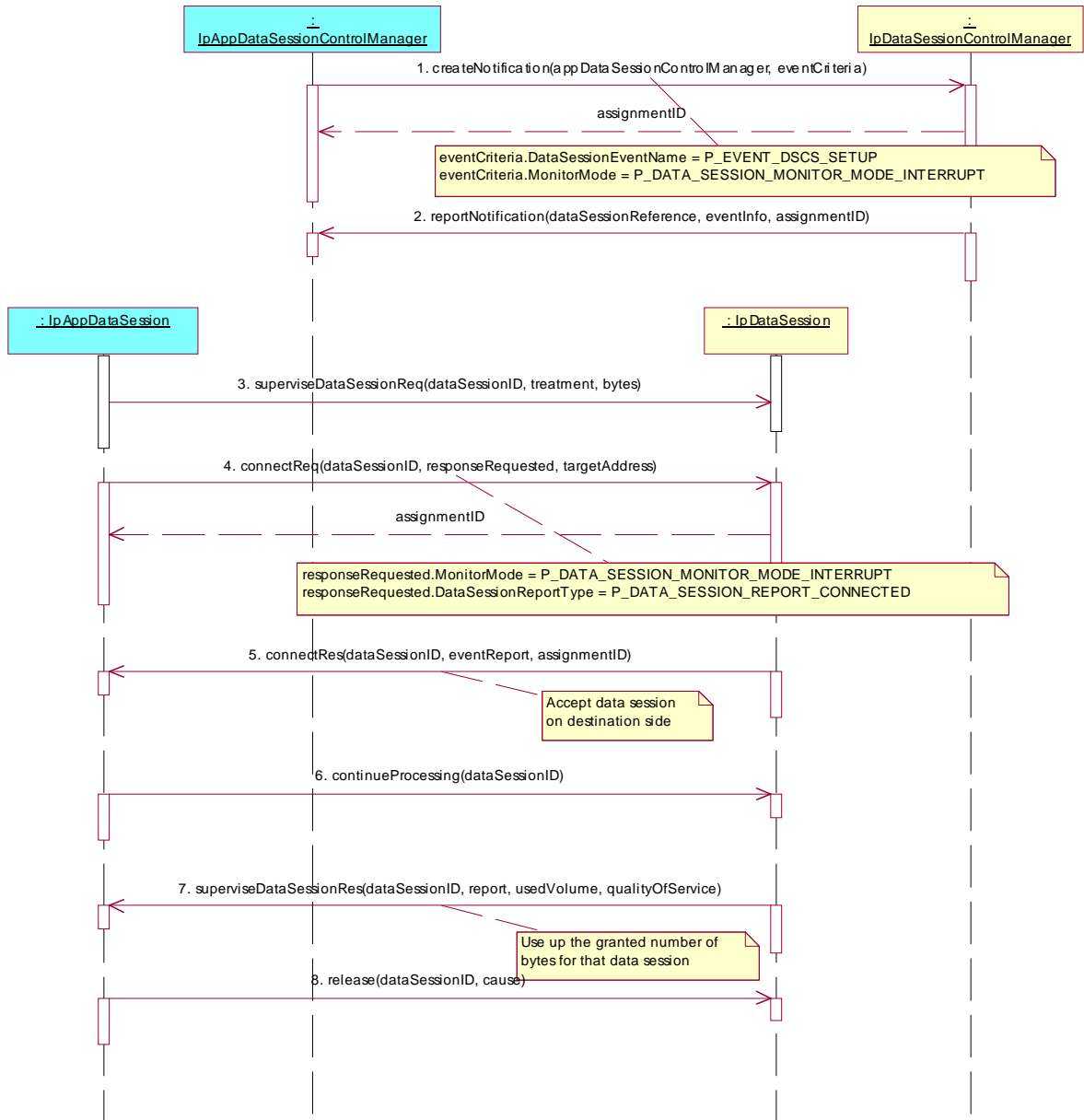
Reference: ES 201 915-8 [1], clauses 7.4.1 and 8.3

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 **createNotification()**
     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

Test DSC_DS_05

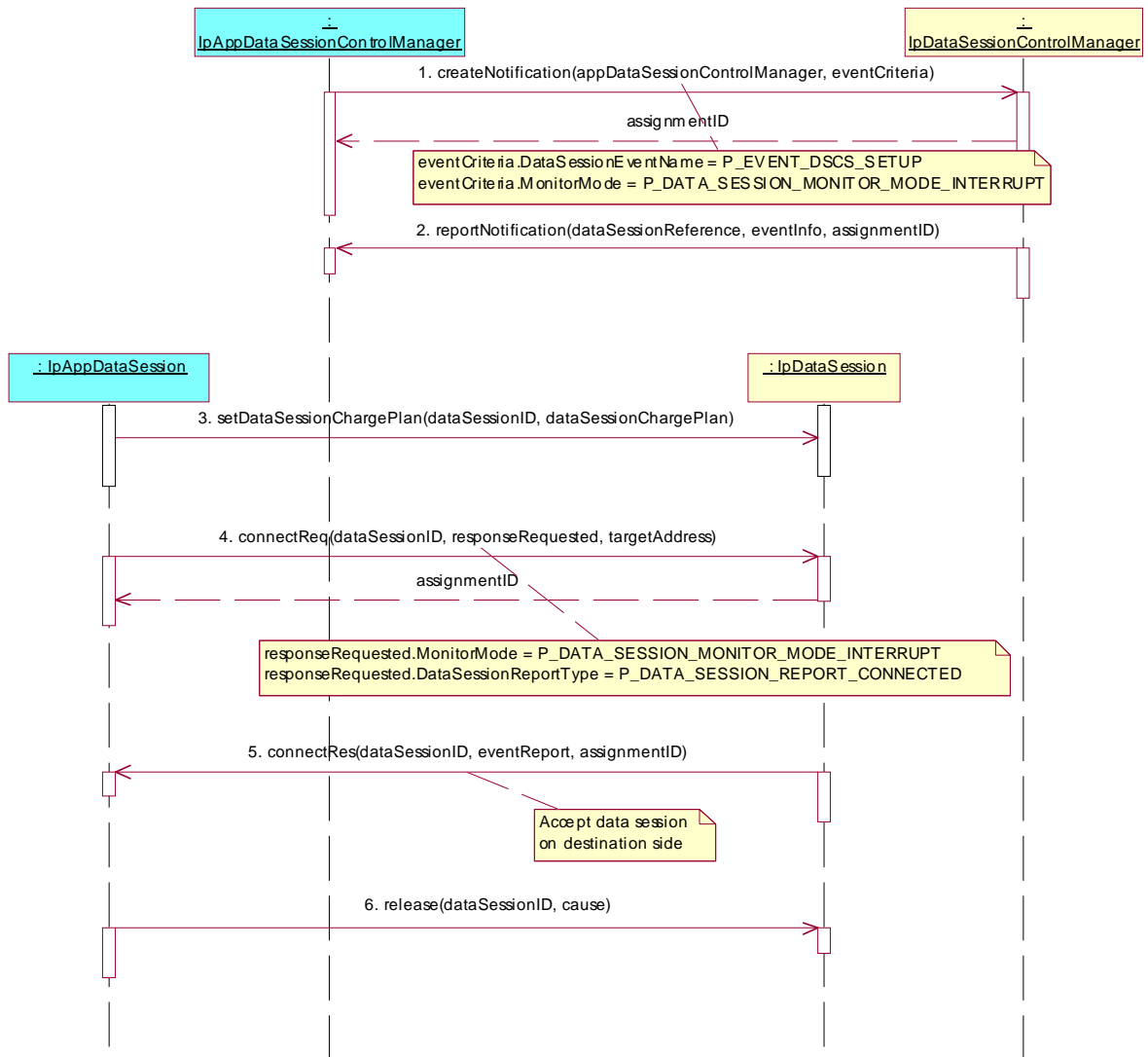Summary: **IpDataSession**, setDataSessionChargePlan()

Reference: ES 201 915-8 [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 **createNotification()**
    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. createNotification(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

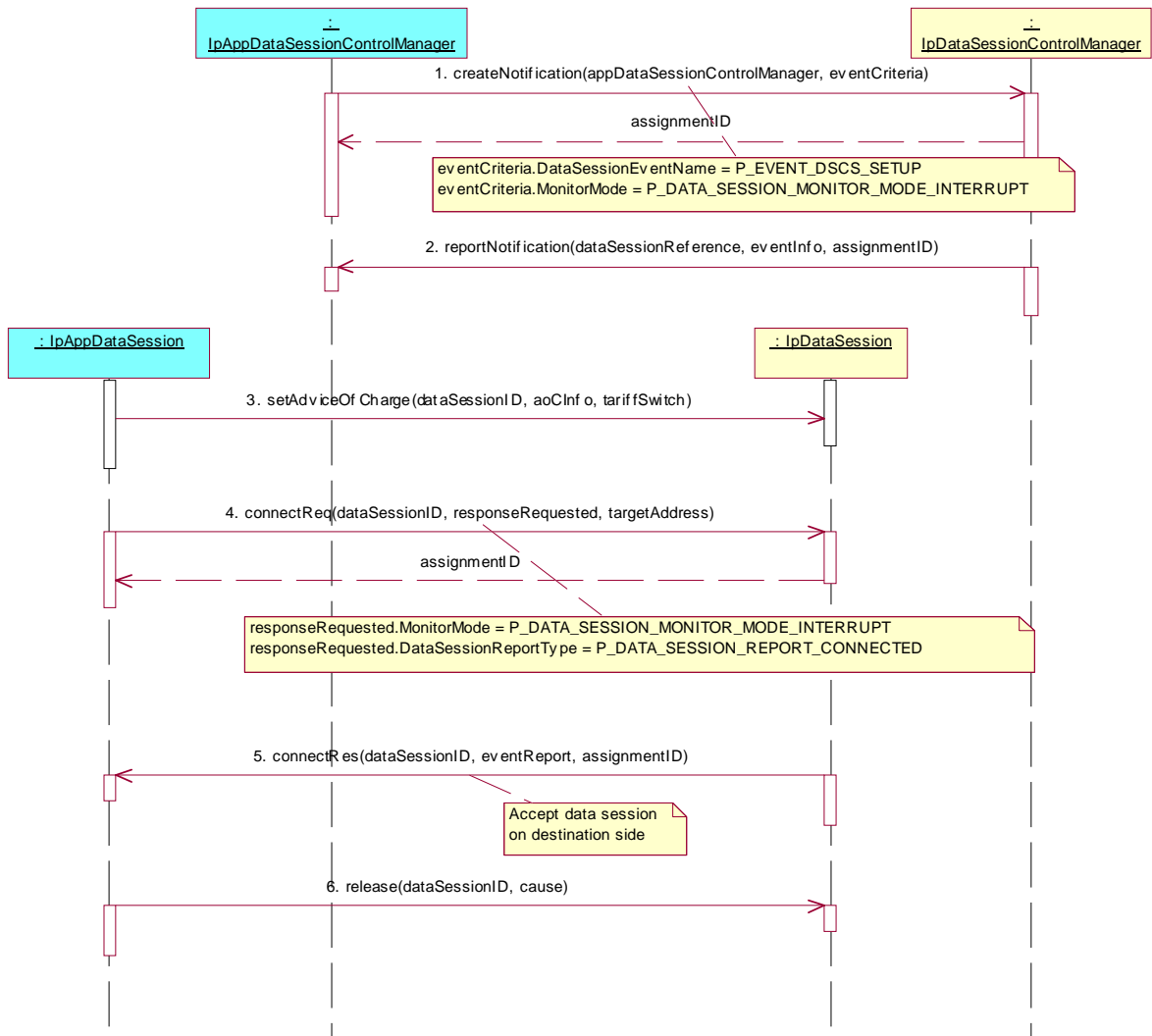Summary: **IpDataSession**, setAdviceOfCharge()

Reference: ES 201 915-8 [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 **createNotification()**
   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

: IpAppDataSessionControlManager

: IpDataSessionControlManager

1. createNotification(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. setAdviceOfCharge(dataSessionID, aoCInfo, tariffSwitch)

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)

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 201 915-8 [1], clause 8.2, 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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1.   Triggered Action: cause IUT to call **createNotification()** 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 201 915-8 [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
                   createNotification() method, the application is permitted to provide the
                   IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to
                   invoking createNotification().

Test Sequence:

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

Delay between createNotification and Interrupted

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

NOTE: 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
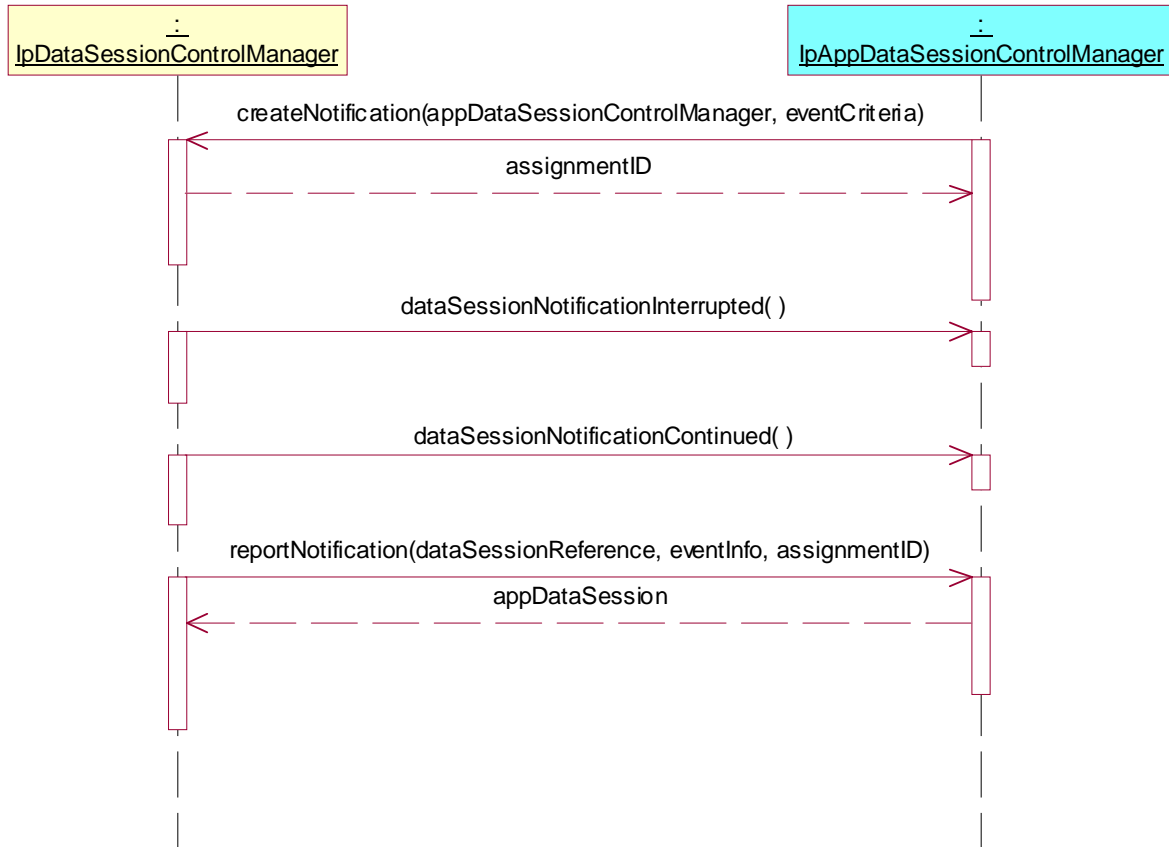
Test DSC_APP_CM_03

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

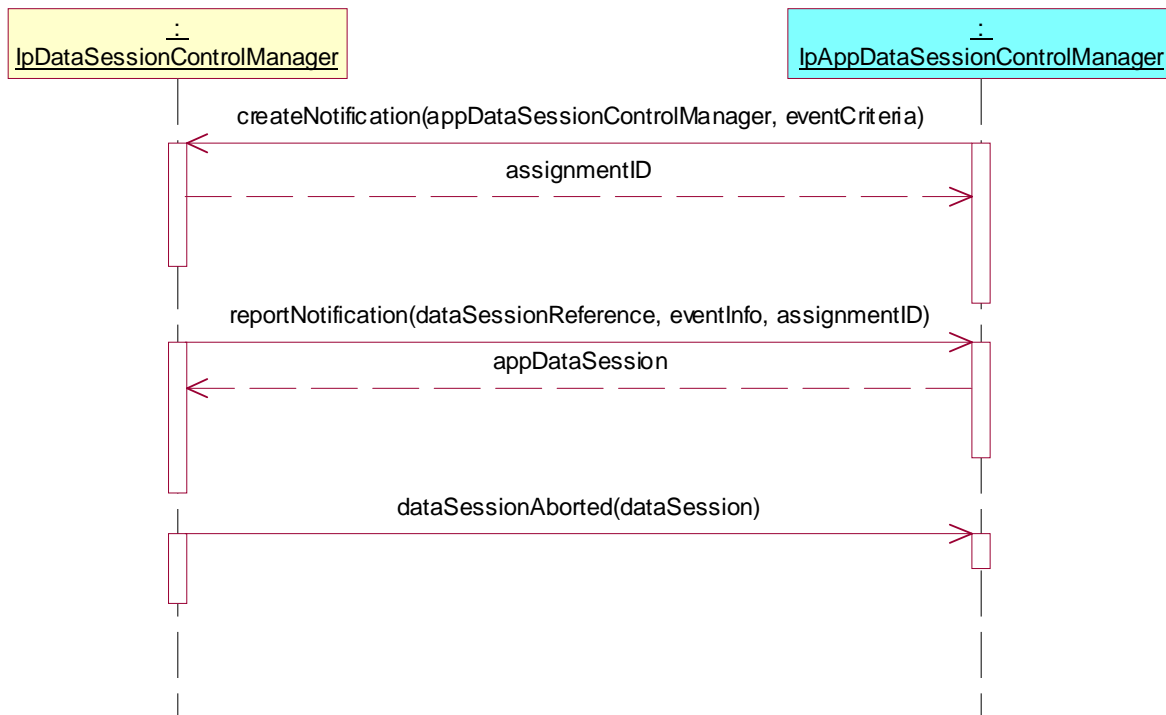Reference: ES 201 915-8 [1], clause 8.2

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
              createNotification() method, the application is permitted to provide the
              IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to
              invoking createNotification().

Test Sequence:

1.   Triggered Action: cause IUT to call **createNotification()** 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
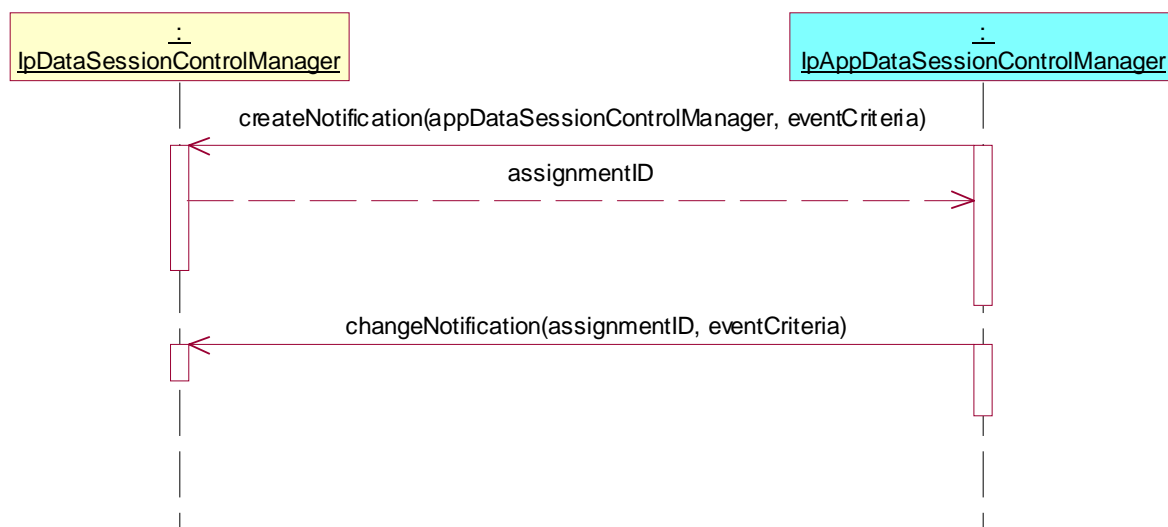
Reference: ES 201 915-8 [1], clause 8.4

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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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
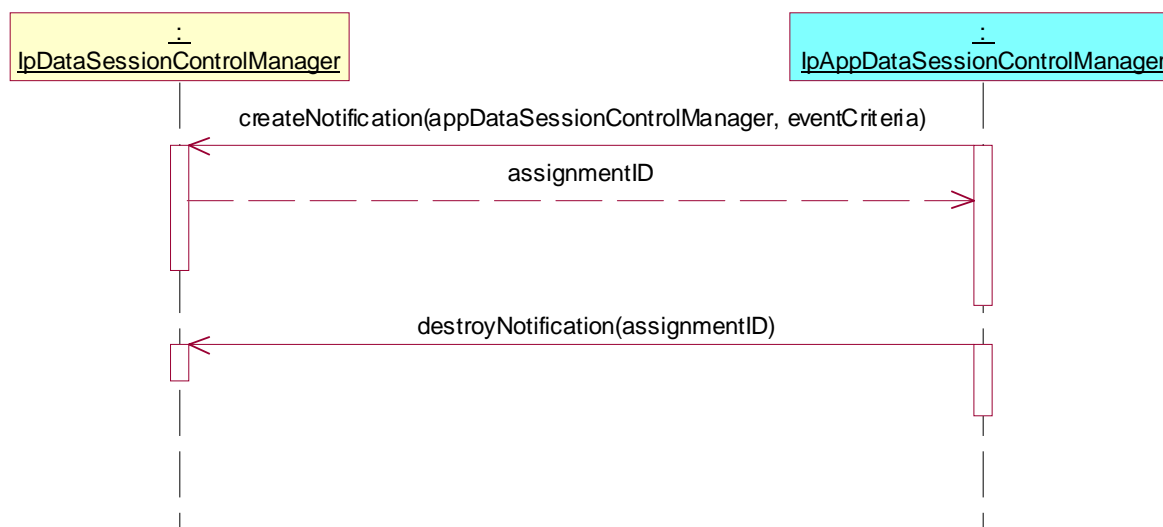
Reference: ES 201 915-8 [1], clause 8.4

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
                 createNotification() method, the application is permitted to provide the
                 IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to
                 invoking createNotification().

Test Sequence:

  1. Triggered Action: cause IUT to call **createNotification()** 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
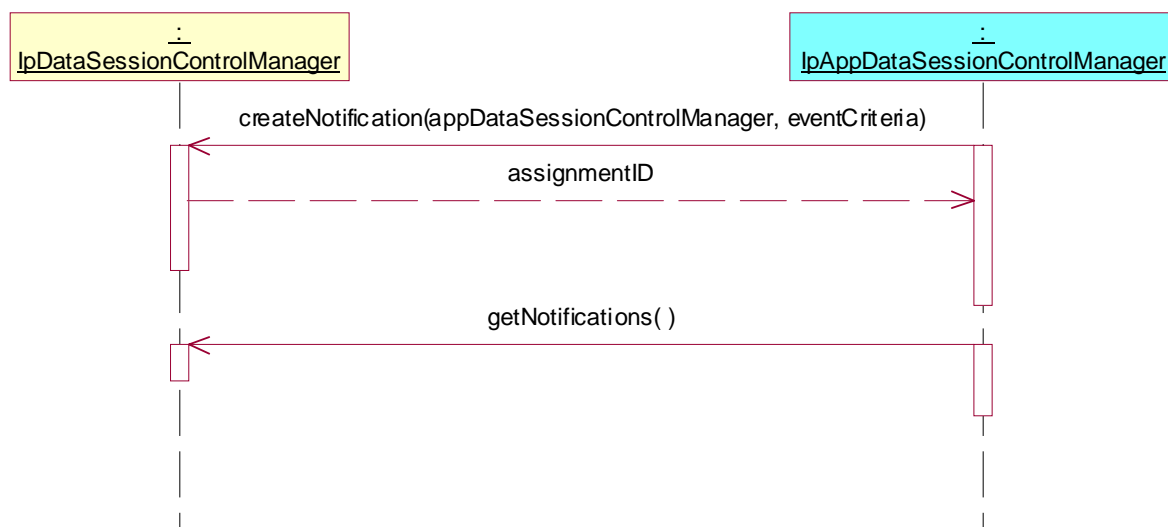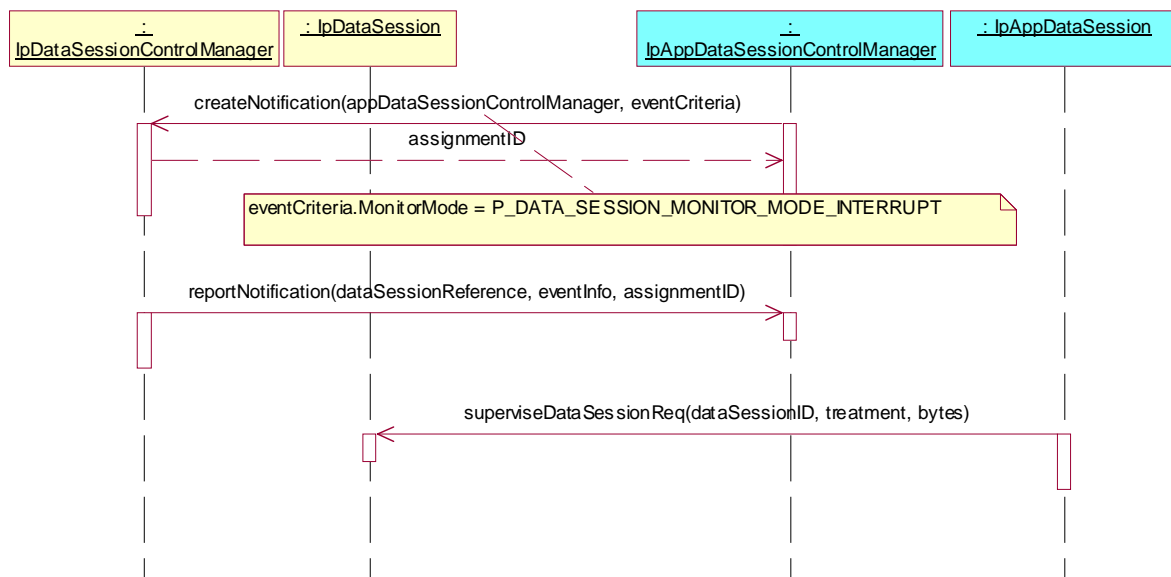
Reference: ES 201 915-8 [1], clause 8.4

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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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

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 201 915-8 [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 createNotification() 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 201 915-8 [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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1.   Triggered Action: cause IUT to call **createNotification()** 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

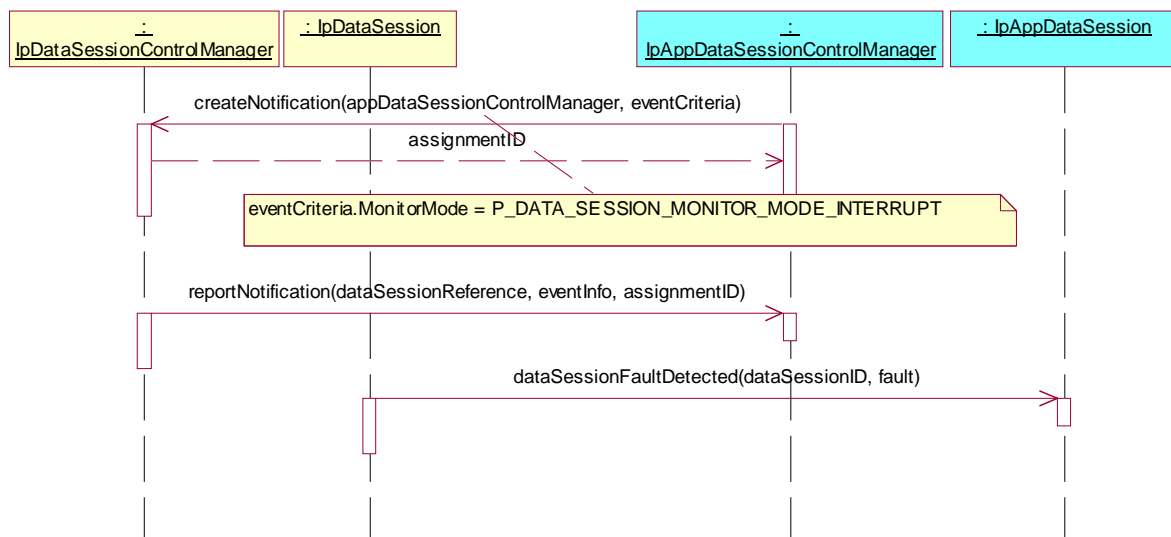Reference: ES 201 915-8 [1], clauses 8.1 and 8.3

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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

  1.   Triggered Action: cause IUT to call **createNotification()** 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 201 915-8 [1], clauses 8.1 and 8.3
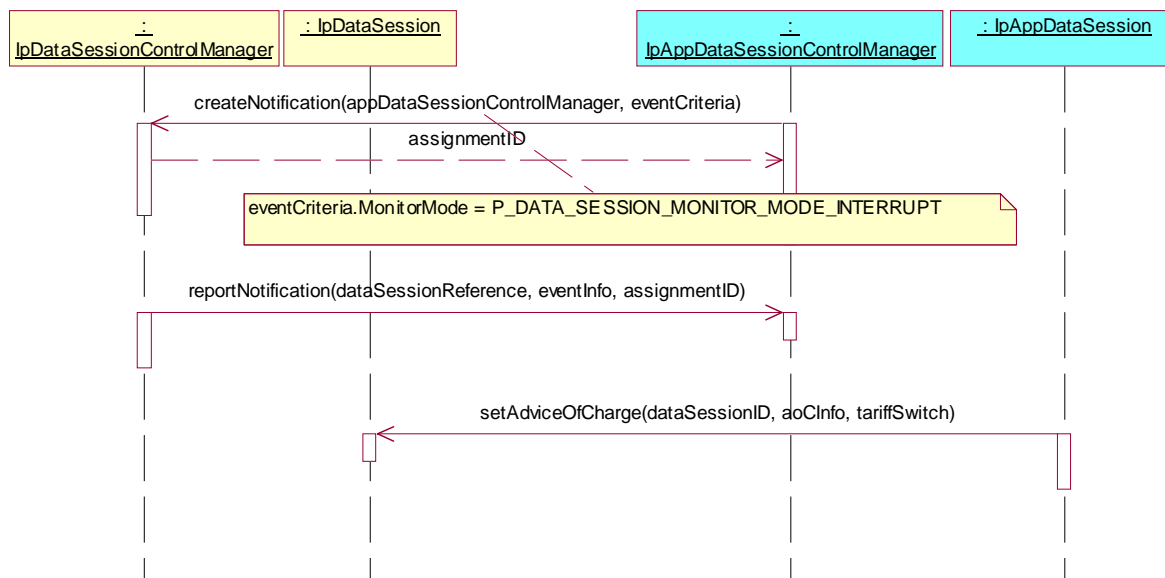
Precondition: IUT capable of invoking **setAdviceOfCharge()**

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
                  createNotification() method, the application is permitted to provide the
                  IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to
                  invoking createNotification().

Test Sequence:

1.   Triggered Action: cause IUT to call **createNotification()** 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

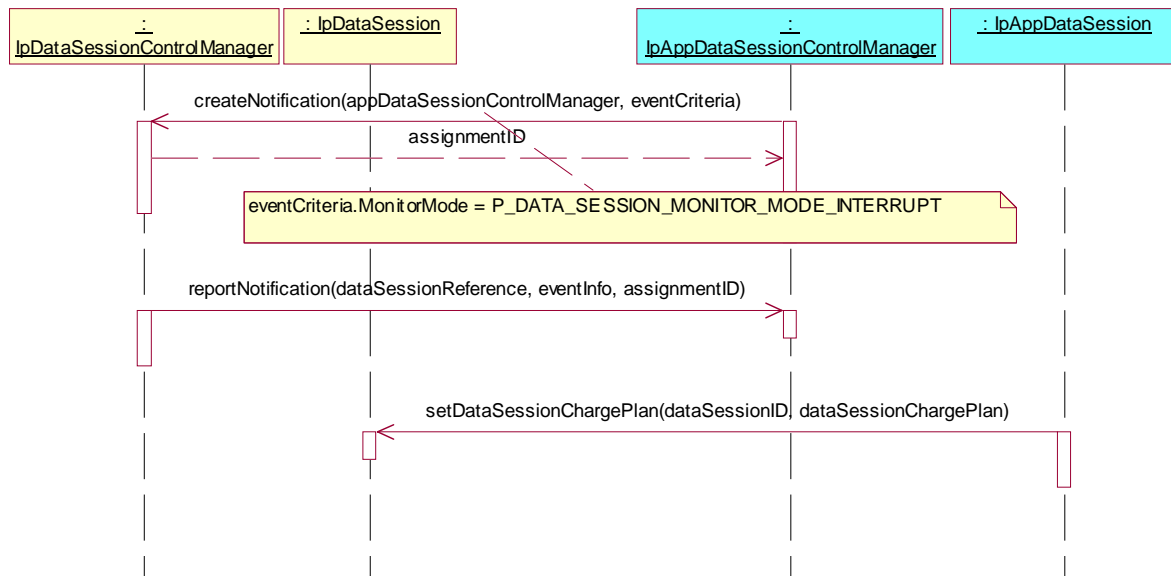Reference: ES 201 915-8 [1], clauses 8.1 and 8.3

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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1.   Triggered Action: cause IUT to call **createNotification()** 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 201 915-8 [1], clauses 8.1 and 8.3
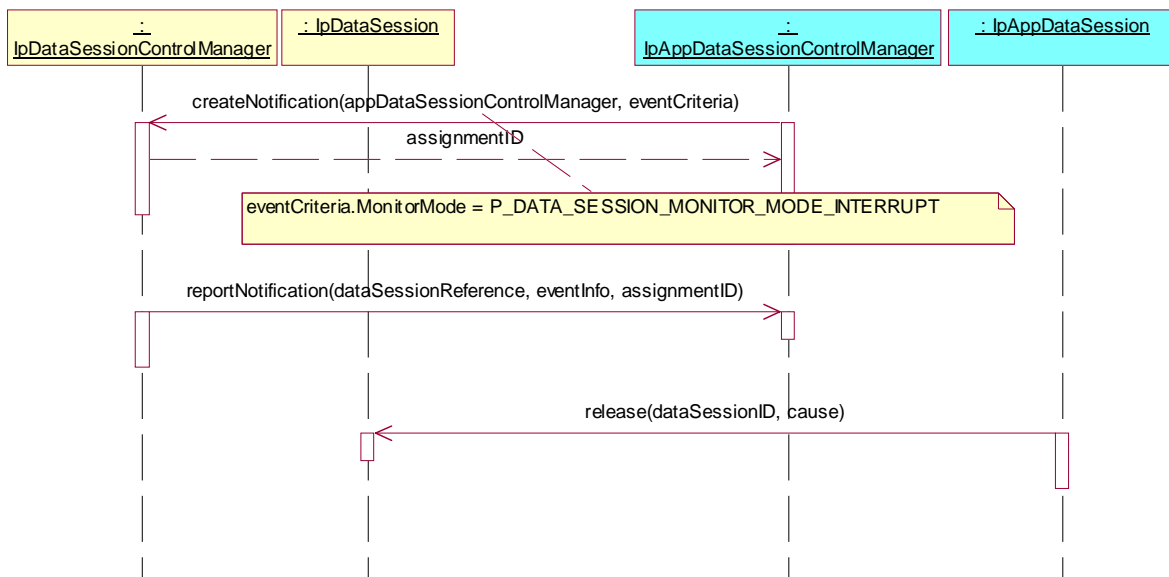
Precondition: IUT capable of invoking **release()**

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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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.
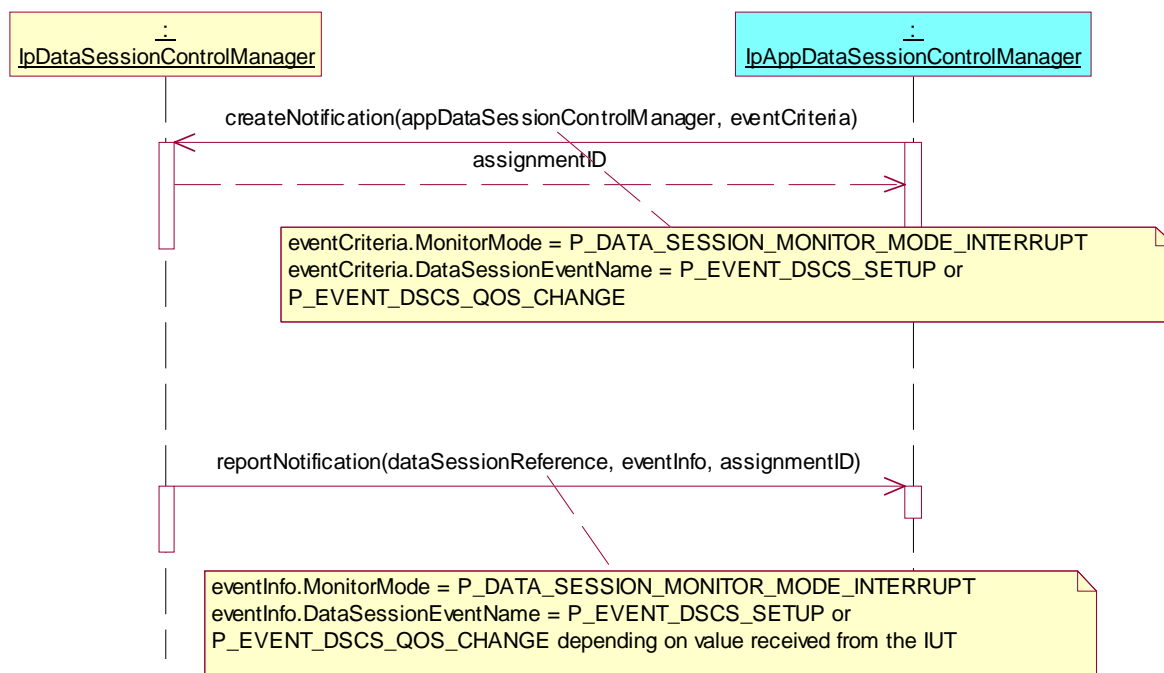
Preamble DSC_APP_DS_Active_Setup

Reference: ES 201 915-8 [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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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

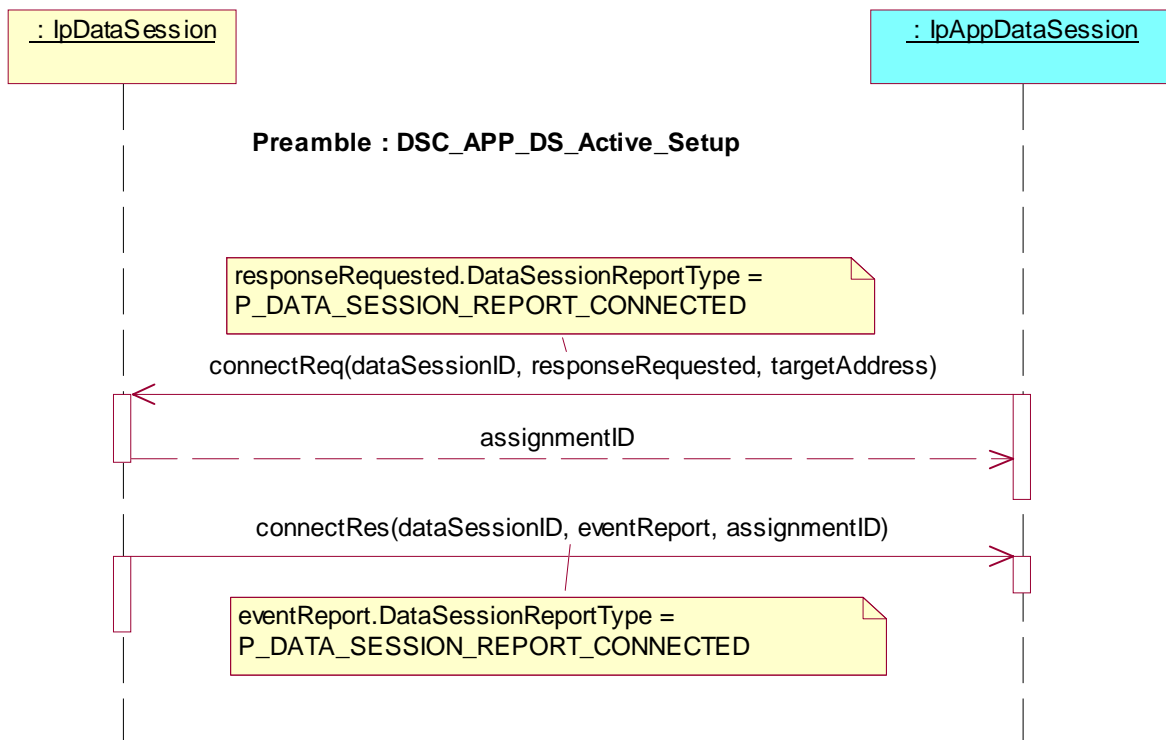Summary: **IpAppDataSession**, connect interrupted data session, wait for connected, successful
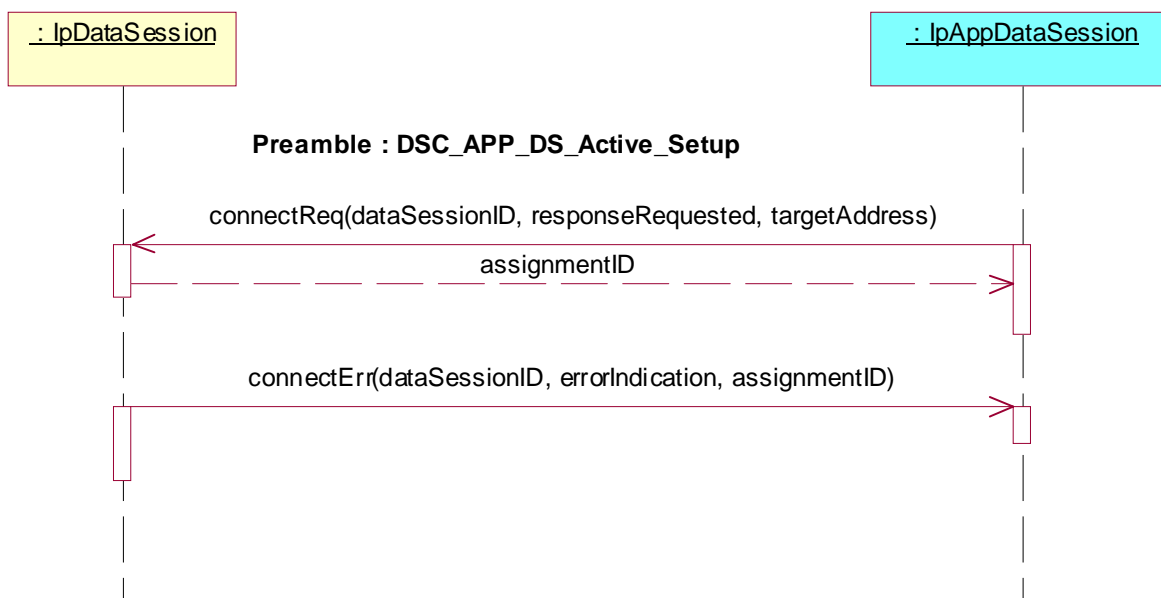
Reference: ES 201 915-8 [1], clauses 8.1 and 8.3

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

: IpDataSession		: IpAppDataSession

Preamble : DSC_APP_DS_Active_Setup

responseRequested.DataSessionReportType =
P_DATA_SESSION_REPORT_CONNECTED

connectReq(dataSessionID, responseRequested, targetAddress)

assignmentID

connectRes(dataSessionID, eventReport, assignmentID)

eventReport.DataSessionReportType =
P_DATA_SESSION_REPORT_CONNECTED

Test DSC_APP_DS_07

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

Reference: ES 201 915-8 [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:

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

Test DSC_APP_DS_08

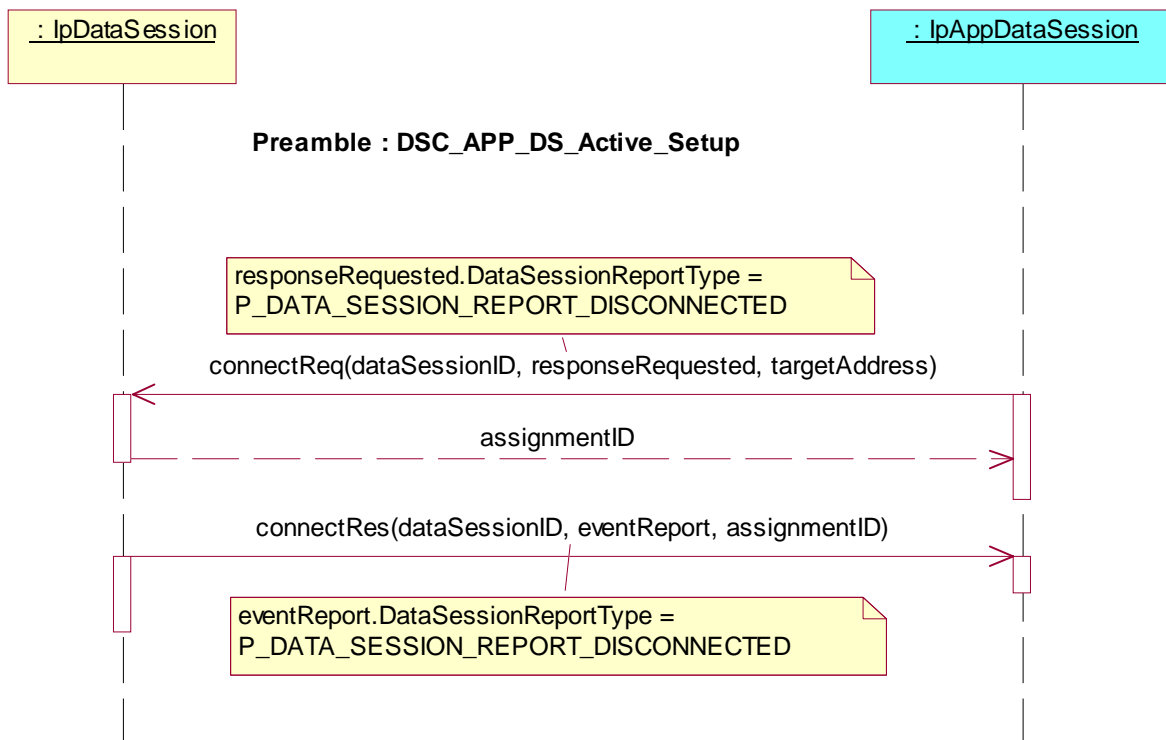Summary: **IpAppDataSession**, connect interrupted data session, wait for disconnected, successful

Reference: ES 201 915-8 [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 201 915-8 [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

### 5.2.2.2.2a Active state, Established Sub-state

Preamble DSC_APP_DS_Active_Established

Reference: ES 201 915-8 [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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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
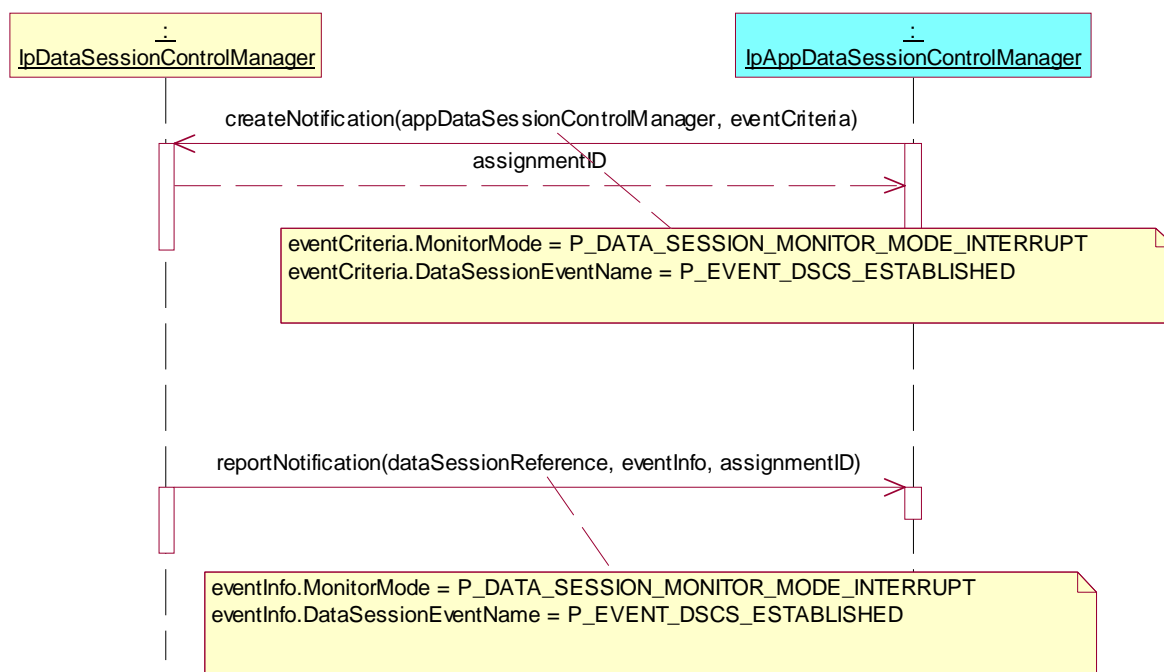
Test DSC_APP_DS_10

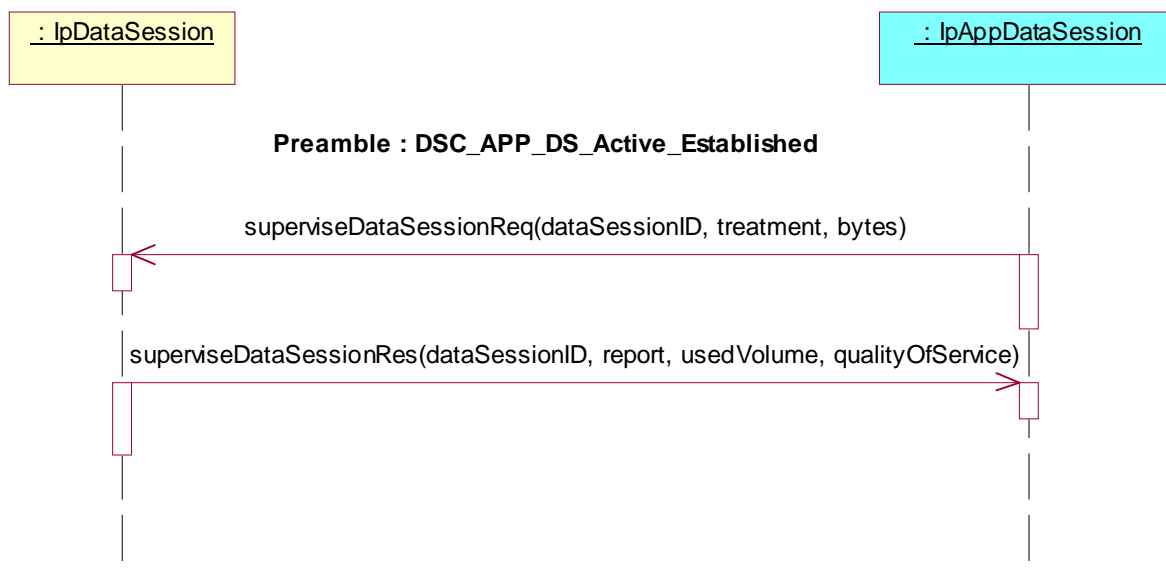Summary: **IpAppDataSession**, supervise data session, successful

Reference: ES 201 915-8 [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 201 915-8 [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
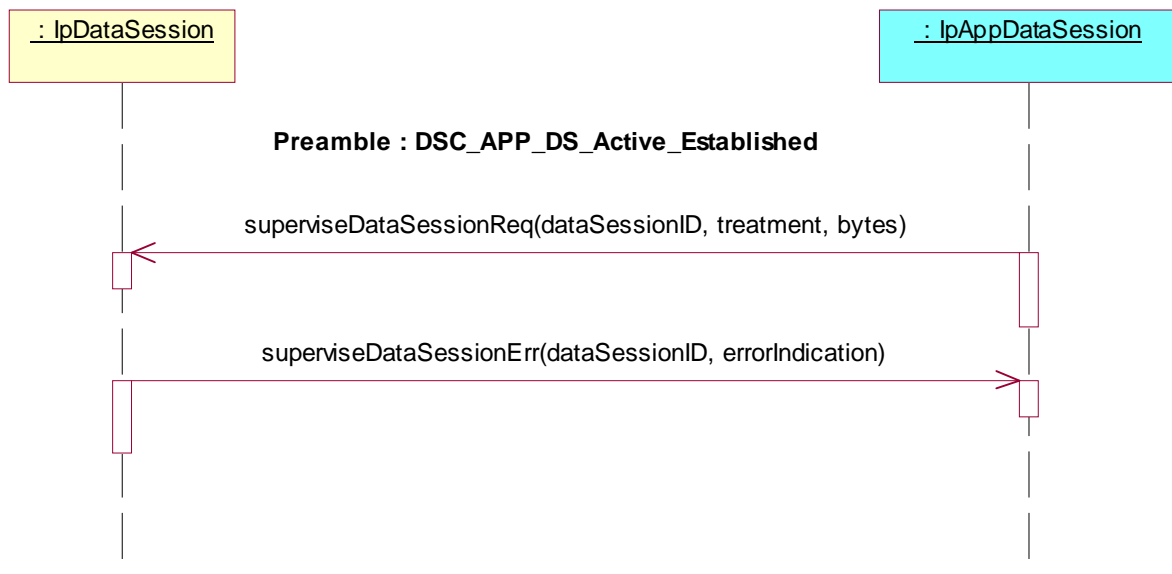
5.2.2.2.3 Network Released and Finished state

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

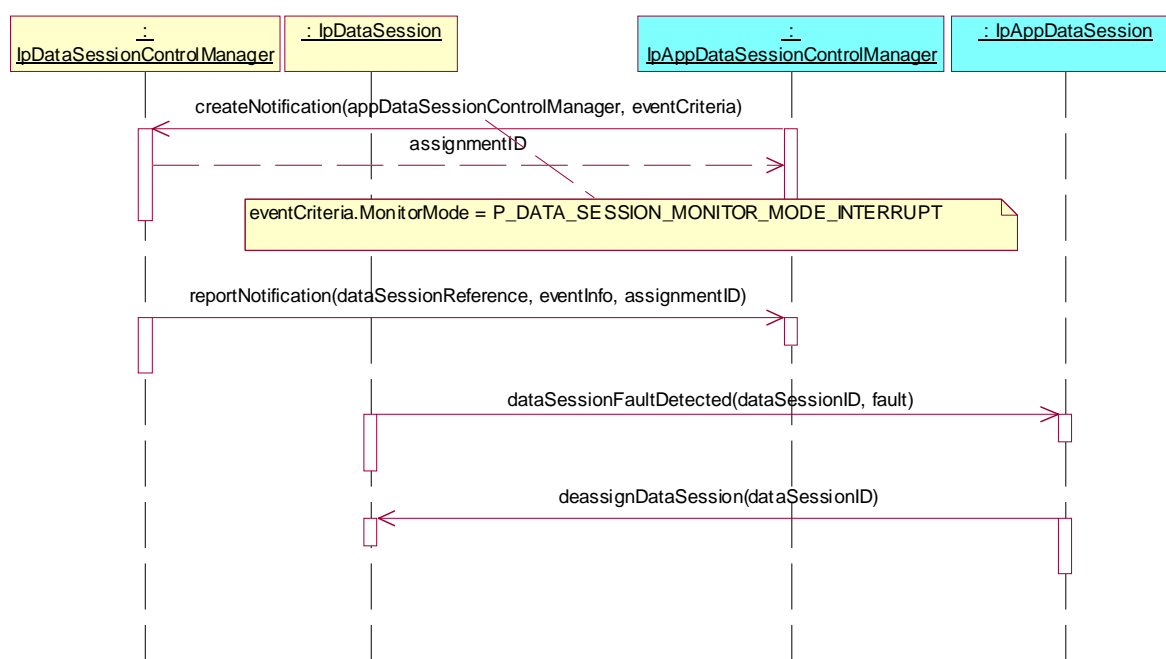Reference: ES 201 915-8 [1], clauses 8.1, 8.3 and 9.1

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 createNotification() method, the application is permitted to provide the IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to invoking createNotification().

Test Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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 201 915-8 [1], clauses 8.1, 8.3, and 9.1

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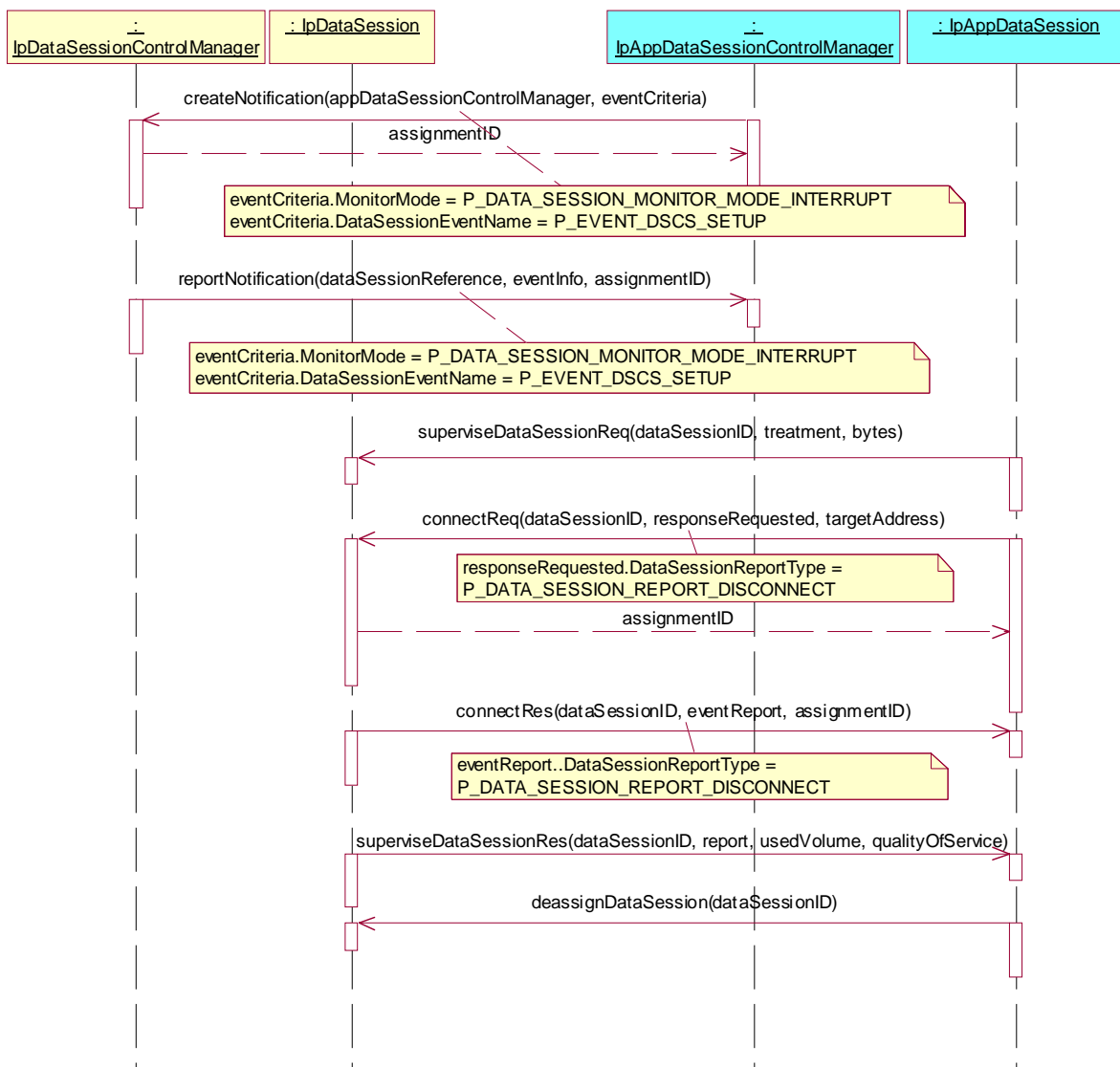
Preamble: Registration of the IUT (application) and the tester (Data Session Control SCF) to the framework. The
                IUT must have obtained a reference to an instance of the IpDataSessionControlManager interface
                through selecting that service and signing the required service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

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

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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: 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

5.2.2.2.4   Application Released state

Test DSC_APP_DS_14

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

Reference: ES 201 915-8 [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
                 createNotification() method, the application is permitted to provide the
                 IpAppDataSessionControlManager interface reference in a setCallback() method which it calls prior to
                 invoking createNotification().

Preamble Sequence:

1. Triggered Action: cause IUT to call **createNotification()** 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: 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
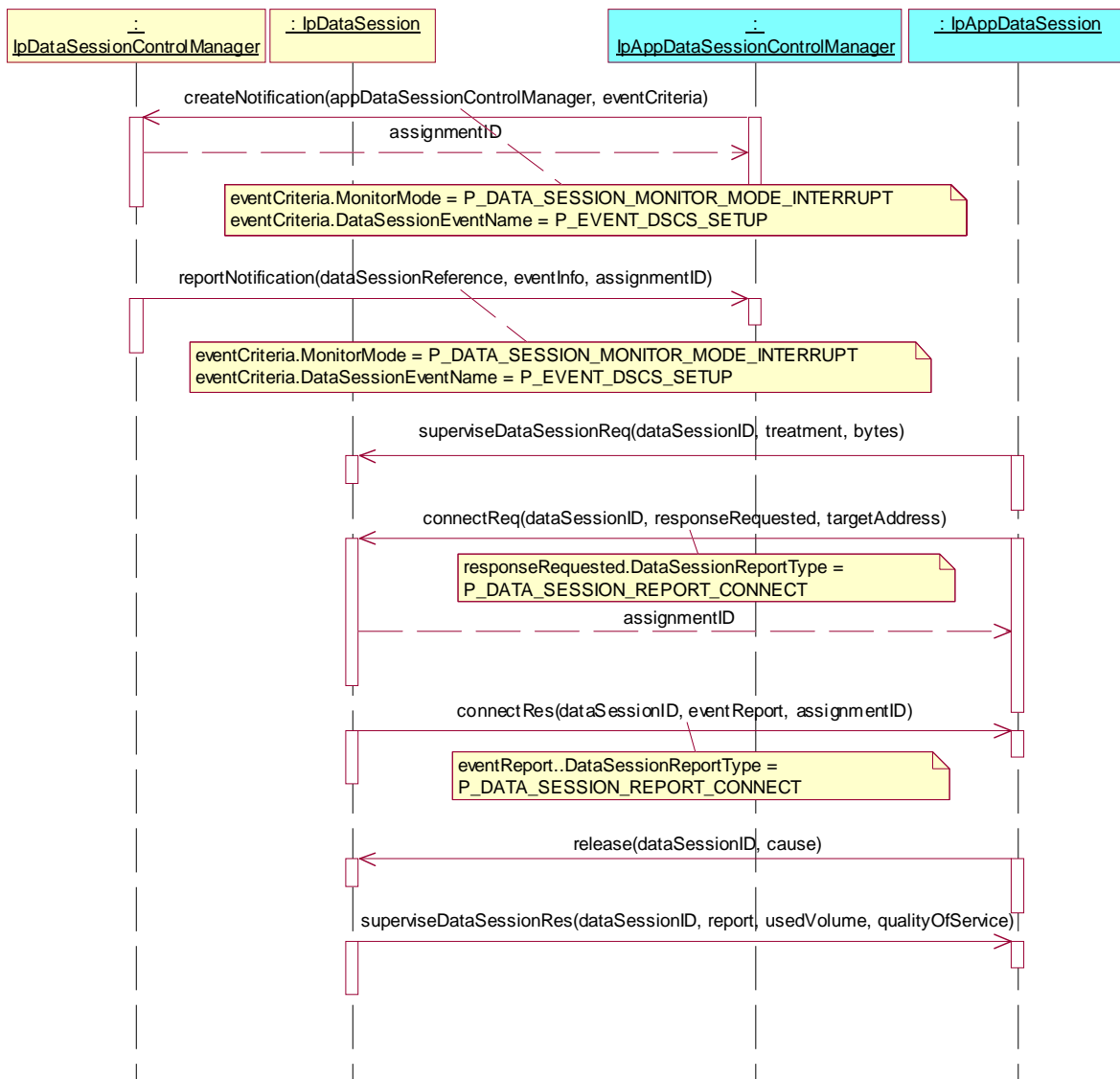
History

Document history		
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