

# ETSI TS 101 580-2 V2.1.1 (2013-12)



**Core Network and Interoperability Testing (INT);  
Diameter Conformance testing for Rx interface  
(3GPP Release 10);  
Part 2: Test Suite Structure (TSS) and Test Purposes (TP)**

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Reference

RTS/INT-00081-2

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Keywords

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## Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Core Network and Interoperability Testing (INT).

The present document is part 2 of a multi-part deliverable covering the test specifications for the Diameter protocol on the Rx interface, as identified below:

- Part 1: "Protocol Implementation Conformance Statement (PICS)";
- Part 2: "Test Suite Structure (TSS) and Test Purposes (TP)";**
- Part 3: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

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# 1 Scope

The present document provides the Test Suite Structure (TSS) and Test Purposes (TP) for the test specifications for the Diameter protocol on the Rx interface as specified in TS 129 214 [1] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETS 300 406 [5].

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# 2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

## 2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] ETSI TS 129 214 (V10.9.0): "Universal Mobile Telecommunications System (UMTS); LTE; Policy and charging control over Rx reference point (3GPP TS 29.214 version 10.9.0 Release 10)".
- [2] ETSI TS 101 580-1: "Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rx interface; (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)".
- [3] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [4] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [5] ETSI ETS 300 406: "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- [6] IETF RFC 3588: "Diameter Base Protocol".
- [7] ETSI TS 129 213 (V10.9.0): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Policy and charging control signalling flows and Quality of Service (QoS) parameter mapping (3GPP TS 29.213 version 10.9.0 Release 10)".

## 2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 129 214 [1] and the following apply:

**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].

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

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TS 129 214 [1] and the following apply:

TP	Test Purpose
TSS	Test Suite Structure

## 4 Test Suite Structure (TSS)

### 4.1 TP naming convention

TPs are numbered, starting at 001, within each group. Groups are organized according to the TSS.

**Table 1: TP identifier naming convention scheme**

Identifier: <TP>_<iut>_<scope>_<nn>			
<tp>	=	Test Purpose:	fixed to "TP"
<iut>	=	type of IUT:	PCRF or AF
<scope>	=	group	IPS Initial Provisioning Session MSI Modification of Session Information GRP Gate Related Procedure ST Session Termination SN Subscription Notification TPE Traffic Plane Events
<nn>	=	sequential number	(01-99)

### 4.2 Test strategy

As the base standard TS 129 214 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification TS 101 580-1 [2].

## 4.3 TP structure

Each TP has been written in a manner which is consistent with all other TPs. The intention of this is to make the TPs more readable and checkable. A particular structure has been used which is illustrated in table 2. This table should be read in conjunction with any TP, i.e. please use a TP as an example to facilitate the full comprehension of table 2.

**Table 2: Structure of a single TP**

TP part	Text	Example
<b>Header</b>	<Identifier> <clause number in base TS 129 214 [1]> <PICS reference>	see table 1 clause 4.4.1 A.2/3
<b>Start point</b>	Ensure that the IUT in the <state> <i>see RFC 3588 [6] clause 5.6</i> <i>and/or further actions before stimulus</i> <i>if the action is sending/receiving</i> <i>see below for message structure</i>	Open state having sent an AA-Request
<b>Stimulus</b>	<trigger>, <i>see below for message structure</i>  or <goal>	on receipt of a Capabilities-Exchange-Request (see note 2) to require PCC supervision, etc.
<b>Reaction</b>	<action>. <i>if the action is sending</i> <i>see below for message structure</i> <next action>, etc.	sends, saves, does, etc.
<b>Message structure</b>	<message type>  a) containing a(n) <avp name> AVP b) indicating <coding of the field> and <i>back to a) or b) (see note 3)</i>	Capabilities-Exchange-Answer, etc. (see note 2) Vendor-Id, etc.
NOTE 1: Text in italics will not appear in TPs and text between <> is filled in for each TP and may differ from one TP to the next.		
NOTE 2: All messages shall be considered as "valid and compatible" unless otherwise specified in the test purpose. This includes the presence of all mandatory AVPs as specified in RFC 3588 [6] and in TS 129 214 [1], clause 5.6.		
NOTE 3: An AVP can be embedded into another AVP. This is expressed by indentations, e.g. if Message1 contains AVP1 and AVP2 where AVP1 has AVP3 embedded this will be expressed like this: sends/receives Message 1 containing AVP1 containing AVP3 indicating ... containing AVP2 indicating ...		

## 4.4 Test Purposes

All PICS items referred to in this clause are as specified in TS 101 580-1 [2] unless indicated otherwise by another numbered reference. PICS items are only meant for test selection, therefore only PICS items with status optional or conditional are explicitly mentioned. Call flow information for described test purposes is specified in TS 129 213 [7].

### 4.4.1 AF Role

Test Selection: IUT takes the role of the AF; PICS A.2/1

#### 4.4.1.1 Initial Provisioning of Session Information for AF Role

NOTE: In this clause it is assumed that two user equipments (UE) have registered to the IMS network via the AF (acting as P-CSCF) and that one UE has sent a SIP INVITE request addressed to a second UE towards the AF with the intention to establish a SIP session between the two UEs.

TP_AF_IPS_01	Standards Reference: 4.4.1 ¶ 1	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state <b>to indicate</b> that a new AF session has been established and media information is available and requires PCC supervision, <b>sends an AA-Request</b> containing a Framed-IP-Address AVP indicating the full IP address of the UE containing a Media-Component-Description AVP containing the Flow-Status AVP.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_AF_IPS_02	Standards Reference: 4.4.1 (last two ¶ in clause)	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having sent an AA-Request <b>on receipt of an AA-Answer</b> , containing a Result-Code AVP indicating DIAMETER_SUCCESS containing an Access-Network-Charging-Address AVP, <b>does not reject the AA-Answer.</b>	
<b>Comments:</b>		

TP_AF_IPS_03	Standards Reference: 4.4.1 ¶ 10	PICS item: A.3/2
<b>Test purpose:</b>	Ensure that the IUT in the Open state <b>to indicate</b> that a new AF session has been established and media information is available and requires PCC supervision, for sponsored connectivity, <b>sends an AA-Request</b> containing a Sponsored-Connectivity-Data AVP containing a Sponsor-Identity AVP containing an Application-Service-Provider-Identity AVP.	
<b>Comments:</b>		

#### 4.4.1.2 Modification of Session Information for AF Role

NOTE: In this clause it is assumed that two user equipments (UE) have registered to the IMS network and have established a SIP session between each other via the AF (acting as P-CSCF) and the corresponding AF session has successfully been established with the exchange of AA-Request and AA-Answer messages.

TP_AF_MSI_01	Standards Reference: 4.4.2 ¶ 1	PICS item: A.3/3
<b>Test purpose:</b>	Ensure that the IUT in the Open state with an AF session successfully established, <b>to indicate</b> modification of the session information, <b>sends an AA-Request</b> containing a Media-Component-Description AVP.	
<b>Comments:</b>		

TP_AF_MSI_02	Standards Reference: 4.4.2 (last ¶ in clause)	PICS item: A.3/3
<b>Test purpose:</b>	Ensure that the IUT in the Open state with an AF session successfully established and having requested modification of the session information within an AA-Request, <b>on receipt of an AA-Answer</b> , containing a Result-Code AVP indicating DIAMETER_SUCCESS containing an Access-Network-Charging-Address AVP, <b>does not reject the AA-Answer.</b>	
<b>Comments:</b>		



<b>TP_AF_MSI_03</b>	<b>Standards Reference:</b> <b>4.4.2 ¶ 5</b>	<b>PICS item:</b> <b>A.3/2, A.3/3</b>
<b>Test purpose:</b>	Ensure that the IUT in the Open state with an AF session successfully established, <b>to indicate</b> modification of the session information, for sponsored connectivity, <b>sends an AA-Request</b> containing a Sponsored-Connectivity-Data AVP containing a Sponsor_Identity AVP containing an Application-Service-Provider-Identity AVP.	
<b>Comments:</b>		

#### 4.4.1.3 Gate Related Procedures for AF Role

<b>TP_AF_GRP_01</b>	<b>Standards Reference:</b> <b>4.4.3 ¶ 6</b>	<b>PICS item:</b> <b>A.3.4</b>
<b>Test purpose:</b>	Ensure that the IUT in the Open state having sent an AA-Request and having received an AA-Answer, <b>on receipt of an RA-Request</b> containing a Specific-Action AVP indicating INDICATION_OF_FAILED_RESOURCES_ALLOCATION, <b>sends an RA-Answer.</b>	
<b>Comments:</b>		

#### 4.4.1.4 Session Termination for AF Role

<b>TP_AF_ST_01</b>	<b>Standards Reference:</b> <b>4.4.4 ¶ 1</b>	<b>PICS item:</b>
<b>Test purpose:</b>	Ensure that the IUT in the Open state having sent an AA-Request and having received an AA-Answer containing a Result-Code AVP indicating DIAMETER_SUCCESS, <b>on termination</b> of the AF session, <b>sends an ST-Request.</b>	
<b>Comments:</b>		

#### 4.4.1.5 Subscription to Notification of Signalling Path Status for AF Role

<b>TP_AF_SN_01</b>	<b>Standards Reference:</b> <b>4.4.5 ¶ 1</b>	<b>PICS item:</b> <b>A.3/6</b>
<b>Test purpose:</b>	Ensure that the IUT in the Open state <b>to open</b> an Rx diameter session and to subscribe to notifications of the status of the AF signalling transmission path, <b>sends an AA-Request</b> containing a Framed-IP-Address AVP indicating the full IP address of the UE containing a Specific-Action AVP indicating INDICATION_OF_RELEASE_OF_BEARER or INDICATION_OF_LOSS_OF_BEARER containing a Media-Component-Description AVP containing <b>one</b> Media-Sub-Component AVP containing a Flow-Usage AVP indicating AF_SIGNALLING containing a Media-Component-Number AVP indicating '0'.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP. IMS UE Actions: Registration of UE.	

TP_AF_SN_02	Standards Reference: 4.4.5 ¶ 1, 2	PICS item: A.3/6, NOT A.3/7
<b>Test purpose:</b>	Ensure that the IUT in the Open state <b>to open</b> an Rx diameter session and to subscribe to notifications of the status of the AF signalling transmission path <b>without</b> the provision of AF signalling flow information, <b>sends an AA-Request</b> <ul style="list-style-type: none"> <li>containing a Framed-IP-Address AVP               <ul style="list-style-type: none"> <li>indicating the full IP address of the UE</li> </ul> </li> <li>containing a Specific-Action AVP               <ul style="list-style-type: none"> <li>indicating INDICATION_OF_RELEASE_OF_BEARER or INDICATION_OF_LOSS_OF_BEARER</li> </ul> </li> <li>containing a Media-Component-Description AVP               <ul style="list-style-type: none"> <li>containing <b>one</b> Media-Sub-Component AVP                   <ul style="list-style-type: none"> <li>containing a Flow-Number AVP                       <ul style="list-style-type: none"> <li>indicating '0'</li> </ul> </li> <li>containing a Flow-Usage AVP                       <ul style="list-style-type: none"> <li>indicating AF_SIGNALLING and not containing any other AVPs</li> </ul> </li> </ul> </li> <li>containing a Media-Component-Number AVP                   <ul style="list-style-type: none"> <li>indicating '0' and not containing any other AVPs.</li> </ul> </li> </ul> </li></ul>	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP. IMS UE Actions: Registration of UE.	

TP_AF_SN_03	Standards Reference: 4.4.5 ¶ 5	PICS item: A.3/6
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an Rx diameter session with subscription to notifications of the status of the AF signalling transmission path, <b>to cancel</b> this subscription, <b>sends an ST-Request</b> .	
<b>Comments:</b>	IMS UE Actions: Registration and Deregistration of UE.	

TP_AF_SN_04	Standards Reference: 4.4.5 ¶ 5	PICS item: A.3/6, NOT A.3/7
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an Rx diameter session with subscription to notifications of the status of the AF signalling transmission path <b>without</b> the provision of AF signalling flow information, <b>to cancel</b> this subscription, <b>sends an ST-Request</b> .	
<b>Comments:</b>	IMS UE Actions: Registration and Deregistration of UE.	

TP_AF_SN_05	Standards Reference: 4.4.5a ¶ 2	PICS item: A.3/6, A.3/7
<b>Test purpose:</b>	Ensure that the IUT in the Open state <b>to open</b> an Rx diameter session and to subscribe to notifications of the status of the AF signalling transmission path <b>with</b> the provision of AF signalling flow information, <b>sends an AA-Request</b> containing a Framed-IP-Address AVP indicating the full IP address of the UE containing a Media-Component-Description AVP containing <b>one or more</b> Media-Sub-Component AVP, each containing a Flow-Number AVP containing <b>one or two</b> Flow-Description AVP containing Flow-Usage AVP indicating AF_SIGNALLING containing Flow-Status AVP indicating ENABLED containing AF-Signalling-Protocol AVP indicating the signalling protocol between UE and AF containing Media-Component-Number AVP indicating '0'.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP. IMS UE Actions: Registration of UE.	

TP_AF_SN_06	Standards Reference: 4.4.5a ¶ 5	PICS item: A.3/6, A.3/7
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an Rx diameter session with subscription to notifications of the status of the AF signalling transmission path <b>with</b> the provision of AF signalling flow information, <b>to cancel</b> this subscription, <b>sends an ST-Request.</b>	
<b>Comments:</b>	IMS UE Actions: Registration and Deregistration of UE.	

#### 4.4.1.6 Traffic Plane Events for AF Role

TP_AF_TPE_01	Standards Reference: 4.4.6.1 ¶ 2	PICS item: A.3/8
<b>Test purpose:</b>	Ensure that when the IUT in the Open state having established an Rx diameter session, <b>on receipt of an AS-Request, sends an AS-Answer and an ST-Request.</b>	
<b>Comments:</b>	The ST-Request is sent to indicate the termination of the session.	

### 4.4.2 PCRF Role

Test Selection: IUT takes the role of the PCRF; PICS A.2/2

#### 4.4.2.1 Initial Provisioning of Session Information for PCRF Role

TP_PCRF_IPS_01	Standards Reference: 4.4.1 (last two ¶ in clause)	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state, <b>on receipt of an AA-Request</b> containing a Framed-IP-Address AVP containing a Media-Component-Description AVP containing the Flow-Status AVP, <b>sends an AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS containing an Access-Network-Charging-Address AVP.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_PCRF_IPS_02	Standards Reference: 4.4.1 ¶ 1, 4, 5, 6, 7, 8, 10, 12	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state, <b>on receipt of an AA-Request</b> containing a Framed-IP-Address AVP containing a Media-Component-Description AVP containing the Flow-Status AVP containing an AF-Application-Identifier AVP containing an AF-Charging-Identifier AVP containing a Service-URN AVP containing a MPS-Identifier AVP containing a Service-Info-Status AVP containing a Sponsored-Connectivity-Data AVP containing an Application-Service-Provider-Identity AVP containing a Sponsor-Identity AVP containing a Granted-Service-Unit AVP containing a Specific-Action AVP indicating USAGE_REPORT, <b>sends an AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_PCRF_IPS_03	Standards Reference: 4.4.1 first item of dashed list	PICS item: NOT A.4/4
<b>Test purpose:</b>	Ensure that the IUT in the Open state, <b>on receipt of an AA-Request</b> containing a Sponsored-Connectivity-Data AVP containing a Sponsor-Identity AVP containing an Application-Service-Provider-Identity AVP, <b>sends an AA-Answer</b> containing an Experimental-Result AVP containing an Experimental-Result-Code AVP indicating REQUEST_SERVICE_NOT_AUTHORIZED.	
<b>Comments:</b>		

#### 4.4.2.2 Modification of Session Information for PCRF Role

TP_PCRF_MSI_01	Standards Reference: 4.4.3 (last ¶ in clause)	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an AF session, <b>on receipt of an AA-Request</b> modifying the session information containing a Framed-IP-Address AVP containing a Media-Component-Description AVP containing the Flow-Status AVP, <b>sends an AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS containing an Access-Network-Charging-Address AVP.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_PCRF_MSI_02	Standards Reference: 4.4.3 ¶ 1, 2, 4, 5, 10	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an AF session, <b>on receipt of an AA-Request</b> modifying the session information containing a Framed-IP-Address AVP containing a Media-Component-Description AVP containing a MPS-Identifier AVP containing a Service-Info-Status AVP indicating FINAL_SERVICE_INFORMATION containing a Sponsored-Connectivity-Data containing an Application-Service-Provider-Identity AVP containing a Sponsor-Identity AVP containing a Granted-Service-Unit AVP, <b>sends an AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

#### 4.4.2.3 Gate Related Procedures for PCRF Role

TP_PCRF_GRP_01	Standards Reference: 4.4.3 ¶ 6	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having received an AA-Request and having sent an AA-Answer, <b>to indicate</b> a resource allocation failure during the modification of PCC/QoS rules, <b>sends an RA-Request</b> containing a Specific-Action AVP indicating INDICATION_OF_FAILED_RESOURCES_ALLOCATION.	
<b>Comments:</b>	It may be impossible to trigger the condition for sending of the RA-Request.	

#### 4.4.2.4 Session Termination for PCRF Role

TP_PCRF_ST_01	Standards Reference: 4.4.4 ¶ 2	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an AF session, <b>on receipt of an ST-Request,</b> <b>sends an ST-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>		

TP_PCRF_ST_02	Standards Reference: 4.4.4 ¶ 4	PICS item: A.4/4
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an AF session for sponsored connectivity, <b>on receipt of an ST-Request,</b> <b>sends an ST-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS containing a Sponsored-Connectivity-Data AVP containing a Used-Service-Unit AVP.	
<b>Comments:</b>		

## 4.4.2.5 Subscription to Notification of Signalling Path Status for PCRF Role

TP_PCRF_SN_01	Standards Reference: 4.4.5 ¶ 3	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state, <b>on receipt of an AA-Request</b> subscribing to notifications of the status of the AF containing a Framed-IP-Address AVP containing a Specific-Action AVP indicating INDICATION_OF_RELEASE_OF_BEARER containing a Specific-Action AVP indicating INDICATION_OF_LOSS_OF_BEARER containing a Media-Component-Description AVP containing a Media-Sub-Component AVP containing a Flow-Usage AVP indicating AF_SIGNALLING containing a Flow-Number AVP indicating '0' containing a Media-Component-Number AVP indicating '0', <b>sends a AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_PCRF_SN_02	Standards Reference: 4.4.5 ¶ 3	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state, <b>on receipt of an AA-Request</b> subscribing to notifications of the status of the AF <b>without</b> the provision of AF signalling flow information, containing a Framed-IP-Address AVP indicating the full IP address of the UE containing a Specific-Action AVP indicating INDICATION_OF_RELEASE_OF_BEARER containing a Specific-Action AVP indicating INDICATION_OF_LOSS_OF_BEARER containing a Media-Component-Description AVP containing a Media-Sub-Component AVP containing a Flow-Number AVP indicating '0' containing a Media-Component-Number AVP indicating '0', <b>sends an AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_PCRF_SN_03	Standards Reference: 4.4.5 ¶ 5	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an Rx diameter session with subscription to notifications of the status of the AF signalling transmission path <b>without</b> the provision of AF signalling flow information, <b>on receipt of an ST-Request,</b> <b>sends an ST-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>		

TP_PCRF_SN_04	Standards Reference: 4.4.5a ¶ 3	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state, <b>on receipt of an AA-Request</b> subscribing to notifications of the status of the AF <b>with</b> the provision of AF signalling flow information, containing a Framed-IP-Address AVP indicating the full IP address of the UE containing a Media-Component-Description AVP containing a Media-Sub-Component AVP, containing a Flow-Number AVP containing two Flow-Description AVPs containing Flow-Usage AVP indicating AF_SIGNALLING containing Flow-Status AVP indicating ENABLED containing AF-Signalling-Protocol AVP indicating the signalling protocol between UE and AF containing Media-Component-Number AVP indicating '0', <b>sends an AA-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	In the case of IPv6 the Framed-IP-Address AVP is replaced by the Framed-IPv6-Prefix AVP.	

TP_PCRF_SN_05	Standards Reference: 4.4.5a ¶ 5	PICS item:
<b>Test purpose:</b>	Ensure that the IUT in the Open state having established an Rx diameter session with subscription to notifications of the status of the AF signalling transmission path <b>with</b> the provision of AF signalling flow information, <b>on receipt of an ST-Request,</b> <b>sends an ST-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>		

#### 4.4.2.6 Traffic Plane Events for PCRF Role

TP_PCRF_TPE_01	Standards Reference: 4.4.6.1 ¶ 1	PICS item:
<b>Test purpose:</b>	Ensure that when the IUT in the Open state having established an Rx diameter session, <b>to indicate</b> termination of an IP-CAN session, <b>sends an AS- Request</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	It may be impossible to trigger the condition for sending of the AS-Request.	

TP_PCRF_TPE_02	Standards Reference: 4.4.6.1 ¶ 2	PICS item:
<b>Test purpose:</b>	Ensure that when the IUT in the Open state having established an Rx diameter session and having indicated termination of an IP-CAN session by sending an AS-Request, <b>on receipt of an AS-Answer</b> followed by an <b>ST-Request,</b> <b>sends an ST-Answer</b> containing a Result-Code AVP indicating DIAMETER_SUCCESS.	
<b>Comments:</b>	It may be impossible to trigger the condition for sending of the AS-Request.	

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## History

<b>Document history</b>		
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V2.1.1	December 2013	Publication