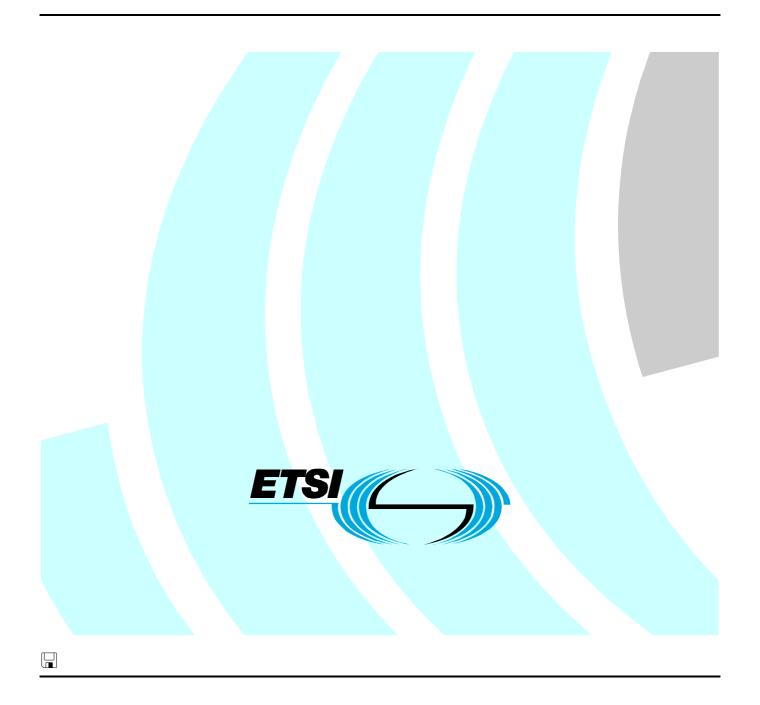
ETSITS 102 790-2 V1.1.1 (2010-03)

Technical Specification

Technical Committee for IMS Network Testing (INT);
Network Integration Testing;
IMS specific use of Session Initiation Protocol (SIP) and
Session Description Protocol (SDP);
Conformance Testing;
Part 2: Test Suite Structure (TSS)
and Test Purposes (TP)



Reference

DTS/INT-00024-2

Keywords

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Foreword

This Technical Specification (TS) has been produced by IMS Network Testing (INT).

The present document is part 2 of a multi-part deliverable. Full details of the entire series can be found in part 1 [7].

Introduction

The IP Multimedia core network Subsystem (IMS) is a key component in the TISPAN NGN architecture. Each IMS consists of multiple functional entities and interfaces. The goal of this work is to provide the conformance tests for standardized external interfaces of the IMS core network that are based on SIP messages.

Test purposes defined in this document have been developed based on the requirements stated in the base TISPAN Release 2 IMS specification. They are based on the philosophy of network integration testing, i.e. a network is assessed only in its entirety via external interfaces. Internal interfaces (even if standardized) are not assessed.

1 Scope

The purpose of the present document is to provide conformance Test Suite Structure and Test Purposes (TSS&TP) for TISPAN Release 2 IP Multimedia core network Subsystem (IMS) equipment testing supporting based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) as specified in ES 283 003 [1] and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETS 300 406 [5].

The content of this document follows the requirements that have been first collected in an internal unpublished requirements catalogue and is written according to the guidelines of EG 202 568 [i.1], ISO/IEC 9646-2 [3] and ETS 300 406 [5].

2 References

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.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

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

expressing Test Purposes".

[6]

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1]	ETSI ES 283 003 (V2.5.1): "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 [3GPP TS 24.229 [Release 7], modified]".
[2]	ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
[3]	ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".
[4]	ISO/IEC 9646-7: "Information technology - Open Ssystems 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".

ETSI ES 202 553: "Methods for Testing and Specification (MTS); TPLan: A notation for

- [7] ETSI TS 102 790-1: "Technical Committee for IMS Network Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 1: Protocol Implementation Conformance Statement (PICS)".
- [8] IETF RFC 4028: "Session Timers in the Session Initiation Protocol (SIP)".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

[i.1] ETSI EG 202 568: "Methods for Testing and Specification (MTS); Internet Protocol Testing (IPT); Testing: Methodology and Framework".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

abstract Selection Expression: Refer to ISO/IEC 9646-1 [2].

Abstract Test Method (ATM): Refer to ISO/IEC 9646-1 [2].

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [2].

Implementation Under Test (IUT): Refer to ISO/IEC 9646-1 [2].

Lower Tester (LT): Refer to ISO/IEC 9646-1 [2].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [2].

3.2 Abbreviations

AS Application Server

CSCF Call Session Control Function

E-CSCF Emergency CSCF

FQDN Fully Qualified Domain Name

IBCF Interconnection Border Control Function

I-CSCF Interrogating CSCF
IMS IP Multimedia Subsystem

IMS-AKA IMS-Authentication and Key Agreement

IP Internet Protocol
P-CSCF Proxy CSCF

PICS Protocol Implementation Conformance Statement

S-CSCF Serving CSCF

SDP Session Description Protocol SIP Session Initiation Protocol

SUT System under Test
TS Test System
UE User Equipment

4 Test configurations

Test purposes of this document address the IMS functional entities that are accessible via the following standardized SIP interfaces: Gm, Mw, Ic, and ISC.

This clause introduces the test configurations that have been used for the definition of test purposes. Depending on the specific configuration the test system (TS) simulates the behaviour of one or more UEs or other IMS core networks communicating with the IMS core network under test. Test configurations try to cover various scenarios of IMS interworking and roaming conditions.

Some test configurations show dashed boxes to visualise the implicit presence of a UE in the TS. These dashed boxes have only been introduced to improve understanding but do not have to be reflected in a test suite implementation.

4.1 Test configurations using Gm interface only

The Gm interface is located between a UE and the IMS core network.

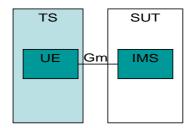


Figure 1: Test configuration CF_1Gm

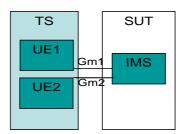


Figure 2: Test configuration CF 2Gm

4.2 Test configurations using the Mw interface

The Mw interface is used in case of interworking or roaming between two different IMS core networks. This interface is used only if no border control functions like topology hiding are required.

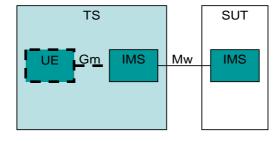


Figure 3: Test configuration CF_1Mw

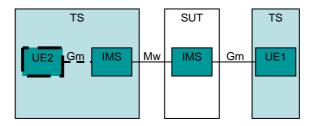


Figure 4: Test configuration CF_1Mw1Gm

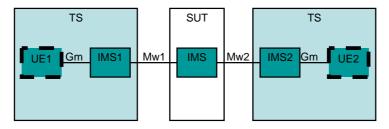


Figure 5: Test configuration CF_2Mw

4.3 Test configurations using the Ic interface

The Ic interface is used in case of interworking or roaming between two different IMS core networks. This interface is used only if border control functions like topology hiding are required.

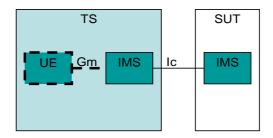


Figure 6: Test configuration CF_1Ic

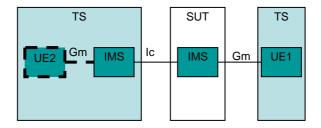


Figure 7: Test configuration CF_1lc1Gm

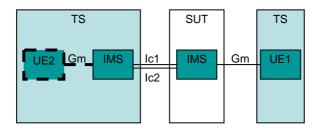


Figure 8: Test configuration CF_2lc1Gm

4.4 Test configurations using the ISC interface

The ISC interface enables the IMS core network to communicate with a AS.

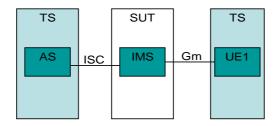


Figure 9: Test configuration CF_1ISC1Gm

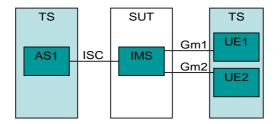


Figure 10: Test configuration CF_1ISC2Gm

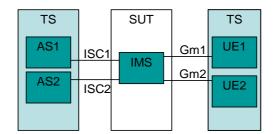


Figure 11: Test configuration CF_2ISC2Gm

5 Test Suite Structure (TSS)

Test Purposes have been written for IMS core network functionality that is accessible via SIP based interfaces, i.e. P-, I-, E-, S-CSCF and IBCF components, as defined by ES 283 003 [1]. All test purposes in this document assess mandatory functionality unless they have been marked with the keyword "OPTIONAL" at the beginning of the TP summary.

The test purposes have been divided according to the interfaces into four major groups. Subgroups have been introduced to structure TPs further according to different procedures:

- 1) Test purposes for the Gm interface only:
 - 1.1) General;
 - 1.2) Registration procedures;
 - 1.3) Initial dialog request procedures;
 - 1.4) Standalone requests procedures;
 - 1.5) Subsequent requests on a dialog procedures;
 - 1.6) Target refresh request procedures;
 - 1.7) Emergency procedures;

- 1.8) Exceptional procedures;
- 1.9) SDP procedures;
- 1.10) NAT traversal procedures.
- 2) Test purposes for the Mw interface:
 - 2.1) General;
 - 2.2) Registration procedures;
 - 2.3) Initial dialog request procedures;
 - 2.4) Standalone requests procedures;
 - 2.5) Subsequent requests on a dialog procedures;
 - 2.6) Target refresh request procedures;
 - 2.7) Emergency procedures;
 - 2.8) SDP procedures.
- 3) Test purposes for the Ic interface:
 - 3.1) General;
 - 3.2) Registration procedures;
 - 3.3) Initial dialog request procedures;
 - 3.4) Standalone requests procedures;
 - 3.5) Subsequent requests on a dialog procedures;
 - 3.6) Target refresh request procedures.
- 4) Test purposes for the ISC interface:
 - 4.1) Registration procedures;
 - 4.2) Initial dialog request procedures;
 - 4.3) Standalone requests procedures;
 - 4.4) Subsequent requests on a dialog procedures;
 - 4.5) Target refresh request procedures.

6 Test Purposes (TP)

The test purposes have been written in the notation TPLan as defined in ES 202 553 [6]. TPLan has been developed by ETSI to express test purposes in a more formal manner. All TPLan TPs have been converted into a symbolic tabular presentation format which is shown in this clause. TPs in the standardized textual TPLan syntax are collected in ts_10279002v010101p0.zip (see annex A). The two presentation formats, i.e. textual and symbolic tabular, contain the same information and shall therefore be considered equivalent. In the case that there appears to be syntactical or semantic differences between the two then the files in the electronic annex take precedence over the following tables.

6.1 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 and whether it applies to the network or the user (see table 1).

Table 1: TP identifier naming convention scheme

Identifie	r: TP_<	ts>_ <int><subgroup>_<</subgroup></int>	:nn>	
<ts></ts>	=	Test suite name:	i.e. "IMS_T	2"
<int< th=""><td>> =</td><td>type of Interface:</td><td>"MW" "GM" "IC" "ISC"</td><td>Mw interface Gm Interface Ic interface ISC interface</td></int<>	> =	type of Interface:	"MW" "GM" "IC" "ISC"	Mw interface Gm Interface Ic interface ISC interface
<su< th=""><td>ogroup></td><td>=</td><td>subgroup "GEN" "REG" "INI" "STA" "SUB" "TAR" "EME" "SDP" "EXC" "NAT"</td><td>3 first letter of the subgroup according to TSS subdivision General Registration procedures Initial request procedures Standalone request procedures Subsequent request on a dialog procedures Target refresh request procedures Emergency procedures SDP procedures Exceptional procedures NAT traversal procedures</td></su<>	ogroup>	=	subgroup "GEN" "REG" "INI" "STA" "SUB" "TAR" "EME" "SDP" "EXC" "NAT"	3 first letter of the subgroup according to TSS subdivision General Registration procedures Initial request procedures Standalone request procedures Subsequent request on a dialog procedures Target refresh request procedures Emergency procedures SDP procedures Exceptional procedures NAT traversal procedures
<nn< th=""><td>> =</td><td>sequential number</td><td>(01-99)</td><td></td></nn<>	> =	sequential number	(01-99)	

EXAMPLE 1: TP_IMS_T2_GM_GEN_01 stands for 1st test case in the Gm interface only group, and in the general subgroup.

All PICS items referred to in this clause are as specified in TR 102 790-1 [7] unless indicated otherwise by another numbered reference. For each PICS item there exists a unique reference defined as the table identifier, followed by a solidus character "/", followed by the item number in the table within TR 102 790-1 [7].

EXAMPLE 2: A.5/4 is the reference to the answer of item 4 in table A.5 of TR 102 790-1 [7].

6.2 The tabular symbolic TPLan presentation format

Each table contains header fields and a description part. The header fields identify the TP, list the related clause reference the base specification that the TP was derived from, introduce the TP with a short summary, references the related test configuration and test case in the ATS. Identifiers starting with the string "RQ_003_" indicate requirements within the internal requirement catalogue.

The description part presents the TP using two sections: (a) initial conditions that have to be fulfilled for the test purpose body to be valid and (b) the test purpose body which is illustrated with one or more stimulus/response pairs. Both sections are further substructured with columns for affected entities from the test configurations, i.e. IUT, UE, UE2, IMS (test system component), and AS.

The condition section lists one or more conditions that have to be fulfilled in order for the test purpose body to apply. Each condition has a description and either "\scrip" or "\scrip" marks to indicate all the entities affected by this condition. "\scrip" marks indicates a positive condition, e.g. "A is registered in B", whereas "\scrip" marks indicate a negative condition, e.g. "B *not* configured for feature Z". If there is no mark in a column then the condition does not apply for that entity, e.g. entity A is not involved in the condition "B not configured for feature Z". It is assumed that all listed conditions have to be fulfilled in the order listed, i.e. the list reflects an "and" relation.

Table 2 shows an example condition section illustrating all of the above examples.

Table 2: Example TP condition section

Ent	ities	Condition
A	В	
✓	✓	A registered in B
× I		B configured for feature Z

The test purpose body section contains one or more steps identified with a number in the first column. Steps belonging to IUT stimuli are shown with a green background whereas steps related to IUT responses are shown with a beige background. All listed steps are assumed to be carried out in increasing step number, i.e. they reflect an "and" relation. "or" relations at the level of entire messages are shown with lowercase letters following the step number identifying the different alternatives, e.g. "2a" versus "2b". Each step indicates the exchange of a message from a source entity (identified by the direction symbols "\$\operatornow\o

Additional information about valid as well as invalid message content is presented in the "Message" column. First general information about message, e.g. its type, destination, attributes, etc, are shown in bold font. Below this information message headers or parameter content that must be present in that message are listed using "\scrtw" symbols whereas headers or parameter content that must *not* be present are listed using the "\scrtw" symbols. The "\scrtw" symbol indicates a valid message parameter value where as the "\scrtw|"symbol indicates an invalid message parameter value. Any content, e.g. header or parameter, which is not explicitly mentioned in a message description of a TP is not restricted by that TP.

Finally, the interface identifier to which a message exchange pertains may be shown in the column labelled "IF".

Table 3 shows an example test purpose body section illustrating all of the above examples.

Table 3: Example TP body section

	A	В		
Step	Dire	ction	Message	IF
1	\$		some request ✓ this header ✓ this one parameter → this value ✓ this other parameter → that value × that parameter × that header	Xx
2a	Ŷ.	Ą	failure response	Xx
2b	€ ₽		no message	Xx

6.3 Test purposes for the Gm interface only

6.3.1 General

	Test Purpose							
Ident	ifier:	TP	_IMST2_G	M_GEN_01				
Summary: All IMS CN components sha bytes in length				mponents sh	all support SIP messages wh	hich are greater than 1300	0	
Claus	se:	4.2	A, paragraph	n 1 first num	bered list 1)			
Refer	rences:	RQ	_003_4002		Config Ref:	CF_2Gm		
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1		
	Entities				Condi	tion		
	UE1		IUT	UE2				
	✓		\checkmark	\checkmark	UE1 and UE2 registered in IUT			
	UE1		IUT	UE2				
Step			Direction		Mess	age	IF	
1	₩		Ď		MESSAGE for UE2 ✓ Message Body greater than 1300 bytes			
2			₩	Ď	MESSAGE			

6.3.2 Registration procedures

	Test Purpose							
Ident	ifier:	TP_IMS	T2_GM_REG_01					
Summary:		request w	as received withou	REGISTER request from that protection, and the Securing a suitable SIP 4xx respons	ty-Client header is not pr			
Claus	se:	5.2.2 first	t numbered list 5)					
Refer	rences:	RQ_003_	5011	Config Ref:	CF_1Gm			
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1			
		Ent	ities	Condi	tion			
	UE1		IUT					
		×	×	UE1 not registered in IUT				
			✓	IUT configured for establiassociation	shing security			
		✓		UE1 has initiated security establishment	association			
	J	J E1	IUT					
Step		Direction		Mess	age	IF		
1	\$		Ð	unprotected REGISTER ★ Security-Client header				
2		Ĉ:	4	4xx response				

	Test Purpose							
Ident	ifier:	TP_IMS	T2_GM_REG_02	,				
Summary:		Security-	When a P-CSCF receives a protected REGISTER request from the UE and the Security-Verify header is not present, then the P-CSCF shall return a suitable SIP 4xx response.					
Claus	se:	5.2.2 first	numbered list 6)	_				
Refer	ences:	RQ_003_	5011	Config Ref:	CF_1Gm			
IUT	Role:	IMS		Selection Expression:	PICS A.2/1			
		Ent	ities	Cond	ition			
	U	E1	IUT					
		×	×	UE1 not registered in IUT				
			✓	IUT configured for establishing security association				
	•	/		UE1 has sent unprotected received 401 response	REGISTER and has			
	•	/		UE1 has initiated security establishment	association			
	U	E1	IUT					
Step	Direction		ction	Mess	age	IF		
1	₩		Ð	protected REGISTER ★ Security-Verify heade	r			
2	4	Ę.	Ą	4xx response				

				Test Purpose				
Identifier: TP_IMST2_GM_REG_03			T2_GM_REG_03	3				
Summary:		Security-	When a P-CSCF receives a protected REGISTER request from the UE and the Security-Client header is not present, then the P-CSCF shall return a suitable SIP 4xx response.					
Claus	se:	5.2.2 first	t numbered list 6)a	ı				
Refer	ences:	RQ_003_	_5011	Config Ref:	CF_1Gm			
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1			
		Ent	ities	Cond	ition			
	U	E1	IUT					
		×	×	UE1 not registered in IUT				
			✓	IUT configured for establishing security association				
	,	✓		UE1 has sent unprotected received 401 response	REGISTER and has			
	,	✓		UE1 has initiated security establishment	association			
	U	E1	IUT					
Step		Dire	ction	Mess	age	IF		
1	₩		Ð	protected REGISTER ★ Security-Client header	r			
2	4	È	ŶĮ.	4xx response				

				Test Purpose				
Identifier: TP_IMST2_GM_REG_04			T2_GM_REG_04					
Summary:			When a P-CSCF receives a unprotected REGISTER request from the UE and the Security-Client header is not present, then the P-CSCF shall return a suitable SIP 4xx response.					
Claus	se:	5.2.2 first	numbered list 6)b					
Refer	rences:	RQ_003_	5011	Config Ref:	CF_1Gm			
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1			
	Ent		ities	Condi	tion			
	UE1		IUT					
		×	×	UE1 not registered in IUT				
			✓	IUT configured for establiassociation	shing security			
		✓		UE1 has initiated security establishment	association			
	U	JE1	IUT					
Step		Direc	ction	Mess	age	IF		
1	₩		Ď	unprotected REGISTER ★ Security-Client header				
2	4	È	Ŷ,	4xx response				

	Test Purpose							
Ident	ifier:	TP_IMS	T2_GM_REG_05					
Summary:		and the pr	When a P-CSCF receives a protected REGISTER request from a non-registered UE and the private user identity conveyed in the Authorization header of the request are different from the ones previously challenged or authenticated, the P-CSCF shall reject the REGISTER request by returning a SIP 403 (Forbidden) response.					
Claus	se:	5.2.2 first	numbered list 6)c					
Refer	rences:	RQ_003_	5011	Config Ref:	CF_1Gm			
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1			
		Ent	ities	Condi	tion			
	U	E 1	IUT					
		×	×	UE1 not registered in IUT				
			✓	IUT configured for establishing security association				
	•	✓		UE1 has sent unprotected REGISTER and has received 401 response				
	,	✓		UE1 has initiated security establishment	association			
	U	E1	IUT					
Step	Direction		ction	Mess	age	IF		
1	₩,		₽	protected REGISTER✓ Authorization header→ invalid private user	identity			
2	4	È	Ŷ,	403 response				

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_REG_06			
Summary: When a P-CSCF receives a p private user identity conveye from the ones previously characteristics. REGISTER request by return		ed in the Authorization head allenged or authenticated, th	ler of the request are diff the P-CSCF shall reject th	erent		
Claus	se:	5.2.2 first	numbered list 6)c			
Refer	References: RQ_003_5011		Config Ref:	CF_1Gm		
IUT I	Role: IMS		Selection Expression:	PICS A.2/1		
	Entities		Condi	tion		
	UE1 IUT		IUT			
	✓		\checkmark	UE1 registered in IUT		
			✓	IUT configured for establishing security association		
	•	✓		UE1 has initiated security association establishment		
	U	E1	IUT			
Step		Direc	ction	Messa	age	IF
1	\$		Ď	protected REGISTER✓ Authorization header→ invalid private user	identity	
2	4	È	ŶŢ	403 response		

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_REG_07	,		
Sumi	mary:		P-CSCF receives a it and returns a SI	unprotected REGISTER re P 401 response	quest from a non-registere	ed UE
Claus	Clause: 5.2.2 second numbered list					
Refer	References: RQ_003_5023		5023	Config Ref:	CF_1Gm	
IUT I	T Role: IMS			Selection Expression:	PICS A.2/1	
	Entiti		ities	Cond	ition	
	J	JE1	IUT			
		×	×	UE1 not registered in IUT		
			\checkmark	IUT configured for establishing security association		
		\checkmark		UE1 has initiated security establishment	association	
	J	JE1	IUT			
Step		Dire	ction	Mess	sage	IF
1	₹		unprotected REGISTER			
2	4	Œ	Ą	401 response		

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_REG_08	3		
Sumi	value of the Expire			SIP 200 (OK) response to a field and/or the Expires part set to zero it passes the 20	rameter in the Contact hea	
Claus	se:	5.2.2 third	d numbered list			
Refer	ences:	RQ_003_	5028	Config Ref:	CF_1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
		Ent	ities	Cond	ition	
	UE1		IUT			
		×	×	UE1 not registered in IUT		
			\checkmark	IUT configured for establishing security association		
		\checkmark		UE1 has sent unprotected received 401 response	REGISTER and has	
		\checkmark		UE1 has initiated security establishment	association	
	J	JE1	IUT			
Step		Dire	ction	Mess	sage	IF
1		\$	∌	protected REGISTER		
2	4	Œ.	4	200 response		

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_REG_09	1		
Summary: If local policy requires the a a P-CSCF fails to forward a a SIP 408 (Request Timeout UE			CCSCF fails IP 408 (Requ	to forward a	REGISTER request from a	UE to any IBCF, it shall	return
Claus	se:	5.2	.2A first nun	nbered list 6)	_	
Refer	ences:	RÇ	0_003_5223		Config Ref:	CF_1Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1	
	Entities			Condi	ition		
	UE1		IUT	IMS			
	\checkmark			UE1 is visiting IUT			
			×		IUT not configured for establishing security association		
			\checkmark		IUT configured for topology hiding		
			×	×	IUT not configured with a	n entry point to IMS	
	UE1		IUT	IMS			
Step			Direction		Mess	age	IF
1	₩		Ď		REGISTER		
2a	Ŷ _C		Ą		408 response		
2b	Œ.		Å		504 response		

				Test Purpose		
Ident	ifier:	TP_IMS'	T2_GM_REG_10			
Sumi	nary:			REGISTER request from a so it accepts it and returns a S		0
Claus	se:	5.2.2 A				
Refer	rences: -		Config Ref:	CF_1Gm		
IUT I	Role: IMS		Selection Expression:	PICS A.2/1		
	Entities			Condi	tion	
	U	E1	IUT			
		×	×	UE1 not registered in IUT		
			×	IUT not configured for esta	ablishing security	
	U	E1	IUT			
Step		Direc	ction	Mess	age	IF
1	₩		Ď	unprotected REGISTER		
2	4	È	Å	200 response		

				Test Purpose		
Ident	ifier:	TP_IMS'	T2_GM_REG_11			
Summary: When a P-CSCF receives a Find the Expires header field and/zero it sends a 200 (OK) to the summary.				or the Expires parameter in		
Claus	nuse: 5.2.5.1					
Refer	ences:	-		Config Ref:	CF_1Gm	
IUT I	T Role: IMS			Selection Expression:	PICS A.2/1	
	Entities			Cond	ition	
	U	UE1 IU				
	•	✓	\checkmark	UE1 registered in IUT		
	U	Œ1	IUT			
Step		Direc	ction	Mess	sage	IF
1	₩		Ď	REGISTER ✓ Expires header → 0		
2	Ŷ Ŀ		ŶJ	200 response ✓ Expires header → 0		

6.3.3 Initial request procedures

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_INI_01			
Sumi	nary:		lestination U	n initial request for a dialogu E and returns a SIP 100 (Try		wards
Claus	se:	5.2.6.3 first nu	mbered list, 5	5.2.6.4 first numbered list		
Refer	ences:	RQ_003_5046 RQ_003_5054 RQ_003_5065		Config Ref:	CF_2Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condi	tion	
	UE1	IUT	UE2			
	\checkmark	✓	✓	UE1 and UE2 registered in	n IUT	
	UE1	IUT	UE2			
Step		Direction		Mess	age	IF
1	₩	∌		INVITE for UE2		
2	Ŷ _C	À		100 response		
3		₩	Ð	INVITE ✓ Record-Route header → address of IUT P-CSCF or FQDN address of IUT P-CSCF ✓ Via header → address of IUT P-CSCF or FQDN address of IUT P-CSCF × P-Charging-Vector header ✓ icid parameter × P-Charging-Function-Addresses header		

				Test Purpose	
Ident	ifier:	TP_IMST2_	GM_INI_02		
Sumr	nary:	preloaded Ro SIP 400 respo	ute not matchin onse to the UE	•	header then it either returns a estination UE with an updated
Claus	se:	5.2.6.3 first n	umbered list 1)), 5.2.6.4 first numbered list	
Refer	References: RQ_003_5046, RQ_003_5054, RQ_003_5065		Config Ref:	CF_2Gm	
IUT I	UT Role: IMS		Selection Expression:	PICS A.2/1, A.3/10.1.1	
	Entities			Condit	ion
	UE1	UE1 IUT UE2			
	\checkmark	✓	✓	UE1 and UE2 registered in IUT	
	UE1	IUT	UE2		
Step		Direction	1	Message	
1	Ð	Ð		INVITE for UE2 ✓ Route header not match Service-Route header	hing stored
2a	Ŷ _C	₹J		400 response	
3b		\$∥	112	no message	
2b	Ŷ _C	Å,		100 response	
3 b		₩	Ð	INVITE	

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_INI_03			
Sumr	nary:			y valid SIP 1xx response as a vards the response to originati		uest
Clause: 5.2.6.3 second numbered list, 5.2.6.4 second numbered list						
Refer	References: RQ_003_5047, RQ_003_5055		Config Ref:	CF_2Gm		
IUT I	IUT Role: IMS		Selection Expression:	PICS A.2/1		
	Entities		Condition			
	UE1	UE1 IUT UE2				
	\checkmark	\checkmark	✓	UE1 and UE2 registered in I	UT	
	\checkmark	✓		IUT has received INVITE fr	om UE1	
		✓	✓	IUT has sent INVITE to UE.	2	
	UE1	IUT	UE2			
Step		Direction		Messag	ge l	IF
1		Ŷ <u>t</u>	₹Ŋ	180 response for UE1		
2	Ŷ.	Ą		180 response		

				Test Purpose	
Ident	ifier:	TP_IMST2_0	GM_INI_04		
Sumr	nary:			ny valid SIP 2xx response as a wards the response to the orig	
Claus	se:	5.2.6.3 second	l numbered lis	t, 5.2.6.4 second numbered lis	st
Refer	ences:	RQ_003_5047 RQ_003_5055		Config Ref:	CF_2Gm
IUT Role: IMS		Selection Expression:	PICS A.2/1		
	Entities			Condition	on
	UE1	IUT	IUT UE2		
	\checkmark	✓	✓	UE1 and UE2 registered in I	UT
	\checkmark	✓		IUT has received INVITE fr	om UE1
		✓	✓	IUT has sent INVITE to UE	2
	UE1	IUT	UE2		
Step		Direction		Messag	ge IF
1		Ýz.	ŶŊ.	200 response for UE1	
2	Ŷ _E	ŶŊ.		200 response	

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_INI_05			
Sumi	nary:			y other response other than a it forwards it to the originating		initial
Claus	se:	5.2.6.4 third nu	mbered list			
Refer	ences:	RQ_003_5056		Config Ref:	CF_2Gm	
IUT I	IUT Role: IMS		Selection Expression:	PICS A.2/1		
	Entities			Condition	on	
	UE1	IUT	IUT UE2			
	\checkmark	\checkmark	✓	UE1 and UE2 registered in I	UT	
		✓	✓	IUT has sent INVITE to UE2	2	
	UE1	IUT	UE2			
Step		Direction		Messag	e	IIF
1		Ýz.	ŶŊ	4xx response for UE1		
2	Œ.	Ą		4xx response		

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_INI_06			
request to a UE for a dialog of Via headers received in the no message or forwards it to					ny other response other than a and if the list of Via headers do ne request corresponding to the other other other.	loes not match the save	ed list
Claus				mbered list		GD AG	
	rences:		0_003_5056		Config Ref:	CF_2Gm	
IUT I	Role:	IM			Selection Expression:	PICS A.2/1, A.3/11.3	.1
	Entities		Condition	on e e e e e e e e e e e e e e e e e e e			
	UE1 IUT		IUT	UE2			
	\checkmark		\checkmark	✓	UE1 and UE2 registered in IUT		
			✓	✓	IUT has sent INVITE to UE2		
	UE1		IUT	UE2			
Step			Direction		Messag	e	IF
1			È	Ą	4xx response for UE1 ✓ Via header not matching	stored Via header	
2a	(E)		4		no message		
2b	Ŷ _t		Ą		4xx response ✓ Via header → stored Via header		

				Test Purpose						
Identifier:		TP_IMS	TP_IMST2_GM_INI_07							
Summary:		SIP INVI	If a P-CSCF requires periodic refreshment of a session established after receiving a SIP INVITE request from a UE and the Session-Expires header indicates a too low refresh frequency, it shall reject the INVITE.							
Claus	se:	5.2.7.2, R	5.2.7.2, RFC 4028 [8]							
Refer	rences:	RQ_003_5064		Config Ref:	CF_1Gm					
IUT	Role:	IMS		Selection Expression:	PICS A.2/1, A.3/12.1.1					
		Enti	ities	Condition	on					
	J	UE1 IUT								
	✓		\checkmark	UE1 registered in IUT						
	UE1		IUT							
Step	Direction		ction	Message		IF				
1	₩		Ď	INVITE ✓ Supported header → timer option tag ✓ Session-Expires header → acceptable expiration	n					
2	4	Ût.	ŶŢ	422 response ✓ Min-SE header						

Test Purpose									
Identifier:		TP_IMST2_GM_INI_08							
Summary:		When a P-CSCF requires periodic refreshment of a session established after receiving a SIP INVITE request from a UE and the Session-Expires header of the INVITE request indicates acceptable refresh frequency then it forwards the request to the destination UE and returns a 100 (Trying) to the originating UE.							
Claus	se:	5.2.7.2, 5.2.8.3,	5.2.7.2, 5.2.8.3, RFC 4028 [8]						
References:		RQ_003_5064, RQ_003_5068, RQ_003_5065		Config Ref:	CF_2Gm				
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1, A.3/12.1	.1			
		Entities		Condition					
	UE1	IUT	UE2						
	\checkmark	✓ ✓		UE1 and UE2 registered in IUT					
	UE1	IUT	UE2						
Step		Direction		Message		IF			
1	\$			INVITE ✓ Supported header → timer option tag ✓ Session-Expires header → acceptable expiration					
2	È	Ą		100 response					
3	\$		INVITE ✓ Session-Expires header						

6.3.4 Standalone requests procedures

				Test Purpose				
Identifier:		TP_IMST2_GM_STA_01						
Summary:		When a P-CSCF receives a request for a standalone transaction from a UE with preloaded Route not matching the stored Service-Route header then it either returns a SIP 400 response to the UE or forwards the request to destination UE with an updated Route header and returns a SIP 100 (Trying) response to the originating UE						
Claus	se:	5.2.6.3 fifth numbered list 1)						
Refer	ences:	RQ_003_5050		Config Ref:	CF_2Gm			
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1, A.3/10.5	5.1		
		Entities		Condition				
	UE1	IUT	UE2					
	\checkmark	\checkmark	✓	UE1 and UE2 registered in l	IUT			
	UE1	IUT	UE2					
Step		Direction		Message IF				
1	\$	Ð		MESSAGE for UE2 ✓ Route header not match Service-Route header	ing stored			
2a	Œ.	Ą		400 response				
3a		\$∥	15	no message				
2b	€	Ŷ,		100 response				
3b	\$ \$		MESSAGE					

Test Purpose									
Identifier: TP_IMST2_GM_STA_02									
Summary:		pre to o	When a P-CSCF receives a request for a standalone transaction from a UE with preloaded Route matching the stored Service-Route header then it forwards the request to destination UE without a P-Charging-Vector header and returns a SIP 100 (Trying) response to the originating UE						
Claus	se:	5.2	5.2.6.3 fifth numbered list, 5.2.6.4 seventh numbered list						
Refer	References:		_003_5050, _003_5060		Config Ref:	CF_2Gm			
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1			
	Entities				Condition				
	UE1		IUT	UE2					
	✓		\checkmark	✓	UE1 and UE2 registered in I	UT			
	UE1		IUT	UE2					
Step	Direction			Message		IF			
1	₩		Ď		MESSAGE for UE2				
2	Ŷ.		Ą		100 response				
3			₩	Ð	MESSAGE * P-Charging-Vector heade	er			

Test Purpose									
Identifier:		TP_IMST2_GM_STA_03							
Summary:			When a P-CSCF receives a SIP 200 response to a forwarded request for a standalone transaction then it forwards the request to the originating UE.						
Claus	se:	5.2.6.3 sixth nu	5.2.6.3 sixth numbered list, 5.2.6.4 eigth numbered list						
References:		RQ_003_5051, RQ_003_5061		Config Ref:	CF_2Gm				
IUT I	Role:	IMS		Selection Expression: PICS A.2/1					
	Entities			Condition					
	UE1	IUT	UE2						
	✓	\checkmark	✓	UE1 and UE2 registered in I	UT				
		✓	✓	IUT has sent MESSAGE to U	UE2				
	UE1	IUT	UE2						
Step		Direction		Messag	e	IF			
1		ŶĿ.	和	200 response for UE1					
2	Ýc.	₩.		200 response					

				Test Purpose			
Ident	ifier:	TP_IMST2_G	M_STA_04				
Sumr	nary:				y 4xx response to a forwarded request for a standalone the request to the originating UE.		
Claus	se:						
Refer	rences:	RQ_003_5051, RQ_003_5061	,	Config Ref:	CF_2Gm		
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1		
		Entities		Condition			
	UE1	IUT	UE2				
	✓	✓	\checkmark	UE1 and UE2 registered in IUT			
		✓	✓	IUT has sent MESSAGE to U	UE2		
	UE1	IUT	UE2				
Step		Direction		Messag	e	IF	
1		€ ₽		4xx response for UE1			
2	Ýc.	ŶŊ.		4xx response			

6.3.5 Subsequent request procedures

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_SUB_01			
Sumi	nary:				a subsequent request for non-eddoes not forward it any furthe		s it
Claus	se:	5.2	.6.3 seventh	numbered lis	st 1) a)		
Refer	ences:	RQ	_003_5052		Config Ref:	CF_2Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1	
Entities					Condition	on	
	UE1		IUT	UE2			
	✓		\checkmark	\checkmark	UE1 and UE2 registered in IUT		
	×		×	×	IUT not has established an INVITE dialog from UE1 to UE2		
	UE1		IUT	UE2			
Step		,	Direction		Messag	e	IF
1	\$ \$			BYE for UE2			
2	€ ₽		403 response				
3			\$	五	no message		

					Test Purpose			
Ident	ifier:	TP_	_IMST2_G	M_SUB_02				
Sumr	nary:				a subsequent request with unl 00 response or forwards it wit			
Claus	se:	5.2.	6.3 seventh	seventh numbered list 2)				
Refer	ences:	RQ	_003_5052		Config Ref:	CF_2Gm		
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/1, A.3/10.7	'.1	
			Entities		Conditi	on		
	UE1		IUT	UE2				
	\checkmark		\checkmark	\checkmark	UE1 and UE2 registered in l	IUT		
	✓		✓	✓	IUT has established an INV to UE2	ITE dialog from UE1		
	UE1		IUT	UE2				
Step			Direction		Messag	ge	IF	
1	∌	BYE for UE2 ✓ Route header r		BYE for UE2 ✓ Route header not match Record-Route header	ing stored			
2a	Ŷ.		Ą		400 response			
3b			\$ ∥	11	no message			
2b			₩	Ď	ВУЕ			

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_SUB_03			
Sumr	nary:	fro		ating UE it e	a subsequent request with unkeither rejects it with a SIP 400		
Claus	se:	5.2	.6.3 seventh	numbered li	st 2)		
Refer	ences:	RQ	_003_5052		Config Ref:	CF_2Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1, A.3/10.7	'.1
	Entities				Condition	on	
	UE1		IUT	UE2			
	✓		\checkmark	✓	UE1 and UE2 registered in I	UT	
	✓	IUT has established an INVITE dialog from UE1 to UE2		TE dialog from UE1			
	UE1		IUT	UE2			
Step		<u>.</u>	Direction		Messag	e	IF
1	BYE for UE1		✓ Route header not match	ing stored			
2a			₽	Ð	400 response		
3a	1		4		no message		
2b	Ý:		Ą		ВУЕ		

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_SUB_04			
Sumr	nary:			a subsequent request for exist t to the destination UE withou		header
Claus	se:	5.2.6.3 seventh	numbered lis	st, 5.2.6.4 ninth numbered list		
Refer	ences:	RQ_003_5052, RQ_003_5058		Config Ref:	CF_2Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condition	on	
	UE1	IUT	UE2			
	✓	✓	✓	UE1 and UE2 registered in IUT		
	✓	✓	✓	IUT has established an INVITE dialog from UE1 to UE2		
	UE1	IUT	UE2			
Step		Direction		Messag	e	IF
1	\$		BYE for UE2			
2		₩	₽	BYE * P-Charging-Vector heade	er	

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_SUB_05			
Sumi	nary:	teri			a subsequent request for exist it to the destination UE without		
Claus	se:	5.2	.6.3 seventh	numbered li	st, 5.2.6.4 ninth numbered list	į.	
Refer	References: RQ_003		_003_5052, _003_5058		Config Ref:	CF_2Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1	
			Entities		Condition		
	UE1	-	IUT	UE2			
	\checkmark		\checkmark	✓	UE1 and UE2 registered in IUT		
	✓		✓	✓	IUT has established an INVITE dialog from UE1 to UE2		
	UE1		IUT	UE2			
Step			Direction		Messag	ge	IF
1	€ ₽		ĆŊ.	BYE for UE1			
2	È		ŶJ.		BYE * P-Charging-Vector header		

	Test Purpose										
Ident	ifier:	TP_IN	IST2_G	M_SUB_06							
Sumr	nary:			CF receives le terminatin	a SIP 200 to subsequent reque g UE	st from the originating	UE it				
Claus	se:	5.2.6.4	tenth nu	mbered list							
Refer	ences:	RQ_00	3_5063		Config Ref:	CF_2Gm					
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1					
	Entities				Condition	n					
	UE1		IUT	UE2							
	\checkmark		\checkmark	\checkmark	UE1 and UE2 registered in IUT						
	✓		✓	\checkmark	IUT has established an INVITE dialog from UE1 to UE2						
	✓		\checkmark	\checkmark	IUT has received BYE from	UE1 for UE2					
			\checkmark	\checkmark	IUT has sent BYE to UE2						
	UE1		IUT	UE2							
Step		Direction			Messag	e	IF				
1	₹ ₽		200 response for UE1								
2	€		4		200 response						

	Test Purpose										
Ident	ifier:	TP	_IMST2_G	M_SUB_07							
Sumi	nary:			CF receives ne originating	a SIP 200 to subsequent requeg UE	st from the terminating	g UE it				
Claus	se:	5.2	.6.4 tenth nu	mbered list							
Refer	rences:	RQ	_003_5063		Config Ref:	CF_2Gm					
IUT I	Role:	IM:	S		Selection Expression:	PICS A.2/1					
	Entities				Condition	n					
	UE1		IUT	UE2							
	✓		\checkmark	✓	UE1 and UE2 registered in IUT						
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2						
	✓		\checkmark	✓	IUT has received BYE from	UE2 for UE1					
	✓		\checkmark		IUT has sent BYE to UE1						
	UE1		IUT	UE2							
Step		Direction			Messag	e	IF				
1	\$ ₽		200 response for UE2								
2			₩	Ď	200 response						

					Test Purpose		
Ident	ifier:	TP_	_IMST2_G	M_SUB_08			
Sumr	nary:	requ	uest from the		a SIP 200 with unknown Via I g UE it either does not forward it		
Claus	se:	5.2.	6.4 tenth nu	mbered list			
Refer	rences:	RQ	_003_5063		Config Ref:	CF_2Gm	
IUT I	Role:	IMS	5		Selection Expression:	PICS A.2/1, A.3/11.1	0.1
			Entities		Condition	on	
	UE1		IUT	UE2			
	\checkmark		\checkmark	✓	UE1 and UE2 registered in I	UT	
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2		
	✓		\checkmark	✓	IUT has received BYE from	UE1 for UE2	
			\checkmark	✓	IUT has sent BYE to UE2		
	UE1		IUT	UE2			
Step			Direction		Messag	ge	IF
1			Œ	Ą	200 response for UE1 ✓ Via header not matching	g stored Via header	
2a	(E)		4		no message		
2b	Ŷ _E		Ϋ́À		200 response ✓ Via header → stored Via header		

					Test Purpose		
Ident	ifier:	TP_	IMST2_G	M_SUB_09			
Sumr	nary:	reque		e originating	a SIP 200 with unknown Via l UE it either does not forward		
Claus	se:	5.2.6	5.4 tenth nu	mbered list	1		
Refer	ences:	RQ_	003_5063		Config Ref:	CF_2Gm	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/11.1	0.1
			Entities		Condition	on	
	UE1		IUT	UE2			
	\checkmark		\checkmark	\checkmark	UE1 and UE2 registered in I	UT	
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2		
	✓		\checkmark	✓	IUT has received BYE from UE2 for UE1		
	✓		\checkmark		IUT has sent BYE to UE1		
	UE1		IUT	UE2			
Step]	Direction		Messag	ge	IF
1	♦		Ď		200 response for UE2 ✓ Via header not matching	stored Via header	
2a			₩	\$	no message		
2b			₩	Ð	200 response ✓ Via header → stored Via header		

Test Purpose										
Ident	ifier:	TP.	_IMST2_G	M_SUB_10						
Sum	nary:	sess			n a dialog for which the P-CSC shall return 481 (Call/Transac		I			
Claus	se:	5.2.	.8.1.3							
Refer	ences:	RQ	_003_5241		Config Ref:	CF_2Gm				
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/1				
	Entities				Condition	o n				
	UE1		IUT	UE2						
	✓		\checkmark	✓	UE1 and UE2 registered in IUT					
	✓		✓	✓	IUT has established an INVITE dialog from UE1 to UE2					
			\checkmark	✓	IUT has received BYE from UE2					
	✓		\checkmark		IUT has sent BYE to UE1					
	UE1		IUT	UE2						
Step			Direction		Messag	e	IF			
1	\$			BYE for UE2						
2	₹ ₽			481						
3			♥	Ď	200					

6.3.6 Target refresh request procedures

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_TAR_01			
Sumr	nary:		nen the P-CS h a SIP 403 1		a refresh request for non-exist	ting dialog it shall rejec	ct it
Claus	se:	5.2	.6.3 third nu	mbered list 1	.) a)		
Refer	ences:	RQ	_003_5048		Config Ref:	CF_2Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1	
	Entities				Condition	on	
	UE1		IUT	UE2			
	\checkmark		\checkmark	\checkmark	UE1 and UE2 registered in IUT		
	×		×	×	IUT not has established an INVITE dialog from UE1 to UE2		
	UE1		IUT	UE2			
Step			Direction		Messag	e	IF
1	\$ \$		target refresh UPDATE for	·UE2			
2	Ŷ:		Ą		403 response		
3			\$	五	no message		

					Test Purpose		
Ident	ifier:	TP_	_IMST2_G	M_TAR_02			
Sumr	nary:				a refresh request with unkno ard it with an updated Route		r it
Claus	se:	5.2.	6.3 third nu	mbered list 2	2)		
Refer	ences:	RQ	_003_5048		Config Ref:	CF_2Gm	
IUT I	Role:	IMS	5		Selection Expression:	PICS A.2/1, A.3/10.3	3.1
			Entities		Condition		
	UE1		IUT	UE2			
	\checkmark		\checkmark	\checkmark	UE1 and UE2 registered in	IUT	
	✓		\checkmark	✓	IUT has established an INV to UE2	TTE dialog from UE1	
	UE1		IUT	UE2			
Step			Direction		Messa	ge	IF
1	∌		Ď		target refresh INVITE for ✓ Route header not match Record-Route header		
2a	Ŷ _G		Ą		400 response		
3a			₽	15	no message		
2b	Œ.		Ą		100 response		
3b			♦	±ŷ∕	INVITE		

				Test Purpose			
Ident	ifier:	TP_IMST2_G	M_TAR_03				
Sumr	nary:			a refresh request for existing orward the request	lialog from originating	UE it	
Claus	se:	5.2.6.3 third nu	mbered list,	5.2.6.4 fourth numbered list			
Refer	ences:	RQ_003_5048, RQ_003_5058, RQ_003_5079		Config Ref: CF_2Gm			
IUT I	Role:	IMS		Selection Expression: PICS A.2/1			
		Entities		Condition			
	UE1	IUT	UE2				
	\checkmark	\checkmark	✓	UE1 and UE2 registered in IUT			
	√	✓	✓	IUT has established an INVITE dialog from UE1 to UE2			
	UE1	IUT	UE2				
Step		Direction		Messag	e	IF	
1	\Longrightarrow	Ð		target refresh INVITE for UE2			
2	Ć.	Ą		100 response			
3		₩	5	target refresh INVITE			

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_TAR_04			
Sumr	nary:			a refresh request for existing orward the request	dialog from terminating	g UE it
Claus	se:	5.2.6.3 third nu	mbered list,	5.2.6.4 fourth numbered list		
Refer	rences:	RQ_003_5048, RQ_003_5058, RQ_003_5081		Config Ref:	CF_2Gm	
IUT I	IUT Role: IMS			Selection Expression:	PICS A.2/1	
		Entities		Condition		
	UE1	IUT	UE2			
	\checkmark	\checkmark	✓	UE1 and UE2 registered in IUT		
	✓	✓	✓	IUT has established an INVITE dialog from UE1 to UE2		
	UE1	IUT	UE2			
Step		Direction		Messag	e	IF
1		€	ŶĮ	target refresh INVITE for UE1		
2		₩	Ð	100 response		
3	E	44		target refresh INVITE		

					Test Purpose			
Ident	ifier:	TP_	_IMST2_G	M_TAR_05				
Sumi	nary:				a valid 180 response to refrest to the originating UE	h request from termina	ting	
Claus	se:	5.2.	6.3 fourth n	umbered list	nbered list, 5.2.6.4 sixth numbered list			
Refer	rences:		_003_5049, _003_5058		Config Ref:	CF_2Gm		
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/1		
	Entities Condition		on					
	UE1		IUT	UE2				
	✓		\checkmark	\checkmark	UE1 and UE2 registered in IUT			
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2			
	✓		\checkmark	\checkmark	IUT has received target refresh INVITE from UE1 for UE2			
			\checkmark	\checkmark	IUT has sent target refresh INVITE to UE2			
	UE1		IUT	UE2				
Step		Direction			Messag	e	IF	
1	1 🔄 💆		180 response for UE1					
2	Ŷ.		Ą	180 response				

					Test Purpose			
Ident	ifier:	TP_	_IMST2_G	M_TAR_06				
Sumr	nary:				a valid 180 response to refresh to the terminating UE	n request from originat	ing	
Claus	se:	5.2.	6.3 fourth n	umbered list,	red list, 5.2.6.4 sixth numbered list			
Refer	rences:	_	_003_5049, _003_5058		Config Ref: CF_2Gm			
IUT I	Role:	IMS	3		Selection Expression:	PICS A.2/1		
			Entities		Condition			
	UE1		IUT	UE2				
	✓		\checkmark	\checkmark	UE1 and UE2 registered in IUT			
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2			
	✓		\checkmark	√	IUT has received target refre for UE1	sh INVITE from UE2		
	\checkmark		\checkmark		IUT has sent target refresh IN	NVITE to UE1		
	UE1		IUT	UE2				
Step			Direction		Messag	e	IF	
1	\$ \$		180 response for UE2					
2			₩	Ď	180 response			

					Test Purpose		
Ident	ifier:	TP_IM	ST2_G	M_TAR_07			
Sumr	nary:				a valid 200 response to refresh d forwards the response to the	.	ting
Claus	se:	5.2.6.3	fourth n	umbered list	, 5.2.6.4 sixth numbered list		
Refer	rences:	RQ_003 RQ_003			Config Ref:	CF_2Gm	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1	
		En	Entities Condition				
	UE1]	IUT	UE2			
	✓		\checkmark	✓	UE1 and UE2 registered in IUT		
	✓		√	✓	IUT has established an INVITE dialog from UE1 to UE2		
	✓		√	✓	IUT has received target refresh INVITE from UE1 for UE2		
			\checkmark	✓	IUT has sent target refresh IN	NVITE to UE2	
	UE1]	IUT	UE2			
Step		Dir	ection		Messag	e	IF
1			Œ.	Ą	200 response for UE1		
2			₩	Ď	ACK		
3	€		4		200 response		

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_TAR_08			
Sumr	nary:			a valid SIP 200 response to r SIP ACK and forwards the re		ıg UE
Claus	se:	5.2.6.3 fourth n	umbered list	, 5.2.6.4 sixth numbered list		
Refer	rences:	RQ_003_5049, RQ_003_5058		Config Ref:	CF_2Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condit	ion	
	UE1	IUT	UE2			
	\checkmark	\checkmark	\checkmark	UE1 and UE2 registered in IUT		
	✓	✓	✓	IUT has established an INVITE dialog from UE1 to UE2		
	✓	✓	✓	IUT has received target refresh INVITE from UE2 for UE1		
	✓	\checkmark		IUT has sent target refresh	INVITE to UE1	
	UE1	IUT	UE2			
Step		Direction		Messa	ge	IF
1	₩	Ð		200 response for UE2		
2	₹ ₽		ACK			
3		₩	1	200 response		

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_TAR_09			
Sumr	nary:				a valid 4xx response to refresh to the originating UE	n request from termina	ting
Claus	se:	5.2	.6.4 sixth nu	mbered list			
Refer	ences:	RQ	_003_5059		Config Ref:	CF_2Gm	
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/1	
			Entities		Condition	on	
	UE1		IUT	UE2			
	✓		\checkmark	\checkmark	UE1 and UE2 registered in IUT		
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2		
	✓		\checkmark	✓	IUT has received target refresh INVITE from UE1 for UE2		
			\checkmark	✓	IUT has sent target refresh IN	NVITE to UE2	
	UE1		IUT	UE2			
Step			Direction		Message		IF
1			Ć.	ŶĮ.	4xx response for UE1		
2	È		₹J		4xx response		

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_TAR_10			
Sumi	nary:				a valid SIP 4xx response to re he response to the terminating		
Claus	se:	5.2	.6.4 sixth nu	mbered list			
Refer	ences:	RQ	_003_5059		Config Ref:	CF_2Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1	
			Entities		Condition	on	
	UE1		IUT	UE2			
	✓		\checkmark	\checkmark	UE1 and UE2 registered in IUT		
	✓		\checkmark	✓	IUT has established an INVITE dialog from UE1 to UE2		
	✓		✓	✓	IUT has received target refresh INVITE from UE2 for UE1		
	\checkmark		\checkmark		IUT has sent target refresh IN	NVITE to UE1	
	UE1		IUT	UE2			
Step Direction			Messag	e	IF		
1 🖔 🕏		4xx response for UE2					
2			₩	±Îr	4xx response		

				Test Purpose		
Ident	ifier:	TP_IMST2_	GM_TAR_11			
Sumi	nary:			a 4xx with unknown Via hears not forward the message or	-	
Claus	se:	5.2.6.4 sixth	numbered list			
Refer	rences:	RQ_003_505	9	Config Ref:	CF_2Gm	
IUT	Role:	IMS		Selection Expression:	PICS A.2/1, A.3/11.6	.1
		Entities		Conditi	ion	
	UE1	IUT	UE2			
	\checkmark	\checkmark	\checkmark	UE1 and UE2 registered in	IUT	
	✓	✓	✓	IUT has established an INV to UE2	ITE dialog from UE1	
	✓	✓	✓	IUT has received target refresh INVITE from UE1 for UE2		
		\checkmark	\checkmark	IUT has sent target refresh I	NVITE to UE2	
	UE1	IUT	UE2			
Step		Direction	1	Messa	ge	IF
1		Ŷ <u>.</u>	¢ħ	4xx response for UE1 ✓ Via header not matchin	g stored Via header	
2a	(E)			no message		
2b	Ŷ _E	Ŷħ		4xx response ✓ Via header → stored Via header		

				Test Purpose		
Ident	ifier:	TP_IMST2_G	M_TAR_12			
Sumr	nary:			a 4xx with unknown Via head s not forward the message or f	-	
Claus	se:	5.2.6.4 sixth nu	mbered list			
Refer	ences:	RQ_003_5059		Config Ref:	CF_2Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1, A.3/11.6	.1
		Entities		Condition	o <u>n</u>	
	UE1	IUT	UE2			
	\checkmark	✓	✓	UE1 and UE2 registered in I	UT	
	✓	✓	✓	IUT has established an INVI to UE2	TE dialog from UE1	
	✓	✓	✓	IUT has received target refresh INVITE from UE2 for UE1		
	\checkmark	\checkmark		IUT has sent target refresh II	NVITE to UE1	
	UE1	IUT	UE2			
Step		Direction		Messag	ge	IF
1	₩	立		4xx response for UE2 ✓ Via header not matching	g stored Via header	
2a		\$∥	12	no message		
2b		4xx response ✓ Via header → stored Via header				

6.3.7 Emergency procedures

				Test Purpose	
Ident	tifier:	TP_IMS	T2_GM_EME_01		
Sumi	mary:		rejects INVITE to e S domain	emergency service with 380	when emergency calls have to
Claus	se:	5.2.10.1			
Refer	rences:	RQ_003_ RQ_003_		Config Ref:	CF_1Gm
IUT	Role:	IMS		Selection Expression:	PICS A.2/1
	Entities			Condition	
	UE1		IUT		
			×	IUT not configured for em	nergency sessions
	U	E1	IUT		
Step		Dire	ction	Mess	age IF
1	₽		Ď	INVITE ✓ Request URI → emergency service identifier	
2	ŶĘ.		Ą	380 response ✓ Content-Type header → 3GPP IMX XML b	ody

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_EME_02	,		
Sumi	nary:		accepts INVITE to ng) response	emergency service from u	nregistered user and return	ns SIP
Claus	se:	5.2.10.2				
Refer	ences:	RQ_003_	5250	Config Ref:	CF_1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
	Entities		Cond	lition		
	U	E1	IUT			
		×	×	UE1 not registered in IU7	Γ	
			\checkmark	IUT configured for emergency sessions		
	U	E1	IUT			
Step		Dire	ction	Mess	sage	IIF
1	\$		Ď	INVITE ✓ Request URI → emergency service	identifier	
2	4	ĆŢJ	Ą	100 response		
3	<	 	4	4xx response		

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_EME_03	3		
Sumi	nary:		rejects INVITE to a	non-emergency service from	m user with emergency	
Claus	se:	5.2.10.3				
Refer	Gerences: RQ_003_5252		Config Ref:	CF_1Gm		
IUT I	UT Role: IMS			Selection Expression:	PICS A.2/1	
		Ent	ities	Cond	lition	
	τ	UE1 IU'				
		\checkmark	\checkmark	UE1 emergency registered in IUT		
	τ	JE1	IUT			
Step		Dire	ction	Message		IF
1	₩		Þ	INVITE ✓ Request URI → emergency service	e identifier	
2	4	Ć:	Ą	403 response		

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_EME_04	ļ		
Sumi	nary:		accepts INVITE to ns SIP 100 respons	emergency service from us	er with emergency regist	ration
Claus	se:	5.2.10.3				
Refer	rences:	RQ_003_	_5253	Config Ref:	CF_1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
	Entities		Condi	ition		
	U	UE1 IUT				
	•	\checkmark	\checkmark	UE1 emergency registered in IUT		
	U	Œ1	IUT			
Step		Dire	ction	Message		IF
1	\$		INVITE ✓ Request URI → emergency service	identifier		
2	€ 4 H		100 response			
3	<	년	114	4xx response		

				Test Purpose		
Ident	ifier:	TP_IMS	Γ2_GM_EME_05			
Sum	nary:		accepts INVITE to IP 100 response	emergency service from use	er with normal registration	on and
Claus	se:	5.2.10.4				
Refer	erences: RQ_003_5256		5256	Config Ref:	CF_1Gm	
IUT I	Role: IMS			Selection Expression:	PICS A.2/1	
	Entities		Condi	tion		
	UE1 IUT		IUT			
	•	/	\checkmark	UE1 registered in IUT		
	U	E1	IUT			
Step		Direc	ction	Message		IF
1	\$		Ď	INVITE ✓ Request URI → emergency service identifier		
2	€ ₽		100 response			
3	Ŷ	<u>ਰ</u> ਜ	< <u>7</u> ,	4xx response		

6.3.8 Exceptional procedures

				Test Purpose		
Ident	ifier:	TP_IMST2_	GM_EXC_01	l		
Sumi	nary:	P-CSCF initi	ates call releas	e due to unacceptable SDP	offer in SIP 200 response	
Claus	se:	5.2.8.1.2, 6.2	2			
Refer	ences:	RQ_003_50° RQ_003_50° RQ_003_600	74,	Config Ref:	CF_2Gm	
IUT I	IUT Role: IMS			Selection Expression:	PICS A.2/1	
		Entities	S	Condi	ition	
	UE1	UE1 IUT UE2				
	\checkmark	✓	✓	UE1 and UE2 registered in	n IUT	
	✓	✓		IUT has received INVITE	from UE1	
		✓ ✓		IUT has sent INVITE to UE2		
	UE1 IUT UE2		UE2			
Step		Directio	n	Mess	age IF	
1		E	Ą	200 response for UE1 ✓ unacceptable SDP off	er	
2	Ý:	ŶĮ.		200 response		
3	₩	Ð		ACK ✓ SDP answer		
4	ŶĿ.	¢ħ.		BYE ✓ Reason header → 503 response code	or 488 response code	
5		₩	Ð	ACK		
6		₩	Ď	BYE ✓ Reason header → 503 response code or 488 response code		

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_EXC_02	2		
Sumi	nary:		TIONAL: Ponse	-CSCF initia	ates call release due to encry	opted SDP offer in SIP 20	00
Claus	se:	5.2	.8.1.2, 6.2				
Refer	rences:	RQ_003_5073, RQ_003_5074, RQ_003_6005			Config Ref:	CF_2Gm	
IUT I	TT Role: IMS Selection Expression: PICS A.2/1		PICS A.2/1				
			Entities		Condition		
	UE1		IUT	UE2			
	✓		\checkmark	✓	UE1 and UE2 registered i	n IUT	
	✓		\checkmark		IUT has received INVITE	from UE1	
			\checkmark	✓	IUT has sent INVITE to U	JE2	
			\checkmark		IUT configured to reject encrypted SDP offers		
	UE1		IUT	UE2			
Step			Direction		Mess	sage	IF
1			È	⇔	200 response for UE1 ✓ encrypted SDP offer		
2	Æ.		Ą		200 response		
3	₩		Ď		ACK ✓ SDP answer		
4	Œ		Ą		BYE ✓ Reason header → 503 response code	or 488 response code	
5			₩	Ď	ACK		
6			₽	侴	BYE ✓ Reason header → 503 response code	or 488 response code	

6.3.9 SDP procedures

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_SDP_01			
Sumi	nary:	P-CSCF 1 488 respo	-	h SDP offer with unacceptabl	e media parameter with	h SIP
Claus	se:	6.2				
Refer	rences:	RQ_003_	_6000	Config Ref:	CF_1Gm	
IUT I	T Role: IMS			Selection Expression:	PICS A.2/1	
		Ent	ities	Condition	on	
	U	UE1 IUT				
	,	\checkmark	\checkmark	UE1 registered in IUT		
	U	Œ1	IUT			
Step		Dire	ction	Messag	e	IF
1	₩		Ď	INVITE ✓ SDP offer → unacceptable media p	arameter	
2	€ ₽		4	488 response ✓ SDP offer		

				Test Purpose			
Ident	ifier:	TP_IMS	T2_GM_SDP_02				
Sumr	nary:	OPTION.	AL: P-CSCF reject	ts INVITE with encrypted SD	P offer		
Claus	se:	6.2					
Refer	ences:	RQ_003_	6001	Config Ref:	CF_1Gm		
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1, A.3/18.1	.1	
		Enti	ities	Condition	on		
	U	E1	IUT				
	•		\checkmark	UE1 registered in IUT			
			\checkmark	IUT configured to reject encrypted SDP offers			
	U	E1	IUT				
Step		Direc	ction	Messag	Message		
1	₩		Ď	INVITE ✓ encrypted SDP offer			
2	4	टि	Ą	4xx response			

					Test Purpose		
Ident	ifier:	TP	_IMST2_G	M_SDP_03			
Sumi	nary:			ds SIP respo originating	nse with unacceptable SDP n UE	nedia parameter offer in	SIP
Claus	se:	6.2					
Refer	ences:	RQ	_003_6002		Config Ref:	CF_2Gm	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/1	
	Entities		Conditi	on			
	UE1		IUT	UE2			
	✓		\checkmark		UE1 registered in IUT		
	✓		\checkmark		IUT has received INVITE for	ITE from UE1	
			\checkmark	✓	IUT has sent INVITE to UE	2	
	UE1		IUT	UE2			
Step			Direction		Messaş	ge	IF
1			È	ŶĮ.	180 response for UE2 ✓ SDP offer → unacceptable media parameter		
2	Ŷ _E		Ą		180 response		

6.3.10 NAT traversal procedures

				Test Purpose		
Ident	ifier:	TP_IMS	T2_GM_NAT_01			
Sumi	nary:			unprotected REGISTER from UDP tunneling support	m UE if Security-Clien	t
Claus	se:	Annex K	.2.2.2 first numbere	ed list 5)a)		
Refer	ences:	RQ_003_	_7000	Config Ref:	CF_1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/1	
	Entities			Condition	o n	
	J	UE1 IUT				
		x x		UE1 not registered in IUT		
		✓		IUT configured for establishing security association		
		\checkmark		UE1 has initiated security association establishment		
	J	JE1	IUT			
Step		Dire	ction	Messag	ge .	IF
1	t	\	unprotected REGISTER ✓ Security-Client header → UDP-enc-tun support ✓ topmost Via header ✓ IP address different from IP source address			
2	<	6	4	no message		

6.4 Test purposes for the Mw interface

6.4.1 General

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_GEN_0	1		
Sumi	mary:	All IMS bytes in l			hall support SIP messages v rface	which are greater than	1300
Clau	se:	4.2A, par	ragraph 1	first nun	nbered list 1)		
Refe	rences:	RQ_003_	_4002		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
	Entities				Condi	tion	
	UE1	IMS	IUT	UE2			
	✓		\checkmark		UE1 registered in IUT		
		\checkmark		✓	UE2 registered in IMS		
		\checkmark	\checkmark		IUT configured with an en	ntry point to IMS	
			×		IUT not configured for top	pology hiding	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	age	IF
1	₩		Ď		MESSAGE to UE2 ✓ Message Body greater than 1300 bytes		
2		E	Ą		MESSAGE to UE2		Mw

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_GEN_0)2		
Sumi	mary:				oundary of a trust domain s any SIP message sent out o		ess-
Claus	se:	4.4.3, par	ragraph 1				
Refe	References: RQ		_4202		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
		Ent	ities		Condi	tion	
	UE1	IMS	IUT	UE2			
	✓		\checkmark		UE1 registered in IUT		
		✓		✓	UE2 registered in IMS	UE2 registered in IMS	
		✓	\checkmark		IUT configured with an er	ntry point to IMS	
			×		IUT not configured for top	oology hiding	
		×	×		IMS not configured for be domain as IUT	ing in the same trust	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	ige	IF
1	₩		Ď		MESSAGE to UE2		Gm
2		Ŷ:	Ą		MESSAGE ★ P-Access-Network-In	fo header	Mw

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_GEN_0)3			
Sumi	mary:	P-CSCF Vector he		the ICIE	and includes it in the icid	parameter of the P-Cha	arging-	
Clau	se:	4.5.2, par	ragraph 2					
Refe	rences:	RQ_003	_4084		Config Ref:	CF_1Mw1Gm		
IUT	Role:	IMS			Selection Expression:	PICS A.2/1		
		Ent	ities		Condit	tion		
	UE1 IMS IUT UE2							
	✓		✓		UE1 registered in IUT			
		✓		\checkmark	UE2 registered in IMS			
		✓	✓		IUT configured with an er	ntry point to IMS		
			×		IUT not configured for top	oology hiding		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ige	IF	
1	${\mathfrak P}$		Ď		MESSAGE to UE2	MESSAGE to UE2		
2		Ê	Ą		MESSAGE ✓ P-Charging-Vector he ✓ icid parameter	ader	Mw	

				Test Purpose		
Ident	tifier:	TP_IMST2_	MW_GEN_0)4		
Sum	mary:		-	inged between a P-CSCF in tork shall include the type 1 in		
Clau	se:	4.5.4, paragra	ph 4			
Refe	rences:	RQ_003_420	4	Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Conditi	on	
	UE1 IMS II		IUT			
			×	IUT not configured for topo	ology hiding	
	✓		✓	UE1 visiting IUT		
	UE1	IMS	IUT			
Step		Direction	1	Messag	ge	IF
1	₩		₽	unprotected REGISTER		Gm
2	Ý£.		ŶĦ	<pre>unprotected REGISTER ✓ P-Charging-Vector header ✓ ioi parameter → type1</pre>		Mw

	Test Purpose dentifier: TP_IMST2_MW_GEN_05												
Ident	tifier:	TP	_IMST2_M	IW_GEN_0)5								
Sumi	mary:				nanged between a P-CSCF is ork shall include the type 1 is								
Clau	se:	4.5	.4, paragrap	h 4									
Refe	rences:	RQ	_003_4204		Config Ref:	CF_1Mw							
IUT	Role:	IM	S		Selection Expression:	PICS A.2/1							
			Entities		Condit	ion							
	UE1 IMS IUT												
				×	IUT not configured for topology hiding								
	✓		\checkmark		UE1 visiting IMS								
				✓	IUT has sent unprotected REGISTER and has received 401 response via Mw								
	UE1		IMS	IUT									
Step			Direction		Messa	ge	IF						
1	protected REGISTER			Mw									
2			È	Å	200 response ✓ P-Charging-Vector hea ✓ ioi parameter → type1	ader	Mw						

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_GEN_0	06			
Sumi	mary:	network		CSCF of t	exchanged between a S-CSCF of the home originating the home terminating network shall include a type 2 inter			
Claus	se:	4.5.4, pa	ragraph 4					
Refer	rences:	RQ_003	_4205		Config Ref:	CF_1Gm1Mw		
IUT 1	Role:	IMS			Selection Expression:	PICS A.2/1		
		Ent	ities		Conditi	ion		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for top	ology hiding		
	✓		✓		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an ent	try point to IMS		
	✓				UE1 has sent INVITE and response	has received 200		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ge	IF	
1	₩		Ď		ACK to UE2		Gm	
2		Û.	À		ACK to UE2 ✓ P-Charging-Vector hea ✓ ioi parameter → type2	nder	Mw	

					Test Purpose			
Ident	tifier:	TP_IMS	ST2_MW	_GEN_0	77			
Sum	mary:	origination operator	ng netwo	rk and a S (IOI) and	exchanged between a S-CSC S-CSCF of the home network d forward the orig-ioi parame request.	shall include a type 2		
Clau	se:	4.5.4, pa	ragraph 4	•				
Refe	rences:	RQ_003	_4205		Config Ref:	CF_1Gm1Mw		
IUT :	Role:	IMS			Selection Expression: PICS A.2/1			
		Ent	ities		Condition	on		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for topo	ology hiding		
	✓		✓		UE1 registered in IUT	UE1 registered in IUT		
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an ent	ry point to IMS		
	✓		✓		IUT has received INVITE a Mw	addressed to UE1 via		
	✓		✓		IUT has sent INVITE to UF	E1 via Gm		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messag	ge	IF	
1	₩		Ď		200 response to UE2		Gm	
2		È	Å		200 response to UE2 ✓ P-Charging-Vector head ✓ ioi parameter → type2 ✓ orig-ioi parameter of		Mw	

					Test Purpose			
Ident	ifier:	TP_IMS	T2_MW	_GEN_0	8			
Sumi	mary:				ny P-Charging-Function-Addresses header of SIP to a visited network or UE			
Claus	se:	4.5.5, par	ragraph 3					
Refer	rences:	RQ_003	_4208		Config Ref:	CF_1Gm1Mw		
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1	_	
	Entities				Condit	tion		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for top	oology hiding		
	\checkmark		✓		UE1 registered in IUT			
		✓		\checkmark	UE2 registered in IMS			
		✓	✓		IUT configured with an en	atry point to IMS		
	\checkmark				UE1 has sent INVITE and response	has received 200		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ıge	IF	
1	$ \Rightarrow $		Ď		ACK to UE2		Gm	
2		È	Ą		ACK to UE2 ★ P-Charging-Function-	Addresses header	Mw	

Test Purpose											
Ident	tifier:	TP_IMS	Γ2_N	IW_GEN_0	9						
Sumi	mary:		Func	tion-Addres	SIP MESSAGE request to ses and P-Charging-Vector						
Clau	se:	5.2.1, para	agrap	h 4							
Refe	rences:	RQ_003_	5006		Config Ref:	CF_1Mw1Gm					
IUT	Role:	IMS			Selection Expression:	PICS A.2/1					
		Entit	ties		Condi	tion					
	UE1 IMS IUT										
	✓			✓	UE1 registered in IUT						
		✓		✓	IUT configured with an entry point to IMS						
				×	IUT not configured for topology hiding						
	UE1	IM	S	IUT							
Step		Direc	tion		Messa	ıge	IF				
1	\$		Ð	MESSAGE to UE1 ✓ P-Charging-Vector headers ✓ P-Charging-Function-Addresses header		Mw					
2	2 दि		À	MESSAGE to UE1 ★ P-Charging-Vector headers ★ P-Charging-Function-Addresses header		Gm					

					Test Purpose				
Ident	tifier:	TP_IMS	ST2_MW	_GEN_1	0				
Sumi	mary:	Charging		n-Addres	SIP 200 response to the UE, it shall remove the Peses and P-Charging-Vector headers before sending the				
Claus	se:	5.2.1, pa	ragraph 4						
Refer	rences:	RQ_003_5006			Config Ref:	CF_1Mw1Gm			
IUT	Role:	IMS			Selection Expression:	PICS A.2/1			
		Ent	ities		Conditi	on			
	UE1	IMS	IUT	UE2					
	\checkmark		\checkmark		UE1 registered in IUT				
		✓		✓	UE2 registered in IMS	UE2 registered in IMS			
		✓	✓		IUT configured with an ent	ry point to IMS			
	✓		✓	✓	IUT has received MESSAC addressed to UE2	GE via Gm from UE1			
			✓	✓	IUT has sent MESSAGE vi UE2	ia Mw addressed to			
			×		IUT not configured for topo	ology hiding			
	UE1	IMS	IUT	UE2					
Step		Dire	ction		Messaş	ge	IF		
1		₩	Ð		 200 response originated by UE2 ✓ P-Charging-Vector headers ✓ P-Charging-Function-Addresses header 		Mw		
2	Ŷ		À		200 response to UE1 * P-Charging-Vector hea * P-Charging-Function-A		Gm		

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_GEN_1	1			
Sumi	mary:		_	•	ESSAGE request received for nction-Addresses and P-Cha		shall	
Clau	se:	5.2.1, par	ragraph 6					
Refe	rences:	RQ_003	_5007		Config Ref:	CF_1Mw1Gm		
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1		
		Ent	ities		Conditi	on		
	UE1	IMS	IUT	UE2				
	\checkmark		✓		UE1 registered in IUT			
		✓		\checkmark	UE2 registered in IMS	UE2 registered in IMS		
		✓	✓		IUT configured with an entry point to IMS			
			×		IUT not configured for topo	ology hiding		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messag	ge	IF	
1	₩		Ð		MESSAGE to UE2 ✓ P-Charging-Vector headers of UE1 ✓ P-Charging-Function-Addresses header of UE1		Gm	
2		È	À		MESSAGE to UE2 * P-Charging-Vector head * P-Charging-Function-A UE1		Mw	

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_GEN_1	2			
Sumi	mary:		_	•	00 response received from a UE, a P-CSCF shall remove Addresses and P-Charging-Vector headers received			
Clau	se:	5.2.1, par	ragraph 6					
Refe	rences:	RQ_003	_5007		Config Ref:	CF_1Mw1Gm		
IUT	Role:	IMS			Selection Expression:	PICS A.2/1		
	Entities				Condit	ion		
	UE1	IMS	IUT	Γ UE2				
	\checkmark		\checkmark		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an en	try point to IMS		
	✓		√	✓	IUT has received MESSA addressed to UE1 via Mw	GE originated by UE2		
	✓		✓		IUT has sent MESSAGE v	via Gm to UE1		
			×		IUT not configured for top	oology hiding		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ge	IF	
1	∌		Ð		200 response to UE2 ✓ P-Charging-Vector headers of UE1 ✓ P-Charging-Function-Addresses header of UE1			
2		Ŷz.	À		200 response to UE2 * P-Charging-Vector hea * P-Charging-Function- UE1		Mw	

Test Purpose										
Ident	tifier:	TP_IMS	T2_MW	_GEN_1	3					
Sumi	mary:		P-Access-	Network	ESSAGE request received full of the same o		shall			
Claus	se:	5.2.1, par	ragraph 6							
Refer	rences:	RQ_003	_5007		Config Ref:	CF_1Mw1Gm				
IUT	Role:	IMS			Selection Expression:	PICS A.2/1				
		Ent	ities		Conditi	on				
	UE1	IMS	IUT	UE2						
	✓		\checkmark		UE1 registered in IUT					
		✓		✓	UE2 registered in IMS					
		✓	\checkmark		IUT configured with an ent	ry point to IMS				
			×		IUT not configured for top	ology hiding				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messa	ge	IF			
1	₩		Ď		MESSAGE to UE2 ✓ P-Access-Network-Info header ✓ network provider parameter		Gm			
2		Ŷ.	À		MESSAGE to UE2 * P-Access-Network-Info	o header	Mw			

					Test Purpose						
Ident	tifier:	TP_IMS	T2_MW	_GEN_1	.4						
Sumi	mary:	P-Access	Before forwarding a SIP 200 response received from a UE, a P-CSCF shall remore P-Access-Network-Info header if such header contains a "network-provided" parameter								
Claus	se:	5.2.1, pa	ragraph 6								
Refer	rences:	RQ_003_5007			Config Ref:	CF_1Mw1Gm					
IUT	Role:	IMS			Selection Expression:	PICS A.2/1					
		Ent	ities		Condi	tion					
	UE1	IMS	IUT	UE2							
	\checkmark		\checkmark		UE1 registered in IUT	UE1 registered in IUT					
		✓		✓	UE2 registered in IMS	UE2 registered in IMS					
		✓	✓		IUT configured with an er	ntry point to IMS					
	✓		✓	✓	IUT has received MESSA originated by UE2 via Mv						
	✓		✓		IUT has sent MESSAGE	via Gm to UE1					
			×		IUT not configured for top	pology hiding					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messa	nge	IF				
1	₩		Ð		200 response to UE2 ✓ P-Access-Network-Info header ✓ network provider parameter		Gm				
2	200 response to UE2 * P-Access-Network-Info header		Mw								

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_GEN_1	5			
Sumi	mary:				e P-Media-Authorization header from a SIP MESSAGE e forwarding the message			
Clau	se:	5.2.1, par	ragraph 1	3				
Refe	rences:	RQ_003	_5212		Config Ref:	CF_1Mw1Gm		
IUT	Role:	IMS			Selection Expression:	PICS A.2/1		
	Entities				Condi	tion		
	UE1	IMS	IUT	UE2				
	\checkmark		✓		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an er	atry point to IMS		
			×		IUT not configured for top	oology hiding		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ige	IF	
1	₩		Ď		MESSAGE to UE2 ✓ P-Media-Authorization header			
2		Ŷ	À		MESSAGE to UE2 ★ P-Media-Authorizatio	n header	Mw	

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_GEN_1	6		
Sumi	mary:				e P-Media-Authorization heding the message	ader from a SIP 200 res	sponse
Claus	se:	5.2.1, par	ragraph 1	3			
Refer	rences:	RQ_003_	_5212		Config Ref:	CF_1Mw1Gm	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1	
	Entities				Condit	ion	
	UE1	IMS	IUT	UE2			
	\checkmark		\checkmark		UE1 registered in IUT		
		✓		✓	UE2 registered in IMS		
		\checkmark	\checkmark		IUT configured with an en	try point to IMS	
	✓			✓	UE1 has received MESSA	GE originated by UE2	
			×		IUT not configured for top	oology hiding	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	ge	IF
1	₩		Ď		200 response to UE2 ✓ P-Media-Authorization header		
2		Û	À		200 response to UE2 * P-Media-Authorization	n header	Mw

					Test Purpose			
Ident	tifier:	TP_IMS	ST2_MW	_GEN_1	7			
Sum	mary:	Proxy) re	esponse, t to any of	o a reque	SIP Redirect response (3xx) est forwarded from the UE, as specified in the Contact he	it shall not resend the o	riginal	
Clau	se:	5.2.1, par	ragraph 1	4				
Refe	rences:	RQ_003	_5213		Config Ref:	CF_1Mw1Gm		
IUT :	Role:	IMS			Selection Expression:	PICS A.2/1		
		Ent	ities		Condi	tion		
	UE1	IMS	IUT	UE2				
	\checkmark		\checkmark		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS	UE2 registered in IMS		
		✓	✓		IUT configured with an er	ntry point to IMS		
			✓	✓	IUT has received MESSA via Gm	GE addressed to UE2		
			✓	✓	IUT has sent MESSAGE a Mw	addressed to UE2 via		
			×		IUT not configured for top	oology hiding		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	nge	IF	
1		₩	Ð		3xx response different to 305 response ✓ contact header ✓ Contact URI			
2		&	4		MESSAGE to Contact Ul	RI	Mw	

6.4.2 Registration procedures

				Test Purpose				
Ident	tifier:	TP_IMST2_M	IW_REG_0	1				
Sum	mary:	Path header co option tag, P-C parameter iden	When a P-CSCF receives REGISTER request from the UE, it shall insert a cor Path header containing SIP URI identifying the P-CSCF, Require header with poption tag, P-Charging-Vector header with the icid parameter and a type 1 orig parameter identifying the sending network but not including term-ioi parameter and insert a P-Visited-Network-ID header identifying the visited network at the home network					
Clau	se:	5.2.2, paragrap	h 2 items 1).	, 2), 3) and 7)				
Refe	rences:	RQ_003_5011		Config Ref:	CF_1Mw1Gm			
IUT	Role:	IMS		Selection Expression:	PICS A.2/1			
		Entities	ı	Condition	on			
	UE1	IMS	IUT					
			×	IUT not configured for topo	ology hiding			
		✓	✓	IUT configured with an entry point to IMS				
	✓		✓	UE1 visiting IUT				
	UE1	IMS	IUT					
Step		Direction		Message		IF		
1	₩		Ď	unprotected REGISTER		Gm		
2		₹िंद	À	unprotected REGISTER ✓ Path header ✓ SIP URI of IMS P-CS ✓ Require header ✓ path tag parameter ✓ P-Charging-Vector head ✓ icid parameter ✓ orig-ioi parameter → type1 of the sending * term-ioi parameter → type1 ✓ P-Visited-Network-ID ✓ visited network pre-p	der ng network header	Mw		

				Test Purpose		
Ident	tifier:	TP_IMST2_I	MW_REG_0)2		
Sumi	mary:	parameter "infield if the RE	egrity-protections: GISTER requires	REGISTER request from the ted" with a value "yes" into the uest was received protected value to challenge response	he Authorization head	
Claus	se:	5.2.2, paragra	ph 2 item 4)			
Refer	rences:	RQ_003_501	[Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condition	on	
	UE1	IMS	IUT			
			×	IUT not configured for topology hiding		
	√		✓	UE1 visiting IUT		
	✓	✓	✓	UE1 has sent unprotected REGISTER and has received 401 response		
	✓			UE1 has established a secur	rity association	
	UE1	IMS	IUT			
Step		Direction		Messag	ge	IF
1	₩		Ď	protected REGISTER ✓ authentication challeng	e response parameter	Gm
2		Ŷ£.	À	REGISTER ✓ Authorization header ✓ integrity-protected pa → yes	✓ Authorization header✓ integrity-protected parameter	

					Test Purpose		
Ident	tifier:	TP_IN	IST2_M	IW_REG_0	3		
Sum	mary:	parame field if	eter "inte the REC	grity-protec GISTER requ	REGISTER request from the ted" with a value "yes" into to uest was received on the secuthentication procedure	he Authorization head	
Clau	se:	5.2.2, p	paragrap	h 2 item 4)			
References: RQ_003_5011 Config Ref					Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1	
	Entities				Condition	on	
	UE1	UE1 IMS IUT		IUT			
				×	IUT not configured for topology hiding		
	✓			✓	UE1 visiting IUT		
	✓				UE1 has established a security association		
	UE1]	IMS	IUT			
Step		Dir	rection		Messag	e	IF
1	₩			Ď	protected REGISTER		Gm
2	4		Ϋ́́À	REGISTER ✓ Authorization header ✓ integrity-protected parameter → yes		Mw	

					Test Purpose			
Ident	tifier:	TP_	_IMST2_M	IW_REG_0	4			
Sum	mary:	para field	ameter "inte d if the REC	egrity-protec GISTER requ	REGISTER request from the ted" with a value "no" into the uest was not received protect Security-Client header if the	ne Authorization head red with the security	er	
Clau	se:	5.2.	2, paragrap	h 2 item 5) a	a) and 6)			
Refe	rences:	RQ	_003_5011		Config Ref: CF_1Mw1Gm			
IUT	UT Role: IMS Selection Expression: PICS A.2/1				PICS A.2/1			
	Entities				Condition	on		
	UE1		IMS	IUT				
				×	IUT not configured for topology hiding			
	✓			✓	UE1 visiting IUT			
	×				UE1 not has established a security association			
	UE1		IMS	IUT				
Step			Direction		Messag	ge	IF	
1	\$		unprotected REGISTER ✓ Security-Client header		Gm			
2			Ŷ	Ϋ́́́́	REGISTER ✓ Authorization header ✓ integrity-protected pa → no × Security-Client header	nrameter	Mw	

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_REG_0	95		
Sumi	mary:				REGISTER request from the ader then the P-CSCF shall r		
Clau	se:	5.2	.2, paragrap	h 2 item 5)			
Refe	rences:	RQ	_003_5011		Config Ref:	CF_1Mw1Gm	
IUT	UT Role: IMS Selection Expression: PICS A.2/1				PICS A.2/1		
Entities					Condit	ion	
	UE1		IMS	IUT			
				×	IUT not configured for top	ology hiding	
	✓			\checkmark	UE1 visiting IUT		
	UE1		IMS	IUT			
Step			Direction		Messa	ge	IF
1	♦			Ď	unprotected REGISTER ★ Security-Client header		Gm
2			&	4	REGISTER		Mw
3	Æ.			À	4xx response to UE1		Gm

					Test Purpose		
Ident	ifier:	TP	_IMST2_M	IW_REG_0)6		
Sumi	mary:	req	uest was rec	eived with a	REGISTER request from the UE if the REGISTER a temporary security association but without a Security-SCF shall return a 4xx response.		
Claus	se:	5.2	.2, paragrap	h 2 item 6) a	a)		
Refer	rences:	RÇ	0_003_5011		Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1	
Entities					Condit	ion	
	UE1 IMS IUT						
		IUT not configured for topology hiding					
	\checkmark			\checkmark	UE1 visiting IUT		
	✓				UE1 has sent unprotected REGISTER and has received 401 response		
	\checkmark				UE1 has established a tem association	porary security	
	UE1		IMS	IUT			
Step			Direction		Messa	ege	IF
1	$ \Rightarrow $			Ď	protected REGISTER ★ Security-Verify header		Gm
2			&	4	REGISTER		Mw
3	Œ.			P	4xx response to UE1		Gm

					Test Purpose		
Ident	ifier:	TP	_IMST2_M	IW_REG_0)7		
Sumi	mary:	req Sec	uest was rec curity-Verify	ceived via a a and the Se	REGISTER request from the temporary security association curity-Client header do not much the request by sending a 42 center of the request of th	on and the content of the atch previous information	
Claus	se:	5.2	.2, paragrap	h 2 item 6)	a)		
Refer	rences:	RQ	_003_5011		Config Ref:	CF_1Mw1Gm	
IUT Role:IMSSelection Expression:				Selection Expression:	PICS A.2/1		
	Entities				Condition	on	
	UE1		IMS	IUT			
				×	IUT not configured for topo	ology hiding	
	\checkmark		✓ UE1 visiting IUT				
	✓				UE1 has sent unprotected REGISTER and has received 401 response		
	\checkmark				UE1 has established a temp association	orary security	
	UE1		IMS	IUT			
Step			Direction		Messag	ge	IF
1	Ð			Ð	protected REGISTER ✓ Security-Verify header different to Security-Server header of 401 response ✓ Security-Client header equal to Security-Client header of unprotected REGISTER		Gm
2			龟	4	REGISTER		Mw
3	L			♠	4xx response to UE1		Gm

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_REG_0	8		
Sumi	mary:	req hea	uest was rec	ceived via a t urity-Client	REGISTER request from the temporary security associate headers match previous infund the Security-Client headers.	ion and Security-Verify ormation, the P-CSCF	7
Clau	se:	5.2	.2, paragrap	h 2 item 6) a	1)		
Refe	rences:	RQ	_003_5011		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IM	S		Selection Expression:	PICS A.2/1	
	Entities				Condit	ion	
	UE1 IMS IUT						
				×	IUT not configured for topology hiding		
	✓			✓	UE1 visiting IUT		
	✓				UE1 has sent unprotected REGISTER and has received 401 response		
	✓				UE1 has established a temporary security association		
	UE1		IMS	IUT			
Step			Direction		Messa	ge	IF
1	protected REGISTER ✓ Security-Verify header equal to Server header of 401 response		onse r equal to Security-	Gm			
2			È	À	REGISTER * Security-Verify header * Security-Client header		Mw

				Test Purpose		
Ident	tifier:	TP_IMST2_M	IW_REG_0	9		
Sumi	mary:	request was red	ceived via an	REGISTER request from the already established security curity-Client and Security-V	y association, then the	P-
Clau	se:	5.2.2, paragrap	h 2 item 6) b	0)		
Refe	rences:	RQ_003_5011		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condit	ion	
	UE1	IMS	IUT			
			×	IUT not configured for topology hiding		
	✓		✓	UE1 visiting IUT		
	✓			UE1 has established a security association		
	UE1	IMS	IUT			
Step		Direction		Messa	ge	IF
1	\$		Ð	<pre>protected REGISTER ✓ Security-Verify header ✓ Security-Client header</pre>		Gm
2	€		À	REGISTER ★ Security-Verify header ★ Security-Client header		Mw

					Test Purpose		
Ident	ifier:	TP_	IMST2_M	W_REG_1	0		
Sumi	mary:	requ	est was rec	eived via an	REGISTER request from the already established securit the P-CSCF shall return a	y association and the	
Claus	se:	5.2.2	2, paragrap	h 2 item 6) b))		
Refer	rences:	RQ_	003_5011		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
	Entities				Condit	ion	
	UE1		IMS	IUT			
				×	IUT not configured for topology hiding		
	\checkmark			\checkmark	UE1 visiting IUT		
	✓				UE1 has established a security association		
	UE1		IMS	IUT			
Step]	Direction		Messa	ge	IF
1	\Rightarrow			Ď	protected REGISTER ★ Security-Client header		Gm
2			&	4	REGISTER		Mw
3	L			⇔	4xx response to UE1		Gm

Test Purpose								
Ident	tifier:	TP	_IMST2_N	IW_REG_1	1			
Sumi	mary:	req ide	uest was recentity in the A	ceived via an Authorizatio	REGISTER request from the already established security in header differs from the once P-CSCF shall return a 403	association and private in the unprotected		
Clau	se:	5.2	.2, paragrap	h 2 item 6) b	p)	_		
Refe	rences:	RÇ	0_003_5011		Config Ref:	CF_1Mw1Gm		
IUT	Role:	IM	S		Selection Expression:	PICS A.2/1		
	Entities				Conditi	on		
	UE1		IMS	IUT				
				×	IUT not configured for topology hiding			
	✓			✓	UE1 visiting IUT			
	✓				UE1 has sent unprotected REGISTER and has received 401 response			
	✓				UE1 has established a secu	rity association		
	UE1		IMS	IUT				
Step			Direction		Messaş	ge	IF	
1	₩			Ð	protected REGISTER ✓ Authorization header ✓ private user identity different to private user identity of unprotected REGISTER		Gm	
2			&	4	REGISTER		Mw	
3	Ýc.			Ŷ,	403 response to UE1		Gm	

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_REG_1	2		
Sumi	mary:	it s	hall remove	the CK and	SIP 401 (Unauthorized) respo IK values contained in the 4 ader in the response		
Clau	se:	5.2	.2, paragrap	h 33) 2) and	3)		
Refe	rences:	RQ	_003_5023		Config Ref:	CF_1Mw1Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1	
	Entities				Conditi	on	
	UE1		IMS	IUT			
				×	IUT not configured for topo	ology hiding	
	✓			\checkmark	UE1 visiting IUT		
	✓	-			UE1 has sent REGISTER		
	UE1		IMS	IUT			
Step		,	Direction		Messag	ge	IF
1			Œ	Ď	401 response		Mw
2	Ŷ.			Á	401 response to UE1 ✓ WWW-Authenticate ho × CK parameter × IK parameter ✓ Security-Server header ✓ P-CSCF security list needed for the security asso	the parameters	Gm

				Test Purpose		
Ident	ifier:	TP_IMST2_M	IW_REG_1	3		
Sum	mary:	association, it s CSCF, a Requi icid parameter, the sending net	shall insert a re header wi a type 1 orig twork and no	REGISTER request from the Path header containing SIP th a path option tag, a P-Chag-ioi parameter, a type 1 origo type 1 term-ioi parameter, a type the visited network at the	URI identifying the Parging-Vector header was a parameter identifies well as a P-Visited-	vith a ying
Clau		5.2.2A, paragra	aph 2 item 1)	,		
	rences:	RQ_003_5221		Config Ref:	CF_1Mw1Gm	
IUT :	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities	ı	Condition	on	
	UE1	IMS	IUT			
			×	IUT not configured for topo	ology hiding	
	\checkmark	√		UE1 visiting IUT		
	×			UE1 not has established a s	ecurity association	
	UE1	IMS	IUT			
Step		Direction		Message		IF
1	\Longrightarrow		25	REGISTER		Gm
2		ींद	À	REGISTER ✓ Path header ✓ SIP URI of IUT P-CS ✓ Require header ✓ path tag parameter ✓ P-Charging-Vector hea ✓ icid parameter ✓ orig-ioi parameter → type1 of the sendin × term-ioi parameter → type1 ✓ P-Visited-Network-ID ✓ visited network pre-p	der ng network header	Mw

				Test Purpose		
Ident	tifier:	TP_IMST2_N	IW_REG_1	14		
Sumi	mary:		in the visited	(OK) response to an initial S d network shall send a SIP S twork		
Clau	se:	5.2.3, paragrap	h 2 item 1)	and 2)		
Refe	rences:	RQ_003_5044		Config Ref:	CF_1Mw1Gm	
IUT :	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condit	ion	
	UE1	IMS	IUT			
			×	IUT not configured for top	oology hiding	
	✓		\checkmark	UE1 visiting IUT		
	✓			UE1 has sent initial REGIS	STER	
	UE1 IMS IU		IUT			
Step		Direction		Messa	ge	IF
1		₩	Ď	200 response		Mw
2		िंद	Ð	SUBSCRIBE ✓ Request-URI ✓ From header ✓ SIP URI of IUT P-C ✓ To header ✓ SIP URI → public user identi ✓ Event header ✓ reg parameter ✓ Expires header ✓ a value higher than tresponse ✓ P-Asserted-Identity he ✓ SIP URI of IUT P-C Path header during the reg ✓ P-Charging-Vector he ✓ icid parameter	the value in the 200 eader CSCF inserted into the istration of UE1	Mw

					Test Purpose		
Ident	ifier:	TP	_IMST2_M	IW_REG_1	15		
Sumi	nary:	Au use aut	otected" para thorization hed to register thentication is	ameter of its neader speci one or mor is successful	SIP REGISTER request in version header is set to se	to the value "no", the hich has previously be have not yet expired itiated deregistration of	and
Claus	se:	5.4	1.2.1, 5.4.1	.2.2, 5.4.1.5			
	rences:		0_003_5088		Config Ref:	CF_1Mw	
IUT I	Role:	IM			Selection Expression:	PICS A.2/3	
			Entities		Conditi	<u>on</u>	
	IMS		IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	√			\checkmark	UE2 visiting IMS		
	\checkmark	✓ ✓		\checkmark		UE2 registered public user identity with current private user identity in IUT	
	✓		√		IUT configured with an ent	ry point to IMS	
	IMS		IUT	UE2			
Step	l		Direction		Messag	,	IF
1	₩		Ď		REGISTER originated by ↑ ✓ Authorization header ✓ integrity protected pa → no		Mw
2	Ŷ.		Ą		401 response ✓ WWW-Authenticate he	ader	Mw
3	₩		Ď		REGISTER originated by UE2 ✓ Authorization header ✓ integrity protected parameter → yes		Mw
4	È		Ą		200 respone		Mw
5	È		Ą		NOTIFY ✓ NOTIFY body ✓ registered public user	identity	Mw

				Test Purpose		
Ident	ifier:	TP_IMST2_M	IW_REG_1	16		
Sumi	mary:	protected" par contains an uni (Unauthorized)	ameter in the registered pu response to realm, RANI	SIP REGISTER request in e Authorization header is sentiablic user identity, the S-CS of the originating UE including D, AUTN, algorithm, IK, and	t to "no" and the To fie CF shall send a 401 ng WWW-Authenticate	
Refer	rences:	RQ_003_5089	<u> </u>	Config Ref:	CF_1Mw	
IUT	Role:	IMS		Selection Expression:	PICS A.2/3	
		Entities		Condit	ion	
	IMS	IUT	UE2			
		×		IUT not configured for top	oology hiding	
	\checkmark		✓	UE2 visiting IMS		
	✓ ✓			IUT configured with an entry point to IMS		
	IMS	IUT	UE2			
Step		Direction		Messa	ge	IF
1	∌	Ð		REGISTER originated by ✓ Authorization header ✓ integrity protected p → no ✓ To header ✓ a not registered publication	arameter	Mw
2	Ŷ	∱ Ā		401 response ✓ WWW-Authenticate header ✓ realm parameter → a globally unique name of the IUT S- CSCF ✓ RAND parameter ✓ AUTN parameter ✓ algorithm parameter → AKAv1-MD5 ✓ ik parameter ✓ ck parameter		Mw

					Test Purpose		
Ident	tifier:	TP.	_IMST2_M	IW_REG_1	7		
protected" para procedure for re parameter for the registration if a			tected" para cedure for r ameter for this istration if a	meter in the eceipt of a R he received p	SIP REGISTER request with Authorization header, the SEGISTER request without public user identity and per 1.5	S-CSCF shall perform the "integrity-protected	l''
Refe	rences:	_	_003_5410,	,	Config Ref:	CF_1Mw	
IUT	Role:	IMS	S		Selection Expression:	PICS A.2/3	
			Entities		Condi	tion	
	IMS		IUT	UE2			
			×		IUT not configured for top	oology hiding	
	✓	✓		\checkmark	UE2 visiting IMS		
	✓	✓ ✓		✓	UE2 registered public user identity with another contact address in IUT		
			×		IUT not configured for IMS AKA authentication		
	✓		✓		IUT configured with an entry point to IMS		
	IMS		IUT	UE2			
Step			Direction		Messa	nge	IF
1	₩		Ď		REGISTER originated by UE2 ✓ Authorization header × integrity protected parameter ✓ Contact header × registered public user identities		Mw
2	È		Ą		200 response		Mw
3	€		Ą		NOTIFY ✓ NOTIFY body ✓ registered public use	er identity	Mw

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_REG_1	8		
Sumi	mary:	par pro	ameter in the cess the RE	e Authorizat	P REGISTER request without ion header and for existing puest as if the "integrity-protet to "yes"	contact information, it	shall
Claus	se:	5.4	.1.2A, parag	graph 18		,	
Refer	rences:	RQ	_003_5415		Config Ref:	CF_1Mw	
IUT	Role:	IM	S		Selection Expression:	PICS A.2/3	
	Entities				Condit	ion	
	IMS		IUT	UE2			
			×		IUT not configured for topology hiding		
	✓		✓	✓	UE2 registered public user identity with current private user identity in IUT		
			×		IUT not configured for IMS AKA authentication		
	✓		\checkmark		IUT configured with an en	try point to IMS	
	IMS		IUT	UE2			
Step			Direction		Messa	ige	IF
1	₩		Ď		REGISTER originated by UE2 for registered public user identity ✓ Authorization header * integrity-protected parameter		Mw
2	Ŷ.		₹¥		200 response		Mw

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_REG_1	9		
Sumi	mary:	and	l for existing	g contact info	P REGISTER request without cormation, it shall process the meter in the Authorization hea	REGISTER request a	
Claus	se:	5.4	.1.2A, parag	graph 18			
Refer	rences:	RQ	0_003_5415		Config Ref:	CF_1Mw	
IUT	Role:	IM	S		Selection Expression:	PICS A.2/3	
			Entities		Conditi	on	
	IMS		IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	✓		\checkmark	✓	UE2 registered public user identity with current private user identity in IUT		
			×		IUT not configured for IMS AKA authentication		
	✓		\checkmark		IUT configured with an ent	ry point to IMS	
	IMS		IUT	UE2			
Step			Direction		Messag	ge	IF
1	₩		Ď		REGISTER originated by UE2 for registered public user identity ★ Authorization header		Mw
2	Ŷ _E		Ą		200 response		Mw

				Test Purpose		
Ident	tifier:	TP_IMS	T2_MW_REG_2	0		
Sumi	mary:	an Expire	es header which is	REGISTER request from a Ul set to a value shorter than th shall return a SIP 423 (Intervader	e minimum time that	the S-
Clau	se:	5.4.1.2A	.1, paragraph 1			
Refe	rences:	RQ_003	_5416	Config Ref:	CF_1Mw	
IUT	Role:	IMS		Selection Expression:	PICS A.2/3	
		Ent	ities	Condition	on	
	IMS		IUT			
			×	IUT not configured for topology hiding		
			×	IUT not configured for IMS AKA authentication		
	,	✓	✓	IUT configured with an entry point to IMS		
	I	MS	IUT			
Step		Dire	ction	Messag	ge	IF
1	₹>		Ð	REGISTER originated by UE2 ✓ Expires header → duration smaller than minimum		Mw
2	4	È	क्र	423 response ✓ Min-Expires header		Mw

				Test Purpose		
Ident	tifier:	TP_IMST2_M	IW_REG_2	1		
Sumi	mary:	protected" para an unregistered response to the	meter in the I public user originating	SIP REGISTER request in v Authorization header is set identity, the S-CSCF shall s UE including WWW-Autherm, ik, and the CK (Cipher F	to "yes", To header co end a 401 (Unauthoriz nticate header with rea	zed)
Clau	se:	5.4.1.2.2				
Refe	rences:	RQ_003_5090		Config Ref:	CF_1Mw	
IUT	Role:	IMS		Selection Expression:	PICS A.2/3	
		Entities		Conditi	on	
	IMS	IUT	UE2			
		×		IUT not configured for topo	ology hiding	
	✓		✓	UE2 visiting IMS		
		✓		IUT configured for IMS AKA authentication		
	✓	✓		IUT configured with an ent	ry point to IMS	
	IMS	IUT	UE2			
Step		Direction		Messaş	ge	IF
1	₹	Ð		REGISTER originated by UE2 ✓ Authorization header ✓ integrity protected parameter → yes ✓ To header ✓ a not registered public user identity		Mw
2	ींद	ŶŊ		401 response ✓ WWW-Authenticate header ✓ realm parameter → globally unique name ✓ RAND parameter ✓ AUTN parameter ✓ algorithm parameter → AKAv1-MD5 ✓ ik parameter ✓ ck parameter		Mw

				Test Purpose		
Ident	tifier:	TP_IMST2_N	MW_REG_2	22		
Sum	mary:	challenge resp	onse from th header is set	SIP REGISTER request cone UE and the integrity-prote to the value "yes", the S-C	ected parameter in the	
	rences:	RQ_003_5092	<u> </u>	Config Ref:	CF_1Mw	
	Role:	IMS		Selection Expression:	PICS A.2/3	
		Entities		Condi	tion	
	IMS	IUT	UE2			
		×		IUT not configured for top	oology hiding	
	✓		✓	UE2 visiting IMS		
	✓		✓	UE2 has sent unprotected REGISTER and has received 401 response		
		\checkmark		IUT configured for IMS A	KA authentication	
	✓	✓		IUT configured with an entry point to IMS		
	IMS	MS IUT UE2				
Step		Direction		Messa	nge	IF
1	\$	Σ		REGISTER originated by UE2 ✓ Authorization header ✓ integrity protected parameter → yes ✓ algorithm parameter → AKAv1-MD5 ✓ username parameter → private user identity ✓ response parameter → valid challenge response ✓ initial CallID parameter		Mw
2	Œ	₹ħ		200 response ✓ Path header ✓ P-Associated-URI header ✓ registered public us ✓ Service-Route header ✓ SIP URI → IUT S-CSCF ✓ P-Charging-Function ✓ P-Charging-Vector header ✓ address of public us	er identities Addresses header ader	Mw

					Test Purpose		
Ident	tifier:	TP_	_IMST2_M	IW_REG_2	3		
Sumi	mary:	cha the	llenge respo integrity-pr	onse from the otected para	REGISTER request containing UE and the request is not to meter in the Authorization hourn a SIP 403 (Forbidden) re	the expected REGISTI leader is set to the valu	
Clau	se:	5.4.	1.2.3, parag	graph 1			
Refe	rences:	_	_003_5420, _003_5424	,	Config Ref:	CF_1Mw	
IUT	Role:	IMS	S		Selection Expression:	PICS A.2/3	
	Entities				Conditi	ion	
	IMS IUT UE2		UE2				
			×		IUT not configured for topology hiding		
	✓			\checkmark	UE2 visiting IMS		
	✓		\checkmark	✓	UE2 has sent unprotected I received 401 response	REGISTER and has	
	✓		\checkmark		IUT configured with an entry point to IMS		
	IMS		IUT	UE2			
Step			Direction		Messa	ge	IF
1	₩		Ď		REGISTER originated by UE2 ✓ Authorization header ✓ integrity-protected parameter → yes ✓ unknown CallID parameter		Mw
2	Ŷ Ŀ		Ą		403 response ✓ P-Charging-Vector hea ✓ orig-ioi parameter → type1	nder	Mw

					Test Purpose		
Ident	tifier:	TP_I	MST2_M	IW_REG_2	24		
Sumi	mary:	Autho Numb	entication	Synchronize was out of	SIP REGISTER request fro ation (AUTS) directive indi range, the S-CSCF shall ret	cating that the Sequenc	ce
Claus	Clause: 5.4.1.2.3, paragraph 7		graph 7				
References:			003_5421, 003_5424	,	Config Ref:	CF_1Mw	
IUT	Role:	IMS			Selection Expression:	PICS A.2/3	
		I	Entities		Condit	ion	
	IMS	,	IUT	UE2			
			×		IUT not configured for topology hiding		
	✓			\checkmark	UE2 visiting IMS		
	✓	✓ ✓ ✓		✓	UE2 has sent unprotected received 401 response	REGISTER and has	
	✓		\checkmark		IUT configured with an en	try point to IMS	
	IMS		IUT	UE2			
Step		D	Direction		Message		IF
1	₹	REGISTER originated by U Authorization header AUTS parameter invalid SQN parameter			Mw		
2a	Ŷ£;		À		401 response to UE2 ✓ P-Charging-Vector header ✓ orig-ioi parameter → type1		Mw
2b	Ŷ _E		À		403 response to UE2 ✓ P-Charging-Vector header ✓ orig-ioi parameter → type1		Mw

				Test Purpose		
Ident	tifier:	TP_IMST2_M	IW_REG_2	25		
	mary:	parameter in the received in the header of the F shall return a S	e Authorizat To header n REGISTER r IP 500 (Serv	SIP REGISTER request wition header set to "yes" and or the private user identity request match any of the S-Cyer Internal Error) response	neither the user identity received in the Authori CSCFs registered users	y zation
Claus		5.4.1.2.3, parag		C C D C	CE 11/	
Refei	rences:	RQ_003_5423 RQ_003_5424		Config Ref:	CF_1Mw	
IUT	IUT Role: IMS Selection Expression: PICS A.2/3		PICS A.2/3			
		Entities		Condition		
	IMS	IUT	UE2			
		×		IUT not configured for top	oology hiding	
	\checkmark		✓	UE2 visiting IMS		
	✓	/ / /		UE2 has sent unprotected received 401 response	REGISTER and has	
	✓	✓		IUT configured with an en	try point to IMS	
	IMS	IUT	UE2			
Step		Direction		Messa	ge	IF
1	∌	Ð		REGISTER originated by UE2 ✓ Authorization header ✓ integrity-protected parameter → yes × private user identity matching previous registered public user identity ✓ To header → public user identity not matching previous registered public user identity		Mw
2	Ŷ£:	Ŷij		500 response to UE2 ✓ P-Charging-Vector he ✓ orig-ioi parameter → type1	ader	Mw

					Test Purpose		
Ident	ifier:	TP.	_IMST2_M	IW_REG_2	6		
Sumi	mary:	resp cha para inva	oonse to an a llenge respo ameters indi	authenticationse from the icating that t	SIP REGISTER request which challenge but the request to the UE and no Authentication the Message Authentication to S-CSCF shall return a SIP of the S-CSCF shall retu	contains no authentica Synchronization (AU' Code (MAC) paramete	tion ΓS) er was
Claus	se:	5.4.	1.2.3, parag	graph 4	T		
Refe	rences:	_	_003_5425, _003_5424	,	Config Ref:	CF_1Mw	
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/3		
	Entities				Conditi	on	
	IMS		IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	✓		\checkmark	✓	UE2 has sent unprotected Freceived 401 response	REGISTER and has	
	✓			✓	UE2 visiting IMS		
	\checkmark		\checkmark		IUT configured with an entry point to IMS		
	IMS		IUT	UE2			
Step			Direction		Messag	ge	IF
1	$ \oint $	subsequent REGISTER originated by UE2 ✓ Authorization header × authentication challenge response		nge response	Mw		
2	Ŷ±	A M		403 response to UE2 ✓ P-Charging-Vector header ✓ orig-ioi parameter → type1		Mw	

6.4.3 Initial request procedures

				Test Purpose		
Ident	tifier:	TP_IMST2_	MW_INI_01			
Sum	mary:	previously re subscription	gistered publi s required, it	SIP 2xx response to a SUBSO ic user identity and the responshall automatically refresh the initial subscription was	nse indicates that cont ne subscription 600 sec	
Clau	se:	5.2.3, paragra	ph 12			
Refe	rences:	RQ_003_504	5	Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/1	
		Entities		Conditi	on	
	UE1	UE1 IMS I				
			×	IUT not configured for topology hiding		
				IUT configured for continu	IUT configured for continuous subscription	
	✓		✓	UE1 visiting IUT		
	✓	√	✓	UE1 registered in IMS via	IUT	
		✓	✓	IUT has sent SUBSCRIBE header indicating duration puthan 1200 seconds	<u> </u>	
	UE1	IMS	IUT			
Step		Direction	1	Messag	ge	IF
1		₩	Ď	200 response		Mw
2		Ŷ _E	À	SUBSCRIBE 600 seconds duration parameter time	before expiration of	Mw

				Test Purpose		
Iden	tifier:	TP_IMST2_M	IW_INI_02	,		
Sum	mary:	previously regi subscription is	stered publi required, it	SIP 2xx response to a SUBS c user identity and the responsable automatically refresh t initial subscription was for	onse indicates that con he subscription when h	
Clau	se:	5.2.3, paragrap	h 12			
Refe	rences:	RQ_003_5045		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS		Selection Expression:	PICS A.2/1	
		Entities		Condit	ion	
	UE1	IMS	IUT			
			×	IUT not configured for top	ology hiding	
			✓	IUT configured for continu	uous subscription	
	✓		✓	UE1 visiting IUT		
	✓	\checkmark	✓	UE1 registered in IMS via	IUT	
		✓	✓	IUT has sent SUBSCRIBE indicating duration parameter equal or less than 1200 seconds		
	UE1	IMS	IUT			
Step		Direction		Messa	ge	IF
1		₩	1	200 response		Mw
2		₹ E	À	SUBSCRIBE after half of the duration parameter time has elapsed		Mw

					Test Purpose		
Ident	ifier:	TP_IMS	T2_MW	_INI_03			
Sumi	mary:	of URIs header fr either ret replace th	in the Ro com the la urn a SIP he receive ader rece	oute headoust succes 400 (Baced Route	n initial request for a dialoger different to the stored valusful registration or re-registred Request) response and not header value in the request value the last SIP 200 (OK) response to the last SIP 200 (OK)	nes of the Service-Rou ation, then the P-CSCI forward the request or with the value of the So	te F shall ervice-
Claus	se:	5.2.6.3, p	aragraph	4	1		
Refe	References: RQ_003_5046 Config Ref: CF_1Mw1Gm					CF_1Mw1Gm	
IUT	Role:	IMS	MS Selection Expression: PICS A.2/1, A.3/10			1.1	
		1	ntities Condition		on		
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	\checkmark		\checkmark		UE1 registered in IUT		
		✓		✓	UE2 registered in IMS		
		✓	\checkmark		IUT configured with an ent	ry point to IMS	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messaş	ge	IF
1	\cancel{D}		₽		INVITE to UE2 ✓ Route header not match Route header	hing stored Service-	Gm
2a		&	4		INVITE		Mw
3a	ŶŢ		À		400 response to UE1		Gm
2b		Ŷ Ŀ	Ą		INVITE ✓ Route header from 200 registration	response of last	Mw

					Test Purpose			
Ident	ifier:	TP_IMS	T2_MW	_INI_04				
Sumr	nary:	own add paramete CSCF SI awaits su resolves	ress to the er, when a P URI in absequent	e Via head dding its a format requests address o	n initial request for a dialog der and a add a P-Charging-Vown SIP URI to the Record-that contains the port numbe from the called party, and einthe P-CSCF IP address	Vector header with the Route header, build to r of the P-CSCF whe	e icid he P- re it	
Refer	ences:	RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm		
IUT I	Role:	IMS		Selection Expression: PICS A.2/1				
Entities					Condition	on		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for topo	ology hiding		
	\checkmark		✓		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS	UE2 registered in IMS		
		✓	✓		IUT configured with an ent	IUT configured with an entry point to IMS		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messag	ge	IF	
1	⇔		Ð		INVITE to UE2 ✓ topmost Route header → IMS		Gm	
2		Ŷ	Ð		INVITE ✓ Via header ✓ address of IUT P-CSO ✓ topmost Route header → IMS ✓ Record-Route header ✓ SIP URI of IUT P-CSO → port number of IUO → FQDN address of IOO ✓ P-Charging-Vector head ✓ icid parameter	SCF T P-CSCF IUT P-CSCF T P-CSCF	Mw	
3	È		À		100 response		Gm	

					Test Purpose		
Ident	tifier:	TP_IMS	ST2_MW	_INI_05			
Sumi	mary:	the P-Prewith a va	eferred-Id alue, inclu	entity heading the	n initial request for a dialog ader, if present, and insert a display name if previously s the request	P-Asserted-Identity he	eader
Claus			paragraph	. 4	1		
Refe	rences:	RQ_003_5046, RQ_003_5065			Config Ref:	CF_1Mw1Gm	
IUT I	•				PICS A.2/1		
		Ent	ities		Conditi	on	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for top	ology hiding	
	✓		✓		UE1 registered in IUT		
	✓		✓		IUT has stored display nam	ne of UE1	
		✓		✓	UE2 registered in IMS		
		\checkmark	✓		IUT configured with an ent	ry point to IMS	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messaş	ge	IF
1	₩		Ð		INVITE to UE2 ✓ P-Preferred-Identity he ✓ topmost Route header → IMS	eader	Gm
2		Ŷ:	À		INVITE to UE2 ★ P-Preferred-Identity he ✓ P-Asserted-Identity he ✓ stored display name	ader	Mw
3	Ú.		Ą		100 response		Gm

					Test Purpose			
Ident	tifier:	TP_IMS	ST2_MW	_INI_06				
Sumi	mary:	receives dialog, it URI with P-CSCF	any SIP 1 shall rep the prote	xx or 2xx lace in the ected server the P-CS	ists between the UE and P-C x response as a result of a for e response its own Record in ver port number of the secur SCF IP address	orwarded request for ar Route entry with its ow	n SIP	
	rences:	RQ_003		10	Config Ref:	CF_1Mw1Gm		
IUT		IMS			Selection Expression:	PICS A.2/1		
		Entities			Condit	ion		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for top	oology hiding		
	✓		✓		UE1 registered in IUT			
	✓				UE1 has established a security association			
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an en	try point to IMS		
	✓		✓		IUT has received INVITE	addressed to UE2		
		✓	✓		IUT has sent INVITE addr	ressed to UE2		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ige	IF	
1		₩	Ď		180 response to UE1		Mw	
2	Ŷt.		Ą		180 response to UE1 ✓ Record Route header ✓ SIP URI of IUT P-C → port number of IU security association → IP address of IUT or FQDN address	TP-CSCF for	Gm	

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_INI_07				
Sum	mary:	receives dialog, it URI with P-CSCF	any SIP 1 shall rep the prote	axx or 2xx lace in the ected server the P-CS	ists between the UE and P-Ox response as a result of a form response its own Record in the response its own the security of th	orwarded request for an Route entry with its ow	n initial /n SIP	
	rences:	RQ_003		. 10	Config Ref:	CF_1Mw1Gm		
IUT		IMS			Selection Expression:	PICS A.2/1		
		Entities			Condit	ion		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for top	oology hiding		
	✓		✓		UE1 registered in IUT			
	✓				UE1 has established a security association			
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an en	atry point to IMS		
	✓		✓		IUT has received INVITE	addressed to UE2		
		✓	✓		IUT has sent INVITE add	ressed to UE2		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ige	IF	
1		₩	Ď		200 response to UE1		Mw	
2	Ŷt.		Ą		200 response to UE1 ✓ Record Route header ✓ SIP URI of IUT P-C → port number of IU security association → IP address of IUT or FQDN address	JT P-CSCF for P-CSCF	Gm	

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_INI_08			
Sum	mary:	from a U P-Assert	E, it shall ed-Identit	l remove y header	SIP 1xx or 2xx response to an the P-Preferred-Identity head with the value saved from the tial request and the registration	der, if present, and inso ne P-Called-Party-ID h	ert a leader
Clau	se:	5.2.6.4, p	paragraph	15			
Refe	rences:	RQ_003_5055			Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
		Entities			Condition	on	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	✓		✓		UE1 registered in IUT	UE1 registered in IUT	
	✓		✓		IUT has stored display name of UE1		
		✓		✓	UE2 registered in IMS		
		✓	✓		IUT configured with an entry point to IMS		
	✓		✓	✓	IUT has received INVITE v UE2 addressed to UE1	via Mw originated by	
	✓		✓		IUT has sent INVITE via G	m to UE1	
	✓		✓		IUT has stored P-Called-Pa	rty-ID header of UE1	
	✓		✓		IUT has stored display nam	e of UE1	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messag	ge	IF
1	₩		Ď		180 response to UE2 ✓ P-Preferred-Identity he	ader	Gm
2		È	À		180 response ➤ P-Preferred-Identity hea ✓ P-Asserted-Identity hea ✓ stored display name p	ader	Mw

					Test Purpose			
Ident	ifier:	TP_IMS	ST2_MW	_INI_09	_			
Sumi	mary:	from a U P-Assert	E, it shall ed-Identit	remove y header	SIP 1xx or 2xx response to an initial request for a dialog the P-Preferred-Identity header, if present, and insert a with the value saved from the P-Called-Party-ID header tial request and the registration display name if available			
Claus	se:	5.2.6.4, p	paragraph	15				
Refer	rences:	RQ_003_5055			Config Ref: CF_1Mw1Gm			
IUT	Role:	IMS			Selection Expression: PICS A.2/1			
		Ent	ities		Condition			
	UE1	IMS	IUT	UE2				
			×		IUT not configured for topology hiding			
	✓		✓		UE1 registered in IUT			
	✓		✓		IUT has stored display name of UE1			
		✓		\checkmark	UE2 registered in IMS			
		✓	√		IUT configured with an entry point to IMS			
	✓		✓	✓	IUT has received INVITE via Mw originated b UE2 addressed to UE1	У		
	✓		√		IUT has sent INVITE via Gm to UE1			
	✓		✓		IUT has stored P-Called-Party-ID header of Ul	E1		
	\checkmark		✓		IUT has stored display name of UE1			
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Message	IF		
1	\Longrightarrow		Ď		200 response to UE2 ✓ P-Preferred-Identity header			
2		Ŷ:	À		200 response ➤ P-Preferred-Identity header ✓ P-Asserted-Identity header ✓ stored display name parameter	Mw		

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_INI_10				
	mary:	from a U initial recreptaces	E, if Via quest corr the Via h	headers d espondin eader wit	IP 1xx or 2xx response to an initial request for a dialog to not match the saved list of Via headers received in the g to the same dialog, it either discards the response or h the ones from the initial request			
Clau	se: rences:	-	paragraph	15	Config Dof.	CE 1Mw1Cm		
IUT		RQ_003	_3033		Config Ref: Selection Expression:	CF_1Mw1Gm PICS A.2/1, A.3/11.2	7 1	
101	Koic.	Entities			Condit	,	2,1	
	UE1	IMS	IUT	UE2	Condition			
			x		IUT not configured for top	ology hiding		
	✓		✓		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS			
		✓	✓		IUT configured with an entry point to IMS			
	✓		✓	✓	IUT has received INVITE UE2 addressed to UE1	via Mw originated by		
	✓		✓		IUT has sent INVITE to U	E1		
			✓		IUT has stored Via header			
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ge	IF	
1	₩		Ď		180 response to UE2 ✓ Via header not matching	ng stored Via header	Gm	
2a		&	4		180 response	180 response		
2b		È	Ą		180 response ✓ Via header → stored Via header		Mw	

					Test Purpose				
Ident	tifier:	TP_IMS	T2_MW	_INI_11					
	mary:	from a U initial rec replaces	en a P-CSCF receives SIP 1xx or 2xx response to an initial request for a dialog in a UE, if Via headers do not match the saved list of Via headers received in the ial request corresponding to the same dialog, it either discards the response or laces the Via header with the ones from the initial request 6.4, paragraph 15						
Clau	se: rences:			15	Config Dof.	CF_1Mw1Gm			
	Role:	RQ_003_5055 IMS			Config Ref: Selection Expression:	PICS A.2/1, A.3/11.2	2 1		
	Koic.	Entities			Condition Expression:	,	2,1		
	UE1	IMS	IUT	UE2	Condition				
			×		IUT not configured for top	ology hiding			
	✓		✓		UE1 registered in IUT				
		✓		\checkmark	UE2 registered in IMS				
		✓	✓		IUT configured with an entry point to IMS				
	✓		✓	✓	IUT has received INVITE via Mw originated by UE2 addressed to UE1				
	✓		✓		IUT has sent INVITE to U	E1			
			✓		IUT has stored Via header				
	UE1	IMS	IUT	UE2					
Step		Dire	ction		Messa	ge	IF		
1	₩		Ď		200 response to UE2 ✓ Via header not matching	ng stored Via header	Gm		
2a		金川	114		200 response		Mw		
2b		Ŷ <u>t</u>	ŶŊ		200 response ✓ Via header → stored Via header		Mw		

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_INI_12			
Sumi	mary:	from a U received replaces If a secur port num number version the P-CS	E, with a in the Re the Recordity associates of its where it a CF FQDI	Record-I cord-Route d-Route iation exi own Rec waits sub V that res	Route header including a list ate header of the initial reque header values with those receists, the P-CSCF adds to the cord-Route entry with its own esequent requests from the casolves to its IP address; or the or if present	of URIs different to the st, discards the responsived in the initial required Record-Route header to SIP URI and the portalling party and with experts.	ne one se or uest. the
Claus		5.2.6.4, p	oaragraph	15			
	rences:	RQ_003_	_5055		Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1, A.3/11.2	2.2
		Ent	ities	ı	Condition	on	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	IUT not configured for topology hiding	
	✓		✓		UE1 registered in IUT		
	✓				UE1 has established a secur	rity association	
		✓		✓	UE2 registered in IMS		
		✓	✓		IUT configured with an ent	ry point to IMS	
	✓		√	✓	IUT has received INVITE v UE2 addressed to UE1	via Mw originated by	
	\checkmark		\checkmark		IUT has sent INVITE to UF	E1	
			√		IUT has stored Record-Rou	te header	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messag	ge	IF
1	₩		Ð		180 response to UE2 ✓ Record-Route header n Record-Route header	ot matching stored	Gm
2a		龟	4		180 response		Mw

	Test Purpose									
2b		Ŷŧ	Ý,	180 response ✓ Record-Route header → stored Record-Route header → port number of Record-Route header of IUT P-CSCF → SIP URI port number of IUT P-CSCF → FQDN address of IUT P-CSCF or IP address of IUT P-CSCF * comp parameter	Mw					

					Test Purpose					
Ident	tifier:	TP_IMS	T2_MW	_INI_13						
Sumi	mary:	from a U received replaces of a secur port num number with P-CS	When a P-CSCF receives SIP 1xx or 2xx response to an initial request for a dialog from a UE, with a Record-Route header including a list of URIs different to the one received in the Record-Route header of the initial request, discards the response or replaces the Record-Route header values with those received in the initial request. If a security association exists, the P-CSCF adds to the Record-Route header the port number of its own Record-Route entry with its own SIP URI and the port number where it awaits subsequent requests from the calling party and with either the P-CSCF FQDN that resolves to its IP address; or the P-CSCF IP address; and remove the comp parameter if present							
Claus	se:	_		15	T					
Refer	rences:	RQ_003_	_5055		Config Ref:	CF_1Mw1Gm				
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1, A.3/11.2	2.2			
		Ent	ities		Condition	on				
	UE1	IMS	IUT	UE2						
			×		IUT not configured for topology hiding					
	√		✓		UE1 registered in IUT					
	✓				UE1 has established a secur	ity association				
		\checkmark		✓	UE2 registered in IMS					
		✓	\checkmark		IUT configured with an enti	ry point to IMS				
	✓		✓	✓	IUT has received INVITE v UE2 addressed to UE1	ia Mw originated by				
	\checkmark		\checkmark		IUT has sent INVITE to UE	E1				
			✓		IUT has stored Record-Rou	te header				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messag	e	IF			
1	₩		Ď		200 response to UE2 ✓ Record-Route header n Record-Route header	ot matching stored	Gm			
2a		1	4		200 response		Mw			

	Test Purpose									
2b		Ŷŧ	Ą		200 response ✓ Record-Route header → stored Record-Route header → port number of Record-Route header of IUT P-CSCF → SIP URI port number of IUT P-CSCF → FQDN address of IUT P-CSCF or IP address of IUT P-CSCF * comp parameter	Mw				

					Test Purpose				
Ident	tifier:	TP_IMS	T2_MW	_INI_14					
Sum	mary:	initial rec saved lis dialog, it	quest to a t of Via h	UE for a eaders reder discar	ny other response other than dialog and if the list of Via ceived in the initial request d the response or replace the request	headers does not match corresponding to the sa	h the ime		
Clau	Clause: 5.2.6.4, paragraph 27								
Refe	rences:	RQ_003	_5056		Config Ref:	CF_1Mw1Gm			
IUT	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/11.3	3.1		
		Ent	ities		Condit	ion			
	UE1	IMS	IUT	UE2					
			×		IUT not configured for top	ology hiding			
	\checkmark		✓		UE1 registered in IUT	UE1 registered in IUT			
		✓		\checkmark	UE2 registered in IMS	E2 registered in IMS			
		✓	✓		IUT configured with an entry point to IMS				
	✓		✓	✓	IUT has received INVITE UE2 addressed to UE1	via Mw originated by			
	✓		✓		IUT has sent INVITE to U	E1			
			✓		IUT has stored Via header				
	UE1	IMS	IUT	UE2					
Step		Dire	ction		Messa	ge	IF		
1	₩		D		4xx response to UE2 ✓ Via header not matchi	ng stored Via header	Gm		
2a		&	4		4xx response		Mw		
2b		È	Ą		4xx response ✓ Via header → stored Via header		Mw		

					Test Purpose			
Ident	ifier:	TP_IMS	ST2_MW	_INI_15				
	mary:	SIP INV field in the proxy M	ITE reques he reques UST NO	est from a t before f Γ include	dic refreshment of a session established after receiving a a UE the P-CSCF shall insert a Session-Expires header forwarding it if none was present in the request. The a refresher parameter in the header field value			
Clause: References:		RQ_003		1, KFC ²	4028 [8], clause 8 Config Ref:	CF_1Mw1Gm		
KCICI	circos.	RQ_003			Comig Rei.	CI_IIVIWIGIII		
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/1, A.3/12.	1.1	
	Entities				Condition	on		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for topo	ology hiding		
			✓		IUT configured for requiring periodic refreshment			
	\checkmark		✓		UE1 registered in IUT	UE1 registered in IUT		
		✓		✓	UE2 registered in IMS			
		\checkmark	✓		IUT configured with an ent	ry point to IMS		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messag	ge	IF	
1	₩		Ð		INVITE to UE2 ★ Session-Expires header		Gm	
2		दि	À		INVITE ✓ Session-Expires header × refresher parameter M		Mw	
3	Ć.		Å		100 response		Gm	

					Test Purpose		
Ident	ifier:	TP_IMS	T2_MW	_INI_16			
Sumi	mary:	SIP INV field in the duration	ITE request	est from a t before fo ot be lowe	dic refreshment of a session established after receiving a UE the P-CSCF shall insert a Session-Expires header orwarding it if none was present in the request. The er than the value in the Min-SE header field in the		
Claus	Clause: 5.2.7.2, paragraph 1, RFC				4028 [8], clause 8		
Refe	rences:	RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/12.	1.1
Entities					Condition	on	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	ology hiding	
			✓		IUT configured for requiring periodic refreshment		
	\checkmark		✓		UE1 registered in IUT		
		✓		√	UE2 registered in IMS		
		✓	✓		IUT configured with an ent	ry point to IMS	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messag	ge	IF
1	\cancel{D}		Ð		INVITE to UE2 ★ Session-Expires header ✓ Min-SE header		Gm
2		ींद	Ą		INVITE ✓ Session-Expires header ✓ duration parameter graneter graneter		Mw
3	¢		Ą		100 response		Gm

					Test Purpose		
Ident	ifier:	TP_IMS	ST2_MW	_INI_18			
	mary:	SIP INV header fi The prox	ITE reque eld in the xy MUST	est destine request b NOT inc	dic refreshment of a session of ed for a UE the P-CSCF shall before forwarding it if none valude a refresher parameter in	l insert a Session-Exp was present in the requ	ires iest.
Claus			28 [8], cla	use 8		T	
References:		RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm	
IUT Role:		IMS			Selection Expression:	PICS A.2/1, A.3/12.	2.1
	Entities				Condition	on	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	ology hiding	
			✓		IUT configured for requiring periodic refreshment		
	\checkmark		✓		UE1 registered in IUT		
		\checkmark		\checkmark	UE2 registered in IMS		
		\checkmark	✓		IUT configured with an ent	ry point to IMS	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messag	ge	IF
1		₩	Ď		INVITE originated by UE2 ★ Session-Expires header		Mw
2	ŶĮ.		Ą		INVITE to UE1 ✓ Session-Expires header × refresher parameter Gn		Gm
3		E	Ą		100 response		Mw

					Test Purpose						
Ident	tifier:	TP_IMS	ST2_MW	_INI_19							
Sumi	mary:	SIP INV header fi	If a P-CSCF requires periodic refreshment of a session established after receiving a SIP INVITE request destined for a UE the P-CSCF shall insert a Session-Expires header field in the request before forwarding it if none was present in the request. The duration should not be lower than the value in the Min-SE header field in the request, if it is present								
Claus	se:	5.2.7.2, p	paragraph	1, RFC 4	1028 [8], clause 8						
Refe	rences:	RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm					
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/12.	2.1				
		Ent	ities		Conditi	on					
	UE1	IMS	IUT	UE2							
			×		IUT not configured for topo	ology hiding					
			✓		IUT configured for requiring periodic refreshment						
	✓		✓		UE1 registered in IUT						
		✓		✓	UE2 registered in IMS						
		\checkmark	✓		IUT configured with an ent	ry point to IMS					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messag	ge	IF				
1		₩	Ð		INVITE originated by UE2 ★ Session-Expires header ✓ Min-SE header		Mw				
2	Œ		Ą		INVITE to UE1 ✓ Session-Expires header ✓ duration parameter greater than Min-SE header						
3		Ŷ.	À		100 response		Mw				

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_INI_20			
Sumi	mary:	respond		P 100 (Tr	n initial SIP INVITE reque ying) provisional response		shall
Clau	se:	5.2.7.3, p	oaragraph	3			
Refe	rences:	RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
		Ent	ities		Condi	tion	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for to	pology hiding	
	✓		√		UE1 registered in IUT		
		✓		✓	UE2 registered in IMS		
		✓	✓		IUT configured with an en	ntry point to IMS	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	age	IF
1		₩	Ď		INVITE to UE1		Mw
2		Ŷ.	Ą		100 response		
3	Œ.		Å		INVITE to UE1		Gm

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_INI_21				
Sumi	mary:	term-ioi	paramete	rs and is	response to an initial reque not destined for an AS, the m the P-Charging-Vector he	S-CSCF shall remove a	all	
Claus	se:	5.4.3.2, p	aragraph	. 58				
Refer	rences:	RQ_003	_5104		Config Ref:	CF_1Gm1Mw		
IUT	Role:	IMS			Selection Expression:	PICS A.2/3		
		Ent	ities		Condit	ion		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for top	ology hiding		
	✓		✓		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS			
		✓	√		IUT configured with an en	try point to IMS		
	✓		✓	✓	IUT has sent INVITE from	uE1 to UE2 via Mw		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ge	IF	
1			Ŷ£	ŶŊ	200 response to UE1 ✓ P-Charging-Vector hea ✓ ioi parameter	200 response to UE1 ✓ P-Charging-Vector header		
2	È		À		200 response to UE1 ★ P-Charging-Vector hea ✓ ioi parameter	nder	Gm	

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_INI_22			
Sumi	mary:	cor	ntains a barro	ed public use	s an initial request for a new er identity, the S-CSCF sha and) response		st URI
Clau	se:	5.4	.3.3 first nui	mbered list 1	1)		
Refe	rences:	RÇ	0_003_5108		Config Ref:	CF_1Mw	
IUT	UT Role: IMS			Selection Expression:	PICS A.2/3		
			Entities		Condi	tion	
	IMS IUT		UE2				
		×			IUT not configured for topology hiding		
	✓			\checkmark	UE2 registered in IMS		
			×	×	UE2 not registered in IUT		
	✓		✓		IUT configured with an entry point to IMS		
	IMS		IUT	UE2			
Step			Direction		Messa	age	IF
1	\$ ₽			INVITE ✓ Request URI ✓ barred public user identity		Mw	
2	Œ.		Ą		404 response to UE2		Mw

					Test Purpose		
Ident	ifier:	TP_	_IMST2_M	IW_INI_23			
Sumi	mary:				s an initial request and the Request URI contains an F shall reject the request by sending a SIP 4xx response		
Claus	se:	5.4.	3.3 first nur	mbered list 3	BA)		
Refer	rences:	RQ_	_003_5108		Config Ref:	CF_1Mw	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/3	
	Entities				Condition	on	
	IMS IUT UE2						
			×		IUT not configured for topology hiding		
	\checkmark	✓			UE2 registered in IMS		
	✓		✓		IUT configured with an entr	ry point to IMS	
	IMS		IUT	UE2			
Step			Direction		Messag	ge	IF
1	€ ₽		INVITE ✓ Request URI ✓ invalid GRUU param	eter	Mw		
2	Ŷ.		À		4xx response to UE2		Mw

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_INI_24			
Sumi	mary:	ind	icates a serv	ice that is no	s an initial request and the Fot subscribed-to by the use 03 (Forbidden) response		
Claus	se:	5.4	.3.3 first nui	mbered list 3	BC)		
Refer	References: RQ_003_5108				Config Ref:	CF_1Mw	
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/3		
			Entities		Condi	tion	
	IMS	IMS IUT UE2		UE2			
			×		IUT not configured for top	oology hiding	
	✓		\checkmark		UE2 registered in IMS		
	✓		\checkmark		IUT configured with an entry point to IMS		
			\checkmark		IUT configured to reject unsubscribed service		
	IMS		IUT	UE2			
Step			Direction		Messa	ige	IF
1			Ŷ <u>t</u>	Ą	INVITE ✓ P-Asserted-Service header → unsubscribed service		Mw
2	€		Ą		403 response to UE2		Mw

					Test Purpose			
Ident	tifier:	TP	_IMST2_M	IW_INI_25				
Sumi	mary:	and	d the SDP of	fer indicates	s an initial request without P-Asserted-Service header a service that is not subscribed-to by the user, the Sest by sending a SIP 403 (Forbidden) response			
Claus	se:	5.4	.3.3 first nui	mbered list 3	BD)	-		
Refer	rences:	RQ	0_003_5108		Config Ref:	CF_1Mw		
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/3		
	Entities				Condition	on		
	IMS IUT UE2		UE2					
		×			IUT not configured for topology hiding			
	✓		\checkmark		UE2 registered in IMS			
	✓		\checkmark		IUT configured with an entry point to IMS			
			\checkmark		IUT configured to reject unsubscribed service			
	IMS		IUT	UE2				
Step			Direction		Messag	e	IF	
1	€ ₽		INVITE ★ P-Asserted-Service header ✓ SDP offer → unsubscribed service		Mw			
2	Æ.		₹ J		403 response to UE2		Mw	

6.4.4 Standalone requests procedures

Test Purpose											
Ident	ifier:	TP_IMS	T2_MW	_STA_01							
Sumi	nary:	When a P-CSCF receives a request for a standalone transaction from a UE, containing a list of URIs in the Route header different to the stored values of Service-Route header from the last successful registration or re-registration, the P-CSCF shall either return a SIP 400 (Bad Request) response and not forw the request or replace the received Route header value in the request with the of the Service-Route header received during the last SIP 200 (OK) response for registration or reregistration									
Claus	se:	-	paragraph	42	T.						
Refer	rences:	RQ_003	_5050		Config Ref:	CF_1Mw1Gm					
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1, A.3/10.	5.1				
	Entities LIE				Condit	ion					
	UE1	IMS	IUT	UE2							
			×		IUT not configured for top	ology hiding					
	\checkmark		\checkmark		UE1 registered in IUT						
	\checkmark		✓		IUT has stored Service-Ro	oute header of UE1					
		✓		✓	UE2 registered in IMS						
		✓	✓		IUT configured with an en	try point to IMS					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messa	ge	IF				
1	₩		₽		MESSAGE to UE2 ✓ Route header not mate Route header	ching stored Service-					
2a		1	4		MESSAGE Mw						
3a	ŶĿ		À		400 response Gm						
2b		Ŷz.	Ą		MESSAGE ✓ Route header ✓ stored Record-Route	e header	Mw				

Test Purpose											
Ident	tifier:	TP_IMS	ST2_MW	_STA_02	2						
Sumi	mary:	remove t header w	n a P-CSCF receives request for a standalone transaction from a UE, it shall we the P-Preferred-Identity header, if present, and insert a P-Asserted-Identity er with a value representing the initiator of the request and including display if previously stored during registration								
Clau	se:	5.2.6.3, p	paragraph	42							
Refe	rences:	RQ_003	_5050		Config Ref:	CF_1Mw1Gm					
IUT	Role:	IMS			Selection Expression:	PICS A.2/1					
		Ent	ities		Condit	ion					
	UE1	IMS	IUT	UE2							
			×		IUT not configured for top	oology hiding					
	✓		✓		UE1 registered in IUT						
	✓		✓		IUT has stored display nar	me of UE1					
		✓		✓	UE2 registered in IMS						
		✓	✓		IUT configured with an en	try point to IMS					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messa	ge	IF				
1	₩		Ď		MESSAGE to UE2 ✓ P-Preferred-Identity header						
2		Ŷ.	À		MESSAGE ➤ P-Preferred-Identity ho ✓ P-Asserted-Identity ho ✓ stored display name	eader	Mw				

	Test Purpose											
Ident	tifier:	TP_IMS	ST2_MW	_STA_03	3							
Sumi	mary:		When a P-CSCF receives request for a standalone transaction from a UE it shal add a P-Charging-Vector header with the icid parameter									
Clau	se:	5.2.6.3, p	paragraph	42								
Refe	rences:	RQ_003	_5050		Config Ref:	CF_1Mw1Gm						
IUT	Role:	IMS			Selection Expression:	PICS A.2/1						
		Ent	ities		Condition							
	UE1	IMS	IUT	UE2								
			×		IUT not configured for to	pology hiding						
	\checkmark		✓		UE1 registered in IUT	UE1 registered in IUT						
	✓		✓		IUT has stored Service-Ro	oute header of UE1						
		✓		✓	UE2 registered in IMS							
		✓	✓		IUT configured with an en	ntry point to IMS						
	UE1	IMS	IUT	UE2								
Step		Dire	ction		Messa	age	IF					
1	₩		Ď		MESSAGE to UE2							
2		Ê	Ą		MESSAGE ✓ P-Charging-Vector header ✓ icid parameter		Mw					

					Test Purpose				
Ident	tifier:	TP_IMS	ST2_MW	_STA_0	4				
Sumi	mary:				nny response to a forwarded I the response to the UE	request for a standalor	ne		
Claus	se:	5.2.6.3, p	oaragraph	53	_				
Refer	rences:	RQ_003	_5051		Config Ref:	CF_1Mw1Gm			
IUT	Role:	IMS			Selection Expression:	PICS A.2/1			
		Ent	ities		Condit	ion			
	UE1	IMS	IUT	UE2					
			×		IUT not configured for top	oology hiding			
	\checkmark		\checkmark		UE1 registered in IUT	UE1 registered in IUT			
		\checkmark		✓	UE2 registered in IMS				
		✓	✓		IUT configured with an en	atry point to IMS			
	✓		✓	✓	IUT has received MESSA addressed to UE2	GE from UE1 via Gm			
			✓		IUT has sent MESSAGE v	via Mw			
	UE1	IMS	IUT	UE2					
Step		Dire	ction		Messa	Message			
1		₩	Ď		200 response originated by UE2 to UE1		Mw		
2	Ŷ _E		Ą		200 response to UE1		Gm		

					Test Purpose		
Ident	ifier:	TP_IMS	ST2_MW	_STA_05	5		
Sumi	mary:	unknowr shall add that cont establish resolves	n method l its own a ains the p ed, betwe	(that does address to rotected seen the Ul address o	equest for a standalone transals not relate to an existing dial of the top of the received list of server port number of the second and the P-CSCF and either of the security association or the second control of the security association or the security association as the security association as the security association as the security as	log) destined for a UE of Via header in a form curity association, if the P-CSCF FQDN to	t, it nat hat
Clau		-	paragraph	80	I	I	
	rences:	RQ_003	_5060		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
			ities		Condition	on	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	\checkmark		✓		UE1 registered in IUT		
	\checkmark				UE1 has established a secur	rity association	
		✓		\checkmark	UE2 registered in IMS		
		✓	✓		IUT configured with an entr	ry point to IMS	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messag	ge	IF
1		₩	Ď		MESSAGE originated by U	JE2 to UE1	Mw
2	Û:		ŶŊ.		MESSAGE to UE1 ✓ Via header ✓ port number of IUT F association ✓ FQDN address of IUT or IP address of IUT association × P-Charging-Vector head ✓ icid parameter	Γ P-CSCF P-CSCF for security	Gm

					Test Purpose						
Ident	tifier:	TP_IMS	T2_MW	_STA_0	5						
	mary:	destined headers i header va	When a P-CSCF receives any response to a request for a standalone transaction destined for a UE, if the list of Via headers does not match the saved list of Via headers received in the request, either discard the response or replace the Via header values with those received in the request								
Claus	se: rences:	-	paragraph	. 89	Config Ref:	CF_1Mw1Gm					
IUT		RQ_003_5061 IMS			C	PICS A.2/1, A.3/11.8	Q 1				
101	Koic.	Entities			Condition	,	J.1				
	UE1	IMS	IUT	UE2	Condition						
			×		IUT not configured for topology hiding						
	✓		✓		UE1 registered in IUT						
		✓		✓	UE2 registered in IMS						
		✓	\checkmark		IUT configured with an entry point to IMS						
	✓		✓		IUT has received MESSAGE by UE2 addressed to UE1	E via Mw originated					
	✓		✓		IUT has sent MESSAGE via	Gm to UE1					
			✓		IUT has stored Via header						
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Message		IIF				
1	₩		Ď		200 response ✓ Via header not matching stored Via header		Gm				
2a		&	4		200 response		Mw				
2b		Ŷ:	Ą		200 response ✓ stored Via header		Mw				

					Test Purpose						
Ident	tifier:	TP_IMS	TP_IMST2_MW_STA_07 When a P-CSCF receives any response to a request for a standalone transaction								
Sumi	mary:	destined Asserted	for a UE, -Identity header o	remove theader w	ny response to a request for the P-Preferred-Identity hea ith the saved public user id- lest plus the display name i	ader, if present, and inse entity from the P-Callec	ert a P- d-				
Clau	se:	5.2.6.4, 1	oaragraph	89							
Refer	rences:	RQ_003	_5061		Config Ref: CF_1Mw1Gm						
IUT	Role:	IMS Selection Expression: PICS A.2/1			_						
		Ent	ities		Condition						
	UE1	IMS	IUT	UE2							
			×		IUT not configured for top	oology hiding					
	✓		\checkmark		UE1 registered in IUT						
		✓		✓	UE2 registered in IMS	UE2 registered in IMS					
		✓	\checkmark		IUT configured with an entry point to IMS						
	✓		✓	✓	IUT has received MESSA by UE2 addressed to UE1	GE via Mw originated					
	✓		√		IUT has sent MESSAGE	via Gm to UE1					
			✓		IUT has stored public user Called-Party-ID header	r identity from P-					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messa	nge	IF				
1	₩		Ď		200 response to UE2 ✓ P-Preferred-Identity header						
2		Œ	À		200 response to UE2 ➤ P-Preferred-Identity h ✓ P-Asserted-Identity h ✓ stored public user ic ✓ stored display name	eader lentity	Mw				

6.4.5 Subsequent requests on a dialog procedures

					Test Purpose		
Ident	tifier:	TP_IMS	T2_MW	_SUB_0	1		
Sumi	mary:	that does P-CSCF	not relate	e to an ex d a SIP 40	subsequent request, other the stating dialog in which the condition (Forbidden) response bases	originator is involved th	nen the
Clau	se:	5.2.6.3, p	oaragraph	56			
Refe	rences:	RQ_003	_5052		Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1	
		Ent	ities		Condi	tion	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for top	oology hiding	
	✓		✓		UE1 registered in IUT		
		✓		√	UE2 registered in IMS		
		\checkmark	✓		IUT configured with an er	ntry point to IMS	
	✓			✓	UE1 has established an IN UE2	IVITE dialog with	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	nge	IF
1	₩		Ð		BYE ✓ Call-ID header → existent dialog		Gm
2		仓川	4		BYE		Mw
3	Ú.		Ą		403 response		Gm

					Test Purpose						
Ident	ifier:	TP_IMST2_MW_SUB_02 When a P-CSCF receives a subsequent request, other than a target refresh request,									
Sumi	mary:	from a U values of either ret replace the	E, contain the Serva turn a SIP he receive	ning a listice-Route 400 (Baced Route	subsequent request, other the tof URIs in the Route header header for the existing dialed Request) response and not header value in the request value same dialog	er different to the store og then the P-CSCF sh forward the request or	ed nall				
Claus	se:	5.2.6.3, p	oaragraph	56							
Refer	rences:	RQ_003	_5052		Config Ref: CF_1Mw1Gm						
IUT	Role:	IMS			Selection Expression: PICS A.2/1, A.3/10.						
		Ent	ities		Condition						
	UE1	IMS	IUT	UE2							
			×		IUT not configured for topo	ology hiding					
	\checkmark		✓		UE1 registered in IUT						
	√		✓		IUT has stored Record-Rou	ite header of UE1					
		✓		\checkmark	UE2 registered in IMS	UE2 registered in IMS					
		\checkmark	✓		IUT configured with an ent	ry point to IMS					
	\checkmark			√	UE1 has established an INV UE2	VITE dialog with					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messag	ge	IF				
1	Ð		Ð		BYE ✓ Route header not matc. Route header	hing stored Record-	Gm				
2b		%	4		ВУЕ		Mw				
3b	Ŷ.		À		400 response						
2a		दि	À		BYE ✓ Route header ✓ stored Record-Route	header	Mw				

					Test Purpose		
Ident	tifier:	TP_IMS	ST2_MW	_SUB_0	3		
Sumi	mary:	from a U	E, for dia	logs that	subsequent request, other that are not INVITE dialogs, it parameter		
Clau	se:	5.2.6.3, p	oaragraph	56			
Refe	rences:	RQ_003	_5052		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
		Ent	ities		Condit	ion	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for top	or topology hiding	
	✓		✓		UE1 registered in IUT	E1 registered in IUT	
		✓		\checkmark	UE2 registered in IMS		
		✓	√		IUT configured with an en	try point to IMS	
	✓			✓	UE2 has established a SUI UE1	BSCRIBE dialog with	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	ge	IF
1	₩		Ď		PUBLISH		Gm
2		È	À		PUBLISH ✓ P-Charging-Vector header ✓ icid parameter		Mw

					Test Purpose					
Ident	tifier:	TP_IMS	ST2_MW	_SUB_0	4					
Sumi	mary:	When a P-CSCF receives a subsequent request, other than a target refresh req for a UE, if the request does not relate to an existing dialog in which the origins involved, then the P-CSCF shall send a SIP 403 (Forbidden) response back originator and not forward the request								
Clau	se:	5.2.6.4, 1								
Refe	rences:	RQ_003_5054			Config Ref:	CF_1Mw1Gm				
IUT	Role:	IMS			Selection Expression:	PICS A.2/1				
		Ent	ities		Condi	tion				
	UE1	IMS	IUT	UE2						
			×		IUT not configured for top	oology hiding				
	✓		✓		UE1 registered in IUT					
		✓		✓	UE2 registered in IMS					
		\checkmark	✓		IUT configured with an er	ntry point to IMS				
	✓			✓	UE2 has established an IN UE1	IVITE dialog with				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messa	ige	IF			
1		₩	Ð		BYE to UE1 ✓ Call-ID header → existent dialog	Mw				
2	&		4		BYE to UE1					
3		Ŷ.	À		403 response		Mw			

					Test Purpose						
Ident	ifier:	TP_IMS	TP_IMST2_MW_SUB_05								
Sumi	nary:	for a UE Route he (Bad Red	When a P-CSCF receives a subsequent request, other than a target refresh request, for a UE containing a list of Route headers different to the stored list of Record-Route headers for the same dialog, then the P-CSCF shall either return a SIP 400 (Bad Request) response and not forward the request or replace the Route header value in the request with the stored list of Record-Route headers for the same dialog								
Claus	se:	5.2.6.4, p	paragraph	1							
Refer	ences:	RQ_003	_5054		Config Ref:	CF_1Mw1Gm					
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/10.	7.1				
		Ent	ities		Condition						
	UE1	IMS	IUT	UE2							
			×		IUT not configured for top	oology hiding					
	\checkmark		✓		UE1 registered in IUT						
		\checkmark		✓	UE2 registered in IMS						
		\checkmark	✓		IUT configured with an en	try point to IMS					
	\checkmark			✓	UE2 has established an IN UE1	VITE dialog with					
			✓		IUT has stored Record-Ro	ute header					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messa	age	IF				
1		₩	Ď		BYE to UE1 Route header not matching stored Record.		Mw				
2a	&		4		BYE to UE1 Gn						
3a		Ý:	ŶŊ.		400 response						
2b	Ŷ _E		ŶŊ		BYE to UE1 ✓ stored Record-Route l	neader	Mw				

					Test Purpose		
Ident	ifier:	TP_IMS	ST2_MW	_SUB_0	6		
Sumi	mary:	for a UE		gs that a	subsequent request, other tre not INVITE dialogs, add		
Claus	se:	5.2.6.4, p	paragraph	1			
Refer	rences:	RQ_003	_5054		Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1	
		Ent	ities		Condit	ion	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for top	oology hiding	
	\checkmark		✓		UE1 registered in IUT	E1 registered in IUT	
		✓		✓	UE2 registered in IMS		
		✓	✓		IUT configured with an en	try point to IMS	
	✓			✓	UE2 has established a SUI UE1	BSCRIBE dialog with	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	ge	IF
1		₩	Ď		PUBLISH to UE1		Mw
2	Ŷ.		Ą		PUBLISH to UE1 ✓ P-Charging-Vector he	ader	Gm

					Test Purpose					
Ident	ifier:	TP_IMS	T2_MW	_SUB_0′	7					
Sumi	mary:	for a UE a format one is es that reso of the se	When a P-CSCF receives a subsequent request, other than a target refresh request for a UE, it shall add its own address to the top of the received list of Via header a format that contains the protected server port number of the security association one is established between the UE to the P-CSCF and either the P-CSCF FQDN that resolves to the IP address of the security association or the P-CSCF IP address of the security association, and no P-Charging-Vector header with icid parameter shall be sent							
Claus	se:	5.2.6.4, 1	paragraph	95						
Refe	rences:	RQ_003	_5062		Config Ref:	CF_1Mw1Gm				
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1				
		Ent	ities		Condition					
	UE1	IMS	IUT	UE2						
			×		IUT not configured for top	ology hiding				
	\checkmark		✓		UE1 registered in IUT					
	✓				UE1 has established a secu	rity association				
		✓		✓	UE2 registered in IMS					
		✓	✓		IUT configured with an en	try point to IMS				
	✓			√	UE2 has established an IN UE1	VITE Dialog with				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messa	ge	IF			
1		₩	Ď		BYE to UE1 originated by	UE2	Mw			
2	Ŷŧ		Ą		BYE to UE1 ✓ Via header ✓ port number of IUT association ✓ FQDN address of IUT or IP address of IUT association × P-Charging-Vector heat icid parameter	T P-CSCF Γ P-CSCF for security	Gm			

	Test Purpose										
Ident	ifier:	TP_IMS	T2_MW	_SUB_08	8						
Sumi	mary:	refresh re headers i	When a P-CSCF receives a response to a subsequent request, other than a target refresh request, if the list of Via headers does not match the saved list of Via headers received in the subsequent request, the P-CSCF shall either discard the response or replace the Via header values with those received in the subsequent request								
Claus	se:	5.2.6.4, 1	oaragraph	103							
Refer	rences:	RQ_003_5063			Config Ref:	CF_1Mw1Gm					
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/11.	10.1				
		Ent	ities		Condition						
	UE1	IMS	IUT	UE2							
			×		TUT not configured for topology hiding						
	\checkmark		✓		UE1 registered in IUT						
		✓		✓	UE2 registered in IMS	red in IMS					
		✓	✓		IUT configured with an en	UT configured with an entry point to IMS					
	\checkmark			✓	UE2 has established an IN UE1	VITE Dialog with					
			\checkmark		IUT has stored Via header						
	\checkmark		✓	✓	IUT has received BYE via UE2 addressed to UE1	Mw originated by					
	\checkmark		✓		IUT has sent BYE via Gm	to UE1					
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messa	age	IF				
1			Ď		200 response to UE2 ✓ Via header not matching stored Via header		Gm				
2a		%	4		200 response		Mw				
2b		Û	À		200 response ✓ stored Via header		Mw				

					Test Purpose						
Ident	ifier:	TP_IMS	ST2_MW	_SUB_0	9						
Sumi	mary:	previous	If a P-CSCF receives a subsequent request within a dialog for which it has previously initiated session release, the P-CSCF shall terminate the request and answer it with a SIP 481 (Call/Transaction Does Not Exist) response								
Claus	se:	5.2.8.1.3	, paragrap	oh 1							
Refer	rences:	RQ_003	_5241		Config Ref:	CF_1Mw1Gm					
IUT]	Role:	IMS			Selection Expression:	PICS A.2/1					
		Ent	ities		Conditi	on					
	UE1	IMS	IUT	UE2							
			×		IUT not configured for top	ology hiding					
	\checkmark		✓		UE1 registered in IUT	UE1 registered in IUT					
		✓		✓	UE2 registered in IMS	UE2 registered in IMS					
		✓	✓		IUT configured with an ent	try point to IMS					
	\checkmark				UE1 has established an IN	VITE dialog					
	\checkmark		✓		IUT has received BYE from	n UE1					
			✓		IUT has sent BYE via Mw						
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Message						
1		₩	Ď		BYE to UE1						
2		ŶĿ	Ą		481 response to UE2		Mw				

					Test Purpose						
Ident	tifier:	TP_IMS	T2_MW	_SUB_1	•						
Sumi	mary:	of the cal and when registered	When the registration lifetime of the only public user identity currently registered of the calling user expires while there is still an active dialog that include this used where the session was initiated with the public user identity currently registered, then the S-CSCF shall send a SIP BYE request destined for the called user and shall send a SIP BYE request destined for the calling user								
Clau	se:	5.4.5.1.2	A, paragr	aph 1							
Refe	rences:	RQ_003	_5140		Config Ref:	CF_1Gm1Mw					
IUT :	Role:	IMS			Selection Expression:	PICS A.2/1					
		Ent	ities		Conditi	on					
	UE1	IMS	IUT	UE2							
			×		IUT not configured for topo	ology hiding					
	\checkmark		\checkmark		UE1 registered in IUT						
		✓		✓	UE2 registered in IMS						
		✓	✓		IUT configured with an ent	IUT configured with an entry point to IMS					
	✓		✓	✓	IUT has established an INVITE dialog from UE1 to UE2						
	UE1	IMS	IUT	UE2							
Step		Dire	ction		Messaş	ge	IF				
1					Registration of UE1 expire	S					
2	ŶĿ		₹ <u>J</u>		BYE to UE1		Gm1				
3		िद	₹ <u>N</u>		BYE to UE2 ✓ Request-URI → stored Contact header INVITE ✓ To header → To header from 200 ✓ From header → From header from in ✓ Call-ID header → From header from in ✓ CSeq header as stored to called ✓ Route header as stored ✓ Reason header	response nitial INVITE nitial INVITE for direction calling	Mw				

6.4.6 Target refresh request procedures

	Test Purpose									
Ident	tifier:	TP_IMS	T2_MW	_TAR_0	1					
Sumi	mary:	dialog from a UE, it shall ar			target refresh request not ot nswer the request by sending ator and not forward the requ	g a SIP 403 (Forbidder				
Claus	se:	5.2.6.3, p	aragraph	26						
Refer	rences:	RQ_003_	_5048		Config Ref:	CF_1Mw1Gm				
IUT	Role:	IMS			Selection Expression:	PICS A.2/1				
	Entities Condition									
	UE1	IMS	IUT	UE2						
			×		IUT not configured for topo	ology hiding				
	✓		✓		UE1 registered in IUT					
		✓		\checkmark	UE2 registered in IMS					
		✓	✓		IUT configured with an ent	ry point to IMS				
	×		×	×	IUT not has established an UE1 to UE2	INVITE dialog from				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messag	ge	IF			
1	₩		Ď		target refresh UPDATE to UE2		Gm			
2		&	4		target refresh UPDATE to IMS		Mw			
3	È		À		403 response to UE1		Gm			

Test Purpose										
Ident	ifier:	TP_IMS	ST2_MW	_TAR_0	2					
Sumi	nary:	URIs in headers frequest)	the Route for the sar response	e header one dialogonal and not in	target refresh request from different to the stored values s, then the P-CSCF shall eith forward the request or replace e stored list of Record-Route	of the Record-Route her return a SIP 400 (B hee the received Route I	ad neader			
Claus		5.2.6.3, p	paragraph	26	T					
Refe	rences:	RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm				
IUT I	IUT Role: IMS Selection Expression: PICS A.2/1, A.3/1			PICS A.2/1, A.3/10.	3.1					
	Entities				Conditi	on				
	UE1	IMS	IUT	UE2						
			×		IUT not configured for topo	ology hiding				
	\checkmark		✓		UE1 registered in IUT					
	\checkmark		✓		IUT has stored Record-Rou	ite header of UE1				
		✓		✓	UE2 registered in IMS					
		✓	✓		IUT configured with an ent	ry point to IMS				
	\checkmark		✓	✓	IUT has established an INV UE1 to UE2	/ITE dialog from				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messaş	ge	IF			
1	₩		Ð		target refresh INVITE to ✓ Route header not matc Route header					
2a		%	4		INVITE		Mw			
3a	È		À		400 response Gm					
2b		Ŷz.	À		INVITE ✓ Route header ✓ stored Record-Route header My					
3b	È		ŶŊ.		100 response		Gm			

					Test Purpose		
Ident	ifier:	TP_IMS	T2_MW	_TAR_0	3		
Sumi	nary:	address t shall be l awaits re from the	o the Via ouilt in a s sponses (header a format th in Via he rty, and e	target refresh request from a and to the Record-Route head at contains the port number of ader) and subsequent request ther the P-CSCF FQDN that	der, the P-CSCF SIP Up the P-CSCF where its (in Record-Route he	IRI it eader)
Claus	se:	5.2.6.3, p	oaragraph	26			
Refer	rences:	RQ_003_5048, RQ_003_5080, RQ_003_5079			Config Ref:	CF_1Mw1Gm	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/1	
Entities Condition				o <u>n</u>			
	UE1	IMS	IUT	UE2			
			×		IUT not configured for topo	ology hiding	
	\checkmark		✓		UE1 registered in IUT		
		✓		✓	UE2 registered in IMS		
		✓	✓		IUT configured with an ent	ry point to IMS	
	✓		✓	✓	IUT has established an INV UE1 to UE2	TTE dialog from	
	UE1	IMS	IUT	UE2			
Step		Dire	ction	ı	Messag		IF
1	₽		Ð		target refresh INVITE to	UE2	
2		Ŷ	Ð		INVITE ✓ Via header ✓ port number of IUT P-CSCF ✓ IP address of IUT P-CSCF or FQDN address of IUT P-CSCF ✓ Record-Route header ✓ SIP URI of IUT P-CSCF → port number of IUT P-CSCF → FQDN address of IUT P-CSCF or IP address of IUT P-CSCF ✓ P-Charging-Vector header ✓ updated access-network-charging-info parameter		Mw
3	Ŷ.		À		100 response		Gm

					Test Purpose		
Ident	ifier:	TP_IMS	T2_MW	_TAR_0	4		
	mary:	receives request, i to the sar	any SIP 1 it shall re me value	xx or 2xx place the as for the	ists between the UE and P-C x response as a result of a for address and port number of e response to the initial reque	rwarded target refresh its own Record Route	L
Claus	se: rences:	5.2.6.3, p	paragraph	. 42	Config Dofe	CF_1Mw1Gm	
IUT		IMS	_3049		Config Ref: Selection Expression:	PICS A.2/1	
	KOIC.		ities		Condit		
	UE1 IMS IUT UE2				Conun		
			×		IUT not configured for top	ology hiding	
	\checkmark		✓		UE1 registered in IUT		
	\checkmark		✓		UE1 has established a security association in IUT		
		\checkmark		✓	UE2 registered in IMS		
		\checkmark	\checkmark		IUT configured with an en	try point to IMS	
	\checkmark		✓	✓	IUT has established an INV UE1 to UE2	VITE dialog from	
	\checkmark		✓		IUT has received target ref UE1	resh INVITE from	
			✓		IUT has sent target refresh	INVITE via Mw	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	ge	IF
1		₩	Ď		200 response		Mw
2	ŶĿ		À		200 response to UE1 ✓ Record Route header of same address same P-CSCF of response to init	port number of IUT	Gm

					Test Purpose					
Ident	tifier:	TP_IMS	TP_IMST2_MW_TAR_05 When a P-CSCF receives a target refresh request for a dialog destined for a UE							
Sumi	mary:	shall add that if a s protected	its own a security as I server po aat resolve	nddress to ssociation ort numbers to the l	the top of the received list of n exists between the UE and er of the security association IP address of the security ass	of Via header in a form the P-CSCF, contains and either the P-CSC	nat the F			
Claus	se:	5.2.6.4, p	aragraph	32						
Refe	rences:	RQ_003_ RQ_003_			Config Ref:	CF_1Mw1Gm				
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1				
		Ent			Condition	on				
	UE1	IMS	IUT	UE2						
			×		IUT not configured for topo	ology hiding				
	✓		\checkmark		UE1 registered in IUT					
	✓				UE1 has established a secur IUT P-CSCF	ity association with				
		✓		✓	UE2 registered in IMS					
		✓	\checkmark		IUT configured with an entr	ry point to IMS				
	✓		√	✓	IUT has established an INV UE1 to UE2	ITE dialog from				
	✓		√		IUT has received target refr addressed to UE1	esh INVITE via Mw				
	✓		√		IUT has sent target refresh IUE1	INVITE via Gm to				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messag	e	IF			
1		₩	Ď		target refresh INVITE to	UE1	Mw			
2	Û.		Å		target refresh INVITE to ✓ Via header ✓ port number of IUT F association ✓ as topmost the IP add or the FQDN address ✓ Record-Route header → as topmost the SIP U	P-CSCF for security ress of IUT P-CSCF of IUT P-CSCF	Gm			
3		E	À		100 response		Mw			

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_TAR_0	6			
Sum	mary:	dialog de Via head	estined for ers receiv	r the UE, red in the	SIP 1xx or 2xx response to a if the list of Via headers do initial request correspondinace the Via header values w	es not match the saved ig to the same dialog, e	list of ither	
Clau	se:	5.2.6.4, p	oaragraph	67				
Refe	rences:	RQ_003	_5058		Config Ref:	CF_1Mw1Gm		
IUT	Role:	IMS	_	_	Selection Expression:	PICS A.2/1, A.3/11.5	5.1	
			ities		Condit	ion		
	UE1	IMS	IUT	UE2				
			×		IUT not configured for top	ology hiding		
	✓		✓		UE1 registered in IUT			
		✓		\checkmark	UE2 registered in IMS	UE2 registered in IMS		
		✓	✓		IUT configured with an entry point to IMS			
	✓			✓	UE2 has established an IN UE1	VITE dialog with		
			✓		IUT has stored Via header			
	✓		✓	✓	IUT has received target ref originated by UE2 address			
	✓		✓		IUT has sent target refresh	INVITE to UE1		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Messa	ge	IF	
1	₩		Ď		200 response ✓ Via header not matching stored Via header G			
2a		%	4		200 response			
2b		È	Ą		200 response ✓ Via header → stored Via header		Mw	

					Test Purpose		
Ident	ifier:	TP_IMS	T2_MW	_TAR_0	7		
Sumi	mary:	dialog de port num	estined for the of its	r the UE, own Rec	SIP 1xx or 2xx response to a if a security association exicord-Route entry to the same alog and remove the comp	sts, rewrite the address e value as for the respon	and
Claus	se:	5.2.6.4, 1	oaragraph	67			
Refe	rences:	RQ_003 RQ_003			Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
		Ent	ities		Conditi	ion	
	UE1	IMS	IUT	UE2			
			×		IUT not configured for top	ology hiding	
	\checkmark		✓		UE1 registered in IUT		
	\checkmark		✓		UE1 has established a secu IUT	UE1 has established a security association with IUT	
		✓		✓	UE2 registered in IMS		
		✓	✓		IUT configured with an entry point to IMS		
	\checkmark			✓	UE2 has established an IN UE1	VITE dialog with	
			\checkmark		IUT has stored Record-Roo	ute header	
	\checkmark		✓	✓	IUT has received target ref originated by UE2 address		
	\checkmark		✓		IUT has sent target refresh	INVITE to UE1	
	UE1	IMS	IUT	UE2			
Step		Dire	ction		Messa	ge	IF
1	₹\$		Ď		200 response		Gm
2		Û	4		200 response ✓ Record-Route header → stored Record-Rout ✓ P-Charging-Vector hea ✓ updated access-netw parameter	ader	Mw

					Test Purpose			
Ident	tifier:	TP_IMS	T2_MW	_TAR_0	8			
Sumi	mary:	target ref does not correspon	resh requestion reaction in the match the match the match the match to the match the m	uest for a e saved li he same	ny response other than the SI dialog destined for the UE, it st of Via headers received in dialog, either discard the response in the request	f the list of Via header the initial request	rs	
Clau			aragraph	74	Т			
	rences:	RQ_003_	_5059		Config Ref:	CF_1Mw1Gm		
IUT	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/11.0	5.1	
	Entities LIE1 LIMS LIFE LIE2				Condition	n		
	UE1	IMS	IUT	UE2	HITCH C. 10	1 1 1 1 1 1		
			×		IUT not configured for topo	logy hiding		
	\checkmark		\checkmark		UE1 registered in IUT			
		✓		✓	UE2 registered in IMS	UE2 registered in IMS		
		✓	✓		IUT configured with an entry point to IMS			
	✓			✓	UE2 has established an INV UE1	ITE dialog with		
			√		IUT has stored Via header			
	✓		✓	✓	IUT has received target refree originated by UE2 addressed			
	✓		✓		IUT has sent target refresh I	NVITE to UE1		
	UE1	IMS	IUT	UE2				
Step		Dire	ction		Message	e	IF	
1	₽		∌		4xx response ✓ Via header not matching stored Via header		Gm	
2a		&	4		4xx response		Mw	
2b		Ŷ Ŀ	À		4xx response ✓ Via header → stored Via header		Mw	

					Test Purpose					
Ident	ifier:	TP_IMS	T2_MW	_TAR_0	9					
Sumi	mary:	target ref rewrite the address a	When a P-CSCF receives any response other than the SIP 1xx or 2xx response to a target refresh request for a dialog destined for a UE, if a security association exists, rewrite the address and port number of its own Record-Route entry to the IP address and the port number where it awaits subsequent requests from the calling party and remove the comp parameter							
Claus	se:	5.2.6.4, p	oaragraph	74	1					
Refer	rences:	RQ_003	_5059		Config Ref:	CF_1Mw1Gm				
IUT	Role:	IMS			Selection Expression:	PICS A.2/1				
	Entities				Conditi	on				
	UE1	IMS	IUT	UE2						
			×		IUT not configured for topo	ology hiding				
	\checkmark		√		UE1 registered in IUT					
	\checkmark		✓		UE1 has established a security association with IUT					
		✓		✓	UE2 registered in IMS					
		✓	✓		IUT configured with an ent	ry point to IMS				
	✓			✓	UE2 has established an INV UE1	VITE dialog with				
	\checkmark		✓	✓	IUT has received target refroriginated by UE2 addresse					
	✓		✓		IUT has sent target refresh	INVITE to UE1				
	UE1	IMS	IUT	UE2						
Step		Dire	ction		Messag	ge	IF			
1	$ \Rightarrow $		Ď		Avy response		Gm			
2		È	分		4xx response ✓ Record-Route header → IP address of IUT P- → port number of IUT * comp parameter		Mw			

6.4.7 Emergency procedures

					Test Purpose		
Ident	tifier:	TP_	_IMST2_M	IW_EME_0)1		
Sumi	mary:	of the CSO	GISTER fo he emergen Request-UF	r a dialog ancy service id RI field and s pmost Route	om an unregistered user an inchest the Request-URI contained lentifiers, it shall insert an enselect an E-CSCF and add the header and continue with no	d in the request match nergency service URN e URI of the selected	es one Vinto E-
Claus			10.2, parag	•		Т	
Refe	rences:		_003_5250, _003_5065	,	Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS	S		Selection Expression:	PICS A.2/1	
			Entities		Condition	on	
	UE1		IMS	IUT			
				×	IUT not configured for topology hiding		
	×			×	UE1 not registered in IUT		
			\checkmark	\checkmark	IUT configured with an entr	ry point to IMS	
				\checkmark	IUT configured for emergency sessions		
	UE1		IMS	IUT			
Step			Direction		Messag	ge	IF
1	₩			Ð	INVITE ✓ Request-URI matching service identifier	an emergency	
2			今	Ą	INVITE ✓ Request URI → emergency service URN ✓ Route header ✓ topmost SIP URI of IUT E-CSCF		Mw
3	Ć.			Ą	100 response		Gm

				Test Purpose								
Ident	tifier:	r: TP_IMST2_MW_EME_02										
Sumi	mary:	REGISTER of the emerg the Request-CSCF to the process proc	for a dialog an ency service ic URI field and topmost Route	om an unregistered user an ind the Request-URI contain dentifiers, it shall insert an eselect an E-CSCF and add to header and continue with rout removing the P-Preferrentity header	ed in the request match mergency service URN he URI of the selected normal initial SIP reque	nes one Vinto E-						
Clause: 5.2.10.2, paragraph 1												
References: RQ_003_5250, RQ_003_5065 Config Ref: CF_1Mw1												
IUT	Role:	IMS		Selection Expression:	PICS A.2/1							
		Entities	ties Condition									
	UE1	IMS	IUT									
			×	IUT not configured for topology hiding								
	×	x		UE1 not registered in IUT								
		✓	✓	IUT configured with an en	try point to IMS							
			✓	IUT configured for emergency sessions								
	UE1	IMS	IUT									
Step		Directio	n	Messa	ge	IF						
1	₩		立	INVITE ✓ P-Preferred-Identity h	eader							
2		INVITE ✓ P-Preferred-Identity header × P-Asserted-Identity header ✓ Request-URI → emergency service URN ✓ Route header ✓ topmost SIP URI of IUT E-CSCF		Mw								
3	€		₹ J	100 response		Gm						

					Test Purpose		
Ident	tifier:	TP_IN	IST2_M	IW_EME_0)3		
Sumi	mary:	emerge Reques	ency serv st-URI co	vice, an initia ontained in t	rom a UE, that has previously all request that is not a SIP RI the request matches one of the li include an emergency serv	EGISTER request, and the emergency service	d the
Clau	se:	5.2.10.	.3, paragi	raph 3			
Refe	References: RQ_003_525 RQ_003_506				Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS				Selection Expression:	PICS A.2/1	
		E	ntities		Condition	on	
	UE1		IMS	IUT			
				×	IUT not configured for topology hiding		
	✓			\checkmark	UE1 registered for emergen	cy service in IUT	
			\checkmark	\checkmark	IUT configured with an entr	ry point to IMS	
				\checkmark	IUT configured for emerger	ncy sessions	
	UE1		IMS	IUT			
Step		Di	rection		Messag	ge	IF
1	∌	₩		Ď	INVITE ✓ Request-URI matching an emergency service identifier		
2			INVITE ✓ Request-URI → emergency service U	JRN	Mw		
3	ŶĿ			À	100 response		Gm

					Test Purpose		
Ident	tifier:	TP	_IMST2_N	IW_EME_0			
Sumi	mary:	em Reide UR em hea Ide	ergency serve quest-URI contifiers the last and if the dergency publication with the	vice, an inition tained in the P-CSCF shale P-Preferred- blic user idented registered to the contract of the c	rom a UE, that has previously al request that is not a SIP RI the request matches one of the linclude an emergency service Identity header is present and emergency public user identify. URI associated with the regions.	EGISTER request, and e emergency service ce URN in the Reque d carries the registered insert a P-Asserted-Id by a second P-Asserted	l the st- l entity
Clau	se:	5.2	2.10.3, parag	raph 3			
Refe	rences:		Q_003_5253 Q_003_5065	,	Config Ref:	CF_1Mw1Gm	
IUT	Role:	IM	S		Selection Expression:	PICS A.2/1	
	Entities Condition				on		
	UE1		IMS	IUT			
		IUT not configured for topology hiding		logy hiding			
	✓		✓	UE1 registered for emergen	cy service in IUT		
				✓	IUT has stored display nam	e	
			\checkmark	✓	IUT configured with an entry point to IMS		
				✓	IUT configured for emergency sessions		
	UE1		IMS	IUT			
Step			Direction		Messag	e	IF
1	₹			Ð	INVITE ✓ Request-URI matching service identifier ✓ P-Preferred-Identity he ✓ emergency public use	ader	
2	₹		INVITE ★ P-Preferred-Identity header ✓ P-Asserted-Identity header ✓ emergency public user identity ✓ second P-Asserted-Identity header ✓ tel URI of emergency public user identity ✓ Request-URI → emergency service URN		Mw		
3	₹			ŶŊ	100 response		Gm

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_EME_0)5		
Sumi	mary:	em Red ide UR ass and reg wit	ergency serve quest-URI contifiers, the AI and if the ociated with I insert a P-A istered ements the register	vice, an initial contained in the P-CSCF shate P-Preferred the register Asserted-Idergency publicated emerger	rom a UE, that has previously al request that is not a SIP RI the request matches one of the li include an emergency serve Identity header is present and ed emergency public user identity header with the tel-URI course identity and a second acy public user identity	EGISTER request, and e emergency service ice URN in the Requed carries the tel-URI entity, remove that head associated with the	l the est- nder
	Clause: 5.2.10.3, paragraph 3 References: RQ_003_5253, RQ_003_5065 Config Ref: CF_1Mw1Gm				CF_1Mw1Gm		
IUT	Role:	IM	_		Selection Expression:	PICS A.2/1	
	Entities				Condition	on	
	UE1		IMS	IUT			
				×	IUT not configured for topology hiding		
	✓			✓	UE1 registered for emergency service in IUT		
				\checkmark	IUT has stored display name	e	
			\checkmark	\checkmark	IUT configured with an entry point to IMS		
				✓	IUT configured for emergency sessions		
	UE1		IMS	IUT			
Step		1	Direction		Messag	e	IF
1	₩			Ð	INVITE ✓ Request-URI matching an emergency service identifier ✓ P-Preferred-Identity header ✓ tel URI of emergency public user identity		
2			र्देद	Ą	INVITE ★ P-Preferred-Identity header ✓ P-Asserted-Identity header ✓ emergency public user identity ✓ second P-Asserted-Identity header ✓ tel URI of emergency public user identity ✓ Request-URI → emergency service URN		Mw

	Test Purpose								
3	Ŷ.		À	100 response	Gm				

					Test Purpose		
Ident	ifier:	TP_IMS	ST2_N	IW_EME_0)6		
Sumi	mary:	Request- server po	URI cort rela	ontaining Glated to the Gl	arget refresh request for an e RUU, it shall obtain the UE RUU contained in the Requ IP address and UE protected	IP address and UE proest-URI and rewrite the	tected
Clause: 5.2.10.3, paragraph 13							
Refe	rences:	RQ_003	_5255		Config Ref:	CF_1Mw1Gm	
IUT	Role:	IMS			Selection Expression:	PICS A.2/1	
	Entities				Condit	ion	
	UE1	IN	AS	IUT			
				×	IUT not configured for top	ology hiding	
	\checkmark	✓		✓	UE1 registered for emerge	ncy service in IUT	
		•		✓	IUT configured with an entry point to IMS		
				✓	IUT configured for emerge	ency sessions	
	\checkmark				UE1 has established an em	ergency session	
	UE1	IN	AS	IUT			
Step		Dire	ction		Messa	ge	IF
1	$ \oint $			Ð	target refresh INVITE ✓ Request-URI ✓ GRUU		Gm
2		4	दे	À	INVITE ✓ Request-URI ✓ UE1 IP address protonumber	ected server port	Mw

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_EME_	07		
Sumi	mary:	an cor	initial reque ntained in the	st that is not e request ma	from a UE that has registere t a SIP REGISTER request, atches one of the emergency ergency service URN in the	and the Request-URI service identifiers, the	
Clau	Clause: 5.2.10.4, paragraph			raph 1			
Refe	rences:	_	0_003_5256, 0_003_5065	,	Config Ref:	CF_1Mw1Gm	
IUT	Role:	IM	S		Selection Expression:	PICS A.2/1	
	Entities				Condit	tion	
	UE1 IMS IU		IUT				
				×	IUT not configured for top	pology hiding	
	✓		\checkmark	UE1 registered in IUT			
				\checkmark	IUT has stored display name		
			\checkmark	✓	IUT configured with an entry point to IMS		
				\checkmark	IUT configured for emergency sessions		
	UE1		IMS	IUT			
Step			Direction		Messa	nge	IF
1	₩			Ð	INVITE ✓ Request-URI matching an emergency service identifier		
2	€ ₽		INVITE ✓ Request-URI → emergency service	URN	Mw		
3	Ŷ Ŀ			₹¥	100 response		Gm

					Test Purpose		
Iden	tifier:	TP	_IMST2_M	IW_EME_0	08		
Sum	mary:	an con pul P-0 fro pul sec	When a P-CSCF receives from a UE that has registered for non-emergency service an initial request that is not a SIP REGISTER request, and the Request-URI contained in the request matches one of the emergency service identifiers, if the public user identity included in the P-Preferred-Identity header matches one of the P-CSCFs registered public user identities remove the P-Preferred-Identity header from the received request, insert a P-Asserted-Identity header that includes the public user identity that was present in the P-Preferred-Identity header and add a second P-Asserted identity header that contains the tel URI associated with the public user identity				
Clau	se:	5.2	2.10.4, parag	raph 1	1	1	
Refe	rences:	RÇ	0_003_5256		Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/1		
	Entities				Condition	on	
	UE1	UE1 IMS IUT		IUT			
		3		×	IUT not configured for topo	ology hiding	
	✓	✓		✓	UE1 registered in IUT		
				\checkmark	IUT has stored display name		
			\checkmark	\checkmark	IUT configured with an entry point to IMS		
				\checkmark	IUT configured for emergency sessions		
	UE1		IMS	IUT			
Step			Direction		Messag	ge	IF
1	\$ ±\$		Ð	INVITE ✓ Request-URI ✓ emergency service URN ✓ P-Preferred-Identity header ✓ registered public user identity		Gm	
2		€ 4		INVITE ➤ P-Preferred-Identity header ✓ P-Asserted-Identity header ✓ registered public user identity ✓ second P-Asserted-Identity header ✓ tel URI of public user identity		Mw	

					Test Purpose			
Ident	tifier:	TP	_IMST2_M	IW_EME_(-			
Sumi	mary:	an COI UR Pre As Pre a p	When a P-CSCF receives from a UE that has registered for non-emergency service an initial request that is not a SIP REGISTER request, and the Request-URI contained in the request matches one of the emergency service identifiers, if the tel URI associated with one of the registered public user identities is included in the P-Preferred-Identity header remove the P-Preferred-Identity header, insert a P-Asserted-Identity header that includes the tel URI that was present in the P-Preferred-Identity header and add a second P-Asserted-Identity header that contains a public user identity 5.2.10.4, paragraph 1					
	rences:	-	2_003_5256	-wp.i	Config Ref:	CF_1Mw1Gm		
IUT	Role:	IM	S		Selection Expression:	PICS A.2/1		
	Entities			Condit	ion			
	UE1		IMS	IUT				
				×	IUT not configured for topology hiding			
	\checkmark			✓	UE1 registered in IUT			
				✓	IUT has stored display nar	ne		
			✓	✓	IUT configured with an entry point to IMS			
				✓	IUT configured for emergency sessions			
	UE1		IMS	IUT				
Step			Direction		Messa	ge	IF	
1	₩		Ð	INVITE ✓ Request-URI ✓ emergency service URN ✓ P-Preferred-Identity header ✓ tel URI of public user identity		Gm		
2	₹		ŶĮ.	INVITE ★ P-Preferred-Identity he ✓ P-Asserted-Identity he ✓ tel URI of public use ✓ second P-Asserted-Ide ✓ registered public use	eader er identity entity header	Mw		

				Test Purpose		
Ident	tifier:	TP_IMST2_M	IW_EME_	10		
Sumi	mary:	refresh request shall obtain the	for an emer UE IP addr e Request-U	for a user registered for non- rgency dialog with the Requ ress and UE protected server JRI and rewrite the Request- ort	est-URI containing GF port related to the GR	RUU, it
Clau	se:	5.2.10.4, parag	raph 10			
Refe	rences:	RQ_003_5258		Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/1	
	Entities		Condit	ion		
	UE1 IMS IU		IUT			
			×	IUT not configured for topology hiding		
	✓		✓	UE1 registered in IUT		
		✓	✓	IUT configured with an entry point to IMS		
			✓	IUT configured for emerge		
	✓			UE1 has established an em	nergency session	
	UE1	IMS	IUT			
Step		Direction		Messa	ge	IF
1	\Rightarrow		Ð	target refresh INVITE ✓ Request-URI ✓ GRUU		Gm
2	ŶĿ		Ą	INVITE ✓ Request-URI ✓ UE1 IP address prot number	ected server port	Mw

				Test Purpose		
Ident	tifier:	TP_IMST2	_MW_EME_	11		
Sumi	mary:		ponse if it is no	o a SIP INVITE request for ot capable of or not configu		
Clau	se:	5.2.10.5, par	agraph 1			
Refe	rences:	RQ_003_52	59	Config Ref:	CF_1Mw1Gm	
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/1	
	Entities			Condi	tion	
	UE1	IMS	IUT			
			×	IUT not configured for topology hiding		
	\checkmark		✓	UE1 registered in IUT		
		✓	✓	IUT configured with an en	ntry point to IMS	
			×	IUT not configured for en	nergency sessions	
	UE1	IMS	IUT			
Step		Directio	n	Messa	age	IF
1	\Rightarrow		Ď	INVITE ✓ Request-URI ✓ emergency service URN		Gm
2	€.		4	380 response to UE1		Gm

6.4.8 SDP procedures

Test Purpose										
Ident	tifier:	TP_IMST2_N	1W_SDP_0	1						
Sumi	mary:	media paramet it shall send a s which contains	ers which a SIP 488 (Not sall or an acc	a SIP request containing a Size not permitted by local post Acceptable Here) response ceptable subset, of the medit by local policy or user subsets.	licy or by user subscript containing a SDP payla types, codecs and oth	otion, load				
Clau	se:	6.3, paragraph	1							
Refe	rences:	RQ_003_6008		Config Ref:	CF_1Mw					
IUT Role:		IMS		Selection Expression:	PICS A.2/1					
	Entities			Condition						
	UE1	IMS	IUT							
				IUT not configured for topology hiding						
	✓		✓	UE1 registered in IUT						
		✓	✓	IUT configured with an entry point to IMS						
	UE1	IMS	IUT							
Step		Direction		Messa	ge	IF				
1	\$ \$		Ð	INVITE to UE1 ✓ SDP offer ✓ unacceptable media parameter		Mw				
2		Ŷŧ	ŶĮ.	488 response ✓ SDP offer		Mw				

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_SDP_0	2		
Sumi	mary:		en an S-CS ect the reque		a SIP request containing an	encrypted SDP offer, i	t may
Claus	se:	6.3	, paragraph	1			
Refer	rences:	RQ	_003_6009		Config Ref:	CF_1Mw	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/1, A.3/18.	1.1
			Entities		Condit	tion	
	UE1		IMS	IUT			
				×	IUT not configured for topology hiding		
	✓			\checkmark	UE1 registered in IUT		
			\checkmark	\checkmark	IUT configured with an entry point to IMS		
				✓	IUT configured to reject e	ncrypted SDP offers	
	UE1		IMS	IUT			
Step			Direction		Messa	ige	IF
1			₩	Ď	INVITE to UE1 ✓ encrypted SDP offer		Mw
2			Ŷ.	Ą	4xx response		Mw
3	(E)			4	INVITE		Gm

					Test Purpose		
Ident	tifier:	TP	_IMST2_M	IW_SDP_0	3		
Sumi	mary:	whi	ich was cont K), the P-CS	tained in a p	a SIP request containing a Sireviously forwarded SIP rest examine the media parame	sponse, other than a SI	P 200
Claus	se:	6.2	, paragraph	2			
Refer	rences:	RQ	_003_6002		Config Ref:	CF_1Gm1Mw	
IUT	IUT Role: IMS		S		Selection Expression:	PICS A.2/1	
	Entities				Condit	ion	
	UE1		IMS	IUT			
				×	IUT not configured for top	ology hiding	
	✓	✓		✓	UE1 registered in IUT		
	✓			✓	IUT has received INVITE	via Mw for UE1	
				\checkmark	IUT has sent INVITE via	Gm	
			\checkmark	✓	IUT configured with an en	try point to IMS	
	UE1		IMS	IUT			
Step			Direction		Messa	ge	IF
1			₩	Ð	180 response to UE1 ✓ SDP offer ✓ unacceptable media parameter		Mw
2			仓	4	4xx response		Mw
3	Ŷ _E			ŶŊ	180 response		Gm

Test Purpose						
Identifier:		TP_IMST2_MW_SDP_04				
Summary:		When a P-CSCF receives a SIP ACK request containing an SDP answer in response to a SDP offer which was previously forwarded in a SIP 200 (OK) response and which contained media parameters not permitted by local policy, it shall terminate the session				
Clause:		6.2, paragraph 3				
References:		RQ_003_6004		Config Ref:	CF_1Gm1Mw	
IUT Role:		IMS		Selection Expression: PICS A.2/1		
	TID1	Entities TIME		Condition		
	UE1	IMS	IUT	IUT not configured for topology hiding		
	✓		✓	UE1 registered in IUT		
	✓		✓	IUT has received INVITE via Mw for UE1		
	\checkmark		✓	IUT has sent INVITE via Gm to UE1		
		✓	✓	IUT configured with an entry point to IMS		
	UE1	IMS	IUT			
Step		Direction		Message		IF
1	U _k ✓ SDP offe		200 response ✓ SDP offer ✓ unacceptable media	parameter	Gm	
2		Ŷ <u>t</u>	À	200 response		Mw
3	\$		₽	ACK ✓ SDP answer		Mw
4		Ŷ.	À	ВУЕ		Mw
5	仓		ŶĮ.	ВУЕ		Gm

					Test Purpose		
Ident	ifier:	TP_IMS	T2_M	IW_SDP_0	5		
Sumi	mary:	to an end	crypte		a SIP ACK request containing which was previously forward the session	<u> </u>	-
Claus	se:	6.2, para	graph	3			
Refer	rences:	RQ_003	_6005		Config Ref:	CF_1Gm1Mw	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/1, A.3/18.	3.1
		Entities			Condit	ion	
	UE1	IN	IS	IUT			
				×	IUT not configured for top	ology hiding	
	\checkmark			\checkmark	UE1 registered in IUT		
	\checkmark			\checkmark	IUT has received INVITE	via Mw for UE1	
	✓	✓ IUT has sent INVITE via Gm to UE1					
		v		✓	IUT configured with an en	try point to IMS	
				\checkmark	IUT configured to reject en	ncrypted SDP offers	
	UE1	IN	AS	IUT			
Step		Dire	ction		Messa	ge	IF
1	₩			Ď	200 response ✓ encrypted SDP offer		Gm
2		₹\	ţ	₹J	200 response		Mw
3		Á	\$	Ď	ACK ✓ encrypted SDP answer	r	Mw
4		(ţ	⇔	ВУЕ		Mw
5	€			₹Ŋ.	BYE		Gm

6.5 Test purposes for the lc interface

6.5.1 General

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_GEN_01			
Sumr	nary:				REGISTER request from wit RI to the top of the Path heade		shall
Claus	se:	5.1	0.2.1 1), 5.10	0.4.1			
Refer	ences:	RÇ	_003_5500		Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/4	
	Entities				Condition	on	
	UE1 IUT		IMS				
			\checkmark		IUT configured for topology hiding		
			\checkmark		IUT configured with one entry point to home network		
	UE1		IUT	IMS			
Step			Direction		Messag	ge	IF
1	₽ ₽		REGISTER				
2			₩	Ď	REGISTER ✓ topmost Path header → SIP URI of IUT IBCH	3	Ic1

6.5.2 Registration procedures

					Test Purpose				
Ident	ifier:	TP	_IMST2_IC	C_REG_01					
Sumr	nary:	poi req	When an IBCF receives a SIP 3xx (Redirection) response from a home network entry point to a previously forwarded SIP REGISTER request, it shall resend the Register request to another home network entry point to which it has not previously forwarded the same request.						
Claus	se:	5.1	0.2.1 3)						
Refer	rences:		_003_5501, _003_5222		Config Ref:	CF_2Ic1Gm			
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/4			
			Entities		Condi	tion			
	UE1	E1 IUT IMS		IMS					
			✓		IUT configured for topology hiding				
			\checkmark		IUT configured with two entry points to home network				
	✓		✓		IUT has received REGISTER from UE1				
			\checkmark		IUT has sent REGISTER via Ic1				
	UE1		IUT	IMS					
Step			Direction		Messa	age	IF		
1			Ý:	₹Ŋ	3xx response		Ic1		
2			₩	Ð	REGISTER		Ic2		

				Test Purpose					
Ident	tifier:	TP_IMST2_IO	C_REG_02						
Sumi	mary:	network entry programmer forward the Reg	When an IBCF receives SIP 480 (Temporarily Unavailable) response from a home network entry point to a previously forwarded SIP REGISTER request, it shall forward the Register request to another home network entry point to which it has not previously forwarded the same request.						
Claus	se:	5.10.2.1 3)							
Refer	rences:	RQ_003_5501, RQ_003_5222		Config Ref:	CF_2Ic1Gm				
IUT	IUT Role: IMS			Selection Expression:	PICS A.2/4				
		Entities		Condition					
	UE1	E1 IUT IMS							
		\checkmark		IUT configured for topology hiding					
		✓		IUT configured with two entry points to home network					
	✓	✓		IUT has received REGISTER from UE1					
		✓		IUT has sent REGISTER v	ia Ic1				
	UE1	IUT	IMS						
Step		Direction		Messa	ge	IF			
1		Ŷ.	卻	480 response		Ic1			
2		₩	Ð	REGISTER		Ic2			

					Test Purpose				
Ident	ifier:	TP.	_IMST2_IC	C_REG_03					
Sumi	nary:	forv	When an IBCF receives no response from a home network entry point to a previously forwarded SIP REGISTER request, it shall forward the Register request to another home network entry point to which it has not previously forwarded the same request.						
Claus	se:	5.10	0.2.1 3)						
Refer	rences:	_	_003_5501, _003_5222		Config Ref:	CF_2Ic1Gm			
IUT I	IUT Role: IMS			Selection Expression:	PICS A.2/4				
	Entities		Conditi	on					
	UE1	UE1 IUT		IMS					
			\checkmark		IUT configured for topology hiding				
			✓		IUT configured with two entry points to home network				
	✓		\checkmark		IUT has received REGISTER from UE1				
			\checkmark		IUT has sent REGISTER vi	a Ic1			
	UE1		IUT	IMS					
Step			Direction		Messaş	ge	IF		
1			\&	"	no response		Ic1		
2			₩	Ď	REGISTER		Ic2		

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_REG_04			
Sumi				oints in the r	exx (Redirection) response to a registering user s home netword to the P-CSCF.		
Claus	se:	5.1	0.2.1 3)				
Refer	ences:	_	_003_5502, _003_5223		Config Ref:	CF_1Ic1Gm	
IUT I	IUT Role: IMS		Selection Expression:	PICS A.2/4			
	Entities		Condit	ion			
	UE1 IUT IMS		IMS				
			\checkmark		IUT configured for topology hiding		
			✓		IUT configured with one entry point to home network		
	✓		\checkmark		IUT has received REGISTER from UE1		
	UE1		IUT	IMS			
Step			Direction		Messa	ge	IF
1			Ć.	7	3xx response		Ic1
2a	€		Ą		408 response		
2b	Æ.		₹Ŋ		504 response		

					Test Purpose			
Ident	ifier:	TP	_IMST2_IC	C_REG_05				
REGISTER request fro			GISTER req	uest from all	80 (Temporarily Unavailable) response to a SIP Il entry points in the registering user s home network, it r Time-Out) response to the P-CSCF.			
Claus	se:	5.1	0.2.1 3)					
Refer	rences:	_	_003_5502, _003_5223		Config Ref:	CF_1Ic1Gm		
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/4		
	Entities		Condition	on				
	UE1		IUT	IMS				
			\checkmark		IUT configured for topology hiding			
			✓		IUT configured with one entry point to home network			
	✓		\checkmark		IUT has received REGISTER from UE1			
	UE1		IUT	IMS				
Step			Direction		Messag	ge	IF	
1	€ ₽		480 response		Ic1			
2a	408 response							
2b	Ý:		Ą		504 response			

					Test Purpose				
Ident	ifier:	TP	_IMST2_IC	C_REG_06					
Sumi				iser s home i	no response to a SIP REGISTER request from all entry points in shome network, it shall send a SIP 504 (Server Time-Out) SCF.				
Claus	se:	5.1	0.2.1 2)						
Refer	rences:	_	_0_003_5502, _003_5223		Config Ref:	CF_1Ic1Gm			
IUT 1	IUT Role: IMS		Selection Expression:	PICS A.2/4					
	Entities		Condition						
	UE1 IUT IMS		IMS						
			\checkmark		IUT configured for topology hiding				
			✓		IUT configured with one entry point to home network				
	✓		\checkmark		IUT has received REGISTER from UE1				
	UE1		IUT	IMS					
Step			Direction		Messa	ge	IF		
1			\&	4	no response		Ic1		
2a	€		₹ <u>J</u>		408 response				
2b	€		₹Ŋ		504 response				

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_REG_07			
Sumi	nary:	its			IP REGISTER request from ar d a SIP 403 (Forbidden) respo		
Claus	se:	5.1	0.3.1 1)				
Refer	References: RQ_003_5513				Config Ref:	CF_1Ic	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/4	
			Entities		Condition	n	
	UE1		IUT	IMS			
			\checkmark	✓	IMS configured as untrusted domain for IUT		
	UE1		IUT	IMS			
Step			Direction		Messag	e	IF
1			Ć.	À	REGISTER		Ic1
2			₩	Ď	403 response		Ic1

6.5.3 Initial request procedures

					Test Purpose				
Ident	ifier:	TP	_IMST2_IC	C_INI_01					
Sumi	nary:	enc	Then an IBCF receives an initial SIP INVITE request from within its own network it acrypts all Via header URIs except the one of the IBCF prior to forwarding the quest.						
Claus	Clause: 5.10.2.2 1) 2) 4) 5), 5.10.4								
Refer	rences:	RQ	_003_5503		Config Ref:	CF_1Ic1Gm			
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/4			
	Entities		Conditi	on					
	UE1		IUT	IMS					
			\checkmark		IUT configured for topology hiding				
	✓		✓		UE1 registered in IUT				
	UE1		IUT	IMS					
Step			Direction		Messa	ge	IF		
1	₩		Ď		INVITE				
2			₩	Ð	INVITE ✓ topmost Via header → SIP URI of IUT IBC ✓ encrypted SIP URI → tokenized-by parar × P-Charging-Vector head × P-Charging-Function-A	neter Ier	Ic1		

				Test Purpose		
Ident	ifier:	TP_IMST2	_IC_INI_02			
Sumi	nary:		ology hiding is	80 response to a forwarded ini required it shall not encrypt V		nd
Claus	se:	5.10.2.2, par	ragraph 12, 5.10	0.4		
Refer	ences:	RQ_003_55 RQ_003_51		Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/4	
		Entitie	es	Condition	on	
	UE1	UE1 IUT IMS				
		\checkmark		IUT configured for topology	hiding	
	✓	✓		IUT has received INVITE from UE1		
		✓		IUT has sent INVITE via Icl		
	UE1	IUT	IMS			
Step		Direction	on	Messag	e	IF
1		Ŷ _E	47	180 response		Ic1
2	Ŷ Ŀ	ŶŊ.		180 response ★ any header ✓ encrypted SIP URI → tokenized-by param	eter	

					Test Purpose		
Ident	ifier:	TP_IMS	T2_I	C_INI_03			
Sumi	nary:		topolo	gy hiding is r	00 response to a forwarded ini required it shall not encrypt Vi		nd
Claus	se:	5.10.2.2,	paragi	raph 12, 5.10	.4		
Refer	ences:	RQ_003_5506, RQ_003_5138			Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/4	
	Entities				Condition	n	
	UE1	п	J T	IMS			
		v			IUT configured for topology	hiding	
	✓	٧			IUT has received INVITE from	om UE1	
		٧			IUT has sent INVITE via Ic1		
	UE1	П	J T	IMS			
Step		Dire	ction		Messag	e	IF
1		<	Ę	ŶĮ	200 response		Ic1
2	Ŷ Ŀ	<	À		200 response ★ any header ✓ encrypted SIP URI → tokenized-by param	eter	

				Test Purpose		
Ident	ifier:	TP_IMS	T2_IC_INI_04			
Sumr	nary:	non-truste	ed domain and the	SIP request, other than a SIP topmost Route header in the rend a SIP 403 (Forbidden) respond to the respondent to the re	equest contains the orig	g
Claus	ause: 5.10.3.2, paragraph 1					
Refer	rences:	RQ_003_	5517	Config Ref:	CF_1Ic	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/4	
		Ent	ities	Condition	on	
	I	UT	IMS			
	•	✓	\checkmark	IMS configured as untrusted domain for IUT		
	I	UT	IMS			
Step		Direc	ction	Messag	e	IF
1	ŶĿ		Ą	INVITE ✓ topmost Route header ✓ orig parameter		Ic1
2	9	15	Ď	403 response		Ic1

					Test Purpose			
Ident	ifier:	TP_IMST	2_IC_	_INI_05				
Sumr	nary:	network an	d the t it shal	topmost Ro ll return a S	IP INVITE request from a trus oute header in the request does IP 100 response and not encry	s not contain the orig		
Claus	se:							
Refer	ences:	RQ_003_5	518		Config Ref:	CF_1Ic1Gm		
IUT I	Role:	IMS			Selection Expression: PICS A.2/4			
		Entiti	ies		Condition	on		
	UE1	IUT		IMS				
		\checkmark			IUT configured for topology hiding			
		✓		✓	IMS configured as trusted do	omain for IUT		
	UE1	IUT	7	IMS				
Step		Direct	ion		Messag	e	IF	
1		Ŷ Ŀ		⇔	INVITE ✓ Via header ✓ topmost SIP URI of IMS ✓ encrypted SIP URI → tokenized-by parameter		Ic1	
2		♠		Σ	100 response		Ic1	
3	Œ	क्र			INVITE	eter		

					Test Purpose		
Ident	ifier:	TP_I	MST2_IC	_INI_06			
Sumr	nary:				INVITE request and the IBCF shall add a Session-Expires p		the
Claus	se:	5.10.3	3.2, paragr	aph 10			
Refer	ences:	RQ_0	03_5520		Config Ref:	CF_1Ic1Gm	
IUT Role: IMS					Selection Expression:	PICS A.2/4, A.8/11.1	
]	Entities		Condition		
	UE1		IUT	IMS			
			\checkmark		IUT configured for requiring periodic refreshment		
	UE1		IUT	IMS			
Step		D	Direction		Messag	e	IF
1	€ ₽		INVITE		Ic1		
2	€ ₽			INVITE ✓ Session-Expires header			

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	_INI_07			
Sumi	nary:	its o	own URI as	the topmost	alid 180 response from within Via header and encrypt all ot other networks		ıll add
Claus	se:	5.10	0.3.2, paragr	aph 12, 5.10	.4		
Refer	ences:	RQ	_003_5521		Config Ref:	CF_1Ic1Gm	
IUT Role: IMS Selection Expression: PIC				PICS A.2/4			
	Entities				Condit	ion	
	UE1		IUT	IMS			
			\checkmark		IUT configured for topology hiding		
			\checkmark		IUT has received INVITE v	via Ic1	
	✓		\checkmark		IUT has sent INVITE to UE1		
	UE1		IUT	IMS			
Step			Direction		Messa	ge	IF
1	₩		Ď		180 response		
2	₩		Đ	180 response ✓ topmost Via header → SIP URI of IUT IBC ✓ encrypted SIP URI → tokenized-by parar		Ic1	

					Test Purpose		
Ident	ifier:	TP.	_IMST2_IC	C_INI_08			
Sumi	nary:	its o	own URI as	the topmost	alid 200 response from within Via header and encrypt all other networks		ll add
Claus	se:	5.10	0.3.2, paragr	aph 12, 5.10	.4		
Refer	ences:	RQ	_003_5521		Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/4	
	Entities				Condition	on	
	UE1		IUT	IMS			
			\checkmark		IUT configured for topology	hiding	
			\checkmark		IUT has received INVITE vi	ia Ic1	
	\checkmark		\checkmark		IUT has sent INVITE to UE1		
	UE1		IUT	IMS			
Step			Direction		Messag	ge	IF
1	₩		Ď		200 response		
2			₩	Ð	200 response ✓ topmost Via header → SIP URI of IUT IBCH ✓ encrypted SIP URI → tokenized-by param		Ic1

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_INI_09			
Sumi					SIP request or response that contains a contact address le User agent URI (GRUU), it shall replace the contact ich is also a GRUU.		
Claus	se:	5.1	0.5, paragraj	oh 4			
Refer	rences:	RÇ	0_003_5527		Config Ref:	CF_1Ic1Gm	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/4	
	Entities				Condit	ion	
	UE1 IUT IMS		IMS				
		✓			IUT has received INVITE via Ic1 containing Contact header indicating GRUU		
	✓		\checkmark		IUT has sent INVITE to UE1 containing Containing Containing GRUU		
					configured for IMS-ALG		
	UE1		IUT	IMS			
Step		,	Direction		Messa	ge	IF
1	\$ \$			200 response			
2			₩	Ď	200 response ✓ Contact header → GRUU		Ic1

6.5.4 Standalone requests procedures

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_STA_01			
Sum	nary:	INV hea	VITE from w der and encr	vithin its owr cypt all other	nitial SIP request other than an etwork, it shall add its own Via header and exclude chargher networks	URI as the topmost V	ia
Claus	se:	5.10	0.2.2 1) 2) 4	5), 5.10.4	1		
Refer	rences:	RQ	_003_5504		Config Ref:	CF_1Ic1Gm	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/4	
Entities					Condition	on	
	UE1 IUT IMS						
			\checkmark		IUT configured for topology hiding		
	✓		\checkmark		UE1 registered in IUT		
	UE1		IUT	IMS			
Step			Direction		Messag	ge	IF
1	₩		Ď		MESSAGE		
2	2		MESSAGE ✓ topmost Via header → SIP URI of IUT IBCI ✓ encrypted SIP URI → tokenized-by param × P-Charging-Vector head × P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ Topmost Via header ✓ encrypted SIP URI ✓ tokenized-by param × P-Charging-Function-Acceptage ✓ encrypted SIP URI ✓ tokenized-by param × P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ Encrypted SIP URI ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ Encrypted SIP URI ✓ P-Charging-Function-Acceptage ✓ Encrypted SIP URI ✓ P-Charging-Function-Acceptage ✓ P-Charging-Function-Acceptage ✓ Encrypted SIP URI ✓ Encrypted	neter er	Ic1		

					Test Purpose				
Ident	ifier:	TP	_IMST2_IC	C_STA_02					
re			When the IBCF receives an INVITE request and the IBCF requires the periodic efreshment of the session it shall add a Session-Expires prior to forwarding it to other etworks.						
Claus	se:	5.1	0.2.2, paragr	aph 10, RFC	C 4028 [8]				
Refer	ences:	RÇ	_003_5505		Config Ref:	CF_1Ic1Gm			
IUT Role: IMS					Selection Expression:	PICS A.2/4, A.8/11.1			
	Entities				Condition	on			
	UE1	UE1 IUT IMS							
			\checkmark		IUT configured for topology	hiding			
			\checkmark		IUT configured for requiring periodic refreshment				
	\checkmark		\checkmark		UE1 registered in IUT				
	UE1		IUT	IMS					
Step			Direction		Messag	je	IF		
1	INVITE INVITE								
2	INVITE ✓ Session-Expires header		Ic1						

					Test Purpose		
Ident	ifier:	TP_	_IMST2_IC	C_STA_03			
Sumi	nary:	INV	/ITE reques	t, from a trus	IP request, other than a SIP For sted domain outside its own to forwarding the request to	network it shall decrypt	
Claus	se:	5.10	0.3.2 3), 5.10	0.4			
Refer	ences:	RQ	_003_5519		Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/4	
	Entities				Condit	ion	
	UE1 IUT IMS		IMS				
			\checkmark		IUT configured for topology hiding		
			\checkmark	✓	IMS configured as trusted domain for IUT		
	UE1		IUT	IMS			
Step			Direction		Message		IF
1	र्दे		P	MESSAGE ✓ topmost Via header → SIP URI of IMS ✓ encrypted SIP URI → tokenized-by parameter		Ic1	
2				MESSAGE	meter		

				Test Purpose		
Ident	ifier:	TP_IMST2_IC	C_STA_04			
Sumr	nary:		-	ests addressed to its currently ch the GRUU was provided.	valid GRUUs when red	ceived
Clause: 5.10.5, paragraph 6						
Refer	ences:	RQ_003_5528		Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/4	
		Entities		Condition	on	
	UE1	UE1 IUT IMS				
		✓		IUT configured for IMS-ALG		
	UE1	IUT	IMS			
Step		Direction		Messag	e	IF
1		Ŷ Ŀ	ŶŊ.	MESSAGE ✓ To header → GRUU of IUT IBCF		Ic1
2	€	Ŷ,		MESSAGE		

6.5.5 Subsequent requests on a dialog procedures

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_SUB_01			
Sumi	mary:	sub	sequent to a	n initial requ	SIP BYE request from within est it shall add its own URI as prior to forwarding the reque	s the topmost Via heade	er and
Claus	se:	5.1	0.2.3 3) 4), 5	5.10.4			
References: RQ_003_5509 Config Ref:					Config Ref:	CF_1Ic1Gm	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/4	
	Entities				Condition		
	UE1 IUT IMS		IMS				
			\checkmark		IUT configured for topology	hiding	
	✓		✓		IUT has established an INVITE dialog for UE1		
	UE1		IUT	IMS			
Step			Direction		Messag	ge	IF
1	\$ \$			BYE			
2	\$ \$		Ð	BYE ✓ topmost Via header → SIP URI of IUT IBCF ✓ encrypted SIP URI → tokenized-by parameter		Ic1	

					Test Purpose			
Ident	ifier:	TP_IMST	2_IC_	SUB_02				
Sumi	nary:	forwarded	subseq	uent to an	sponse from outside its own n initial request and network top s prior to forwarding the respo	pology hiding is requir	ed is	
Claus	se:	5.10.2.3, pa	aragrap	oh 7, 5.10.4	1			
Refer	rences:	RQ_003_5	CF_1Ic1Gm					
IUT Role:IMSSelection Expression:PICS A.2/4								
Entities Condition				n				
	UE1	IUI		IMS				
		✓			IUT configured for topology	JT configured for topology hiding		
	✓	✓			IUT has established an INVI	IUT has established an INVITE dialog for UE1		
	✓	✓			IUT has received BYE from	JT has received BYE from UE1		
		\checkmark			IUT has sent BYE via Ic1			
	UE1	IUI		IMS				
Step		Direct	ion		Messag	e	IF	
1		Ŷ.		⇔	200 response		Ic1	
2	€ ₹				200 response	eter		

					Test Purpose		
Ident	ifier:	TP_	IMST2_IC	C_SUB_03			
Sumi	nary:	subs		n initial requ	IP MESSAGE request from ouest, then it shall decrypt any h		
Claus	se:	5.10	0.3.3 3) 4), 5	5.10.4			
References:RQ_003_5523Config Ref:CF_1Ic1Gm							
IUT I	Role:	IMS	}		Selection Expression:	PICS A.2/4	
	Entities				Condition	n	
	UE1 IUT IMS						
			\checkmark		IUT configured for topology hiding		
	✓		\checkmark		IUT has established an INVI	TE dialog for UE1	
	UE1		IUT	IMS			
Step			Direction		Messag	e	IF
1	€ #		MESSAGE ✓ topmost Via header → SIP URI of IMS ✓ encrypted SIP URI → tokenized-by parameter		Ic1		
2	Ŷ£:		Ð		MESSAGE	eter	

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_SUB_04			
Sumi	nary:	to a			IP BYE request from outside is shall decrypt any headers prior		
Claus	se:	5.10	0.3.3 3) 4), 5	5.10.4			
References: RQ_003_5523 Config Ref: CF_1Ic1Gm							
IUT I	Role:	IMS	S		Selection Expression:	PICS A.2/4	
	Entities				Condition	on	
	UE1 IUT IMS						
			\checkmark		IUT configured for topology hiding		
	✓		\checkmark		IUT has established an INVI	TE dialog for UE1	
	UE1		IUT	IMS			
Step		·	Direction		Messag	e	IF
1	€ 4 ^y		BYE ✓ topmost Via header → SIP URI of IMS ✓ encrypted SIP URI → tokenized-by parameter		Ic1		
2	€ Ø			BYE	eter		

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_SUB_05			
Sum	nary:	req hea	uest forward	ed subseque	IP 200 response from within nt to an initial request it shall Via headers prior to forward	add its own URI to the	Via
Claus	se:	5.1	0.3.3, paragr	raph 6, 5.10.4	4		
Refer	rences:	RQ	_003_5524		Config Ref:	CF_1Ic1Gm	
IUT I	IUT Role: IMS				Selection Expression:	PICS A.2/4	
			Entities		Condit	ion	
	UE1	UE1 IUT IMS		IMS			
		✓			IUT configured for topology hiding		
	✓		✓		IUT has established an INV	ITE dialog for UE1	
			✓		IUT has received BYE via Ic1		
	✓		\checkmark		IUT has sent BYE to UE1		
	UE1		IUT	IMS			
Step			Direction		Messa	ge	IF
1	₩		Ď		200 response		
2	₩		Ð	200 response ✓ topmost Via header → SIP URI of IUT IBCF ✓ encrypted SIP URI → tokenized-by parameter		Ic1	

6.5.6 Target refresh request procedures

					Test Purpose		
Ident	ifier:	TP	_IMST2_IC	C_TAR_01			
Sumi	mary:	res	pond with a	SIP 100 resp	orget refresh request from with bonse, add its own URI to the orwarding the request to other	Via header and encryp	
Claus	se:	5.1	0.2.3 1) 3), 5	5.10.4		-	
References:RQ_003_5508Config Ref:CF_1Ic1Gm							
IUT I	Role:	IM	S		Selection Expression:	PICS A.2/4	
			Entities		Conditi	on	
	UE1		IUT	IMS			
			\checkmark		IUT configured for topology hiding		
	✓		✓		IUT has established an INV	ITE dialog for UE1	
	UE1		IUT	IMS			
Step			Direction		Messag	ge	IF
1	₩		1		target refresh INVITE		
2	È		₹ <u>N</u>		100 response		
3			₩	Ð	target refresh INVITE ✓ topmost Via header → SIP URI of IUT IBCF ✓ encrypted SIP URI → tokenized-by parameter		Ic1

				Test Purpose		
Ident	ifier:	TP_IMST2_IC	C_TAR_02			
Sumr	nary:			rget refresh request from outs est it shall decrypt all headers		o the
Claus	se:	5.10.3.3 1) 4), 5				
Refer	ences:	RQ_003_5522		Config Ref:	CF_1Ic1Gm	
IUT I	Role:	IMS		Selection Expression:	PICS A.2/4	
		Entities		Condition	on	
	UE1	IUT	IMS			
		\checkmark		IUT configured for topology	hiding	
	✓	✓		IUT has established an INVI	TE dialog for UE1	
	UE1	IUT	IMS			
Step		Direction		Messag	ge	IF
1	€ ₩		Ϋ́	target refresh INVITE ✓ topmost Via header → SIP URI of IMS ✓ encrypted SIP URI → tokenized-by param	neter	Ic1
2	\$			100 response		Ic1
3	ींद	ŶĦ		target refresh INVITE	neter	

6.6 Test purposes for the ISC interface

6.6.1 General

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	GEN_01			
Sumi	nary:				t are exchanged between the include the type 3 inter opera		ised
Claus	se:	4.5.4, par	agraph 4				
Refer	ences:	CF_2Gm1ISC					
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Conditi	on	
	UE1	IUT	AS1	UE2			
	✓	✓		✓	UE1 and UE2 registered in	IUT	
		✓	\checkmark		IUT configured with an iFC designed to contact AS1 for MESSAGE		
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Messa	ge	IF
1	₩	5			MESSAGE		
2		₩	Ď		MESSAGE ✓ P-Charging-Vector header ✓ ioi parameter → type3		

					Test Purpose			
Ident	ifier:	TP_IMS	T2_ISC_	GEN_02	,			
Sumr	mary:				E requests that are exchange be 3 inter operator identifier (and	
Claus	se:	4.5.4, par	agraph 4					
Refer	rences:	RQ_003_	_4206		Config Ref:	CF_2Gm1ISC		
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3		
		Ent	ities		Condit	ion		
	UE1	IUT	AS1	UE2				
	✓	✓		✓	UE1 and UE2 registered in	IUT		
	✓	✓		✓	IUT has received MESSAC to UE2	E from UE1 addressed		
		✓	✓		IUT configured with an iFC designed to contact AS1 for MESSAGE			
		\checkmark	✓		IUT has sent MESSAGE to AS1 via ISC			
		✓		✓	IUT has sent MESSAGE to	UE2 via GM		
		✓	√		AS1 has indicated the hand dialog to IUT	ling of the whole		
	UE1	IUT	AS1	UE2				
Step		Dire	ction		Messa	ge	IF	
1		Ŷ <u></u>		Å,	200 response			
2		₩	Ď		200 response ✓ P-Charging-Vector hea ✓ ioi parameter → type3	der	ISC	

					Test Purpose			
Ident	ifier:	TP_IMS	T2_ISC_	GEN_03				
Sum	nary:			•	t are exchanged between the ator identifier (IOI)	I-CSCF and any AS sha	all	
Claus	se:	4.5.4, par	agraph 4					
Refer	ences:	RQ_003_	_4206		Config Ref:	CF_2Gm1ISC		
IUT I	Role:	IMS			Selection Expression:	PICS A.2/2		
	Entities Condition					ion		
	UE1	IUT	AS1	UE2				
	\checkmark	✓		✓	UE1 and UE2 registered in	IUT		
		✓			IUT configured for forwarding MESSAGE directly to AS1			
	UE1	IUT	AS1	UE2				
Step		Dire	ction		Messa	ge	IF	
1	₩	Ď			MESSAGE			
2		₩	Ď		MESSAGE ✓ P-Charging-Vector header ✓ ioi parameter → type3			

6.6.2 Registration procedures

					Test Purpose		
Iden	tifier:	TP_II	MST2_IS	C_REG_01			
Sum	mary:		IS shall su Iomain	apport 3rd-pa	arty registration or registratio	on with the AS in the sa	me
Clau	se:	5.4.1.7	7, paragra	ph 1			
Refe	rences:	RQ_0	03_5095		Config Ref:	CF_1Gm1ISC	
IUT	Role:	IMS			Selection Expression:	PICS A.2/3	
		ŀ	Entities		Condit	ion	
	UE1		IUT	AS1			
	x x			UE1 registered in IUT			
			✓		IUT configured for establish association	hing security	
	✓			UE1 has sent unprotected R received 401 response	REGISTER and has		
	✓			UE1 has initiated security association establishment			
	✓ ✓		✓	IUT configured with an iFC designed to contact AS1 for REGISTER			
			\checkmark	✓	AS1 configured for being in the same trust domain as IUT		
	UE1		IUT	AS1			
Step		D	irection		Messa	ge	IF
1	₩		Ď		protected REGISTER		
2	REGISTER ✓ P-Access-Network-Info header ✓ P-Visited-Network-ID header ✓ Request-URI → SIP URI of AS1 ✓ To header → a non barred IMPU from the service profile of the processed iFC ✓ From header → SIP URI of IUT S-CSCF ✓ Contact header → SIP URI of IUT S-CSCF ✓ P-Charging-Vector header ✓ a type3 orig-ioi parameter before the received orig-ioi parameters ✓ P-Charging-Function-Addresses header		from the service sed iFC CSCF CSCF ader meter before the ameters	ISC			

					Test Purpose		
Ident	Identifier: TP_IMST2_ISC_REG_02 Summary: An IMS shall support 3rd-party registration or registration with the AS outside the						
Sumi	mary:		IMS shall su st domain	apport 3rd-pa	arty registration or registration	on with the AS outside the	ne
Clau	se:	5.4	.1.7, paragra	ph 1			
Refe	rences:	RQ	_003_5095		Config Ref:	CF_1Gm1ISC	
IUT	Role:	IM	S		Selection Expression:	PICS A.2/3	
			Entities		Condi	tion	
	UE1 IUT AS1		AS1				
	x x			UE1 registered in IUT			
			✓		IUT configured for establis association	hing security	
	✓			UE1 has sent unprotected I received 401 response	REGISTER and has		
	✓			UE1 has initiated security association establishment			
	✓ ✓		✓	IUT configured with an iFO AS1 for REGISTER	C designed to contact		
	x x		×	AS1 configured for being i domain as IUT	n the same trust		
	UE1		IUT	AS1			
Step			Direction		Messa	nge	IF
1	₩		D		protected REGISTER		
2			₩	ъ́	REGISTER P-Access-Network-Info header P-Visited-Network-ID header Request-URI SIP URI of AS1 To header a non barred IMPU from the service profile of the processed iFC From header SIP URI of IUT S-CSCF Contact header SIP URI of IUT S-CSCF P-Charging-Vector header a type3 orig-ioi parameter before the received orig-ioi parameters		ISC

					Test Purpose		
Ident	tifier:	TP.	_IMST2_IS	C_REG_03			
Sumi	mary:	An	IMS shall su	apport 3rd-pa	arty deregistration with the AS	S in the same trust dom	ain
Claus	se:	5.4.	.1.7, paragra	ph 1			
Refer	References: RQ_003_5095				Config Ref:	CF_1Gm1ISC	
IUT	UT Role: IMS				Selection Expression:	PICS A.2/3	
	Entities				Condition	on	
	UE1	UE1 IUT AS1					
	✓		\checkmark		UE1 registered in IUT		
			\checkmark	✓	IUT configured with an entr	y point to AS1	
			\checkmark	✓	IUT configured with an iFC designed to contact AS1 for REGISTER		
			✓	✓	AS1 configured for being in the same trust domain as IUT		
	UE1		IUT	AS1			
Step			Direction		Messag	ge	IF
1	₩		Ď		protected REGISTER ✓ Expires header → 0		
2			\$	Ð	REGISTER ✓ P-Access-Network-Info ✓ P-Visited-Network-ID I ✓ Request-URI → SIP URI of AS1 ✓ To header → a non barred IMPU frof the processed iFC ✓ From header → SIP URI of IUT S-Co ✓ Contact header → SIP URI of IUT S-Co ✓ SIP URI of IUT S-Co ✓ Contact header	rom the service profile	ISC

6.6.3 Initial request procedures

					Test Purpose			
Ident	ifier:	TP_IMS	T2_ISC_	INI_01				
Sumi	mary:				1xx or 2xx response for a UE subsequent to the initial SIP towards an AS inside the home network of the S-CSCF			
Claus	se:	5.4.4.2.2,	paragrap	h 1				
Refer	rences:	RQ_003_	_5127		Config Ref:	CF_2Gm1ISC		
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3		
		Ent	ities		Condition	on		
	UE1 IUT AS1 UE2							
	✓	✓		✓	UE1 and UE2 registered in I	UT		
	✓	✓			IUT has received INVITE from	om UE1		
		✓		✓	IUT has sent INVITE to UE2			
		✓	✓		IUT has sent INVITE to AS	IUT has sent INVITE to AS1 via ISC		
		✓	✓		AS1 configured for being winetwork as IUT	thin same IMS		
		✓	✓		IUT configured with an iFC AS1 for INVITE	designed to contact		
		✓	✓		AS1 has indicated the handli dialog to IUT	ng of the whole		
	UE1	IUT	AS1	UE2				
Step		Dire	ction		Messag	ie e	IF	
1		Ŷ <u>c</u>		ŶĮ.	180 response			
2		₩	Ď		180 response ✓ P-Charging-Function-A	ddresses header	ISC	

	Test Purpose Identifier: TP_IMST2_ISC_INI_02											
Ident	ifier:	TP_IMS	T2_ISC_	INI_02								
Sumr	nary:			-	1xx or 2xx response for a UE cowards an AS inside the home	-						
Claus	se:	5.4.4.2.2,	paragrap	h 1								
Refer	rences:	RQ_003_	_5127		Config Ref:	CF_2Gm1ISC						
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3						
		Ent	ities		Condition	on						
	UE1	IUT	AS1	UE2								
	✓	✓			UE1 and UE2 registered in I	UT						
	✓	✓			IUT has received INVITE from UE1							
		✓		✓	IUT has sent INVITE to UE2							
		✓ ✓ ✓			IUT has sent INVITE to AS1	via ISC						
		✓	√		AS1 configured for being within same IMS network as IUT							
		✓	✓		IUT configured with an iFC AS1 for INVITE	designed to contact						
		✓	✓		AS1 has indicated the handli dialog to IUT	ng of the whole						
	UE1	IUT	AS1	UE2								
Step		Direction			Messag	e	IF					
1		€ ₽		Å.	200 response							
2	2 🖔 🕏				200 response ✓ P-Charging-Function-A	ddresses header	ISC					

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	INI_03			
Sumi	nary:				response for a UE subsequent and AS outside the home netwo		ITE
Claus	se:	5.4.4.2.2,	paragrap	h 2			
Refer	rences:	RQ_003_	_5439		Config Ref:	CF_2Gm1ISC	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Conditi	on	
	UE1	IUT	AS1	UE2			
	√	✓		✓	UE1 and UE2 registered in	IUT	
	✓	✓			IUT has received INVITE from UE1		
		✓		✓	IUT has sent INVITE to UE2		
		×			AS1 configured for being w network as IUT S-CSCF	ithin same IMS	
		✓	✓		IUT configured with an iFC AS1 for INVITE	designed to contact	
		✓	✓		AS1 has indicated the handl dialog to IUT	ing of the whole	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Messa	ge	IF
1		È		₩ ₩	180 response ✓ P-Charging-Vector header ✓ access-network-charging-info parameter		
2	\$		180 response ✓ P-Charging-Vector hea × access-network-charg		ISC		

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	INI_04			
Sumi	mary:				2200 response for a UE subsetowards an AS outside the ho		SCF
Claus	se:	5.4.4.2.2,	paragrap	h 2			
Refer	rences:	RQ_003_	_5439		Config Ref:	CF_2Gm1ISC	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Condition		
	UE1	IUT	AS1	UE2			
	\checkmark	✓		\checkmark	UE1 and UE2 registered in	IUT	
	✓	✓			IUT has received INVITE f	rom UE1	
		✓		✓	IUT has sent INVITE to UI	E2	
		✓	✓		IUT has sent INVITE to AS	51 via ISC	
			×		AS1 configured for being w network as IUT S-CSCF	vithin same IMS	
		✓	✓		IUT configured with an iFC designed to contact AS1 for INVITE		
		✓	✓		AS1 has indicated the hand dialog to IUT	ling of the whole	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Messa	ge	IF
1		È		₹ J	200 response ✓ P-Charging-Vector header ✓ access-network-charging-info parameter		
2		₩	Ď		200 response ✓ P-Charging-Vector hea * access-network-charg		ISC

	Test Purpose Identifier: TP_IMST2_ISC_INI_05												
Ident	ifier:	TP_I	MST2_	ISC_IN	NI_05								
Sumr	nary:	the iF	C has d	lefault h	andling	SIP response from the AS for an SIP INVITE request and set to SESSION_TERMINATED then it does not forward d returns a SIP 408 response to the originating UE							
Claus	se:	5.4.3.	2, parag	graph 50)								
Refer	ences:	RQ_0	003_543	33		Config Ref:	CF_2Gm2ISC						
IUT I	Role:	IMS				Selection Expression:	PICS A.2/3						
]	Entities	S		Condition							
	UE1	IUT	AS1	AS2	UE2								
	\checkmark	✓			\checkmark	UE1 and UE2 registered in	IUT						
	✓	✓		IUT has received INVITE from UE1 addressed UE2									
		✓	✓			IUT has sent INVITE to AS	1 via ISC1						
		✓	✓			IUT configured with an iFC1 designed to contact AS1 for the INVITE							
						iFC1 has default handling set to SESSION TERMINATED							
		✓		✓		IUT configured with an iFC AS2 for INVITE	2 designed to contact						
						iFC1 has greater priority that	an iFC2						
	UE1	IUT	AS1	AS2	UE2								
Step		Ι	Directio	n		Messa	ge	IF					
1		%	4			no response		ISC1					
2	ŶĿ	Ź,				408 response							
3		₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩				INVITE		ISC2					

6.6.4 Standalone requests procedures

					Test Purpose						
Ident	Identifier: TP_IMST2_ISC_STA_01 Summary: When the S-CSCF receives a SIP MESSAGE request it forwards the request to an A										
Sumr	nary:				a SIP MESSAGE request it forwards the request to an AS n as the IUT						
Claus	se:	5.4.	3.2 first nun	nbered list 5)						
Refer	ences:	RQ	_003_5097		Config Ref:	CF_2Gm1ISC					
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3					
			Entities		Conditi	on					
	UE1 IUT AS1										
	✓ ✓			UE1 registered in IUT							
	✓		\checkmark	✓	AS1 configured for being in the same trust domain as IUT						
			\checkmark	✓	IUT configured with an iFC designed to contact AS1 for MESSAGE						
	UE1		IUT	AS1							
Step			Direction		Messaş	ge	IF				
1	₩		Ď		MESSAGE						
2	2		Ď	MESSAGE ✓ P-Asserted-Service header ✓ topmost Route header → SIP URI of AS1 ✓ second Route header → SIP URI of IUT S-C ✓ P-Charging-Vector head ✓ type3 orig-ioi parame received orig-ioi para	SCF ler ter before the	ISC					

						Test Purpose		
Ident	ifier:	TP_I	MST2_	ISC_S	ΓA_02			
Sumi	mary:					from the AS for a SIP MESS. TED then it forwards the reque	-	FC has
Claus	se:	5.4.3.	.2, parag	graph 50)			
Refer	rences:	RQ_0	003_543	33		Config Ref:	CF_2Gm2ISC	
IUT I	Role:	IMS				Selection Expression:	PICS A.2/3	
			Entities			Condition	on	
	UE1	IUT	AS1	AS2	UE2			
	✓	✓	✓			UE1 and UE2 registered in I	UT	
	✓	✓	✓			IUT has received MESSAGE to UE2	E from UE1 addressed	
		✓ ✓				IUT has sent MESSAGE to A	AS1 via ISC1	
		✓	✓			IUT configured with an iFC1 AS1 for the MESSAGE	designed to contact	
						iFC1 has default handling set CONTINUED	t to SESSION	
						iFC1 has no default handling	5	
		✓		✓		IUT configured with an iFC2 AS2 for MESSAGE	2 designed to contact	
						iFC1 has greater priority than	n iFC2	
	UE1	IUT	IUT AS1 AS2 UE2					
Step		Direction			Messag	e	IF	
1		Ŷ£	47			5xx response		ISC1
2		₩		Ď		MESSAGE		ISC2

Test Purpose Identifier: TP_IMST2_ISC_STA_03												
Ident	ifier:	TP_I	MST2_	ISC_S	ΓA_03							
Sumi	nary:					response from the AS for a Si_CONTINUED then it forwar						
Claus	se:	5.4.3.	2, parag	graph 50)		_					
Refer	ences:	RQ_0	003_543	33		Config Ref:	CF_2Gm2ISC					
IUT	Role:	IMS				Selection Expression:	PICS A.2/3					
			Entities	5		Condition						
	UE1	IUT	AS1	AS2	UE2							
	\checkmark	\checkmark			\checkmark	UE1 and UE2 registered in IUT						
	✓	✓			✓	IUT has received MESSAGE from UE1 addressed to UE2						
		\checkmark	✓			IUT has sent MESSAGE to A	AS1 via ISC1					
		✓ ✓			IUT configured with an iFC1 AS1 for the MESSAGE	designed to contact						
						(iFC1 has default handling se CONTINUED	et to SESSION					
						iFC1 has no default handling)					
		✓		✓		IUT configured with an iFC2 AS2 for MESSAGE	designed to contact					
						iFC1 has greater priority than	n iFC2					
	UE1 IUT AS1 AS2 UE2			UE2								
Step	ep Direction					Messag	e	IF				
1	1 4 4			408 response		ISC1						
2	\$ \$					MESSAGE		ISC2				

	Test Purpose											
Ident	ifier:	TP_I	MST2_	ISC_S	ΓA_04							
Sum	mary:					SIP response from the AS for aCONTINUED then it forwar						
Claus	se:	5.4.3.	2, parag	graph 50)							
Refer	rences:	RQ_(003_543	33		Config Ref:	CF_2Gm2ISC					
IUT I	Role:	IMS				Selection Expression:	PICS A.2/3					
			Entities	5		Condition						
	UE1	IUT	AS1	AS2	UE2							
	\checkmark	✓			✓	UE1 and UE2 registered in I	UT					
	✓	✓	✓			IUT has received MESSAGE from UE1 addressed to UE2						
		✓	✓			IUT has sent MESSAGE to A	AS1 via ISC1					
		✓	✓			IUT configured with an iFC1 AS1 for the MESSAGE	designed to contact					
						(iFC1 has default handling so CONTINUED	et to SESSION					
						iFC1 has no default handling	<u>;</u>)					
		✓		✓		IUT configured with an iFC2 AS2 for MESSAGE	2 designed to contact					
						iFC1 has greater priority than	n iFC2					
	UE1	IUT	AS1	AS2	UE2							
Step		Direction				Messag	e	IF				
1		&	4			no response		ISC1				
2	\$ £			∌		MESSAGE		ISC2				

	Test Purpose Identifier: TP_IMST2_ISC_STA_05												
Ident	ifier:	TP_I	MST2_	ISC_S	ΓA_05								
Sumr	nary:	the iF	C has d	lefault h	andling	response from the AS for a SIP MESSAGE request and set to SESSION_TERMINATED then it returns the not forward the request to a second AS							
Claus	se:	5.4.3.	2, paraş	graph 50)								
Refer	ences:	RQ_0	003_543	33		Config Ref:	CF_2Gm2ISC						
IUT I	Role:	IMS				Selection Expression:	PICS A.2/3						
]	Entities	S		Condition							
	UE1	IUT	AS1	AS2	UE2								
	✓	✓			√	UE1 and UE2 registered in IUT							
	✓	✓	IUT has received to UE2				E from UE1 addressed						
		✓	\checkmark			IUT has sent MESSAGE to	AS1 via ISC1						
		✓	\checkmark			IUT configured with an iFC AS1 for the MESSAGE	1 designed to contact						
						iFC1 has default handling set to SESSION TERMINATED							
		✓		✓		IUT configured with an iFC AS2 for MESSAGE	2 designed to contact						
						iFC1 has greater priority that	an iFC2						
	UE1	IUT	AS1	AS2	UE2								
Step		Г	Directio	n		Messa	ge	IF					
1		E	₹Ŋ			5xx response		ISC1					
2	Ŷ _E	Ź,				5xx response							
3	_ \				MESSAGE		ISC2						

	Test Purpose Identifier: TP_IMST2_ISC_STA_06												
Ident	ifier:	TP_I	MST2_	ISC_S	ΓA_06								
Sumr	nary:	the iF	C has d	lefault h	andling	response from the AS for a SIP MESSAGE request and set to SESSION_TERMINATED then it returns the not forward the request to a second AS							
Claus	se:	5.4.3.	2, paraş	graph 50)								
Refer	ences:	RQ_0	003_543	33		Config Ref:	CF_2Gm2ISC						
IUT I	Role:	IMS				Selection Expression:	PICS A.2/3						
]	Entities	S		Condition							
	UE1	IUT	AS1	AS2	UE2								
	\checkmark	\checkmark			\checkmark	UE1 and UE2 registered in IUT							
	✓	✓			\checkmark	IUT has received MESSAG to UE2	IUT has received MESSAGE from UE1 addressed to UE2						
		✓	\checkmark			IUT has sent MESSAGE to	AS1 via ISC1						
		✓	✓			IUT configured with an iFC AS1 for the MESSAGE	1 designed to contact						
						iFC1 has default handling set to SESSION TERMINATED							
		<		✓		IUT configured with an iFC AS2 for MESSAGE	2 designed to contact						
						iFC1 has greater priority that	n iFC2						
	UE1	IUT	AS1	AS2	UE2								
Step		Γ	Directio	n		Messag	ge	IF					
1		E	4			408 response		ISC1					
2	Ŷ _E	₹ J				408 response							
3						MESSAGE		ISC2					

	Test Purpose											
Ident	ifier:	TP_IMS	T2_ISC_	STA_07								
Sumr	nary:		CSCF rec		IP 200 response from the AS for a SIP MESSAGE request							
Claus	se:	5.4.3.2, p	aragraph	53								
Refer	rences:	RQ_003_	_5434		Config Ref:	CF_2Gm1ISC						
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3						
		Ent	ities		Conditi	on						
	UE1	IUT	AS1	UE2								
	✓	✓		\checkmark	UE1 and UE2 registered in 1	IUT						
	✓	✓			IUT has received MESSAGE from UE1 addressed to UE2							
		✓	✓		IUT configured with an iFC designed to contact AS1 for the MESSAGE							
		\checkmark	✓		IUT has sent MESSAGE to	AS1 via ISC						
	UE1	IUT	AS1	UE2								
Step		Dire	ction		Messag	ge	IF					
1		E	À		200 response		ISC					
2	È	€ ♣			200 response							

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	STA_08			
Sumi	nary:				olication Server (AS) the resport from a PSI that initiated the		
Claus	se:	5.4.3.2, p	aragraph	50			
Refer	rences:	RQ_003_	_5105		Config Ref:	CF_2Gm1ISC	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Condit	ion	
	UE1	IUT	AS1	UE2			
	✓				UE1 and UE2 registered in	IUT	
	✓	✓		✓	IUT has received MESSAGE from UE1 addressed to UE2		
					containing the type3 orig-ioi parameter		
		✓		✓	IUT has sent MESSAGE to	UE2 via GM	
		✓	√		IUT has sent MESSAGE to	AS1 via ISC	
		✓	√		AS1 has indicated the hand dialog to IUT	ling of the whole	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Messa	ge	IF
1		₹		Ą	200_response		
2	2		200_response ✓ P-Charging-Vector header ✓ type3 orig-ioi parameter from the initial MESSAGE ✓ type3 term-ioi parameter		ISC		

					Test Purpose			
Ident	ifier:	TP_IMS	T2_ISC_	STA_09				
Sumi	nary:	When a S-CSCF receives a SIP MESSAGE request destined for an unregistered use forwards the request to the AS						
Claus	se:	5.4.3.3, p	5.4.3.3, paragraph 55					
Refer	rences:	RQ_003_	5114		Config Ref:	CF_1Gm1ISC		
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3		
		Ent	ities		Condition			
	UE1	IUT	AS1	UE2				
	✓	✓			UE1 registered in IUT			
		×		×	UE2 registered in IUT			
		✓	\checkmark		IUT configured with an iFC AS1 for MESSAGE	designed to contact		
	UE1	IUT	AS1	UE2				
Step		Dire	ction		Message		IF	
1	₩	±\$\frac{1}{2}			MESSAGE			
2		₩	Ď		MESSAGE			

					Test Purpose			
Ident	ifier:	TP_IMS	T2_ISC_	STA_10				
Sumr	nary:		When the I-CSCF receives a SIP MESSAGE request containing P-Charging-Vector header including icid parameter it forwards it to the AS					
Claus	se:	5.3.2.1, paragraph 2						
Refer	ences:	RQ_003_	_5130		Config Ref:	CF_2Gm1ISC		
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3		
		Ent	ities		Condition	on		
	UE1	IUT	AS1	UE2				
	✓	✓		✓	UE1 and UE2 registered in I	UT		
		✓			IUT configured for forwardi directly to AS1	ng MESSAGE		
	UE1	IUT	AS1	UE2				
Step		Dire	ction		Messag	ge	IF	
1	₩	Ď			MESSAGE ✓ P-Charging-Vector header ✓ icid parameter			
2		₩	Ð		MESSAGE ✓ P-Charging-Vector header ✓ icid parameter		ISC	

					Test Purpose			
Ident	ifier:	TP_IMS	T2_ISC_	STA_11				
Sumi	nary:		When the I-CSCF receives a SIP MESSAGE request containing P-Charging-Vector header not including icid parameter then it adds this parameter prior to forwarding it to the AS					
Claus	se:	5.3.2.1, p	5.3.2.1, paragraph 2					
Refer	rences:	RQ_003_	_5130		Config Ref:	CF_2Gm1ISC		
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3		
		Ent	ities		Condition	on		
	UE1	IUT	AS1	UE2				
	✓	✓		✓	UE1 and UE2 registered in I	UT		
		✓			IUT configured for forwardi	ng MESSAGE		
	UE1	IUT	AS1	UE2				
Step		Dire	ction		Messag	e	IF	
1	₩	Ď			MESSAGE ✓ P-Charging-Vector header × icid parameter			
2		₩	Ð		MESSAGE ✓ P-Charging-Vector header ✓ icid parameter ISO		ISC	

6.6.5 Subsequent requests on a dialog procedures

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	SUB_01			
Sumi	nary:	When S-C		eives a S	IP ACK request then it forwar	rds it to an AS outside t	he
Claus	se:	5.4.3.2, p	aragraph	72			
Refer	ences:	RQ_003_	_5107		Config Ref:	CF_2Gm1ISC	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Conditi	on	
	UE1	IUT	AS1	UE2			
	✓	✓		✓	UE1 and UE2 registered in	IUT	
	✓	✓		✓	IUT has received INVITE for UE2	rom UE1 addressed to	
		✓	√		IUT configured with an iFC designed to contact AS1 for INVITE		
		✓		✓	IUT has sent INVITE to UE	2 via GM	
		√	✓		IUT has sent INVITE to AS	1 via ISC	
		\checkmark		✓	IUT has received 200 respon	nse from UE2	
	✓	✓			IUT has sent 200 response to	o UE1	
		×	×		AS1 configured for being in domain as IUT	the same trust	
		✓	✓		AS1 has indicated the handl dialog to IUT	ing of the whole	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Message		IF
1	₩	Ď			ACK		
2		₩	Ð		ACK ➤ P-Access-Network-Info header ✓ P-Charging-Vector header ➤ access-network-charging-info parameter		ISC

6.6.6 Target refresh request procedures

	Test Purpose						
Ident	ifier:	TP_IMS	T2_ISC_	TAR_01			
Sumr	nary:				n the served user a target ref de the trusted domain and re		
Claus	se:	5.4.3.2, p	aragraph	65			
Refer	ences:	RQ_003_	5106		Config Ref:	CF_2Gm1ISC	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Condit	ion	
	UE1	IUT	AS1	UE2			
	\checkmark	✓			UE1 registered in IUT		
	✓	✓		✓	IUT has received INVITE t UE2	from UE1 addressed to	
		✓	✓		IUT configured with an iFC designed to contact AS1 for INVITE		
		\checkmark		✓	IUT has sent INVITE to Ul	E2 via GM	
		√	√		IUT has sent INVITE to AS	S1 via ISC	
		×	×		AS1 configured for being it domain as IUT	n the same trust	
		✓	✓		AS1 has indicated the hand dialog to IUT	ling of the whole	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Messa	ge	IF
1	₽	Ď			target refresh INVITE		
2		₩	Ď		INVITE ★ P-Access-Network-Info header ✓ P-Charging-Vector header ★ access-network-charging-info parameter ISC		ISC
3	È	₹ÿ.			100 response	100 response Gm	

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	TAR_02			
Sumr	nary:	dialog the		ards it to	IP reINVITE request from a Use an AS inside the home netwo		
Claus	se:	5.4.3.2, p	aragraph	65			
Refer	rences:	RQ_003_	_5442		Config Ref:	CF_2Gm1ISC	
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Conditi	on	
	UE1	IUT	AS1	UE2			
	\checkmark	✓		\checkmark	UE1 and UE2 registered in	IUT	
	✓	✓		✓	IUT has received INVITE for UE2 INVITE	rom UE1 addressed to	
		✓	✓		IUT configured with an iFC designed to contact AS1 for INVITE		
		\checkmark		\checkmark	IUT has sent INVITE to UE	22 via GM	
		✓	✓		IUT has sent INVITE to AS	1 via ISC	
		✓	✓		AS1 has indicated the handledialog to IUT	ing of the whole	
			√		AS1 configured for being w network as IUT S-CSCF	ithin same IMS	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Messa	ge	IF
1	₩	1			target refresh INVITE		
2		₽	Ð		INVITE ✓ P-Access-Network-Info header ✓ P-Charging-Vector header ✓ access-network-charging-info parameter ISO		ISC
3	Ŷ:	À			100 response		Gm

	Test Purpose								
Ident	ifier:	TP_IMS	T2_ISC_	TAR_03	R_03				
Sumr	nary:	dialog the	en it forwa	ards it to	s a SIP reINVITE request from a UE within an established of an AS outside the home network of the S-CSCF without returns a 100 response to the originating UE				
Claus	se:	5.4.3.2, p	aragraph	65					
Refer	rences:	RQ_003_	_5442		Config Ref:	CF_2Gm1ISC			
IUT I	Role:	IMS			Selection Expression:	PICS A.2/3			
		Ent	ities		Condition	on			
	UE1	IUT	AS1	UE2					
	\checkmark	✓			UE1 registered in IUT				
	✓	✓		✓	IUT has received INVITE frou	om UE1 addressed to			
		✓	✓		IUT configured with an iFC AS1 for INVITE	designed to contact			
		\checkmark		✓	IUT has sent INVITE to UE2	2 via GM			
		\checkmark	✓		IUT has sent INVITE to AS1	via ISC			
		✓	✓		AS1 has indicated the handli dialog to IUT	ng of the whole			
			×		AS1 configured for being winetwork as IUT S-CSCF	thin same IMS			
	UE1	IUT	AS1	UE2					
Step		Dire	ction		Messag	e	IF		
1	₩	2			target refresh INVITE				
2		₩	Ď		INVITE ★ P-Access-Network-Info header ✓ P-Charging-Vector header ★ access-network-charging-info parameter ISC		ISC		
3	È	ĆŊ.			100 response		Gm		

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	TAR_04			
Sumi	nary:		it to an A		IP 200 (OK) response to a SIF the home network of the S-C		n
Claus	se:	5.4.6.1.3,	paragrap	h 1			
Refer	rences:	RQ_003_	_5444		Config Ref:	CF_2Gm1ISC	
IUT	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Condition	on	
	UE1	IUT	AS1	UE2			
	\checkmark	✓			UE1 registered in IUT		
	✓	✓		✓	IUT has received INVITE fr UE2	rom UE1 addressed to	
		✓	✓		IUT configured with an iFC AS1 for INVITE	designed to contact	
		✓		✓	IUT has sent INVITE to UE	2 via GM	
		✓	\checkmark		IUT has sent INVITE to AS	1 via ISC	
		×	×		AS1 configured for being wanted network as IUT	ithin same IMS	
		✓	✓		AS1 has indicated the handledialog to IUT	ing of the whole	
	✓	✓			IUT has received target refre	esh INVITE from UE1	
		✓		✓	IUT has sent target refresh I Gm	NVITE to UE2 via	
		✓	✓		IUT has sent target refresh I ISC	NVITE to AS1 via	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Message		IF
1		र्दे		Å,	200 response ✓ P-Charging-Vector header ✓ access-network-charging-info parameter		
2		₩	Ð		200 response ✓ P-Charging-Vector header × access-network-charging-info parameter		ISC

					Test Purpose		
Ident	ifier:	TP_IMS	T2_ISC_	TAR_05			
Sumi	nary:				es a SIP 200 (OK) response to a SIP reINVITE request then it ocated inside the home network of the S-CSCF		
Claus	se:	5.4.6.1.3,	paragrap	h 1			
Refer	rences:	RQ_003_	_5444		Config Ref:	CF_2Gm1ISC	
IUT	Role:	IMS			Selection Expression:	PICS A.2/3	
		Ent	ities		Conditi	ion	
	UE1	IUT	AS1	UE2			
	✓	✓			UE1 registered in IUT		
	✓	✓		✓	IUT has received INVITE for UE2	rom UE1 addressed to	
		✓	✓		IUT configured with an iFC AS1 for INVITE	designed to contact	
		\checkmark		✓	IUT has sent INVITE to UE	22 via GM	
		\checkmark	✓		IUT has sent INVITE to AS	1 via ISC	
		\checkmark	✓		AS1 configured for being w network as IUT	ithin same IMS	
		✓	✓		AS1 has indicated the handledialog to IUT	ing of the whole	
	✓	✓			IUT has received target refr	esh INVITE from UE1	
		✓		✓	IUT has sent target refresh I Gm	NVITE to UE2 via	
		✓	✓		IUT has sent target refresh I ISC	NVITE to AS1 via	
	UE1	IUT	AS1	UE2			
Step		Dire	ction		Message		IF
1		Ŷ Ŀ		4	200 response ✓ P-Charging-Vector hea ✓ access-network-charg		
2		₽	Ð		200 response ✓ P-Charging-Vector hea ✓ access-network-charg		ISC

Annex A (normative): TPLan code

The test purposes defined in the present document have been automatically generated from the text files in the archive file ts_10279002v010101p0.zip which accompanies the present document. The raw text file has been converted to a table format to allow better readability.

The two formats shall be considered equivalent. In the event that there appears to be syntactical or semantic differences between the two then the textual TPlan representation takes precedence over the table format.

Annex B (informative): Bibliography

IETF RFC 3261: "SIP: Session Initiation Protocol".

History

	Document history					
V1.1.1	March 2010	Publication				