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Core Network and Interoperability Testing (INT); S1AP Conformance Testing for the S1-MME interface; (3GPP™ Release 13);

Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

### Reference

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### **Foreword**

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

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

# Modal verbs terminology

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# 1 Scope

The present document provides the Test Suite Structure (TSS) and Test Purposes (TP) for the test specification for the S1AP protocol on the S1-MME interface as specified in ETSI TS 136 413 [1] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETSI ETS 300 406 [5].

# 2 References

### 2.1 Normative references

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

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

[1]	ETSI TS 136 413 (V13.4.0): "LTE; Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP) (3GPP TS 36.413 version 13.4.0 Release 13)".
[2]	ETSI TS 103 497-1: "Core Network and Interoperability Testing (INT); S1AP Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 1: Protocol Implementation Conformance Statement (PICS)".
[3]	ISO/IEC 9646-1: "Information technology Open Systems Interconnection Conformance testing methodology and framework Part 1: General concepts".
[4]	ISO/IEC 9646-7: "Information technology Open Systems Interconnection Conformance testing methodology and framework Part 7: Implementation Conformance Statements".
[5]	ETSI ETS 300 406: "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
[6]	ETSI TS 123 203: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Policy and charging control architecture (3GPP TS 23.203)".
[7]	ETSI TS 125 413: "Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface Radio Access Network Application Part (RANAP) signalling (3GPP TS 25.413)".
[8]	ETSI TS 148 018: "Digital cellular telecommunications system (Phase 2+) (GSM); General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN); BSS GPRS protocol (BSSGP) (3GPP TS 48.018)".

### 2.2 Informative references

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

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

Not applicable.

# 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSITS 136 413 [1] and the following apply:

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

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

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

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

#### 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI TS 136 413 [1] and the following apply:

TP Test Purpose
TSS Test Suite Structure

# 4 Test configurations

#### 4.1 Introduction

Test purposes of the present document address the VoLTE functional entities eNB and MME that are accessible via the standardized S1-MME interface.

# 4.2 Test configuration using the S1-MME interface

The S1-MME interface is located between the eNB and the MME.

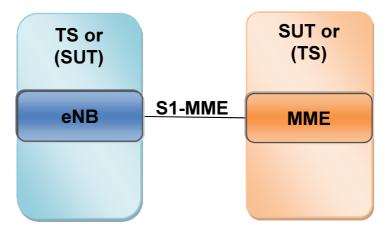


Figure 1: Test configuration CF\_S1-MME

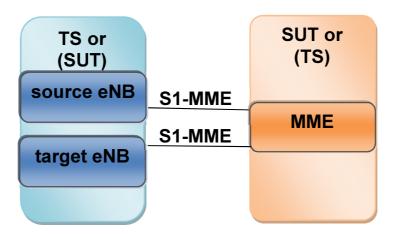


Figure 2: Test configuration CF\_2S1-MME

# 5 Test Suite Structure (TSS) and Test Purposes (TP)

### 5.1 Test Suite Structure

### 5.1.1 TP naming convention

TPs are numbered, starting at 01, within each group. Groups are organized according to the TSS.

Table 1: TP identifier naming convention scheme

Identifier: <tp>_<iut>_<scope>_<nn></nn></scope></iut></tp>	
<tp> = Test Purpose:</tp>	fixed to "TP"
<interface or="" protocol=""></interface>	Interface or protocol: S1AP
<iut> = type of IUT:</iut>	ENB or MME
<scope> = group</scope>	RAB E-RAB Management procedures
	CMP Context Management procedures
	HAS Handover Signalling
	PAG Paging
	NAS NAS transport
	MNP Management procedures
	STP S1 CDMA2000 Tunnelling Procedures
	UEC UE Capability Info Indication
	TRP Trace Procedures
	LRP Location Reporting Procedures
	WTP Warning Message Transmission Procedures
	EIT eNB Direct Information Transfer
	MIT MME Direct Information Transfer
	ECT eNB Configuration Transfer
	MCT MME Configuration Transfer
	LPP LPPa transport
	ERR Unknown, Unforseen and Erroneous Protocol Data
<nn> = sequential number</nn>	(01 to 99)

## 5.1.2 Test strategy

As the base specification in ETSI TS 136 413 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification ETSI TS 103 497-1 [2].

#### 5.1.3 TP structure

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

Table 2: Structure of a single TP

TP part	Text	Example	
Header	<ld><ldentifier></ldentifier></ld>	see Table 1	
	<clause 136="" 413="" [1]="" base="" etsi="" in="" number="" ts=""></clause>	clause 8.2.1.1	
	<pics reference=""></pics>	A.2/3	
Summary	Short free text description of the test objective	Verify that the IUT can successfully	
		process all mandatory IEs in a E-	
		RAB_SETUP_REQUEST received due	
		to establishment-RAB management	
		procedure.	
Configuration	Test configuration as described in clause 4.2	CF_S1-MME	
Initial	Free text description of the condition that the IUT has		
condition	reached before the test purpose applies.		
(optional)			
Start point	Ensure that the IUT in the	Handover Preparation	
	<state> see ETSI TS 136 413 [1], clause 8.1</state>	having sent a HANDOVER_REQUIRED	
	and/or further actions before stimulus		
	if the action is sending/receiving		
	see below for message structure		
Stimulus	<trigger>, see below for message structure</trigger>	on receipt of a	
		HANDOVER_COMMAND (see note 2)	
	or <goal></goal>		
Reaction	<action>.</action>	sends, saves, does, etc.	
	if the action is sending		
	see below for message structure		
	<next action="">, etc.</next>		
Message	<message type=""></message>	Message exchange, etc. (see note 2)	
structure			
	a) containing a(n) <ie name=""> IE (see note 4)</ie>		
	b) indicating <coding field="" of="" the=""></coding>		
	and back to a) or b) (see note 3)		
	ext in italics will not appear in TPs and text between <> is fille	d in for each TP and may differ from one	
	P to the next.		
	Il messages are considered as "valid and compatible" unless		
	nis includes the presence of all mandatory IEs as specified in		
	IE can be embedded into another IE. This is expressed by indentations, e.g. if Message1 contains IE1		
	nd IE2 where IE1 has IE3 embedded this will be expressed like	ce this:	
Se	ends/receives Message 1		
	containing IE1		
	containing IE3		
	indicating		
	containing IE2		
NOTE 4. IF	indicating	agual in the cases of TD if not at the	
	value fields used for e.g. identification or address should be	equal in the scope of 1P if not stated	
OI	herwise.		

# 5.2 Test Purposes

### 5.2.1 PICS references

All PICS items referred to in this clause are as specified in ETSI TS 103 497-1 [2] unless indicated otherwise by another numbered reference. PICS items are only meant for test selection, therefore only PICS items with status optional or conditional are explicitly mentioned.

# 5.2.2 S1\_MME interface

### 5.2.2.1 eNB Role

#### 5.2.2.1.1 Test selection

The IUT takes the role of the eNB; PICS A.2/1.

# 5.2.2.1.2 E-RAB management group

TP_S1AP_ENB_RAB_01	Standards Reference:	PICS item:
	Clauses 8.2.1.2 (1st dashed line in	PICS A.3/1.1
	5 <sup>th</sup> dashed list) and	
	9.1.3.1 and 9.1.3.2	
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in an
		ie to E-RAB management procedure and
	<u> </u>	successfully established E-RABs included in
	the E-RAB_Setup_List IE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Set	•
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5 containing a Transport_Layer_Address	
	containing a Hansport_Layer_Address containing a GTP-TEID	
	containing a GTP-TEID	
	sends an E-RAB_SETUP_RESPON	ISF
	containing an MME_UE_S1AP_ID	
	containing an MME_DE_STAP_ID  containing an eNB_UE_STAP_ID	
	containing an eNB_OE_STAL_ID  containing an E-RAB_Setup_List	
	containing an E-RAB_Setup Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
Comments:		

TP_S1AP_ENB_RAB_02	Standards Reference: Clauses 8.2.1.2 (2 <sup>nd</sup> dashed line in	PICS item: PICS A.3/1.1	
	5 <sup>th</sup> dashed list) and		
_	9.1.3.1 and 9.1.3.2		
Summary:	Verify that the IUT after receiving an E-RAB_SETUP_REQUEST with failed E-RAB		
	sends an E-RAB_SETUP_RESPONSE with E-RAB_Failed_to_Setup_List		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_SETUP_R		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Set		
	containing an E-RAB_to_be_	Setup item 1	
	containing an E-RAB_ID indicating value A		
	containing an E-RAB_Lev	ral OoS Parameters	
	containing an L-RAB_Lev		
	containing a Transport_Lt	1yo1_7\dd1c33	
	containing a NAS-PDU		
		Setup Item 2(not acceptable data for eNB)	
	containing an E-RAB_ID		
	indicating value B(different to value A)		
	containing an E-RAB_Level_QoS_Parameters		
	containing QCI		
	indicating not supported QCI value(255)		
	containing a Transport_Layer_Address		
	containing a GTP-TEID		
	containing a NAS-PDU		
	sends an E-RAB_SETUP_RESPONSE		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Setup_List		
	containing an E-RAB_Setup	tem 1	
	containing an E-RAB_ID		
	indicating value A		
	containing a Transport_Layer_Address		
	containing a GTP-TEID		
	containing an E-RAB_Failed_to_Setup_List containing an E-RAB_List Item 1		
	containing an E-RAB_LIST ITEM T		
	indicating value B		
	containing a Cause		
	indicating 'not-supported-QCI-value'		
Comments:	J J		

TP_S1AP_ENB_RAB_03	Standards Reference: Clauses 8.2.1.2 (3 <sup>rd</sup> numbered list)	PICS item: PICS A.3/1.1.1	
	and 9.1.3.1 and 9.1.3.2	1100 A.3/1.1.1	
Summary:	Verify that the IUT if it is interacted with handover preparation procedure sends		
	E-RAB_SETUP_RESPONSE with appropriate cause value and continue with		
	handover preparation procedure		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_SETUP_R		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Set		
	containing an E-RAB_to_be_	Setup Item 1	
	containing an E-RAB_ID	1000	
	containing an E-RAB_Lev		
	containing a Transport_La	ayer_Address	
	containing a GTP-TEID		
	containing a NAS-PDU sends an E-RAB_SETUP_RESPON	ISE	
	containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID		
	containing an eNB_UE_STAP_ID  containing an E-RAB_Failed_to_Setup_List		
	containing an E-RAB_List Item 1		
	containing an E-RAB_ID		
	containing a Cause		
	indicating 'S1 intra system Handover triggered' <b>or</b>		
	indicating 'S1 inter system Handover triggered' <b>or</b>		
	indicating 'X2 Handove		
	sends a HANDOVER_REQUIRED		
	containing an MME_UE_S1AP_I	D	
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating LTEtoUTRAN		
	containing a Cause		
	containing a Target ID		
	containing a Source_to_Target_1		
	containing a Source RNC_to_Target RNC_Transparent_Container		
	indicating a UE History Information		
Comments:			

TP_S1AP_ENB_RAB_04	Standards Reference:	PICS item:	
	Clauses 8.2.1.4 ¶ 1,	PICS A.3/1.1	
	9.1.3.1 and 9.1.3.2		
	ETSI TS 123 203 [6], Table 6.1.7		
Summary:		AB_SETUP_REQUEST message containing	
	an E-RAB Level QoS Parameters IE wh		
	bearer and which does not contain the C		
	E-RAB_SETUP_RESPONSE with failed	I E-RAB	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_SETUP_R		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Set		
	containing an E-RAB_to_be_Setup Item 1		
	containing an E-RAB_ID		
	containing an E-RAB_Level_QoS_Parameters		
	containing QCI		
	indicating GBR bearer		
	not containing GBR QoS Information		
	containing a Transport_Layer_Address		
	containing a GTP-TEID		
	containing a NAS-PDU	105	
	sends an E-RAB_SETUP_RESPON		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Failed_to_Setup_List		
	containing an E-RAB_List Item 1		
	containing an E-RAB_ID		
	containing a Cause		
Comments	indicating an appropriate cause value		
Comments:			

TP_S1AP_ENB_RAB_05	Standards Reference:	PICS item: PICS A.3/1.1
	Clauses 8.2.1.4 ¶ 2, 9.1.3.1 and 9.1.3.2	PICS A.3/1.1
Summary:	Verify that the IUT on receipt of an E-RAB_SETUP_REQUEST message containing	
	several E-RABs set to the same value sends an E-RAB_SETUP_RESPONSE with	
	failed E-RABs	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Set	
	containing an E-RAB_to_be_	Setup Item 1
	containing an E-RAB_ID	
	indicating value A	
	containing an E-RAB_Lev	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a NAS-PDU	0-4
	containing an E-RAB_to_be_Setup Item 2	
	containing an E-RAB_ID	
	indicating value A containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address containing a GTP-TEID	
	containing a GTP-TEID	
	sends an E-RAB_SETUP_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Failed_to_	
	containing an E-RAB_List Item 1	
	containing an E-RAB_ID	
	containing an E-NAB_ID	
	indicating 'Multiple E-RAB_ID instances'	
	containing an E-RAB_List Iter	
	containing an E-RAB_ID	
	containing a Cause	
	indicating 'Multiple E-RAB_ID instances'	
Comments:		

TP_S1AP_ENB_RAB_06	Standards Reference: Clauses 8.2.1.4 ¶ 3,	PICS item: PICS A.3/1.1
	9.1.3.1 and 9.1.3.2	FICS A.3/1.1
Summary:		_SETUP_REQUEST message containing an
	E-RAB ID IE set to the value that identif	
	E-RAB_SETUP_RESPONSE with failed E-RABs	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	EQUEST
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Set	•
	containing an E-RAB_to_be_	Setup Item 1
	containing an E-RAB_ID	
	indicating new E-RAB	
	containing an E-RAB_Lev	el_QoS_Parameters
	containing QCI	
	indicating value 5	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a NAS-PDU	105
	sends an E-RAB_SETUP_RESPON	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Setup_List	
	containing an E-RAB_Setup Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a GTP-TEID on receipt of an E-RAB_SETUP_REQUEST	
	containing an MME UE S1AP ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_	•
	containing an E-RAB ID	Cotap nom 1
	indicating already activ	ve E-RAB
	containing an E-RAB_Lev	
	containing a Transport_La	
	containing a GTP-TEID	, =
	containing a NAS-PDU	
	sends an E-RAB_SETUP_RESPON	NSE
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing an E-RAB_Failed_to_Setup_List	
	containing an E-RAB_List Item 1	
	containing an E-RAB_ID	
	containing a Cause	
	indicating 'Multiple E-RAB_ID instances'	
Comments:		

TP_S1AP_ENB_RAB_07	Standards Reference:	PICS item:	
	Clauses 8.2.1.4 ¶ 4,	PICS A.3/1.1	
	9.1.3.1 and 9.1.3.2		
Summary:	Verify that the IUT on receipt of an E-RA	AB_SETUP_REQUEST message containing	
	both the Correlation ID and the SIPTO (	Correlation ID IEs for the same E-RAB sends	
	an E-RAB_SETUP_RESPONSE with fa	iled E-RAB	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_SETUP_R		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Set		
	containing an E-RAB_to_be_Setup Item 1		
	containing an E-RAB_ID		
	containing an E-RAB_Level_QoS_Parameters		
	containing a Transport_Layer_Address		
	containing a GTP-TEID		
	containing a NAS-PDU		
	containing a Correlation_ID		
	containing a SIPTO_Correlation_ID		
	sends an E-RAB_SETUP_RESPONSE		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Failed_to_Setup_List containing an E-RAB_List Item 1		
	containing an E-RAB_ID		
	containing an E-NAB_ID		
	indicating an appropriate cause value		
Comments:	3 11 1		

TP_S1AP_ENB_RAB_08	Standards Reference:	PICS item:
	Clauses 8.2.2.2 (1st dashed line in	PICS A.3/1.2
	4 <sup>th</sup> dashed list),	
	9.1.3.3 and 9.1.3.4	
Summary:	Verify that the IUT can successfully prod	ess all mandatory IEs in an
		ue to E-RAB management procedure and
	sends an E-RAB_MODIFY_RESPONSE	with successfully modified E-RAB included
	in the E-RAB_Modify_List IE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFY_I	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5	
	containing a NAS-PDU	
	sends an E-RAB_MODIFY_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Modify_Lis	
	containing an E-RAB_Modify Item 1	
_	containing an E-RAB_ID	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_09	Standards Reference:	PICS item:
	Clauses 8.2.2.2 (2 <sup>nd</sup> dashed line in	PICS A.3/1.2
	4 <sup>th</sup> dashed list),	
	9.1.3.3 and 9.1.3.4	
Summary:		RAB_MODIFY_REQUEST with failed E-RAB
	sends an E-RAB_MODIFY_RESPONSE	with E-RAB_Failed_to_Modify_List
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFY_I	REQUEST
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating not supported QCI value(255)	
	containing a NAS-PDU	NOT
	sends an E-RAB_MODIFY_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID  not containing an E-RAB_Modify_List	
	containing an E-RAB_Failed _to_	
	containing an E-RAB_List Iter	
	containing an E-RAB_ID	11-1
	containing an E-NAB_ID	
	indicating 'not-supported-QCI-value'	
Comments:	Preamble action: E-RAB Setup is exchanged	

TP_S1AP_ENB_RAB_10	Standards Reference: Clauses 8.2.2.2 (1 <sup>st</sup> numbered list),	PICS item: PICS A.3/1.2.1	
	9.1.3.3 and 9.1.3.4		
Summary:	Verify that the IUT if it is interacted with handover preparation procedure sends		
	E-RAB_MODIFY_RESPONSE with app	ropriate cause value and continue with	
	handover preparation procedure		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_MODIFY_F		
	containing an MME_UE_S1AP_II		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Mod		
	containing an E-RAB_to_be_l	Modified Item 1	
	containing an E-RAB_ID containing an E-RAB_Lev	ral Oos Baramatara	
	containing an E-RAB_Lev	el_Q03_Falailletel5	
		orted QCI value(255)	
	containing a NAS-PDU	offed QOI value(255)	
	sends an E-RAB_MODIFY_RESPO	NSF	
	containing an MME_UE_S1AP_II		
	containing an eNB_UE_S1AP_ID		
	not containing an E-RAB_Modify_List		
	containing an E-RAB_Failed _to_Modify_List		
	containing an E-RAB_List Item 1		
	containing an E-RAB_ID		
	containing a Cause		
		stem Handover triggered' <b>or</b>	
	indicating 'S1 inter system Handover triggered' or		
		indicating 'X2 Handover triggered'	
		sends a HANDOVER_REQUIRED	
	containing an MME_UE_S1AP_II		
	containing an eNB_UE_S1AP_ID	)	
	containing a Handover_Type		
	indicating LTEtoUTRAN		
	containing a Cause		
	containing a Target ID containing a Source_to_Target_1	Francharent Container	
	containing a Source RNC_to_Target RNC_Transparent_Container indicating a UE History Information		
Comments:	Preamble action: E-RAB Setup is exchanged		
Johnnents.	i reamble delien. E 1776 Cetap is excita	ngou	

TP_S1AP_ENB_RAB_11	Standards Reference:	PICS item:
	Clauses 8.2.2.4 ¶ 1,	PICS A.3/1.2
	9.1.3.3 and 9.1.3.4 and	
	ETSI TS 123 203 [6], Table 6.1.7	
Summary:		AB MODIFY REQUEST message containing
	an E-RAB Level QoS Parameters IE wh	
		GBR QoS Information IE then the IUT sends
	an E-RAB_MODIFY_RESPONSE with f	ailed E-RAB
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFY_I	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_	Modified Item 1
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating GBR bea	
	not containing GBR Q containing a NAS-PDU	05 information
	sends an E-RAB_MODIFY_RESPO	MSE
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	not containing an E-RAB_Modify	
	containing an E-RAB_Failed _to_	
	containing an E-RAB_List Itel	
	containing an E-RAB_ID	
	containing a Cause	
	indicating an appropriate cause value	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_12	Standards Reference:	PICS item:
	Clauses 8.2.2.4 ¶ 2,	PICS A.3/1.2
	9.1.3.3 and 9.1.3.4	
Summary:	Verify that the IUT on receipt of an E-RA	AB MODIFY REQUEST message containing
	several E-RABs set to the same value sends an E-RAB_MODIFY_RESPONSE with	
	failed E-RABs	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFY_I	REQUEST
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	<del>-</del>
	containing an E-RAB_to_be_	Modified Item 1
	containing an E-RAB_ID	
	indicating value A	
	containing an E-RAB_Level_QoS_Parameters	
	containing a NAS-PDU	
	containing an E-RAB_to_be_Modified Item 2	
	containing an E-RAB_ID	
	indicating value A	
	containing an E-RAB_Level_QoS_Parameters	
	containing a NAS-PDU	
	sends an E-RAB_MODIFY_RESPO	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	not containing an E-RAB_Modify_List	
	containing an E-RAB_Failed _to_	
	containing an E-RAB_List Itel	m 1
	containing an E-RAB_ID	
	containing a Cause	AD ID instanced
	indicating 'Multiple E-F	
	containing an E-RAB_List Itel	11 2
	containing an E-RAB_ID	
	containing a Cause	
Comments:	indicating 'Multiple E-RAB_ID instances'	
Comments:	Preamble action: E-RAB Setup is excha	ngeu

TP_S1AP_ENB_RAB_13	Standards Reference:	PICS item:
	Clauses 8.2.2.4 ¶ 3,	PICS A.3/1.2
	9.1.3.3 and 9.1.3.4	
Summary:	Verify that the IUT on receipt of an E-RA	AB MODIFY REQUEST message containing
	some unknown E-RAB_ID IEs sends ou	ut an E-RAB_MODIFY_RESPONSE with
	cause value 'Unknown E-RAB ID'	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFY_	REQUEST
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_	Modified Item 1
	containing an E-RAB_ID	
	indicating unknown value	
	containing an E-RAB_Level_QoS_Parameters	
	containing a NAS-PDU	
	sends an E-RAB_MODIFY_RESPO	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	not containing an E-RAB_Modify	
	containing an E-RAB_Failed _to_Modify_List	
	containing an E-RAB_List Item 1	
	containing an E-RAB_ID	
	containing a Cause	
<u> </u>	indicating 'Unknown E	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_14	Standards Reference:	PICS item:	
	Clauses 8.2.3.2.1 (1st dashed line in	PICS A.3/1.3	
	2 <sup>nd</sup> dashed list),		
	9.1.3.5 and 9.1.3.6		
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in an	
	E-RAB_RELEASE_COMMAND receive	d due to E-RAB management procedure and	
	send E-RAB_RELEASE_RESPONSE w	rith successfully released E-RABs included in	
	the E-RAB_Released_List IE		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_RELEASE	on receipt of an E-RAB_RELEASE_COMMAND	
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Released_List		
	containing an E-RAB_to_be_Released Item 1		
	containing an E-RAB_ID		
	sends an E-RAB_RELEASE_RESPONSE		
	3 = = =	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Released_		
	containing an E-RAB_Releas	ed Item 1	
	containing an E-RAB_ID		
Comments:	Preamble action: E-RAB Setup is excha	nged	

TP_S1AP_ENB_RAB_15	Standards Reference:	PICS item:
	Clauses 8.2.3.2.1 ¶ 13,	PICS A.3/1.3
	9.1.3.5 and 9.1.3.6	
Summary:	Verify that the IUT can report message I	ocation information of the UE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_RELEASE	_COMMAND
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Released_List	
	containing an E-RAB_to_be_Released Item 1	
	containing an E-RAB_ID	
	sends an E-RAB_RELEASE_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Released_List	
	containing an E-RAB_Released Item 1	
	containing an E-RAB_ID	
	containing a User_Location_Info	rmation
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_16	Standards Reference:	PICS item:
	Clauses 8.2.3.2.1 ¶ 14,	PICS A.3/1.3
	9.1.3.5 and 9.1.3.6	
Summary:	Verify that the IUT after received E-RAB_RELEASE_RESPONSE containing E-RAB	
	ID is able to receive an E-RAB_SETUP_REQUEST message requesting	
	establishment of an E-RAB with this E-F	RAB ID
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_RELEASE	_COMMAND
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing an E-RAB_to_be_Rel	eased_List
	containing an E-RAB_to_be_	Released Item 1
	containing an E-RAB_ID	
	sends an E-RAB_RELEASE_RESF	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Released_	
	containing an E-RAB_Released Item 1	
	containing an E-RAB_ID	
	on receipt of an E-RAB_SETUP_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an ENB_UE_S1AP_ID	
	containing an E-RAB_to_be_Setup_List containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	indicating an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5	
	containing a Transport_La	over Address
	containing a Transport_Lt	1y01_7\dd1033
	containing a NAS-PDU	
	sends an E-RAB_SETUP_RESPON	ISE
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Setup_List	
	containing an E-RAB_Setup	
	containing an E-RAB_ID	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_17	Standards Reference:	PICS item:
	Clauses 8.2.3.2.2 and 9.1.3.7	PICS A.3/1.4
Summary:	Verify that the IUT can send an E-RAB_	RELEASE_INDICATION with at least one
	E-RAB IE to indicate an E-RAB release	indication
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an E-RAB Release indication procedure,	
	sends an E-RAB_RELEASE_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Released_List	
	containing an E-RAB_Released Item 1	
	containing an E-RAB_ID	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_18	Standards Reference:	PICS item:	
	Clauses 8.2.3.2.2 ¶ 3 and 9.1.3.7	PICS A.3/1.4	
		MESSAGE LOCATION INFORMATION	
		OF UE	
Summary:	Verify that the IUT can send an E-RAB_	RELEASE_INDICATION with at least one	
	E-RAB IE to indicate an E-RAB release	indication and report message location	
	information of the UE		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	to indicate an E-RAB Release indication procedure,		
	sends an E-RAB_RELEASE_INDIC	sends an E-RAB_RELEASE_INDICATION	
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Released_List		
	containing an E-RAB_Released Item 1		
	containing an E-RAB_ID		
	containing an User_Location_Info	ormation	
Comments:	Preamble action: E-RAB Setup is excha	nged	

TP_S1AP_ENB_RAB_19	Standards Reference:	PICS item:
	Clauses 8.2.3.2.3 ¶ 1,	PICS A.3/1.3
	9.1.3.5 and 9.1.3.6	
Summary:	Verify that the IUT on receipt of an E-RA	AB RELEASE COMMAND message
	containing several E-RABs set to the sa	me value initiate the release of
	corresponding E-RAB and ignore the du	plication and sends an
	E-RAB_RELEASE_RESPONSE with re	leased E-RAB
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_RELEASE	_COMMAND
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Rel	eased_List
	containing an E-RAB_to_be_Released Item 1	
	containing an E-RAB_ID	
	indicating value A	
	containing an E-RAB_to_be_Released Item 2	
	containing an E-RAB_ID	
	indicating value A	
	sends an E-RAB_RELEASE_RESPONSE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Released_	
	containing an E-RAB_Releas	ed Item 1
	containing an E-RAB_ID	
	indicating value A	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_RAB_20	Standards Reference:	PICS item:	
	Clauses 8.2.3.2.3 ¶ 3,	PICS A.3/1.3	
	9.1.3.5 and 9.1.3.6		
Summary:	Verify that the IUT on receipt of an E-RA	AB_RELEASE_COMMAND message	
	containing some unknown E-RAB_ID IE	Es sends out an	
	E-RAB_RELEASE_RESPONSE with cause value 'Unknown E-RAB ID'		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_RELEASE	_COMMAND	
		containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Released_List		
	containing an E-RAB_to_be_Released Item 1		
	containing an E-RAB_ID		
	indicating unknown value		
	sends an E-RAB_RELEASE_RESPONSE		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	not containing an E-RAB_Released_List		
	containing an E-RAB_Failed _to_Release_List		
	containing an E-RAB_List Item 1		
	containing an E-RAB_ID		
	containing a Cause		
	indicating 'Unknown E	-RAB ID'	
Comments:			

TP_S1AP_ENB_RAB_21	Standards Reference:	PICS item:
	Clauses 8.2.4.2 and 9.1.3.8	PICS A.3/1.5
Summary:	Verify that the IUT can send an E-RAB_	MODIFICATION_INDICATION with at least
	one E-RAB IE to indicate an E-RAB mod	dification indication
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an E-RAB Modification indication procedure,	
	sends an E-RAB_MODIFICATION_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing a Transport_La	ayer_Address
	containing a DL_GTP-TEID	
Comments:	Preamble action: E-RAB Setup is excha	nged

# 5.2.2.1.3 Context management group

TP_S1AP_ENB_CMP_01	Standards Reference:	PICS item:	
	Clauses 8.3.1.2 (1st dashed line in	PICS A.3/2.1	
	7 <sup>th</sup> dashed list),		
	9.1.4.1 and 9.1.4.3		
Summary:	Verify that the IUT can successfully prod		
	INITIAL_CONTEXT_SETUP_REQUES		
	procedure and send INITIAL_CONTEXT_SETUP_RESPONSE with successfully		
	established E-RABs included in the E-RAB_Setup_List IE		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an INITIAL_CONTEX		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a UE_Aggregate_Maximum_Bit_Rate		
	containing an E-RAB_to_be_Setup_List		
	containing an E-RAB_to_be_Setup Item 1		
	containing an E-RAB_ID containing an E-RAB_Level_QoS_Parameters		
	5 =	el_QoS_Parameters	
	containing QCI indicating value 5		
		Addass	
	containing a Transport_La	ayer_Address	
	containing a GTP-TEID		
	containing a UE_Security_Capabilities		
	containing a Security_Key sends an INITIAL_CONTEXT_SETUP_RESPONSE		
	containing an MME_UE_S1AP_I		
	containing an E-RAB Setup List	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Setup I		
	containing an E-RAB_ID		
		containing an E-RAB_ID  containing a Transport_Layer_Address	
	containing a GTP-TEID		
Comments:			

TP_S1AP_ENB_CMP_02	Standards Reference:	PICS item:
	Clauses 8.3.1.2 (2 <sup>nd</sup> dashed line in	PICS A.3/2.1
	7 <sup>th</sup> dashed list),	
	9.1.4.1 and 9.1.4.3	
Summary:	Verify that the IUT after receiving an INITIAL_CONTEXT_SETUP_REQUEST with	
	failed E-RAB sends an INITIAL_CONTE	EXT_SETUP_RESPONSE with
	E-RAB_Failed_to_Setup_List	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEXT_SETUP_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Set	
	containing an E-RAB_to_be_	Setup item i
	containing an E-RAB_ID	
	indicating value A containing an E-RAB_Level_QoS_Parameters	
	containing an E-RAB_Level_QoS_Parameters containing a Transport_Layer_Address	
	containing a Transport_Layer_Address containing a GTP-TEID	
	containing a GTT-TEID  containing an E-RAB_to_be_Setup Item 2	
	containing an E-RAB_ID	
	indicating value B(different to value A)	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating not supported QCI value(255)	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a UE_Security_Capat	pilities
	containing a Security_Key	
	sends an INITIAL_CONTEXT_SETUP_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Setup_List containing an E-RAB_Setup Item 1	
	containing an E-RAB_Setup	nem i
	indicating value A	
	containing a Transport_La	aver Address
	containing a Transport_Lt	2,01 <u>_</u> 7,1001000
	containing an E-RAB_Failed_to_	Setup List
	containing an E-RAB_List Ite	
	containing an E-RAB_ID	
	indicating value B	
	containing a Cause	
	indicating 'not-supported-QCI-value'	
Comments:		

Clauses 8.3.1.2 and 8.3.1.4 ¶ 1, 9.1.4.1 and 9.1.4.3  Summary:  Verify that the IUT on receipt of an INITIAL_CONTEXT_SETUP_REQUEST message containing an E-RAB Level QoS Parameters IE which contains a QCI indicating a GBR bearer and which does not contain the GBR QoS Information		
Summary:  Verify that the IUT on receipt of an INITIAL_CONTEXT_SETUP_REQUEST message containing an E-RAB Level QoS Parameters IE which contains a QCI indicating a GBR bearer and which does not contain the GBR QoS Information		
message containing an E-RAB Level QoS Parameters IE which contains a QCI indicating a GBR bearer and which does not contain the GBR QoS Information		
indicating a GBR bearer and which does not contain the GBR QoS Information		
	E	
I WITH CONTENT OFFUR RECOGNICE " C" C" CE CO		
sends an INITIAL_CONTEXT_SETUP_RESPONSE with failed E-RAB		
Configuration: CF_S1-MME		
Test purpose: Ensure that the IUT		
on receipt of an INITIAL_CONTEXT_SETUP_REQUEST		
containing an MME_UE_S1AP_ID		
containing an eNB_UE_S1AP_ID		
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
containing QCI	•	
indicating GBR bearer		
not containing GBR QoS Information		
containing a Transport_Layer_Address		
containing a GTP-TEID		
	containing a UE_Security_Capabilities	
sends an INITIAL_CONTEXT_SETUP_RESPONSE	containing a Security_Key	
containing an MME UE S1AP ID		
containing an MME_UE_STAP_ID  containing an eNB_UE_S1AP_ID		
containing an E-RAB_List Item 1	containing an E-RAB_Failed_to_Setup_List	
containing an E-RAB_ID		
containing a Cause		
indicating an appropriate cause value		
Comments:		

TP S1AP ENB CMP 04	Standards Reference:	PICS item:
	Clauses 8.3.1.2, 8.3.1.4 ¶ 2,	PICS A.3/2.1
	9.1.4.1 and 9.1.4.3	
Summary:	Verify that the IUT on receipt of an INITIAL_CONTEXT_SETUP_REQUEST	
	message containing several E-RABs set to the same value sends an	
	INITIAL_CONTEXT_SETUP_RESPONS	SE with failed E-RABs
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEX	
	containing an MME UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a UE_Aggregate_Max	
	containing an E-RAB_to_be_Set	
	containing an E-RAB_to_be_	Setup Item 1
	containing an E-RAB_ID	
	indicating value A	
	containing an E-RAB_Lev	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing an E-RAB_to_be_Setup Item 2	
	containing an E-RAB_ID	
	indicating value A	
	containing an E-RAB_Level_QoS_Parameters containing a Transport_Layer_Address	
		ayer_Address
	containing a GTP-TEID	114
	containing a UE_Security_Capabilities	
	containing a Security_Key sends an INITIAL_CONTEXT_SETUP_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Failed_to_Setup_List	
	containing an E-RAB_List Itel	III I
	containing an E-RAB_ID indicating value A	
	containing a Cause indicating 'Multiple E-RAB_ID instances'	
	containing an E-RAB_List Ite	
	containing an E-RAB_list ite	III Z
	indicating value A	
	containing a Cause	
	indicating 'Multiple E-RAB_ID instances'	
Comments:	a.caang maable L 1	

TP_S1AP_ENB_CMP_05	Standards Reference:	PICS item:	
	Clauses 8.3.1.3, 8.3.1.4 ¶ 3,	PICS A.3/2.1	
	9.1.4.1 and 9.1.4.3		
Summary:	Verify that the IUT on receipt of an INITI	AL_CONTEXT_SETUP_REQUEST	
	message containing not supported algor		
	Encryption Algorithms IE in the UE Secu		
	INITIAL_CONTEXT_SETUP_FAILURE message		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an INITIAL_CONTEX		
	containing an MME UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing a UE_Aggregate_Maximum_Bit_Rate		
	containing an E-RAB_to_be_Setup_List		
	containing an E-RAB_to_be_Setup Item 1		
	containing an E-RAB_ID		
		containing an E-RAB_Level_QoS_Parameters	
		containing a Transport_Layer_Address	
	containing a GTP-TEID		
	containing a UE_Security_Capabilities		
	containing an Encription_Algorithms		
	indicating not supported a		
	containing an Integrity_Protect	ction_Algorithms	
	containing a Security_Key		
	sends an INITIAL_CONTEXT_SETUP_FAILURE		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a Cause		
	indicating Encryption and/or	integrity protection algorithms not supported	
Comments:			

TP_S1AP_ENB_CMP_06	Standards Reference:	PICS item:
	Clauses 8.3.1.3, 8.3.1.4 ¶ 4,	PICS A.3/2.1
	9.1.4.1 and 9.1.4.3	
Summary:	Verify that the IUT on receipt of an INITI	
		rithms for encryption defined in the Integrity
	Protection Algorithms IE in the UE Security Capabilities IE then IUT sends	
	INITIAL_CONTEXT_SETUP_FAILURE message	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEX	<del>-</del>
	containing an MME UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a UEa UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Lev	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a UE_Security_Capabilities	
	containing an Encription_Algorithms	
	containing an Integrity_Protection_Algorithms	
	indicating not supported a	llgorithm
	containing a Security_Key	
	sends an INITIAL_CONTEXT_SET	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating 'Encryption and/or	integrity protection algorithms not supported'
Comments:		

TP_S1AP_ENB_CMP_07	Standards Reference:	PICS item:
	Clauses 8.3.1.3, 8.3.1.4 ¶ 5,	PICS A.3/2.1
	9.1.4.1 and 9.1.4.3	
Summary:	Verify that the IUT on receipt of an INITI	
	message not containing CSG Membersh	nip Status IE and the cell
	accessed by the UE is a hybrid cell the IUT sends	
	INITIAL_CONTEXT_SETUP_FAILURE message	
Configuration:	CF_S1-MME(see NOTE1)	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEXT_SETUP_REQUEST	
	containing an MME UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	not containing a CSG Membership_Status	
	sends an INITIAL_CONTEXT_SETUP_FAILURE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating 'CSG Subscription Expiry'	
Comments:	NOTE1: This test requires specific cond	ition - UE is a hybrid cell

TP_S1AP_ENB_CMP_08	Standards Reference:	PICS item:
	Clauses 8.3.1.2, 8.3.1.4 ¶ 6,	PICS A.3/2.1
	9.1.4.1 and 9.1.4.3	
Summary:	Verify that the IUT on receipt of an INITI	AL_CONTEXT_SETUP_REQUEST
	message containing both the Correlation ID and the SIPTO Correlation ID IEs for the	
	same E-RAB sends an INITIAL_CONTEXT_SETUP_RESPONSE with failed E-RAB	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEX	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing a Correlation_ID	
	containing a SIPTO_Corre	
	containing a UE_Security_Capabilities	
	containing a Security_Key	
	sends an INITIAL_CONTEXT_SETUP_RESPONSE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Failed_to_	
	containing an E-RAB_List Itel	11 1
	containing an E-RAB_ID containing a Cause	
	indicating an appropriate cause value	
Comments:	indicating an approprie	ale cause value
John Hollis.		

TP_S1AP_ENB_CMP_09	Standards Reference:	PICS item:
	Clauses 8.3.2.2 ¶ 1, 2 and 9.1.4.5	PICS A.3/2.2
Summary:	Verify that the IUT can send a UE_CON	TEXT_RELEASE_REQUEST to release the
	UE-associated logical S1-connection	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate release of the UE associated logical S1-connection,	
	sends a UE_CONTEXT_RELEASE_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating an appropriate value	
Comments:	Preamble action: E-RAB Setup is exchanged	

TP_S1AP_ENB_CMP_10	Standards Reference:	PICS item:
	Clauses 8.3.3.2 ¶ 2, 4,	PICS A.3/2.3
	9.1.4.6 and 9.1.4.7	
Summary:		ONTEXT_RELEASE_COMMAND containing
	an MME_UE_S1AP_ID IE the IUTsends	a UE_CONTEXT_RELEASE_COMPLETE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RELEASE_COMMAND	
	containing an MME_UE_S1AP_ID	
	containing a Cause	
	indicating value from Table 3	
	sends a UE_CONTEXT_RELEASE_COMPLETE	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged

Table 3: Cause values

Test purpose variants	Cause values
VA_01	User Inactivity
VA_02	Radio Connection With UE Lost
VA_03	CSG Subscription Expiry
VA_04	SC Fallback triggered
VA_05	Redirection towards 1xRTT
VA_06	Inter-RAT Redirection
VA_07	UE Not Available for PS Service

TP_S1AP_ENB_CMP_11	Standards Reference:	PICS item:
	Clauses 8.3.3.2 ¶ 2, 4,	PICS A.3/2.3
	9.1.4.6 and 9.1.4.7	
Summary:	Verify that the IUT on receipt of a UE_C	ONTEXT_RELEASE_COMMAND containing
	a UE_S1AP_ID_pair IE the IUT sends a	UE_CONTEXT_RELEASE_COMPLETE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RELEASE_COMMAND	
	containing a UE_S1AP_ID_pair	
	containing a Cause	
	indicating value from Table 3	
	sends a UE_CONTEXT_RELEASE_COMPLETE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged

TP_S1AP_ENB_CMP_12	Standards Reference:	PICS item:	
	Clauses 8.3.3.3 ¶ 1,	PICS A.3/2.2	
	9.1.4.1 and 9.1.4.3		
Summary:	Verify that the IUT in case if UE Context Release procedure is not initiated towards		
	the eNB before the expiry of timer TS1 <sub>RELOCOverall</sub> the IUT sends request to the MME		
	to release the UE context		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an INITIAL_CONTEX		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing a UE_Aggregate_Max		
	containing an E-RAB_to_be_Set	•	
	containing an E-RAB_to_be_	Setup Item 1	
	containing an E-RAB_ID		
	containing an E-RAB_Level_QoS_Parameters		
	containing QCI		
		indicating value 5 containing a Transport_Layer_Address	
	containing a Transport_Layer_Address containing a GTP-TEID		
	containing a GTT-TEID  containing a UE_Security_Capabilities		
	containing a Security_Key	, muoo	
	sends an INITIAL_CONTEXT_SET	UP RESPONSE	
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Setup_List	:	
	containing an E-RAB_Setup I	tem 1	
	containing an E-RAB_ID		
	containing a Transport_La	ayer_Address	
	containing a GTP-TEID		
	to indicate timer expiry		
	sends a UE_CONTEXT_RELEASE		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID	)	
	containing a Cause		
0	indicating an appropriate value		
Comments:			

TP_S1AP_ENB_CMP_13	Standards Reference:	PICS item:	
	Clauses 8.3.4.2 (last two	PICS A.3/2.4	
	paragraphs),		
	9.1.4.8 and 9.1.4.9		
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in a	
	UE_CONTEXT_MODIFICATION_REQU	JEST received due to UE context	
	modification management procedure an	d send	
	UE_CONTEXT_MODIFICATION_RESP	PONSE	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a UE_CONTEXT_MODIFICATION_REQUEST		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a UE_Aggregate_Maximum_Bit_Rate		
	indicating new value		
	sends a UE_CONTEXT_MODIFICATION_RESPONSE		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID	)	
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged	

TP_S1AP_ENB_CMP_14	Standards Reference:	PICS item:
	Clauses 8.3.4.4,	PICS A.3/2.4
	9.1.4.8 and 9.1.4.10	
Summary:	Verify that the IUT on receipt of a UE_CONTEXT_MODIFICATION_REQUEST	
		dicator IE and one of the security IEs (either
	the Security Key IE or the UE Security C	
	UE_CONTEXT_MODIFICATION_FAILU	JRE message with appropriate cause value
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_MODIFICATION_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a CS_Fallback_Indicator	
	containing a Security_Key	
	sends a UE_CONTEXT_MODIFICATION_FAILURE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating an appropriate cau	se value
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged

TP_S1AP_ENB_CMP_15	Standards Reference:	PICS item:
	Clauses 8.3.4.4,	PICS A.3/2.4
	9.1.4.8 and 9.1.4.10	
Summary:	Verify that the IUT on receipt of a UE_C	ONTEXT_MODIFICATION_REQUEST
	message containing the CS Fallback Inc	licator IE and one of the security IEs (either
	the Security Key IE or the UE Security C	
	UE_CONTEXT_MODIFICATION_FAILU	JRE message with appropriate cause value
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_MODIFICATION_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a CS_Fallback_Indicator	
	containing a UE_Security_Capabilities	
	sends a UE_CONTEXT_MODIFICATION_FAILURE	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate cause value	
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged

TP_S1AP_ENB_CMP_16	Standards Reference:	PICS item:
	Clauses 8.3.5.1, 8.3.5.2 ¶ 3,	PICS A.3/2.5
	9.1.4.11 and 9.1.4.12	
Summary:	Verify that the IUT can successfully prod	
		QUEST received due to UE Radio Capability
	Match procedure and send UE_RADIO_	_CAPABILITY_MATCH_RESPONSE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_RADIO_CAPABILITY_MATCH_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a UE_Radio_Capability	
	sends a UE_RADIO_CAPABILITY_MATCH_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Voice_Support_Match_Indicator	
Comments:		·

TP_S1AP_ENB_CMP_17	Standards Reference:	PICS item:
	Clauses 8.3.6.2 and 9.1.4.13	PICS A.3/2.6
Summary:	Verify that the IUT is able to send a UE_	_CONTEXT_MODIFICATION_INDICATION
	to indicate UE context modification indic	ation procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a UE context modificatio	n indication
	sends a UE_CONTEXT_MODIFICA	TION_INDICATION
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
Comments:		

TP_S1AP_ENB_CMP_18	Standards Reference:	PICS item:
	Clauses 8.3.7.2 and 9.1.4.15	PICS A.3/2.7
Summary:	Verify that the IUT is able to send a UE_	CONTEXT_SUSPEND_REQUEST to
	indicate UE context suspend procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a UE context modification procedure	
	sends a UE_CONTEXT_SUSPEND	_REQUEST
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
Comments:		

TP_S1AP_ENB_CMP_19	Standards Reference:	PICS item:
	Clauses 8.3.8.2 and 9.1.4.17	PICS A.3/2.8
Summary:	Verify that the IUT is able to send a UE_	CONTEXT_RESUME_REQUEST to
	indicate UE context resume procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a UE context resume pro	ocedure
	sends a UE_CONTEXT_RESUME_	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
Comments:		

### 5.2.2.1.4 Handover signalling group

TP_S1AP_ENB_HAS_01	Standards Reference:	PICS item:
	Clauses 8.4.1.2 ¶ 2 and 9.1.5.1	PICS A.3/3.1
Summary:	Verify that the IUT is able to send a HAN	NDOVER_REQUIRED request containing
	Handover Type IE with IntraLTE to indic	ate handover preparation procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a handover preparation	procedure
	sends a HANDOVER_REQUIRED	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Handover_Type	
	indicating IntraLTE	
	containing a Cause	
	containing a Target ID	
	containing a Source_to_Target_Transparent_Container	
Comments:		

TP_S1AP_ENB_HAS_02	Standards Reference:	PICS item:
	Clauses 8.4.1.2 ¶ 3 and 9.1.5.1,	PICS A.3/3.1
	ETSI TS 125 413 [7], clause 9.2.1.28	
Summary:	Verify that the IUT is able to send a HAN	NDOVER_REQUIRED request containing
	Handover Type IE with LTEtoUTRAN to	indicate handover preparation procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a handover preparation	procedure
	sends a HANDOVER_REQUIRED	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Handover_Type	
	indicating LTEtoUTRAN	
	containing a Cause	
	containing a Target ID	
	containing a Source_to_Target_1	Fransparent_Container
	containing a Source RNC_to_	_Target RNC_Transparent_Container
	indicating a UE History In	formation
Comments:		·

TP_S1AP_ENB_HAS_03	Standards Reference:	PICS item:
	Clauses 8.4.1.2 ¶ 3 and 9.1.5.1,	PICS A.3/3.1
	ETSI TS 148 018 [8], clause 11.3.79	
Summary:	Verify that the IUT is able to send a HANDOVER_REQUIRED request containing	
	Handover Type IE with LTEtoGERAN to indicate handover preparation procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a handover preparation procedure	
	sends a HANDOVER_REQUIRED	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Handover_Type	
	indicating LTEtoGERAN	
	containing a Cause	
	containing a Target ID	
	containing a Source_to_Target_Transparent_Container	
	containing a Source BSS_to_	Target BSS_Transparent_Container
Comments:		

TP_S1AP_ENB_HAS_04	Standards Reference:	PICS item:	
TP_STAP_ENB_HAS_04	Clauses 8.4.1.2 (1st numbered list)	PICS 1.2 and 3.1 and 3.5	
	and 9.1.5.1	F103 A.3/1.2 and 3.1 and 3.3	
Summary:	Verify that the IUT reacts according to the standard in case if Handover Preparation		
	procedure is interacted with E-RAB man		
Configuration:	CF_S1-MME	<b>-</b>	
Test purpose:	Ensure that the IUT		
	to indicate a handover preparation procedure		
	sends a HANDOVER_REQUIRED		
	containing an MME_UE_S1AP_I	D	
	containing an eNB_UE_S1AP_ID	)	
		containing a Handover_Type	
	indicating IntraLTE		
	containing a Cause		
	containing a Target ID		
	containing a Source_to_Target_		
	on receipt of an E-RAB_MODIFY_I		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID containing an E-RAB_to_be_Mod		
	containing an E-RAB_to_be_Mot		
	containing an E-RAB_ID	iviodined item i	
	containing an E-RAB_Lev	vel QoS Parameters	
	containing QCI		
	indicating value 5		
	containing a NAS-PDU		
	continue with case 1		
	sends a HANDOVER_CANCEL		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing a Cause		
	indicating an appropriate cause value sends an E-RAB_MODIFY_RESPONSE		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Modify_List		
	containing an E-RAB_Modify		
		containing an E-RAB_ID	
	or continue with case 2		
	sends an E-RAB_MODIFY_RESPO	DNSE	
	containing an MME_UE_S1AP_I	D	
	containing an eNB_UE_S1AP_ID		
	<b>not</b> containing an E-RAB_Modify		
	containing an E-RAB_Failed _to_		
	containing an E-RAB_List Iter	m 1	
	containing an E-RAB_ID		
	containing a Cause	stom Handavar Triggarad' ar	
		stem Handover Triggered' or stem Handover Triggered'	
	receives a HANDOVER_COMMAN		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating IntraLTE		
	containing an E_RABs_Subject_	to_Forwarding_List	
	containing an E_RABs_Subje		
	containing an E-RAB_ID		
	containing a Target_to_Source_1	Fransparent_Container	
Comments:	Preamble action: E-RAB Setup is excha	nged	

TP_S1AP_ENB_HAS_05	Standards Reference:	PICS item:
	Clauses 8.4.1.3 ¶ 3 and 9.1.5.1	PICS A.3/3.1 and 3.5
Summary:	Verify that the IUT reacts according to the	ne standard in case if Handover Preparation
	procedure is interacted with Handover C	Cancel procedure.
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a handover preparation	procedure
	sends a HANDOVER_REQUIRED	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Handover_Type	
	indicating IntraLTE	
	containing a Cause	
	containing a Target ID	
	containing a Source_to_Target_1	
	to indicate no response before timer TS1RELOCprep expires	
	sends a HANDOVER_CANCEL	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate cau	se value.
Comments:		

TP_S1AP_ENB_HAS_06	Standards Reference:	PICS item:
	Clauses 8.4.2.2 and 9.1.5.5 PICS A.3/3.2	
Summary:	Verify that the IUT can successfully process all mandatory IEs in a	
	HANDOVER_REQUEST message cont	
	received due to handover resource alloc	
	HANDOVER_REQUEST_ACKNOWLED	DGE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_REQU	
	containing an MME_UE_S1AP_I	D
	containing a Handover_Type	
	indicating IntraLTE	
	containing a Cause	
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RABs_To_Be_Setup_List	
	containing an E-RABs_To_Be_Setup_Item1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing an E-RAB_Level_QoS_Parameters containing a Source_to_Target_Transparent_Container	
	containing a UE_Security_Capabilities	
	containing a Security_Context	
	sends a HANDOVER_REQUEST_ACKNOWLEDGE containing an MME_UE_S1AP_ID	
	containing an MME_UE_STAP_II	
	containing an E-RABs Admitted	
	containing an E-RABs_Admit	
	containing an E-RAB_ID	ica_itomi
	containing an E-RAB_IB containing a Transport_La	aver Address
	containing a GTP-TEID	., J <u></u>
	containing a Target_to_Source_1	Fransparent Container
Comments:		

TP_S1AP_ENB_HAS_07	Standards Reference: Clauses 8.4.2.2 and 9.1.5.5	PICS item: PICS A.3/3.2
C		
Summary:	Verify that the IUT can successfully process all mandatory IEs in a HANDOVER REQUEST message containing Handover Type IE with UTRANtoLTE	
	received due to handover resource alloc HANDOVER_REQUEST_ACKNOWLED	
Configuration:		JGE
	CF_S1-MME Ensure that the IUT	
Test purpose:	on receipt of a HANDOVER_REQU	IECT
	containing an MME_UE_S1AP_I	
	containing an MME_0E_3TAF_1 containing a Handover_Type	D
	indicating UTRANtoLTE	
	containing a Cause	
	containing a Cause  containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RABs_To_Be_S	
	containing an E-RABs_To_Be_Setup_Item1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Source_to_Target_Transparent_Container	
	containing a UE_Security_Capabilities	
	containing a Security_Context	
	containing a NAS_Security_Parameters_to_E-UTRAN	
	sends a HANDOVER_REQUEST_ACKNOWLEDGE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RABs_Admitted_	
	containing an E-RABs_Admit	ted_Item1
	containing an E-RAB_ID	Adda -
	containing a Transport_La	ayer_Address
	containing a GTP-TEID containing a Target_to_Source_Transparent_Container	
Comments:	containing a rarget_to_Source_	rransparent_Container
Comments:		

TP_S1AP_ENB_HAS_08	Standards Reference:	PICS item:
_	Clauses 8.4.2.2 and 9.1.5.5	PICS A.3/3.2
Summary:	Verify that the IUT can successfully process all mandatory IEs in a	
	HANDOVER_REQUEST message containing Handover Type IE with GERANtoLTE	
	received due to handover resource allocation procedure and sends	
	HANDOVER_REQUEST_ACKNOWLED	)GE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_REQUEST	
	containing an MME_UE_S1AP_II	ט
	containing a Handover_Type	
	indicating GERANtoLTE	
	containing a Cause	dimum Dit Data
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RABs_To_Be_Setup_List containing an E-RABs_To_Be_Setup_Item1	
	containing an E-RAB_ID	
	containing all E-NAB_IB  containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing an E-RAB_Lev	rel QoS Parameters
	containing a Source_to_Target_1	
	containing a UE_Security_Capab	
	containing a Security_Context	
	containing a NAS_Security_Parameters_to_E-UTRAN	
	sends a HANDOVER_REQUEST_ACKNOWLEDGE	
	containing an MME_UE_S1AP_II	D
	containing an eNB_UE_S1AP_ID	)
	containing an E-RABs_Admitted_	_List
	containing an E-RABs_Admit	ted_Item1
	containing an E-RAB_ID	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a Target_to_Source_Transparent_Container	
Comments:		

TP_S1AP_ENB_HAS_09	Standards Reference:	PICS item:
	Clauses 8.4.2.3 ¶ 2 and 9.1.5.6	PICS A.3/3.2
Summary:	Verify that the IUT on receipt of a HANDOVER_REQUEST message not containing	
	CSG_Membership Status IE and containing CSG_Id IE which does not correspond	
	to the CSG_ID of the target cell the IUT sends HANDOVER_FAILURE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_REQU	JEST
	containing an MME_UE_S1AP_I	D
	containing a Handover_Type	
	indicating IntraLTE	
	containing a Cause	
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RABs_To_Be_Setup_List	
	containing an E-RABs_To_Be_Setup_Item1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Source_to_Target_Transparent_Container	
	containing a UE_Security_Capabilities	
	containing a Security_Context	
	containing a CSG_Membership_Status not containing a CSG_Id	
	sends a HANDOVER_FAILURE	
	containing an MME_UE_S1AP_I	n
	containing an eNB_UE_S1AP_ID	
	containing at total_oz_ontaining a Cause	
Comments:		

TP_S1AP_ENB_HAS_10	Standards Reference:	PICS item:
	Clauses 8.4.3.2 ¶ 1 and 9.1.5.7	PICS A.3/3.3
Summary:	Verify that the IUT is able to send a HAN	IDOVER_NOTIFY request to indicate
	handover notification procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a handover notification procedure	
	sends a HANDOVER_NOTIFY	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-UTRAN_CGI	
	containing a TAI	
Comments:		

TP_S1AP_ENB_HAS_11	Standards Reference:	PICS item:
	Clauses 8.4.4.2 ¶ 1 and 9.1.5.8	PICS A.3/3.4
Summary:	Verify that the IUT is able to send a PAT	H_SWITCH_REQUEST message to
	indicate path switch procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a path switch procedure	
	sends a PATH_SWITCH_REQUES	Т
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_To_Be_Switched_in_Downlink_List	
	containing an E-RABs_Switched_in_Downlink_Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_address	
	containing a GTP-TEID	
	containing a Source_MME_UE_S	S1AP_ID
	containing an E-UTRAN_CGI	
	containing a TAI	
	containing a UE_Security_Capat	pilities
Comments:		

TP_S1AP_ENB_HAS_12	Standards Reference:	PICS item:
	Clauses 8.4.5.2 ¶ 1, 2 and 9.1.5.11	PICS A.3/3.5
Summary:	Verify that the IUT is able to send a HAN	IDOVER_CANCEL message to indicate
	handover cancel procedure	-
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a handover cancel procedure	
	sends a HANDOVER_CANCEL	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate caus	se value
Comments:	Preamble action: Handover Preparation	Procedure started

TP_S1AP_ENB_HAS_13	Standards Reference:	PICS item:
	Clauses 8.4.6.2 ¶ 1, 2, 9.1.5.13,	PICS A.3/3.6
	9.2.1.31 and 9.2.1.32	
Summary:	Verify that the IUT is able to send an eN	B_STATUS_TRANSFER message to
	indicate eNB status transfer procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a eNB status transfer pro	ocedure
	sends an eNB_STATUS_TRANSFER	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an eNB_Status_Transfer_Transparent_Container	
	containing an E-RAB_Subject_to_Status_Transfer_List	
	containing an E-RAB_Subject_to_Status_Transfer_Item 1	
	containing an E-RAB_ID	
	containing a UL_Count_Value	
	containing a PDCF	P-SN
	containing an HFN	
	containing a DL_Count_Value	
Comments:	Preamble action: Handover Preparation	Procedure during intra LTE S1 handover

# 5.2.2.1.5 Paging group

Void.

## 5.2.2.1.6 NAS transport group

TP_S1AP_ENB_NAS_01	Standards Reference:	PICS item:
	Clauses 8.6.2.1 ¶ 1 and 9.1.7.1	PICS A.3/5.1
Summary:	Verify that the IUT can send an INITIAL	_UE_MESSAGE to indicate the initiation of a
	NAS Transport procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate the initiation of a NAS Tr	ansport procedure,
	sends an INITIAL_UE_MESSAGE	
	containing an eNB_UE_S1AP_ID	
	containing a NAS-PDU	
	containing a TAI	
	containing a PLMN_Identity	
	containing a TAC	
	containing an E-UTRAN_CGI	
	containing a PLMN_Identity	
	containing a Cell_Identity	
	containing a RRC_Establishmen	t_Cause
Comments:	Preamble action: E-RAB Setup is initiate	ed

TP_S1AP_ENB_NAS_02	Standards Reference:	PICS item:
	Clauses 8.6.2.3 ¶ 1 and 9.1.7.3	PICS A.3/5.3
Summary:	Verify that the IUT can send an UPLINK	_NAS_TRANSPORT to indicate an ongoing
	NAS Transport procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an ongoing NAS Transpe	ort procedure,
	sends an UPLINK_NAS_TRANSPORT	
	containing an MME UE S1AP ID	
	containing an eNB_UE_S1AP_ID	
	containing a NAS-PDU	
	containing a TAI	
	containing a PLMN_Identity	
	containing a TAC	
	containing an E-UTRAN_CGI	
	containing a PLMN_Identity	
	containing a Cell_Identity	
	containing a RRC_Establishmen	t_Cause
Comments:	Preamble action: E-RAB Setup is initiate	ed

TP_S1AP_ENB_NAS_03	Standards Reference:	PICS item:
	Clauses 8.6.2.4 and 9.1.7.4	PICS A.3/5.4
Summary:	Verify that the IUT can send a NAS_NO	N_DELIVERY_INDICATION to indicate the
	eNB was unable to ensure that the mess	sage has been received by the UE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a UE has not received a INITIAL_UE_MESSAGE,	
	sends a NAS_NON_DELIVERY_INDICATION	
	containing an MME UE S1AP ID	
	containing an eNB_UE_S1AP_ID	
	containing a NAS-PDU	
	containing a Cause	
	indicating an appropriate cause value	
Comments:	Preamble action: E-RAB Setup is initiate	ed, and a NAS procedure is initiated

## 5.2.2.1.7 Management group

TP_S1AP_ENB_MNP_01	Standards Reference:	PICS item:
	Clauses 8.7.1.2.1 ¶ 2, 9.1.8.1 and	PICS A.3/6.1.2
	9.1.8.2	
Summary:	Verify that the IUT can successfully process	s all mandatory IEs in a RESET and
	sends a RESET_ACKNOWLEDGE due to	a Reset procedure initiated from the MME
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a RESET	
	containing a Cause	
	indicating an appropriate cause	value
	containing a Reset_Type	
	containing a S1_Interface	
	indicating a value 'Reset_all'	
	sends a RESET_ACKNOWLEDGE	
	containing a UE-associated_logical_	_S1-connection_list
Comments:		

TP_S1AP_ENB_MNP_02	Standards Reference:	PICS item:
	Clauses 8.7.1.2.2 ¶ 1, 9.1.8.1 and	PICS A.3/6.1.2
	9.1.8.2	
Summary:	Verify that the IUT can send an RESET due	e to a Reset procedure initiated from the
_	E-UTRAN	·
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Reset procedure initiated from the E-UTRAN,	
	sends a RESET	
	containing a Cause	
	indicating the appropriate cause value	
	containing a Reset_Type	
	containing a S1_Interface	
	indicating a value 'Reset_all'	
Comments:		

TP_S1AP_ENB_MNP_03	Standards Reference:	PICS item:
	Clauses 8.7.1.3.2, 9.1.8.1 and 9.1.8.2	PICS A.3/6.1.1
Summary:	Verify that the IUT can successfully man	nage Reset procedure in case of Abnormal
	Condition at the E-UTRAN	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a RESET	
	containing a Cause	
	indicating an appropriate cause value	
	containing a Reset_Type	
	containing a Part_of_S1_interface	
		associated_logical_S1-connection'
	sends a RESET_ACKNOWLEDGE	
	containing a empty UE-associate	d_logical_S1-connection_list
Comments:		

TP_S1AP_ENB_MNP_04	Standards Reference:	PICS item:
	Clauses 8.7.2.2 and 9.1.8.3	PICS A.3/6.2.2
Summary:	Verify that the IUT can send an ERROR	_INDICATION due to an Error Indication
	procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT  to indicate an Error Indication procedure, sends an ERROR_INDICATION  (containing a Cause or containing a Criticality_Diagnostics)	
Comments:		

TP_S1AP_ENB_MNP_05	Standards Reference:	PICS item:
	Clauses 8.7.3.2 ¶ 1, 9.1.8.4 and 9.1.8.5	PICS A.3/6.3
Summary:	Verify that the IUT can send a S1_SETUP_	REQUEST to indicate a S1 Setup
	procedure	·
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a S1 Setup procedure,	
	sends an S1_SETUP_REQUEST	
	containing a Global_eNB_ID	
	containing a Supported_TAs	
	containing a TAC	
	containing a Default_Paging_DRX	
Comments:		

TP_S1AP_ENB_MNP_06	Standards Reference:	PICS item:
	Clauses 8.7.4.2 ¶ 1, 9.1.8.7 and 9.1.8.8	PICS A.3/6.4
Summary:	Verify that the IUT can send an ENB_CON	FIGURATION_UPDATE to indicate an
	eNB Configuration Update procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an eNB Configuration Update procedure,	
	sends an ENB_CONFIGURATION_UPDATE	
	containing a Global_eNB_ID	
	containing a Supported_TAs	
	containing a TAC	
Comments:		

TP_S1AP_ENB_MNP_07	Standards Reference:	PICS item:
	Clauses 8.7.5.2 ¶ 1, 9.1.8.10 and	PICS A.3/6.5
	9.1.8.11	
Summary:	Verify that the IUT can successfully produced	cess all mandatory IEs in an
	MME_CONFIGURATION_UPDATE and	d sends an
	MME_CONFIGURATION_UPDATE_ACKNOWLEDGE due to an MME	
	Configuration Update procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an MME_CONFIGURATION_UPDATE	
	may containing a Served_GUMMEIs	
	may containing a Served_PLMNs	
	sends an MME_CONFIGURATION	_UPDATE_ACKNOWLEDGE
Comments:		

TP_S1AP_ENB_MNP_08	Standards Reference:	PICS item:
	Clauses 8.7.5.3, 9.1.8.10 and	PICS A.3/6.5
	9.1.8.12	
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in an
	MME_CONFIGURATION_UPDATE and	sends an MME CONFIGURATION
	UPDATE_FAILURE due to an invalid MI	ME Configuration Update procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an MME_CONFIGURATION_UPDATE	
	containing a Broadcast_PLMNs	
	indicating at least one unknown PLMN identity	
	sends an MME_CONFIGURATION_UPDATE_FAILURE	
	containing a Cause	
	indicating an appropriate cau	se value
Comments:		

# 5.2.2.1.8 S1 CDMA 2000 tunnelling group

TP_S1AP_ENB_STP_01	Standards Reference:	PICS item:
	Clauses 8.8.2.2 ¶ 1, 9.1.9.2 and	PICS A.3/7.2
	9.2.1.23	
Summary:	Verify that the IUT can send an UPLINK	_S1_CDMA2000_TUNNELLING containing
	CDMA2000-PDU IE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a CDMA2000 to be forwarded,	
	sends an UPLINK_S1_CDMA2000_TUNNELLING	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a CDMA2000_RAT_Type	
	containing a CDMA2000_Sector_ID	
	containing a CDMA2000_PDU	
Comments:	Preamble action: E-RAB Setup is exchanged	

# 5.2.2.1.9 UE capability info indication group

TP_S1AP_ENB_UEC_01	Standards Reference:	PICS item:
	Clauses 8.9.2 and 9.1.10	PICS A.3/8
Summary:	Verify that the IUT can send a UE_CAP.	ABILITY_INFO_INDICATION to indicate
_	capability-related information update	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate capability-related information update,	
	sends a UE_CAPABILITY_INFO_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a UE_Radio_Capabili	ty.
Comments:	Preamble action: E-RAB Setup is exchanged	

# 5.2.2.1.10 Trace group

TP_S1AP_ENB_TRP_01	Standards Reference:	PICS item:
	Clauses 8.10.1.2 ¶ 8, 8.10.2.2,	PICS A.3/9.1 and A.3/9.2
	9.1.11.1 and 9.1.11.2	
Summary:	Verify that the IUT can successfully send	d a TRACE_FAILURE_INDICATION on
	TRACE_START	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a TRACE_START	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Trace_Activation	
	containing an E-UTRAN_Trace_ID	
	containing a Interfaces_To_Trace	
	indicating value 'S1-MME'	
	containing a Trace_depth	
	indicating value 'maximum'	
	containing a Trace_Collection_Entity_IP_Address	
	not containing an MDT_Configuration	
	sends atrace_failure_indication	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-UTRAN_Trace_I	ט
	containing a Cause	
	indicating an appropriate cause value	
Comments:	Preamble action: E-RAB Setup is exchanged, and a handover procedure is initiated	

TP_S1AP_ENB_TRP_02	Standards Reference:	PICS item:
	Clauses 8.10.3.2 ¶ 3, 8.10.2.2,	PICS A.3/9.2 and A.3/9.3
	9.1.11.3 and 9.1.11.2	
Summary:	Verify that the IUT can successfully send	a TRACE_FAILURE_INDICATION on
	DEACTIVATE_TRACE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a DEACTIVATE_TRACE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-UTRAN_Trace_ID	
	sends a TRACE_FAILURE_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-UTRAN_Trace_ID	
	containing a Cause	
	indicating an appropriate cause value	
Comments:	Preamble action: E-RAB Setup is excha	
	succeed, and a handover procedure is in	nitiated

TP_S1AP_ENB_TRP_03	Standards Reference:	PICS item:
	Clauses 8.10.4.2 and 9.1.18	PICS A.3/9.4
Summary:	Verify that the IUT can send a CELL_TR	RAFFIC_TRACE when the conditions
	required for tracing are met	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate the conditions required for tracing are met,	
	sends a CELL_TRAFFIC_TRACE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-UTRAN_Trace_ID	
	containing an E-UTRAN_CGI	
	containing a PLMN_Identity	
	containing a Cell_Identity	
	containing a Trace_Collection_E	ntity_IP_Address
Comments:	Preamble action: E-RAB Setup is excha	nged

# 5.2.2.1.11 Location reporting group

TP_S1AP_ENB_LRP_01	Standards Reference:	PICS item:
	Clauses 8.11.1.2 ¶ 2 (1st dashed	PICS A.3/10.1 and A.3/10.3
	line), 9.1.12.1, 9.1.12.3, 9.2.1.16,	
	9.2.1.34 and 9.2.1.38	
Summary:	Verify that the IUT can process all mand	
		containing Event Type IE indicating Directly
	and sends a LOCATION_REPORT	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a LOCATION_REPOR	RTING_CONTROL
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Request_Type	
	containing an Event_Type	
	indicating Directly	
	containing a Report_Area	
	indicating ECGI	
	sends a LOCATION_REPORT	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing an E-UTRAN_CGI	
	containing a PLMN_Identity	
	containing a Cell_Identity	
	containing a TAI	
	containing a PLMN_Identity	
	containing a TAC	
	containing a Request_Type	
	containing a Event_Type containing a Report_Area	
Comments:		ngod
Comments.	Preamble action: E-RAB Setup is excha	ngeu

TP_S1AP_ENB_LRP_02	Standards Reference:	PICS item:	
	Clauses 8.11.1.2 ¶ 2 (2 <sup>nd</sup> dashed	PICS A.3/10.1 and A.3/10.3	
	line), 9.1.12.1, 9.1.12.3, 9.2.1.16,		
	9.2.1.34 and 9.2.1.38		
Summary:	Verify that the IUT can process all mand		
		containing Event Type IE indicating Change	
	of service cell and sends a LOCATION_	REPORT	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a LOCATION_REPOR		
	containing an MME_UE_S1AP_I		
	•	containing an eNB_UE_S1AP_ID	
	containing a Request_Type		
	containing a Event_Type		
	indicating change_of_service_cell		
	containing a Report_Area		
	indicating ECGI when UE changes to new cell		
	sends a LOCATION_REPORT		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing arrend_ole_stat _ic	,	
	containing a TAI		
	containing a PLMN_Identity		
	containing a TAC		
	containing a Request_Type		
	containing a Event_Type		
	containing a Report_Area		
Comments:	Preamble action: E-RAB Setup is excha	nged	

TP_S1AP_ENB_LRP_03	Standards Reference:	PICS item:
	Clauses 8.11.1.2 ¶ 2 (3 <sup>rd</sup> dashed	PICS A.3/10.1 and A.3/10.3
	line), 9.1.12.1, 9.1.12.3, 9.2.1.16,	
	9.2.1.34 and 9.2.1.38	
Summary:	Verify that the IUT can process all mand	
		containing Event Type IE indicating Stop
	change of service cell and sends a LOC	ATION_REPORT
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a LOCATION_REPOR	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a Request_Type	
	containing a Event_Type	
	indicating stop_change_of_service_cell	
	containing a Report_Area	
	indicating ECGI	
	when UE stop reporting at change of serving cell	
	sends a LOCATION_REPORT	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing a E-UTRAN_CGI containing a TAI	
	containing a TAI  containing a PLMN_Identity	
	containing a T EMIN_identity	
	containing a TAC	
	containing a Request_Type	
	containing a Report_Area	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_LRP_04	Standards Reference:	PICS item:
	Clauses 8.11.2.2 ¶ 1 and 9.1.12.2	PICS A.3/10.1 and A.3/10.2
Summary:	Verify that the IUT can send a LOCATIC	N REPORT_FAILURE_INDICATION
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a LOCATION_REPOR	RTING_CONTROL
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	containing a Request_Type	
	containing a Event_Type	
	containing a Report_Area	
	sends a LOCATION_REPORT_FAI	LURE_INDICATION
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate cau	se value
Comments:	Preamble action: E-RAB Setup is excha	nged, and a handover procedure is initiated

# 5.2.2.1.12 Warning message transmission group

TP_S1AP_ENB_WTP_01	Standards Reference:	PICS item:
	Clauses 8.12.1.2 ¶ 1, 9.1.13.1 and	PICS A.3/11.1
	9.1.13.2	
Summary:	Verify that the IUT can successfully proc	cess all mandatory IEs in a
	WRITE-REPLACE_WARNING_REQUE	ST received and sends a
	WRITE-REPLACE_WARNING_RESPO	NSE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an WRITE-REPLACE_WARNING_REQUEST	
	containing a Message_Identifier	
	containing a Serial_Number	
	containing a Repetition Period	
	containing an Number_of_Broadcasts_Requested	
	sends an WRITE-REPLACE_WARNING_RESPONSE	
	containing a Serial_Number	
Comments:		

TP_S1AP_ENB_WTP_02	Standards Reference:	PICS item:
	Clauses 8.12.2.2 ¶ 1, 3, 9.1.13.3 and	PICS A.3/11.2
	9.1.13.4	
Summary:	Verify that the IUT can successfully proc	ess all mandatory IEs in an
	KILL_REQUEST received and sends a I	KILL_RESPONSE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a KILL_REQUEST	
	containing a Message_Identifier	
	containing a Serial_Number	
	sends a KILL_RESPONSE	
	containing a Message_Identifier	
	containing a Serial_Number	
Comments:	Preamble action: A warning message pr	ocedure is exchanged

TP_S1AP_ENB_WTP_03	Standards Reference:	PICS item:
	Clauses 8.12.3.2 and 9.1.13.5	PICS A.3/11.3
Summary:	Verify that the IUT can send a PWS_RE	START_INDICATION to indicate a PWS
	Restart Indication procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a PWS Restart Indication procedure,	
	sends a PWS_RESTART_INDICATION	
	containing an E-CGI_List_for_Restart	
	indicating a valid list of E-CGI	
	containing a Global_eNB_ID	
	containing a TAI_List_for_Restart	
	indicating a valid list of eNB identifier	
	containing an Emergency_Area_ID_List_for_Restart	
	indicating an empty list	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_WTP_04	Standards Reference:	PICS item:
	Clauses 8.12.4.2 and 9.1.13.6	PICS A.3/11.4
Summary:	Verify that the IUT can send a PWS_FA	ILURE_INDICATION to indicate PWS
	Failure Indication procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a PWS Failure Indication procedure,	
	sends a PWS_FAILURE_INDICATI	
	containing a PWS failed E-CGI L	ist
	indicating a valid list of E-CGI	
	containing a Global_eNB_ID	
Comments:		

## 5.2.2.1.13 eNB direct information transfer group

TP_S1AP_ENB_EIT_01	Standards Reference:	PICS item:
	Clauses 8.13.2.1, 9.1.14 and 9.2.3.23	PICS A.3/12
Summary:	Verify that the IUT can send an ENB_DI	RECT_INFORMATION_TRANSFER to
	indicate an eNB Direct Information Trans	sfer procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an eNB Direct Information Transfer procedure,	
	sends an ENB_DIRECT_INFORMATION_TRANSFER	
	containing an Inter-system_Information_Transfer_Type	
	containing a RIM	
	containing a RIM_Transfer	
	containing a RIM_Information	
	containing a RIM_Routing_Address	
Comments:		

## 5.2.2.1.14 MME direct information transfer group

Void.

#### 5.2.2.1.15 eNB configuration transfer group

TP_S1AP_ENB_ECT_01	Standards Reference:	PICS item:
	Clauses 8.15.2.1 and 9.1.16	PICS A.3/14
Summary:	Verify that the IUT can send an ENB_CO	ONFIGURATION_TRANSFER to indicate an
	eNB Configuration Transfer procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an eNB Configuration Transfer procedure,	
	sends an ENB_CONFIGURATION_TRANSFER	
	containing a SON_Configuration_Transfer	
	containing a Target_eNB-ID	
	containing a Source_eNB-ID	
	containing a SON_Information	
	containing a SON_Information_Request	
	indicating X2TNL_Configuration_Info	
	containing an X2_TNL_Configuration_Info	
Comments:		

## 5.2.2.1.16 MME configuration transfer group

Void.

#### 5.2.2.1.17 LPPa transport group

TP_S1AP_ENB_LPP_01	Standards Reference:	PICS item:
	Clauses 8.17.2.2 and 9.1.19.2	PICS A.3/16.2
Summary:	Verify that the IUT can send a UPLINK_	UE_ASSOCIATED_LPPA_TRANSPORT to
	indicate a LPPa Transport procedure us	ing a UE associated signalling
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a LPPa Transport procedure using a UE associated signalling,	
	sends a UPLINK_UE_ASSOCIATED_LPPA_TRANSPORT	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Routing_ID	
	indicating a valid routing identifier value	
	containing an LPPa-PDU	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_ENB_LPP_02	Standards Reference:	PICS item:
	Clauses 8.17.2.4 and 9.1.19.4	PICS A.3/16.4
Summary:	Verify that the IUT can send a	
	UPLINK_NON_UE_ASSOCIATED_LPP	A_TRANSPORT to indicate a LPPa
	Transport procedure using a non-UE as	sociated signalling
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a LPPa Transport procedure using a non-UE associated signalling,	
	sends a UPLINK_NON_UE_ASSO	CIATED_LPPA_TRANSPORT
	containing a Routing_ID	
	indicating a valid routing iden	tifier value
	containing an LPPa-PDU	
Comments:		

# 5.2.2.1.18 Unknown, Unforseen and Erroneous Protocol Data group

TP_S1AP_ENB_ERR_01	Standards Reference:	PICS item:
	Clause 10.3.4.1 ¶ 8	PICS A.3/2.1, A.3/6.2.2 and A.3/17.2
Summary:	Verify that the IUT rejects the procedure using Error Indication Procedure if the	
	message contains different types of received criticality information of the Procedure	
		, Triggering Message IE and Procedure
	Criticality IE in the Criticality Diagnostics	IE within ERROR_INDICATION
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEX	
	with Criticality set to value from Table	
	containing an MME UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing a NAS-PDU	
	containing a UE_Security_Capabilities	
	containing an Encription_Algorithms	
	indicating not supported a	
	containing an Integrity_Protect	ction_Algorithms
	containing a Security_Key	
	sends an ERROR_INDICATION	
	containing a Criticality_Diagnosti	
	containing a Procedure_Code	
	containing a Triggering_Message	
0	containing a Procedure_Critic	ашу
Comments:		

**Table 4: Criticality values** 

Test purpose variants	Criticality values:
VA_01	Ignore
VA_02	Notify

	Clause 10.3.4.2 ¶ 3 (1st dashed line) and 13	PICS A.3/2.1, NOT A.3/6.2.2 and A.3/17
Summary:	Verify that the IUT rejects the procedure if the message contains not comprehended	
	IEs/IE groups marked with 'Reject IE' or 'Ignore IE and Notify Sender' and include	
	Information Element Criticality Diagnostics IE in the Criticality Diagnostics IE for	
	each reported IEs/IE groups within the r	esponse message for this procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEX	
	containing an MME UE_S1AP_II	
	containing an eNB_UE_S1AP_ID	)
	containing an Unknown_ID	
	containing Criticality indicating Reject or Ignore	and Natify Sandar
	containing a UE_Aggregate_Max	
	containing a DE_Aggregate_Max	
	containing an E-RAB_to_be_	
	containing an E-RAB_ID	Cotap nom 1
	containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	.,, =
	containing a NAS-PDU	
	containing a UE_Security_Capat	pilities
	containing an Encription_Algo	
	indicating not supported a	
	containing an Integrity_Protection_Algorithms	
	containing a Security_Key	
	sends an INITIAL_CONTEXT_SETUP_FAILURE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	10
	indicating appropriate Protoco	
	containing a Criticality_Diagnosti	
	containing an Information Ele containing an IE_Criticalit	
	containing an IE_Childain	у
	containing an IE_ID containing an IE_Type_of_Error	
Comments:	containing an 12_1ypc_or	

TP_S1AP_ENB_ERR_03	Standards Reference:	PICS item:
	Clause 10.3.4.2 ¶ 4 (2 <sup>nd</sup> dashed line)	PICS A.3/1.1, A.3/6.2.2 and A.3/17.2
0	and 14  Verify that the IUT rejects the procedure using Error Indication Procedure if the	
Summary:		
	message contains not comprehended IE	e Procedure Code IE, Triggering Message IE
		tion Element Criticality Diagnostics IE in the
	Criticality Diagnostics IE for each reporte	
	ERROR_INDICATION	od 120/12 groups within
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing an Unknown_ID	
	containing Criticality	131 27 0 1
	indicating Reject or Ignore and Notify Sender	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1 containing an E-RAB_ID	
	containing an E-RAB_ID  containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5	
	containing a Transport_La	aver Address
	containing a GTP-TEID	
	containing a NAS-PDU	
	sends an ERROR_INDICATION	
	containing a Criticality_Diagnostic	cs
	containing a Procedure_Code	9
	containing a Triggering_Mess	sage
	containing a Procedure_Critic	
	containing an Information Ele	
	containing an IE_Criticality	у
	containing an IE_ID	
Comments	containing an IE_Type_of	_ELLOL
Comments:	<u> </u>	

TP_S1AP_ENB_ERR_04	Standards Reference:	PICS item:	
	Clause 10.3.5 ¶ 3 (1st dashed line) and 13	PICS A.3/2.1, NOT A.3/6.2.2 and A.3/17	
Summary:		e if the message not contains mandatory	
	IEs/IE groups and include Information E		
	Criticality Diagnostics IE for each reported IEs/IE groups within the response		
0	message for this procedure		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT	T OFTUR REQUEST	
	on receipt of an INITIAL_CONTEX	<del>-</del>	
	containing an MME UE_S1AP_II not containing an eNB_UE_S1A		
	containing all eNB_UE_STA		
	containing a CE_Aggregate_Maz		
	containing an E-RAB to be		
	containing an E-RAB_ID	- Comp nom .	
	containing an E-RAB_Lev	vel_QoS_Parameters	
	containing a Transport_Layer_Address		
	containing a GTP-TEID		
	containing a NAS-PDU		
	containing a UE_Security_Capabilities		
	containing an Encription_Algorithms		
	indicating not supported algorithm containing an Integrity_Protection_Algorithms		
	containing an Integrity_Protection_Algorithms containing a Security_Key		
	sends an INITIAL_CONTEXT_SETUP_FAILURE		
	containing an MME_UE_S1AP_ID		
	containing an MME_UE_STAP_ID  containing an eNB_UE_S1AP_ID		
	containing a Cause		
	indicating appropriate Protocol Cause		
	containing a Criticality_Diagnostics		
	containing an Information Ele		
		containing an IE_Criticality	
	containing an IE_ID		
	containing an IE_Type_of_Error		
Comments:			

TP_S1AP_ENB_ERR_05	Standards Reference: Clause 10.3.5 ¶ 4 (2 <sup>nd</sup> dashed line)	PICS item: PICS A.3/1.1, A.3/6.2.2 and A.3/17.2
	and 14	
Summary:	Verify that the IUT rejects the procedure	
	message not contains mandatory IEs/IE groups and include Procedure Code IE, Triggering Message IE and Procedure Criticality IE and Information Element	
	Criticality Diagnostics IE in the Criticality Diagnostics IE for each reported IEs/IE groups within ERROR_INDICATION	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	EQUEST
	containing an MME_UE_S1AP_I	D
	not containing an eNB_UE_S1A	
	containing an E-RAB_to_be_Set	up_List
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5 containing a Transport_Layer_Address	
		ayer_Address
	containing a GTP-TEID	
	containing a NAS-PDU	
	sends an ERROR_INDICATION	
	containing a Criticality_Diagnostic	
	containing a Frocedure_Code	
	containing a Procedure_Critic	
	containing an Information Ele	
	containing an IE Criticality	
	containing an IE_ID	J
	containing an IE_Type_of	Error
Comments:	<u> </u>	

TP_S1AP_ENB_ERR_06	Standards Reference:	PICS item:
	Clause 10.3.6 ¶ 2 (1st dashed line)	
Summary:	Verify that the IUT rejects the procedure if the message contains too many	
	occurrences of the same IEs/IE groups with the response message for this	
	1.	bstract Syntax Error(Falsely Constructed
	Message)'	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an INITIAL_CONTEX	
	containing an MME UE_S1AP_II	
	containing an eNB_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	` ' '
	containing a UE_Aggregate_Max	
	containing an E-RAB_to_be_Set	
	containing an E-RAB_to_be_	Setup Item 1
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address	
	containing a GTP-TEID containing a NAS-PDU	
	containing a WAS-PDO  containing a UE_Security_Capabilities	
	containing a DE_Security_Capabilities  containing an Encription Algorithms	
	indicating not supported algorithm	
	containing an Integrity_Protection_Algorithms	
	containing an integrity_Frotection_Algorithms  containing a Security_Key	
	sends an INITIAL_CONTEXT_SETUP_FAILURE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_I	
	containing a Cause	
	indicating 'Abstract Syntax Error(Falsely Constructed Message)'	
Comments:		<u> </u>

TP_S1AP_ENB_ERR_07	Standards Reference:	PICS item:
	Clause 10.3.5 ¶ 3 (2 <sup>nd</sup> dashed line)	PICS A.3/1.1, A.3/6.2.2 and A.3/17.2
Summary:	Verify that the IUT terminates the procedure that does not have a message to report	
		e contains too many occurrences of the same
	IEs/IE groups and initiate Error Indicatio	
	Syntax Error(Falsely Constructed Messa	age)'
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a NAS-PDU	
	sends an ERROR_INDICATION containing a Cause	
	· ·	ror(Falsely Constructed Message)'
Comments:	Indicating Abstract Syntax Er	Torti discry Constructed Message
Comments.	T .	

TP_S1AP_ENB_ERR_08	Standards Reference:	PICS item:
	Clause 10.3.6 ¶ 2	PICS A.3/1.1, A.3/6.2.2 and A.3/17
Summary:	Verify that the IUT initiate an Error Indication procedure with inclusion of only the	
	previously received AP ID from the peer	node and appropriate cause value in case if
	AP ID has been stored previously for an	other UE-associated logical connection for
	same peer node	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_SETUP_R	EQUEST
	containing an MME_UE_S1AP_ID	
	indicating already used AP ID	)
	containing an eNB_UE_S1AP_ID	
	indicating already used AP ID	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing a NAS-PDU	
	sends an ERROR_INDICATION	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
		ly allocated eNB UE S1AP ID'
Comments:	Preamble action: E-RAB Setup is excha	nged

## 5.2.2.2 MME Role

#### 5.2.2.2.1 Test selection

The IUT takes the role of the MME; PICS A.2/2.

# 5.2.2.2.2 E-RAB management group

TP_S1AP_MME_RAB_01	Standards Reference:	PICS item:
	Clauses 8.2.1.2 and 9.1.3.1	PICS A.4/1.1
Summary:	Verify that the IUT can send an E-RAB_	SETUP_REQUEST with at least one
	E-RAB IE to indicate an E-RAB Setup p	rocedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an E-RAB Setup proced	
	sends an E-RAB_SETUP_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing a NAS-PDU	
Comments:		

TP_S1AP_MME_RAB_02	Standards Reference:	PICS item:	
	Clauses 8.2.2.2 and 9.1.3.3	PICS A.4/1.2	
Summary:	Verify that the IUT can send an E-RAB_	MODIFY_REQUEST with at least one	
	E-RAB IE to indicate an E-RAB Modify p	procedure	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	to indicate an E-RAB Modify proced	dure,	
	sends an E-RAB_MODIFY_REQUEST		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_to_be_Mod	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_	Modified Item 1	
	containing an E-RAB_ID		
	containing an E-RAB_Level_QoS_Parameters		
	containing a QCI		
	indicating value 5		
	containing a NAS-PDU		
Comments:	Preamble action: E-RAB Setup is excha	nged	

TP_S1AP_MME_RAB_03	Standards Reference:	PICS item:
	Clauses 8.2.3.2 and 9.1.3.5	PICS A.4/1.3
Summary:	Verify that the IUT can send an E-RAB_	RELEASE_COMMAND with at least one
	E-RAB IE to indicate an E-RAB Release	procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an E-RAB Release procedure,	
	sends an E-RAB_RELEASE_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Released_List	
	containing an E-RAB_to_be_Released Item 1	
	containing an E-RAB_ID	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_MME_RAB_04	Standards Reference:	PICS item:
	Clauses 8.2.4.2 (1st dashed line in	PICS A.4/1.4
	1 <sup>st</sup> dashed list),	
	9.1.3.8 and 9.1.3.9	
Summary:	Verify that the IUT can successfully prod	ess all mandatory IEs in an
	E-RAB_MODIFICATION_INDICATION	received due to E-RAB Modification
	Indication procedure and send E-RAB_N	MODIFICATION_CONFIRM with
	successfully modified E-RABs included	n the E-RAB_Modified_List IE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICATION_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a DL_GTP-TEID	
	sends an E-RAB_MODIFICATION_CONFIRM	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Modify_Lis	
	containing an E-RAB_Modify Item 1	
	containing an E-RAB_ID	
Comments:	Preamble action: E-RAB Setup is exchanged	

TP_S1AP_MME_RAB_05	Standards Reference:	PICS item:
	Clauses 8.2.4.2 (2 <sup>nd</sup> dashed line in	PICS A.4/1.4
	1 <sup>st</sup> dashed list),	
	9.1.3.8 and 9.1.3.9	
Summary:	Verify that the IUT after receiving an E-F	RAB_MODIFICATION_INDICATION with
	failed E-RAB sends an E-RAB_MODIFI	CATION_CONFIRM with
	E-RAB_Failed_to_Modify_List	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICA	ATION_INDICATION
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing a Transport_La	
	indicating not acceptal	
	containing a DL_GTP-TEI	
	sends an E-RAB_MODIFICATION_	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Failed_to_Modify_List	
	containing an E-RAB_Failed_to_Modify Item 1	
	containing an E-RAB_ID	
	containing a Cause	Pesource Unavailable' or
	indicating 'Transport Resource Unavailable' or indicating 'Unspecified'	
Comments:	Preamble action: E-RAB Setup is excha	

TP_S1AP_MME_RAB_06	Standards Reference:	PICS item:	
	Clauses 8.2.4.2 (3rd dashed line in	PICS A.4/1.5	
	1 <sup>st</sup> dashed list),		
	9.1.3.8 and 9.1.3.9		
Summary:	Verify that the IUT after receiving an E-F	RAB_MODIFICATION_INDICATION with	
	E-RAB sends an E-RAB_MODIFICATION	N_CONFIRM with	
	E-RAB_to_be_Released_List		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of an E-RAB_MODIFICA	ATION_INDICATION	
	containing an MME_UE_S1AP_I	D	
	containing an eNB_UE_S1AP_ID	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Modified_List		
	containing an E-RAB_to_be_Modified Item 1		
	containing an E-RAB_ID		
	containing a Transport_Layer_Address		
	containing a DL_GTP-TEI	D	
	sends an E-RAB_MODIFICATION_		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
		containing an E-RAB_to_be_Released_List	
	containing an E-RAB_to_be_Released Item 1		
	containing an E-RAB_ID		
	containing a Cause		
	indicating an appropriate value		
Comments:	Preamble action: E-RAB Setup is exchanged		

TP_S1AP_MME_RAB_07	Standards Reference:	PICS item:
	Clauses 8.2.4.2 ¶ 11,	PICS A.4/1.5
	9.1.3.8 and 9.1.3.9	
Summary:	Verify that the IUT can successfully prod	cess CSG Membership Info IE in an
	E-RAB_MODIFICATION_INDICATION	received due to E-RAB Modification
	Indication procedure and send E-RAB_I	MODIFICATION_CONFIRM with CSG
	Membership Status IE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICA	ATION_INDICATION
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing a Transport_La	
	containing a DL_GTP-TE	
	containing a CSG_Membership_	
	containing a CSG_Membership_Status	
	containing a CSG_Id	
	sends an E-RAB_MODIFICATION_CONFIRM	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_Modify_Lis	
	containing an E-RAB_Modify	item i
	containing an E-RAB_ID	
Comments	containing a CSG_Membership_Info	
Comments:	Preamble action: E-RAB Setup is excha	ngea

TP_S1AP_MME_RAB_08	Standards Reference: Clauses 8.2.4.4 ¶ 1, 2, 9.1.3.8 and 9.1.3.9	PICS item: PICS A.4/1.5
Summany.	0111010 0111010	with UE Contact Dalages Degrees
Summary:	Verify that the IUT in case of interaction with UE Context Release Request	
	procedure on receipt of an E-RAB_MODIFICATION_INDICATION which does not	
	contain all the RABs previously included in the UE context the IUT triggers the UE	
Configuration	context release procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	TION INDICATION
	on receipt of an E-RAB_MODIFICA	<del>-</del>
	containing an MME_UE_S1AP_I containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	
	containing <b>only one</b> E-RAB_to_be_Modified Item 1 containing an E-RAB_ID	
	containing an E-NAB_ID  containing a Transport_Layer_Address	
	containing a Pt_Insport_Eayor_Nauroos	
	sends an E-RAB MODIFICATION	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing an E-RAB_to_be_Rele	eased_List
	containing an E-RAB_to_be_	Released Item 1
	containing an E-RAB_ID	
	containing a Cause	
	indicating an appropria	ate value.
	sends a UE_CONTEXT_RELEASE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating an appropriate valu	
Comments:		ETUP_REQUEST containing at least two
	E-RABs and INITIAL_CONTEXT_SETU	P_RESPONSE are exchanged

TP_S1AP_MME_RAB_09	Standards Reference:	PICS item:
	Clauses 8.2.4.4 ¶ 1, 3, 9.1.3.8 and 9.1.3.9	PICS A.4/1.5
Summary:	Verify that the IUT in case of interaction with UE Context Release Request	
	procedure on receipt of an E-RAB_MOD	DIFICATION_INDICATION containing several
	E-RAB ID IEs set to the same value the	IUT triggers the UE context release
	procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICA	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_	Modified Item 1
	containing an E-RAB_ID	
	indicating value A	
	containing a Transport_La	
	containing a DL_GTP-TEID	
	containing an E-RAB_to_be_Modified Item 2	
	containing an E-RAB_ID	
	indicating value A	
	containing a Transport_La	
	containing a DL_GTP-TEI	
	sends an E-RAB_MODIFICATION_	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Released_List	
	containing an E-RAB_to_be_	Released Item 1
	containing an E-RAB_ID	
	indicating value A	
	containing a Cause	
	indicating an appropria	
	sends a UE_CONTEXT_RELEASE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
_	indicating an appropriate valu	
Comments:		ETUP_REQUEST containing at least two
	E-RABs and INITIAL_CONTEXT_SETU	P_RESPONSE are exchanged

TP_S1AP_MME_RAB_10	Standards Reference:	PICS item:
	Clauses 8.2.4.4 ¶ 1, 4,	PICS A.4/1.5
	9.1.3.8 and 9.1.3.9	
Summary:	Verify that the IUT in case of interaction with UE Context Release Request	
	procedure on receipt of an E-RAB_MODIFICATION_INDICATION containing CSG	
	membership Info IE and does not contain the Cell Access Mode IE set to "hybrid"	
	then the IUT triggers the UE Context Release procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICA	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_	Modified Item 1
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a DL_GTP-TEID	
	containing a CSG_Membership_Info	
	containing a CSG_Membership_Status	
	containing a CSG_ld	
	containing a Cell_Access_Mo	ode
	not indicating "hybrid"	
	sends an E-RAB_MODIFICATION_	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_IE	
	containing an E-RAB_to_be_Released_List	
	containing an E-RAB_to_be_Released Item 1	
	containing an E-RAB_ID	
	containing a Cause	
	indicating an appropria	
	sends a UE_CONTEXT_RELEASE	
	(containing an MME_UE_S1AP_	טו <b>or</b>
	containing a UE_S1AP_ID_pair)	
	containing a Cause	
Comments	indicating an appropriate valu	
Comments:	Preamble action: E-RAB_Setup is excha	
	Postamble action: IUT receives UE_Cor	ntext_Release_Complete

# 5.2.2.2.3 Context management group

TP_S1AP_MME_CMP_01	Standards Reference:	PICS item:
	Clauses 8.3.1.2 and 9.1.4.1	PICS A.4/2.1
Summary:	Verify that the IUT can send an INITIAL	_CONTEXT_SETUP_REQUEST with at
	least one E-RAB IE to indicate the Initial	Context Setup procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an Initial Context Setup	procedure,
	sends an INITIAL_CONTEXT_SET	UP_REQUEST
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a UE_Aggregate_Maximum_Bit_Rate	
	containing an E-RAB_to_be_Setup_List	
	containing an E-RAB_to_be_Setup Item 1	
	containing an E-RAB_ID	
	containing an E-RAB_Level_QoS_Parameters	
	containing QCI	
	indicating value 5	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing a UE_Security_Capabilities	
	containing a Security_Key	
Comments:		

TP_S1AP_MME_CMP_02	Standards Reference:	PICS item:
	Clauses 8.3.2.2 ¶ 3, 4, 8.3.3.2,	PICS A.4/2.2
	9.1.4.5 and 9.1.4.6	
Summary:	Verify that the IUT after received UE_CO	ONTEXT_RELEASE_REQUEST sends
	UE_CONTEXT_RELEASE_COMMAND	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RELEASE_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating value from Table 3	
	sends a UE_CONTEXT_RELEASE_COMMAND	
	(containing an MME_UE_S1AP_ID <b>or</b>	
	containing a UE_S1AP_ID_pair)	
	containing a Cause	
	indicating an appropriate valu	ie
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged
	Postamble action: IUT receives Context	Release Complete

TP_S1AP_MME_CMP_03	Standards Reference:	PICS item:
	Clauses 8.3.4.2 and 9.1.4.8	PICS A.4/2.4
Summary:	Verify that the IUT is able to send a UE_	CONTEXT_MODIFICATION_REQUEST to
	partly modify the established UE Contex	t
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a UE Context Modification procedure,	
	sends a UE_CONTEXT_MODIFICATION_REQUEST	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a UE_Aggregate_Max	rimum_Bit_Rate
Comments:	Preamble action: Initial Context Setup p	rocedure is exchanged

TP_S1AP_MME_CMP_04	Standards Reference:	PICS item:
	Clauses 8.3.5.1 and 9.1.4.11	PICS A.4/2.5
Summary:	Verify that the IUT is able to send a UE_	RADIO_CAPABILITY_MATCH_REQUEST
	to indicate UE Radio Capability Match p	rocedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a UE Radio Capability Match procedure,	
	sends a UE_RADIO_CAPABILITY_	MATCH_REQUEST
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
Comments:		

TP_S1AP_MME_CMP_05	Standards Reference:	PICS item:
	Clauses 8.3.6.2,	PICS A.4/2.6
	9.1.4.13 and 9.1.4.14	
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in a
	UE_CONTEXT_MODIFICATION_INDIC	CATION received due to UE Context
	Modification Indication procedure and se	end
	UE_CONTEXT_MODIFICATION_CONF	FIRM
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_MO	DIFICATION_INDICATION
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	sends a UE_CONTEXT_MODIFICATION_CONFIRM	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
Comments:	Preamble action: Initial Context setup is	exchanged

TP_S1AP_MME_CMP_06	Standards Reference:	PICS item:
	Clauses 8.3.6.2 ¶ 1,	PICS A.4/2.6
	9.1.4.13 and 9.1.4.14	
Summary:	Verify that the IUT can successfully prod	cess CSG Membership Info IE in a
	UE_CONTEXT_MODIFICATION_INDIC	CATION received due to UE Context
	Modification Procedure and send UE_C	ONTEXT_MODIFICATION_CONFIRM with
	CSG Membership Status IE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_MODIFICATION_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing a CSG_Membership_	
	containing a CSG_Membership_Status	
	containing a CSG_ld	
	sends a UE_CONTEXT_MODIFICATION_CONFIRM	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	containing a CSG_Membership_	Info
Comments:	Preamble action: Initial Context setup is	exchanged

TP_S1AP_MME_CMP_07	Standards Reference:	PICS item:	
IT _STAT _WINE_SWIT_ST	Clauses 8.3.6.2, 8.3.6.4,	PICS A.4/2.6	
	9.1.4.6 and 9.1.4.13	1100 A.4/2.0	
Summary:	Verify that the IUT in case of interaction	with LE Contact Polosco procedure on	
Summary.	receipt of a UE_CONTEXT_MODIFICAT		
		Cell Access Mode IE set to "hybrid" the IUT	
	triggers the UE Context Release proced		
Configuration		uie	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT	DIFICATION INDICATION	
	on receipt of a UE_CONTEXT_MO		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID		
	containing a CSG_Membership_		
	containing a CSG_Membership_Status		
	containing a CSG_ld		
	containing a Cell_Access_Mo	ode	
	not indicating "hybrid"	TION CONFIDM	
	sends a UE_CONTEXT_MODIFICA		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
		sends a UE_CONTEXT_RELEASE_COMMAND	
	(containing an MME_UE_S1AP_	טו <b>or</b>	
	containing a UE_S1AP_ID_pair)		
	containing a Cause		
	indicating an appropriate value		
Comments:	Preamble action: Initial Context setup is		
	Postamble action: IUT receives Context	Release Complete	

TP_S1AP_MME_CMP_08	Standards Reference:	PICS item:
	Clauses 8.3.7.2,	PICS A.4/2.7
	9.1.4.15 and 9.1.4.16	
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in a
	UE_CONTEXT_SUSPEND_REQUEST	received due to UE Context Suspend
	procedure and send UE_CONTEXT_SU	JSPEND_RESPONSE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_SUSPEND_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	sends a UE_CONTEXT_SUSPEND_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
Comments:	Preamble action: Initial Context setup is	exchanged

TP_S1AP_MME_CMP_09	Standards Reference:	PICS item:
	Clauses 8.3.8.2,	PICS A.4/2.8
	9.1.4.17 and 9.1.4.18	
Summary:	Verify that the IUT can successfully prod	
	UE_CONTEXT_RESUME_REQUEST r	
	procedure and sends UE_CONTEXT_R	ESUME_RESPONSE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RESUME_REQUEST	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	sends a UE_CONTEXT_RESUME_RESPONSE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
Comments:	Preamble action: Initial Context setup is	exchanged

TP_S1AP_MME_CMP_10	Standards Reference:	PICS item:	
	Clauses 8.3.8.3,	PICS A.4/2.8	
	9.1.4.17 and 9.1.4.19		
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in a	
	UE_CONTEXT_RESUME_REQUEST re	eceived due to UE Context Resume	
	procedure and sends UE_CONTEXT_R	ESUME_FAILURE if the IUT is not able to	
	resume a single E-RAB		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a UE_CONTEXT_RES	on receipt of a UE_CONTEXT_RESUME_REQUEST	
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Failed_to_Resume_List		
	containing an E-RAB_Failed_to_Resume_Item 1		
	containing an E-RAB_ID		
	containing a Cause		
	indicating an appropriate value.		
	sends a UE_CONTEXT_RESUME_	FAILURE	
	containing an MME_UE_S1AP_I	D	
	containing an eNB_UE_S1AP_ID	)	
	containing a Cause		
Comments:	Preamble action: Initial Context setup is	exchanged	

TP_S1AP_MME_CMP_11	Standards Reference:	PICS item:
	Clauses 8.3.9.2 and 9.1.4.20	PICS A.4/2.9
Summary:	Verify that the IUT is able to send a	
	CONNECTION_ESTABLISHMENT_IND	DICATION to indicate Connection
	Establishment Indication procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Connection Establishment Indication procedure,	
	sends a CONNECTION_ESTABLISHMENT_INDICATION	
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
Comments:		·

## 5.2.2.2.4 Handover signalling group

TP_S1AP_MME_HAS_01	Standards Reference:	PICS item:	
	Clauses 8.4.1.2 ¶ 2,	PICS A.4/3.1	
	9.1.5.1 and 9.1.5.2		
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in a	
	HANDOVER_REQUIRED request conta		
	received due to Handover Preparation p	rocedure and sends	
	HANDOVER_COMMAND		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a HANDOVER_REQU	IIRED	
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID	)	
	containing a Handover_Type		
	indicating IntraLTE		
	containing a Cause		
	containing a Target ID		
	containing a Target eNB-ID		
	containing a Global eNB_ID		
	containing a Selected_TAI		
	containing a Source_to_Target_	Fransparent_Container	
	sends a HANDOVER_COMMAND		
	containing an MME_UE_S1AP_I		
	containing an eNB_UE_S1AP_ID	)	
	containing a Handover_Type		
	indicating IntraLTE		
_	containing a Target_to_Source_1	Fransparent_Container	
Comments:			

TP S1AP MME HAS 02	Standards Reference:	PICS item:
	Clauses 8.4.1.2 ¶ 3, 7,	PICS A.4/3.1
	9.1.5.1 and 9.1.5.2,	
	ETSI TS 125 413 [7],	
	clauses 9.2.1.28 and 9.2.1.30	
Summary:	Verify that the IUT can successfully prod	
		aining Handover Type IE with LTEtoUTRAN
	received due to Handover Preparation p	procedure and sends
	HANDOVER_COMMAND	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_REQU	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Handover_Type	
	indicating LTEtoUTRAN	
	containing a Cause	
	containing a Target ID	
	containing a Target RNC_ID	
	containing a LAI	
	containing a RNC_ID containing a Source_to_Target_Transparent_Container	
		_Tansparent_Container _Target RNC_Transparent_Container
	indicating a UE History Information sends a HANDOVER_COMMAND	
	containing an MME_UE_S1AP_I	n
	containing an eNB_UE_S1AP_ID	
	containing a Handover_Type	
	indicating LTEtoUTRAN	
	containing a NAS_Security_Para	meters from E-UTRAN
	containing a Target_to_Source_Transparent_Container	
	containing a Target RNC_to_Source RNC_Transparent_Container	
Comments:	<b>5 5</b> – –	

Clauses 8.4.1.2 ¶ 3, 7,	TP_S1AP_MME_HAS_03	Standards Reference:	PICS item:
Summary:  Verify that the IUT can successfully process all mandatory IEs in a HANDOVER_REQUIRED request containing Handover Type IE with LTEtoGERAN received due to Handover Preparation procedure and sends HANDOVER_COMMAND  Configuration:  CF_S1-MME  Test purpose:  Ensure that the IUT  on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing a eNB_UE_S1AP_ID  containing a Cause  containing a Cause  containing a PLMN_Identity  containing a CI  containing a PLMN_Identity  containing a CI  containing a Source_to_Target_Transparent_Container  sends a HANDOVER_COMMAND  containing a NME_UE_S1AP_ID  containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a HANDOVER_COTRAINE  containing a Target_To_Source_Transparent_Container		Clauses 8.4.1.2 ¶ 3, 7,	PICS A.4/3.1
Summary:  Verify that the IUT can successfully process all mandatory IEs in a HANDOVER_REQUIRED request containing Handover Type IE with LTEtoGERAN received due to Handover Preparation procedure and sends HANDOVER_COMMAND  Configuration:  CF_S1-MME  Test purpose:  Ensure that the IUT  on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing a PB_UE_S1AP_ID  containing a Cause  containing a Target ID  containing a CGI  containing a PLMN_Identity  containing a CI  containing a Source_to_Target_Transparent_Container  containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing an MME_UE_S1AP_ID  containing an MME_UE_S1AP_ID  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a Handover_Type  indicating LTEtoGERAN  containing a Target_to_Source_Transparent_Container		9.1.5.1 and 9.1.5.2,	
Summary:  Verify that the IUT can successfully process all mandatory IEs in a HANDOVER_REQUIRED request containing Handover Type IE with LTEtoGERAN received due to Handover Preparation procedure and sends HANDOVER_COMMAND  Configuration:  CF_S1-MME  Test purpose:  Ensure that the IUT  on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing an eNB_UE_S1AP_ID  containing a Cause  containing a Target ID  containing a PLMN_Identity  containing a LAC  containing a Source_to_Target_Transparent_Container  containing a Source BSS_to_Tansparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing an MME_UE_S1AP_ID  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a Handover_Type  indicating LTETOGERAN  containing a NAS_Security_Parameters_from_E-UTRAN  containing a Target_to_Source_Transparent_Container			
HANDOVER_REQUIRED request containing Handover Type IE with LTEtoGERAN received due to Handover Preparation procedure and sends HANDOVER_COMMAND  Configuration: CF_S1-MME  Test purpose: Ensure that the IUT  on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a Cause  containing a Target ID  containing a PLMN_Identity  containing a PLMN_Identity  containing a CI  containing a Source_to_Target_Transparent_Container  containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing a NME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a NAS_Security_Parameters_from_E-UTRAN  containing a Target_to_Source_Transparent_Container		311131 1 11010 0	
received due to Handover Preparation procedure and sends HANDOVER_COMMAND  Configuration:  CF_S1-MME  Ensure that the IUT  on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a Cause  containing a CGI  containing a PLMN_Identity  containing a CI  containing a Source_to_Target_Transparent_Container  containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing a HANDOVER_S1AP_ID  containing a HANDOVER_SECURITY_PARAMETERS_FROM_E-UTRAN  containing a Target_to_Source_Transparent_Container	Summary:		
HANDOVER_COMMAND  Configuration: CF_S1-MME  Test purpose: Ensure that the IUT			
Configuration:  CF_S1-MME  Ensure that the IUT  on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a Cause  containing a CGI  containing a PLMN_Identity  containing a LAC  containing a Source_to_Target_Transparent_Container  containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing an eNB_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a NAS_Security_Parameters_from_E-UTRAN  containing a Target_to_Source_Transparent_Container			rocedure and sends
Test purpose:  Ensure that the IUT on receipt of a HANDOVER_REQUIRED containing an MME_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a Cause containing a CGI containing a PLMN_Identity containing a LAC containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
on receipt of a HANDOVER_REQUIRED  containing an MME_UE_S1AP_ID  containing an eNB_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a Cause  containing a CGI  containing a PLMN_Identity  containing a LAC  containing a CI  containing a Source_to_Target_Transparent_Container  containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a NAS_Security_Parameters_from_E-UTRAN  containing a Target_to_Source_Transparent_Container		CF_S1-MME	
containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a Cause containing a Target ID containing a PLMN_Identity containing a PLMN_Identity containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container	Test purpose:		
containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a Cause containing a Target ID containing a PLMN_Identity containing a LAC containing a CI containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Tansparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container		-	
containing a Handover_Type     indicating LTEtoGERAN     containing a Cause     containing a Target ID         containing a PLMN_Identity         containing a LAC         containing a CI     containing a Source_to_Target_Transparent_Container     containing a Source BSS_to_Target BSS_Transparent_Container     sends a HANDOVER_COMMAND     containing an MME_UE_S1AP_ID     containing an eNB_UE_S1AP_ID     containing a Handover_Type     indicating LTEtoGERAN     containing a NAS_Security_Parameters_from_E-UTRAN     containing a Target_to_Source_Transparent_Container		3 = = =	
indicating LTEtoGERAN containing a Cause containing a Target ID containing a PLMN_Identity containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			)
containing a Cause containing a Target ID containing a CGI containing a PLMN_Identity containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing a Target ID containing a CGI containing a PLMN_Identity containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing a CGI containing a PLMN_Identity containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing a PLMN_Identity containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing a LAC containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing a CI containing a Source_to_Target_Transparent_Container containing a Source BSS_to_Target BSS_Transparent_Container sends a HANDOVER_COMMAND containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			ty
containing a Source_to_Target_Transparent_Container			
containing a Source BSS_to_Target BSS_Transparent_Container  sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing an eNB_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a NAS_Security_Parameters_from_E-UTRAN  containing a Target_to_Source_Transparent_Container		9	
sends a HANDOVER_COMMAND  containing an MME_UE_S1AP_ID  containing an eNB_UE_S1AP_ID  containing a Handover_Type  indicating LTEtoGERAN  containing a NAS_Security_Parameters_from_E-UTRAN  containing a Target_to_Source_Transparent_Container			
containing an MME_UE_S1AP_ID containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing an eNB_UE_S1AP_ID containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			D
containing a Handover_Type indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
indicating LTEtoGERAN containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			)
containing a NAS_Security_Parameters_from_E-UTRAN containing a Target_to_Source_Transparent_Container			
containing a Target_to_Source_Transparent_Container			meters from F-LITRAN
		containing a Target_to_Source_Transparent_Container	
Comments:	Comments:	containing a raiget boo_to_	Course Doc_Transparent_Container

TP_S1AP_MME_HAS_04	Standards Reference: Clauses 8.4.1.2 ¶ 12,	PICS item: PICS A.4/3.1 and A.4/3.2
	9.1.5.1 and 9.1.5.2	FIGS A.4/3.1 and A.4/3.2
Summary:		OOVER_REQUIRED request containing the
		t to'hybrid' due to Handover Preparation
	1	nbership status of UE and the CSG_ld to the
O and income the man	target side	
Configuration:	CF_2S1-MME	
Test purpose:	Ensure that the IUT	IIDED from course aND
	on receipt of a HANDOVER_REQU	
	containing an MME_UE_S1AP_I containing an eNB_UE_S1AP_I	
	containing an eNB_0E_3TAF_IL	,
	indicating IntraLTE	
	containing a Cause	
	containing a Caddo	
	containing a Target eNB-ID	
	containing a Global eNB_	ID
	containing a Selected_TA	
	containing a Source_to_Target_1	Transparent_Container
	containing a CSG_Id	
	containing a Cell_Access_Mode	
	indicating 'hybrid'	
	sends a HANDOVER_COMMAND to source eNB	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing a Handover_Type	
	indicating IntraLTE	Francharent Container
	containing a Target_to_Source_Transparent_Container sends a HANDOVER_REQUEST to target eNB	
	containing an MME_UE_S1AP_ID	
	containing art www.Z_CZ_STAL_I	D .
	containing a Flandover_Type	
	containing a UE Aggregate Maxii	mum Bit Rate
	containing an E-RABs_To_Be_S	
	containing an E-RABs_To_Be	
	containing an E-RAB_ID	
	containing a Transport_La	ayer_Address
	containing a GTP-TEID	
	containing an E-RAB_Lev	
	containing a Source_to_Target_1	
	containing a UE_Security_Capak	DIIITIES
	containing a Security_Context	
	containing a CSG_ld containing a Cell_Access_Mode	
Comments:	Containing a Cell_Access_Mode	
Comments:	<u> </u>	

TP_S1AP_MME_HAS_05	Standards Reference:	PICS item:	
	Clauses 8.4.1.2 (1st dashed line in	PICS A.4/3.1	
	1 <sup>st</sup> and 3 <sup>rd</sup> dashed list),		
	9.1.5.1 and 9.1.5.2		
Summary:	Verify that the IUT in case the SRVCC operation is performed and the SRVCC HO		
	Indication IE in the HANDOVER_REQUIRED message indicates that handover is		
	prepared only for CS domain and the target system is GERAN the IUT sends		
	appropriate HANDOVER_COMMAND message		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a HANDOVER_REQUIRED		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating LTEtoGERAN		
	containing a Cause		
	containing a Target ID		
	containing a CGI		
	containing a PLMN_Identity		
	containing a LAC		
	containing a CI		
	containing a SRVCC_HO_Indication		
	indicating CS only		
	containing a Source_to_Target_Transparent_Container		
	containing a Old BSS_to_New BSS_Information		
	not containing a Source_to_Target_Transparent_Container_Secondary		
	sends a HANDOVER_COMMAND		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID	)	
	containing a Handover_Type		
	indicating LTEtoGERAN		
	containing a NAS_Security_Para		
	containing a Target_to_Source_		
	containing a Layer_3_Informa		
0.0000000000000000000000000000000000000	not containing a rarget_to_Sour	ce_Transparent_Container_Secondary	
Comments:			

TP_S1AP_MME_HAS_06	Standards Reference:	PICS item:	
	Clauses 8.4.1.2 (2 <sup>nd</sup> dashed line in	PICS A.4/3.1	
	1 <sup>st</sup> and 3 <sup>rd</sup> dashed list),		
	9.1.5.1 and 9.1.5.2		
Summary:	Verify that the IUT in case the SRVCC operation is performed and the SRVCC HO		
	Indication IE in the HANDOVER_REQUIRED message indicates that handover is		
	prepared only for CS domain and the target system is UTRAN the IUT sends		
	appropriate HANDOVER_COMMAND message		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a HANDOVER_REQUIRED		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating LTEtoUTRAN		
	containing a Cause		
	containing a Target ID		
	containing a Target RNC_ID		
	containing a LAI		
	containing a RNC_ID containing a SRVCC_HO_Indication		
	indicating CS only		
	containing a Source_to_Target_Transparent_Container		
	containing a Source_IO_Target_Transparent_Container		
	indicating a UE_History_Information		
	not containing a Source_to_Target_Transparent_Container_Secondary		
	sends a HANDOVER_COMMAND		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating LTEtoUTRAN		
	containing a NAS_Security_Para		
	containing a Target_to_Source_1		
		SourceRNC_Transparent_Container	
_	not containing a Target_to_Sour	ce_Transparent_Container_Secondary	
Comments:			

TP_S1AP_MME_HAS_07	Standards Reference:	PICS item:	
	Clauses 8.4.1.2 (1st dashed line in	PICS A.4/3.1	
	2 <sup>nd</sup> and 4 <sup>th</sup> dashed list),		
_	9.1.5.1 and 9.1.5.2		
Summary:	Verify that the IUT in case the SRVCC operation is performed and the SRVCC HO		
	Indication IE in the HANDOVER_REQUIRED message indicates that handover is		
	prepared for PS and CS domain and the target system is GERAN with DTM HO		
	support and the Handover Preparation procedure has succeeded in the CS and PS		
0	the IUT sends appropriate HANDOVER_COMMAND message		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a HANDOVER_REQUIRED		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating LTEtoGERAN		
	containing a Cause containing a Target ID		
	containing a Target ID		
	containing a CGI containing a PLMN_Identity		
	containing a Figure 1 containing a Figure 1 containing a LAC		
	containing a EAC		
	containing a SRVCC_HO_Indication		
	indicating PS and CS		
	containing a Source_to_Target_Transparent_Container		
	containing a SourceBSS_to_Target BSS_Transparent_Container		
	containing a Source_to_Target_Transparent_Container_Secondary		
	containing a Old BSS_to_New BSS_Information		
sends a HANDOVER_COMMAND			
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing a Handover_Type		
	indicating LTEtoGERAN		
	containing a NAS_Security_Para		
	containing a Target_to_Source_Transparent_Container		
	containing a Layer_3_Information containing a Target_to_Source_Transparent_Container_Secondary		
Comments	containing a rargetBSS_t0_S	Source BSS_Transparent_Container	
Comments:			

TP_S1AP_MME_HAS_08	Standards Reference:	PICS item:
	Clauses 8.4.1.2 (2 <sup>nd</sup> dashed line in	PICS A.4/3.1
	2 <sup>nd</sup> and 4 <sup>th</sup> dashed list),	
	9.1.5.1 and 9.1.5.2	
Summary:		peration is performed and the SRVCC HO
		IRED message indicates that handover is
	prepared for PS and CS domain and the target system is UTRAN the IUT sends	
	appropriate HANDOVER_COMMAND n	nessage
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_REQU	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Handover_Type	
	indicating LTEtoUTRAN	
	containing a Cause	
	containing a Target ID	
	containing a Target RNC_ID	
	containing a LAI containing a RNC_ID	
	containing a RNC_ID containing a SRVCC_HO_Indica	tion
	indicating PS and CS	
	containing a Source_to_Target_	Francharent Container
		TargetRNC_Transparent_Container
	indicating a UE_History_Information	
		get_Transparent_Container_Secondary
	sends a HANDOVER_COMMAND	, <u>_</u> ,
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	)
	containing a Handover_Type	
	indicating LTEtoUTRAN	
	containing a NAS_Security_Para	meters_from_E-UTRAN
	containing a Target_to_Source_	
	containing a TargetRNC_to_SourceRNC_Transparent_Container	
	not containing a Target_to_Sour	ce_Transparent_Container_Secondary
Comments:		

TP_S1AP_MME_HAS_09	Standards Reference:	PICS item:
	Clauses 8.4.1.3 ¶ 2,	PICS A.4/3.1
	9.1.5.1 and 9.1.5.2	
Summary:		PREPARATION_FAILURE if the CSE Id IE
		ed in the HANDOVER_REQUIRED message
	and the access control is unsuccessful a	and none of the E-RABs has particular ARP
	value	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_REQU	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a Handover_Type	
	indicating IntraLTE	
	containing a Cause	
	containing a Target ID containing a Target eNB-ID	
	containing a Target eNB-ID  containing a Global eNB_ID	
	containing a Global eNB_ID  containing a Selected_TAI	
	containing a Source_to_Target_ containing a CSG Id	rransparent_Container
	not containing a CSG id	ode
	sends a HANDOVER_PREPARATI	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_IE	
	containing an CNB_CL_CTAT _IL	
	indicating an appropriate cau	se value
Comments:	Preamble action: E-RAB Setup is excha	

TP_S1AP_MME_HAS_10	Standards Reference:	PICS item:
	Clauses 8.4.2.2 and 9.1.5.4	PICS A.4/3.2
Summary:	Verify that the IUT is able to send a HAN	NDOVER_REQUEST message containing
	Handover Type IE to indicate Handover	Resource Allocation procedure
Configuration:	CF_S1-MME	·
Test purpose:	Ensure that the IUT	
	to indicate a Handover Resource Al	llocation procedure
	sends a HANDOVER_REQUEST	
	containing an MME_UE_S1AP_I	D
	containing a Handover_Type	
	containing a Cause	
	containing a UE Aggregate Maximum Bit Rate	
	containing an E-RABs_To_Be_Setup_List	
	containing an E-RABs_To_Be_Setup_Item1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a GTP-TEID	
	containing an E-RAB_Lev	rel_QoS_Parameters
	containing a Source_to_Target_1	Fransparent_Container
	containing a UE_Security_Capat	pilities
	containing a Security_Context	
Comments:		

TP_S1AP_MME_HAS_11	Standards Reference:	PICS item:
	Clauses 8.4.4.2 ¶ 3 and 9.1.5.9	PICS A.4/3.4
Summary:	Verify that the IUT can successfully produced	cess all mandatory IEs in a
	PATH_SWITCH_REQUEST message re	eceived due to Path Switch Request
	procedure and sends PATH_SWITCH_F	REQUEST_ACKNOWLEDGE
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a PATH_SWITCH_RE	QUEST
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_To_Be_Switched_in_Downlink_List	
	containing an E-RABs_Switched_in_Downlink_Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_address	
	containing a GTP-TEID	
	containing a Source_MME_UE_S1AP_ID	
	containing an E-UTRAN_CGI	
	containing a TAI	
	containing a UE_Security_Capabilities	
	sends a PATH_SWITCH_REQUEST_ACKNOWLEDGE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Security_Context	
Comments:		

TP_S1AP_MME_HAS_12	Standards Reference:	PICS item:
	Clauses 8.4.4.3 ¶ 1 and 9.1.5.10	PICS A.4/3.4
Summary:	Verify that the IUT in case if EPC fails to switch the downlink GTP tunnel endpoints	
	toward a new GTP tunnel endpoint for a	II E-RABs included in the E-
	RAB_To_Be_Switched _in_Downlink_Li	ist IE during the execution of Path Switch
	Request procedure the IUT sends PATH	I_SWITCH_REQUEST_FAILURE with an
	appropriate cause value	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a PATH_SWITCH_RE	QUEST
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_To_Be_Switched_in_Downlink_List	
	containing an E-RABs_Switched_in_Downlink_Item 1	
	containing an E-RAB_ID	
	containing a Transport_La	ayer_address
	containing a GTP-TEID	
	containing a Source_MME_UE_S	S1AP_ID
	containing an E-UTRAN_CGI	
	containing a TAI	
	containing a UE_Security_Capabilities	
	sends a PATH_SWITCH_REQUES	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate caus	se value
Comments:		

TP_S1AP_MME_HAS_13	Standards Reference:	PICS item:
	Clauses 8.4.4.4 ¶ 1 and 9.1.5.10	PICS A.4/3.4
Summary:	Verify that the IUT receives a PATH_SWITCH_REQUEST message containing	
	several E-RAB ID IEs set to the same value the IUT sends the	
	PATH_SWITCH_REQUEST_FAILURE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a PATH_SWITCH_REQUEST	
	containing an eNB_UE_S1AP_ID	
	containing an E-RAB_To_Be_Sw	
	containing an E-RABs_Switched_in_Downlink_Item 1	
	containing an E-RAB_ID	
	indicating_value A	
	containing a Transport_Layer_address	
	containing a GTP-TEID	
	containing an E-RABs_Switched_in_Downlink_Item 2	
	containing an E-RAB_ID	
	indicating value A	
	containing a Transport_Layer_address	
	containing a GTP-TEID	244B IB
	containing a Source_MME_UE_S	S1AP_ID
	containing an E-UTRAN_CGI	
	containing a TAI	
	containing a UE_Security_Capat	
	sends a PATH_SWITCH_REQUEST_FAILURE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
Comments	indicating an appropriate caus	se value
Comments:		

TP_S1AP_MME_HAS_14	Standards Reference:	PICS item:
	Clauses 8.4.4.4 ¶ 2 and 9.1.5.10	PICS A.4/3.4
Summary:	Verify that the IUT receives a PATH_SWITCH_REQUEST message without CSG	
	Membership Status IE and without CSG	Id IE the IUT sends the
	PATH_SWITCH_REQUEST_FAILURE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a PATH_SWITCH_RE	QUEST
	containing an eNB_UE_S1AP_ID	)
	containing an E-RAB_To_Be_Sw	
	containing an E-RABs_Switched_in_Downlink_Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_address	
	containing a GTP-TEID	
	containing a Source_MME_UE_S1AP_ID	
	containing an E-UTRAN_CGI	
	containing a TAI	
	containing a UE_Security_Capabilities	
	not containing a CSG_Membership_Status	
	not containing a CSG_ID	
	sends a PATH_SWITCH_REQUEST_FAILURE	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate caus	se value
Comments:		

TP_S1AP_MME_HAS_15	Standards Reference:	PICS item:
	Clauses 8.4.5.2 ¶ 3 and 9.1.5.11	PICS A.4/3.5
Summary:	Verify that the IUT can successfully proc	
	HANDOVER_CANCEL message received due to Handover Cancel procedure and sends HANDOVER_CANCEL_ACKNOWLEDGE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a HANDOVER_CANCEL	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	
	indicating an appropriate cause value	
	sends a HANDOVER_CANCEL_ACKNOWLEDGE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
Comments:	Preamble action: Handover Preparation	procedure started

TP_S1AP_MME_HAS_16	Standards Reference:	PICS item:
	Clauses 8.4.7.2 ¶ 1, 9.1.5.14 and	PICS A.4/3.7
	9.2.1.31 and 9.2.1.32	
Summary:	Verify that the IUT is able to send an MME_STATUS_TRANSFER message to	
	indicate MME Status Transfer procedure	9
Configuration:	CF_2S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an eNB_STATUS_TR	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate caus	
	containing an eNB_Status_Trans	
	containing an E-RAB_Subject	
	containing an E-RAB_Subject_to_Status_Transfer_Item 1	
	containing an E-RAB_ID	
	containing a UL_Count_Value	
	containing a PDCP-SN	
	containing an HFN	
	containing a DL_Coun	
	sends an MME_STATUS_TRANSF containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing an eNB_OE_STAP_ID containing an eNB_Status_Transfer_Transparent_Container	
	containing an eNB_Status_Hans	
		i_to_Status_Transfer_List bject_to_Status_Transfer_Item 1
	containing an E-RAB_out	
	containing an E-NAB_	
	containing a CL_Oodin	
	containing at 1501	
	containing a DL_Coun	
Comments:	Preamble action: Handover Preparation	

## 5.2.2.5 Paging group

TP_S1AP_MME_PAG_01	Standards Reference:	PICS item:
	Clauses 8.5.2 ¶ 1 and 9.1.6	PICS A.4/4
Summary:	Verify that the IUT can send a PAGING	to indicate a Paging procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Paging procedure,	
	sends a PAGING	
	containing a UE_Identity_Index_v	value
	containing a UE_Paging_Identity	
	containing a S-TMSI	
	containing an IMSI	
	containing a CN_Domain	
Comments:	Preamble action: E-RAB Setup is excha	nged

# 5.2.2.2.6 NAS transport group

TP_S1AP_MME_NAS_01	Standards Reference:	PICS item:
	Clauses 8.6.2.2 ¶ 1 and 9.1.7.2	PICS A.4/5.2
Summary:	Verify that the IUT can send a DOWNLII	NK_NAS_TRANSPORT to indicate an
	ongoing NAS Transport procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an ongoing NAS Transport procedure,	
	sends a DOWNLINK_NAS_TRANSPORT	
	containing an MME UE S1AP ID	
	containing an eNB_UE_S1AP_ID	
	containing a NAS-PDU	
Comments:	Preamble action: E-RAB Setup is excha	nged, and a NAS procedure is initiated

TP_S1AP_MME_NAS_02	Standards Reference:	PICS item:
	Clauses 8.6.2.5 ¶ 1 and 9.1.7.5	PICS A.4/5.5
Summary:	Verify that the IUT can send a REROUT	E_NAS_REQUEST to indicate a Reroute
	NAS Request procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Reroute NAS Request procedure,	
	sends a REROUTE_NAS_REQUEST	
	containing an eNB_UE_S1AP_ID	
	containing a S1_Message	
	containing an MME_Group_ID	
Comments:	Preamble action: E-RAB Setup is excha	nged, and a NAS procedure is initiated

## 5.2.2.2.7 Management group

TP_S1AP_MME_MNP_01	Standards Reference:	PICS item:
	Clauses 8.7.1.2.1 ¶ 2, 9.1.8.1 and 9.1.8.2	PICS A.4/6.1.2
Summary:		o indicate a Reset procedure initiated from
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT  to indicate a Reset procedure initiated from the MME, sends a RESET  containing a Cause indicating an appropriate cause value containing a Reset_Type containing a S1_Interface indicating a value 'Reset all'	
Comments:	_	

TP_S1AP_MME_MNP_02	Standards Reference:	PICS item:
	Clauses 8.7.1.2.2 ¶ 1, 9.1.8.1 and	PICS A.4/6.1.1
	9.1.8.2	
Summary:	Verify that the IUT can send process su	ccessfully all mandatory IEs in a RESET and
	sends a RESET_ACKNOWLEDGE due	to a Reset procedure initiated from the
	E-UTRAN	·
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a RESET	
	containing a Cause	
	indicating an appropriate cause value	
	containing a Reset_Type	
	containing an S1_Interface	
	indicating value 'Reset_all'	
	sends a RESET_ACKNOWLEDGE	
	containing a UE-associated_logic	cal_S1-connection_list
Comments:		_

TP_S1AP_MME_MNP_03	Standards Reference:	PICS item:
	Clauses 8.7.1.3.2 ¶ 1, 9.1.8.1 and	PICS A.4/6.1.1
	9.1.8.2	
Summary:	Verify that the IUT can successfully all n	nandatory IEs in a RESET and sends a
	RESET_ACKNOWLEDGE due to a Res	set procedure in case of Abnormal Condition
	at the EPC	·
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a RESET	
	containing a Cause	
	indicating an appropriate cause value	
	containing a Reset_Type	
	containing a Part_of_S1_interface	
	indicating an empty 'UE-associated_logical_S1-connection'	
	sends a RESET_ACKNOWLEDGE	
	containing a UE-associated_logic	cal_S1-connection_list
		ssociated_logical_S1-connection'
Comments:		

TP_S1AP_MME_MNP_04	Standards Reference:	PICS item:
	Clauses 8.7.2.2 and 9.1.8.3	PICS A.4/6.2.2
Summary:	Verify that the IUT can send an ERROR	_INDICATION due to an Error Indication
	procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an Error Indication procedure,	
	sends an ERROR_INDICATION	
	(containing a Cause	
	or containing a Criticality_Diagno	stics)
Comments:		

TP_S1AP_MME_MNP_05	Standards Reference:	PICS item:
	Clauses 8.7.3.2 ¶ 1, 9.1.8.4 and	PICS A.4/6.3
	9.1.8.5	
Summary:		latory IEs in a S1_SETUP_REQUEST and
	sends a S1_SETUP_RESPONSE to inc	licate a S1 Setup procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a S1_SETUP_REQUEST	
	containing a Global_eNB_ID	
	containing a Supported_TAs	
	containing a TAC	
	containing a Default_Paging_DR	X
	sends a S1_SETUP_RESPONSE	
Comments:		_

TP_S1AP_MME_MNP_06	Standards Reference:	PICS item:
	Clauses 8.7.3.2 ¶ 1, 9.1.8.4 and	PICS A.4/6.3
	9.1.8.6	
Summary:	Verify that the IUT can process all mand	latory IEs in a S1_SETUP_REQUEST and
	sends a S1_SETUP_FAILURE to indica	te an invalid S1 Setup procedure due to an
	unknown PLMN identities	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a S1_SETUP_REQUEST	
	containing a Global_eNB_ID	
	containing a Supported_TAs	
	containing a TAC	
	containing a Broadcast_PLMNs	
	indicating at least one unknown PLMN identity	
	sends a S1_SETUP_FAILURE	
	containing a Cause	
	indicating the cause value 'Ur	nknown PLMN
Comments:		

TP_S1AP_MME_MNP_07	Standards Reference:	PICS item:
	Clauses 8.7.4.2 ¶ 1, 9.1.8.7 and	PICS A.4/6.4
	9.1.8.8	
Summary:	Verify that the IUT can process all mand	latory IEs in an
	ENB_CONFIGURATION_UPDATE and	sends an
	ENB_CONFIGURATION_UPDATE_AC	KNOWLEDGE to indicate an eNB
	Configuration Update procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an ENB_CONFIGURATION_UPDATE	
	containing a Global_eNB_ID	
	containing a Supported_TAs	
	containing a TAC	
	sends an ENB_CONFIGURATION_	_UPDATE_ACKNOWLEDGE
Comments:		_

TP_S1AP_MME_MNP_08	Standards Reference:	PICS item:
	Clauses 8.7.3.2 ¶ 1, 9.1.8.7 and	PICS A.4/6.4
	9.1.8.9	
Summary:	Verify that the IUT can process all mand	latory IEs in an
	ENB_CONFIGURATION_UPDATE and	
	ENB_CONFIGURATION_UPDATE_FAI	
	Configuration Update procedure due to	an invalid Global eNB identifier
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an ENB_CONFIGURATION_UPDATE	
	containing a Global_eNB_ID	
	indicating an invalid value	
	sends an ENB_CONFIGURATION_UPDATE_FAILURE	
	containing a Cause	
	indicating an appropriate cau	se value
Comments:		

TP_S1AP_MME_MNP_09	Standards Reference:	PICS item:
	Clauses 8.7.4.2 ¶ 1 and 9.1.8.10	PICS A.4/6.5
Summary:	Verify that the IUT can send an ENB_CO	ONFIGURATION_UPDATE to indicate an
	eNB Configuration Update procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an eNB Configuration Update procedure,	
	sends an ENB_CONFIGURATION_UPDATE	
	containing a Global_eNB_ID	
	containing a Supported_TAs	
	containing a TAC	
Comments:		

TP_S1AP_MME_MNP_10	Standards Reference:	PICS item:
	Clauses 8.7.6.2 ¶ 1 and 9.1.8.13	PICS A.4/6.6
Summary:	Verify that the IUT can send an OVERLO procedure	OAD_START to indicate an Overload Start
0	,	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an Overload Start procedure,	
	sends an OVERLOAD_START	
	containing an Overload_Response	
Comments:		

TP_S1AP_MME_MNP_11	Standards Reference:	PICS item:
	Clauses 8.7.7.2 ¶ 1 and 9.1.8.14	PICS A.4/6.7
Summary:	Verify that the IUT can send an OVERLO	OAD_STOP to indicate an Overload Stop
	procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an Overload Stop procedure,	
	sends an OVERLOAD_STOP	
Comments:	Preamble action: an Overload Start procedure is exchanged	

## 5.2.2.2.8 S1 CDMA 2000 tunnelling group

TP_S1AP_MME_STP_01	Standards Reference:	PICS item:
	Clauses 8.8.2.1 ¶ 1 and 9.1.9.1	PICS A.4/7.1
Summary:	Verify that the IUT can send a DOWNLII	NK_S1_CDMA2000_TUNNELLING
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a CDMA2000 signalling event,	
	sends a DOWNLINK_S1_CDMA2000_TUNNELLING	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	not containing an E-RABs_Subject_to_Forwarding_Lis	
	containing a CDMA2000_HO_typ	oe e
	containing a CDMA2000_PDU	
Comments:	Preamble action: E-RAB Setup is excha	nged

# 5.2.2.2.9 UE capability info indication group

Void.

# 5.2.2.2.10 Trace group

TP_S1AP_MME_TRP_01	Standards Reference:	PICS item:
	Clauses 8.10.1.2 ¶ 1, 9.1.11.1 and	PICS A.4/9.1
	9.2.1.4	
Summary:	Verify that the IUT can send a TRACE_S	START message to indicate Trace Start
	procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Trace Start procedure,	
	sends a TRACE_START	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Trace_Activation	
	containing an E-UTRAN_Trace_ID	
	containing a Interfaces_To_Trace	
	indicating value 'S1-MME'	
	containing a Trace_depth	
	indicating value 'maximun	ו'
	containing a Trace_Collection	n_Entity_IP_Address
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_MME_TRP_02	Standards Reference:	PICS item:
	Clauses 8.10.1.2 ¶ 1 and 9.1.11.2	PICS A.4/9.3
Summary:	Verify that the IUT can successfully proc	ess all mandatory IEs in a
	DEACTIVATE_TRACE	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Deactivate Trace procedure,	
	sends a DEACTIVATE_TRACE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an E-UTRAN_Trace_ID	
	containing a Cause	
	indicating an appropriate cause value	
Comments:	Preamble action: E-RAB Setup is exchain	nged, and Trace Start procedure succeed

TP_S1AP_MME_TRP_03	Standards Reference:	PICS item:	
	Clauses 8.10.2.2, 9.1.11.1 and 9.1.11.2	PICS A.4/9.1 and A.4/9.2	
0	<u> </u>		
Summary:	Verify that the IUT can successfully prod	cess all mandatory IEs in a	
Configuration	TRACE_FAILURE_INDICATION		
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	to indicate a Trace Start procedure, sends a TRACE START		
	_	D	
	containing an MME_UE_S1AP_IC containing an eNB_UE_S1AP_IC		
		,	
	containing a Trace_Activation containing an E-UTRAN_Trace	containing a Trace_Activation	
	containing an E-OTRAN_Trace_ID  containing a Interfaces_To_Trace		
	indicating value 'S1-MME'		
	containing a Trace_depth		
	indicating value 'maximum'		
	containing a Trace_Collection		
	not containing MDT_Configur		
	on receipt a TRACE_FAILURE_IND		
	containing an MME_UE_S1AP_ID		
	containing an eNB_UE_S1AP_ID		
	containing an E-UTRAN_Trace_ID		
	containing a Cause		
		indicating an appropriate cause value	
	cancels the TRACE_START proce		
Comments:	Preamble action: E-RAB Setup is excha		
Note:	TP check if IUT is able to accept TRACE		
		ponse from IUT side. In case if this TP is not	
	reasonable in the meantime of validation	n it could be removed	

## 5.2.2.2.11 Location reporting group

TP_S1AP_MME_LRP_01	Standards Reference: Clauses 8.11.1.2 ¶ 1, 9.1.12.1, 9.1.12.3, 9.2.1.16, 9.2.1.34 and	PICS item: PICS A.4/10.1 and A.4/10.3
	9.2.1.38	
Summary:	Verify that the IUT can send a LOCATION	N_REPORTING_CONTROL
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Location Reporting Control procedure,	
	sends a LOCATION_REPORTING_CONTROL	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Request_Type	
	containing a Event_Type	
	containing a Report_Area	
	indicating ECGI	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_MME_LRP_02	Standards Reference:	PICS item:
	Clauses 8.11.2.2 ¶ 1, 9.1.12.1,	PICS A.4/10.1 and A.4/10.3
	9.1.12.3, 9.2.1.16, 9.2.1.34 and	
	9.2.1.38	
Summary:		N_REPORTING_CONTROL and process
	all mandatory IEs in a LOCATION REPO	DRT_FAILURE_INDICATION
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Location Reporting Co	ntrol procedure,
	sends a LOCATION_REPORTING_	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	
	containing a Request_Type	
	containing a Event_Type	
	indicating Directly	
	containing a Report_Area	
	indicating ECGI	
	receives a LOCATION_REPORT_FAILURE_INDICATION	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	
	indicating an appropriate cau	
Comments:		nged, and a Handover procedure is initiated
Note:	TP check if IUT is able to accept LOCAT	
		n to verify response from IUT side. In case if
	this TP is not reasonable in the meantime	ne of validation it could be removed

#### 5.2.2.2.12 Warning message transmission group

TP_S1AP_MME_WTP_01	Standards Reference:	PICS item:
	Clauses 8.12.1.2 ¶ 1, 9.1.13.1 and	PICS A.4/11.1
	9.1.13.2	
Summary:	Verify that the IUT can send a WRITE-R	EPLACE_WARNING_REQUEST to indicate
	a Warning Message Transmission proce	edure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a Warning Message Transmission procedure,	
	sends a WRITE-REPLACE_WARNING_REQUEST	
	containing a Message_Identifier	
	containing a Serial_Number	
	containing a Repetition Period	
	containing an Number_of_Broad	casts_Requested
Comments:	_	·

TP_S1AP_MME_WTP_02	Standards Reference:	PICS item:
	Clauses 8.12.2.2 ¶ 1, 9.1.13.3 and	PICS A.4/11.2
	9.1.13.4	
Summary:	Verify that the IUT can send a KILL_RE	QUEST to cancel an already ongoing
	broadcast of a Warning Message Transmission procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a cancellation of an ongoing Warning Message Transmission	
	procedure,	
	sends a KILL_REQUEST	
	containing a Message_Identifier	
	containing a Serial_Number	
Comments:	Preamble action: A warning message pr	ocedure is exchanged

# 5.2.2.2.13 eNB direct information transfer group

Void.

#### 5.2.2.2.14 MME direct information transfer group

TP_S1AP_MME_MIT_01	Standards Reference:	PICS item:
	Clauses 8.14.2.1, 9.1.15 and 9.2.3.23	PICS A.4/13
Summary:	Verify that the IUT can send an MME_D	IRECT_INFORMATION_TRANSFER to
	indicate an MME Direct Information Tran	nsfer procedure
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an MME Direct Information Transfer procedure,	
	sends an MME_DIRECT_INFORMATION_TRANSFER	
	containing an Inter-system_Information_Transfer_Type	
	containing a RIM	
	containing a RIM_Transfer	
	containing a RIM_Information	
Comments:		

# 5.2.2.2.15 eNB configuration transfer group

Void.

#### 5.2.2.2.16 MME configuration transfer group

TP_S1AP_MME_MCT_01	Standards Reference:	PICS item:
	Clauses 8.16.2.1 and 9.1.17	PICS A.4/15
Summary:	Verify that the IUT can send an MME_C	ONFIGURATION_TRANSFER to indicate an
	MME Configuration Transfer procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate an MME Configuration Transfer procedure,	
	sends an MME_CONFIGURATION_TRANSFER	
	containing a SON_Configuration_Transfer	
	containing a Target_eNB-ID	
	containing a Source_eNB-ID	
	containing a SON_Information	١
Comments:		

#### 5.2.2.2.17 LPPa transport group

TP_S1AP_MME_LPP_01	Standards Reference:	PICS item:
	Clauses 8.17.2.1 and 9.1.19.1	PICS A.4/16.1
Summary:	Verify that the IUT can send a	
		_TRANSPORT to indicate a LPPa Transport
	procedure using a UE associated signal	ling
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a LPPa Transport procedure using a UE associated signalling,	
	sends a DOWNLINK_UE_ASSOCIATED_LPPA_TRANSPORT	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Routing_ID	
	indicating a valid routing iden	tifier value
	containing an LPPa-PDU	
Comments:	Preamble action: E-RAB Setup is excha	nged

TP_S1AP_MME_LPP_02	Standards Reference:	PICS item:
	Clauses 8.17.2.3 and 9.1.19.3	PICS A.4/16.3
Summary:	Verify that the IUT can send a	
	DOWNLINK_NON_UE_ASSOCIATED_	LPPA_TRANSPORT to indicate a LPPa
	Transport procedure using a non-UE as	sociated signalling
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	to indicate a LPPa Transport proced	dure using a non-UE associated signalling,
	sends a DOWNLINK_NON_UE_AS	SOCIATED_LPPA_TRANSPORT
	containing a Routing_ID	
	indicating a valid routing iden	tifier value
	containing an LPPa-PDU	
Comments:		

# 5.2.2.2.18 Unknown, Unforseen and Erroneous Protocol Data group

TP_S1AP_MME_ERR_01	Standards Reference:	PICS item:	
	Clause 10.3.4.1 ¶ 8	PICS A.4/2.8, A.4/6.2.2 and A.4/17.2	
Summary:	Verify that the IUT rejects the procedure	using Error Indication Procedure if message	
	contains different types of received critic	cality information of the Procedure Code IE	
	and include Procedure Code IE, Trigger	ing Message IE and Procedure Criticality IE	
	in the Criticality Diagnostics IE within EF	RROR_INDICATION	
Configuration:	CF_S1-MME		
Test purpose:	Ensure that the IUT		
	on receipt of a UE_CONTEXT_RES	SUME_REQUEST	
	with Criticality set to value from Tabl	e 5	
		containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID		
	containing an E-RAB_Failed_to_Resume_List		
	containing an E-RAB_Failed_	to_Resume_Item 1	
	containing an E-RAB_ID		
	containing a Cause		
	indicating an appropria	ate value	
		sends an ERROR_INDICATION	
	containing a Criticality_Diagnosti		
	containing a Procedure_Code		
	containing a Triggering_Mess		
	containing a Procedure_Critic	•	
Comments:	Preamble action: Initial Context setup is	exchanged	

**Table 5: Criticality values** 

Test purpose variants	Criticality values	
VA_01	Ignore	
VA 02	Notify	

TP_S1AP_MME_ERR_02	Standards Reference:	PICS item:
	Clause 10.3.4.2 ¶ 3 (1st dashed line)	PICS A.4/2.8, NOT A.4/6.2.2 and A.4/17
	and 13	
Summary:	Verify that the IUT rejects the procedure if the message contains not comprehended	
		'Ignore IE and Notify Sender' and include
	Information Element Criticality Diagnostics IE in the Criticality Diagnostics IE for	
	each reported IEs/IE groups within the response message for this procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RES	<u> </u>
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing an Unknown_ID	
	containing Criticality	
	indicating Reject or Ignore and Notify Sender	
	containing an E-RAB_Failed_to_Resume_List	
	containing an E-RAB_Failed_	to_Resume_Item 1
	containing an E-RAB_ID	
	containing a Cause	
	indicating an appropria	
	sends a UE_CONTEXT_RESUME_	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause indicating appropriate Protoco	ol Cauco
	containing a Criticality_Diagnosti	
	containing a Criticality_blaghosti	
	containing an information Ele	
	containing an IE_ID	y
	containing an IE_Type_of	Error
Comments:	Preamble action: Initial Context setup is	

TP_S1AP_MME_ERR_03	Standards Reference:	PICS item:
	Clause 10.3.4.2 ¶ 4 (2 <sup>nd</sup> dashed line)	PICS A.4/1.4, A.4/6.2.2 and A.4/17.2
	and 14	
Summary:	Verify that the IUT rejects the procedure using Error Indication Procedure if the	
	message contains not comprehended IE	
		e Procedure Code IE, Triggering Message IE
	and Procedure Criticality IE and Information Element Criticality Diagnostics IE in the	
	Criticality Diagnostics IE for each report	ed IEs/IE groups within
	ERROR_INDICATION	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICA	
	containing an MME_UE_S1AP_I	
	containing an eNB_UE_S1AP_ID	)
	containing an Unknown_ID	
	containing Criticality	
	indicating Reject or Ignore	
	containing an E-RAB_to_be_Mod	
	containing an E-RAB_to_be_	Modified Item 1
	containing an E-RAB_ID	
	containing a Transport_La	
	containing a DL_GTP-TEI	ט
	sends an ERROR_INDICATION	
	containing a Criticality_Diagnosti	
	containing a Procedure_Code	
	containing a Triggering_Mess	
	containing a Procedure_Critic	
	containing an Information Ele	
	containing an IE_Criticalit	y
	containing an IE_ID	Error
Comments:	containing an IE_Type_of	
Comments:	Preamble action: E-RAB Setup is excha	ngea

TP_S1AP_MME_ERR_04	Standards Reference:	PICS item:
	Clause 10.3.5 ¶ 3 (1st dashed line)	PICS A.4/2.8, NOT A.4/6.2.2 and A.4/17
	and 13	
Summary:	Verify that the IUT rejects the procedure if the message not contains mandatory	
	IEs/IE groups and include Information Element Criticality Diagnostics IE in the	
	Criticality Diagnostics IE for each reported IEs/IE groups within the response	
	message for this procedure	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RES	
	containing an MME_UE_S1AP_I	
	not containing an eNB_UE_S1A	
	containing an E-RAB_Failed_to_Resume_List	
	containing an E-RAB_Failed_to_Resume_Item 1	
	containing an E-RAB_ID	
	containing a Cause	
	indicating an appropriate value	
	sends a UE_CONTEXT_RESUME_FAILURE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	)
	containing a Cause	-1.0
	indicating appropriate Protoco	
	containing a Criticality_Diagnostics	
	containing an Information Element Criticality_Diagnostics	
	containing an IE_Criticality	
	containing an IE_ID	
Comments	containing an IE_Type_of_Error	
Comments:	Preamble action: Initial Context setup is	exchanged

TP_S1AP_MME_ERR_05	Standards Reference:	PICS item:
	Clause 10.3.5 ¶ 4 (2 <sup>nd</sup> dashed line)	PICS A.4/1.4, A.4/6.2.2 and A.4/17.2
	and 14	
Summary:	Verify that the IUT rejects the procedure using Error Indication Procedure if the	
	message not contains mandatory IEs/IE groups and include Procedure Code IE,	
	Triggering Message IE and Procedure Criticality IE and Information Element	
	Criticality Diagnostics IE in the Criticality Diagnostics IE for each reported IEs/IE	
	groups within ERROR_INDICATION	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICA	
	containing an MME_UE_S1AP_I	
	not containing an eNB_UE_S1A	
	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing a Transport_Layer_Address	
	containing a DL_GTP-TEID	
	sends an ERROR_INDICATION	
	containing a Criticality_Diagnosti	
	containing a Procedure_Code	
	containing a Triggering_Mess	
	containing a Procedure_Criticality	
	containing an Information Element Criticality_Diagnostics	
	containing an IE_Criticality	
	containing an IE_ID	
Commonto	containing an IE_Type_of_Error	
Comments:	Preamble action: E-RAB Setup is excha	ngea

TP_S1AP_MME_ERR_06	Standards Reference:	PICS item:
	Clause 10.3.6 ¶ 2 (1st dashed line)	PICS A.4/2.8, NOT A.4/6.2.2 and A.4/17
Summary:	Verify that the IUT rejects the procedure if the message contains too many	
	occurrences of the same IEs/IE groups with the response message for this	
	procedure and report the cause value 'Abstract Syntax Error(Falsely Constructed	
	Message)'	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of a UE_CONTEXT_RES	SUME_REQUEST
	containing an MME_UE_S1AP_I	D
	containing an eNB_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID(same IE as already present)	
	containing an E-RAB_Failed_to_Resume_List	
	containing an E-RAB_Failed_to_Resume_Item 1	
	containing an E-RAB_ID	
	containing a Cause	
	indicating an appropria	
	sends a UE_CONTEXT_RESUME_FAILURE	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing a Cause	(5.1.1.0
	i	ror(Falsely Constructed Message)'
Comments:	Preamble action: Initial Context setup is	exchanged

TP_S1AP_MME_ERR_07	Standards Reference:	PICS item:
	Clause 10.3.6 ¶ 3 (2 <sup>nd</sup> dashed line)	PICS A.4/1.4, A.4/6.2.2 and A.4/17.2
Summary:	Verify that the IUT terminates the procedure that does not have a message to report	
		hat contains too many occurrences of the
	same IEs/IE groups and initiate Error Inc	
	'Abstract Syntax Error(Falsely Constructed Message)'	
Configuration:	CF_S1-MME	
Test purpose:	Ensure that the IUT	
	on receipt of an E-RAB_MODIFICATION_INDICATION	
	containing an MME_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID	
	containing an eNB_UE_S1AP_ID(same IE as already present)	
	containing an E-RAB_to_be_Modified_List	
	containing an E-RAB_to_be_Modified Item 1	
	containing an E-RAB_ID	
	containing a Transport_La	
	containing a DL_GTP-TEI	D
	sends an ERROR_INDICATION	
	containing a Cause	
	indicating 'Abstract Syntax Er	ror(Falsely Constructed Message)'
Comments:	Preamble action: E-RAB Setup is excha	nged

# History

Document history		
V1.1.1	July 2017	Publication