ETSI TS 186 010-2 V4.1.1 (2017-12)

TECHNICAL SPECIFICATION

**Core Network and Interoperability Testing (INT);
Conference (CONF) using IP Multimedia (IM)
Core Network (CN) subsystem;
Conformance test specification;
(3GPP™ Release 12);
Part 2: Test Suite Structure and Test Purposes (TSS&TP)**

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00   Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or
print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any
existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the
print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.
Information on the current status of this and other ETSI documents is available at
https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx

If you find errors in the present document, please send your comment to one of the following services:
https://portal.etsi.org/People/CommiteeSupportStaff.aspx

Copyright Notification

ETSI

Contents

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

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

The present document is part 2 of a multi-part deliverable covering the Conformance Test Specification of Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem, as identified below:

Part 1:   "Protocol Implementation Conformance Statement (PICS)";

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

Part 3:   "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

1   Scope

The present document provides the Implementation Conformance Statement (ICS) pro forma for the Conference (CONF) service based on stage one and two of the ISDN CONF supplementary service defined in ETSI TS 124 605 [1] in compliance with the relevant requirements

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.

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

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

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

[1]   ETSI TS 124 605 (V12.5.0) (04-2015): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.605 version 12.5.0 Release 12)".

[2]   ETSI TS 124 147: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3 (3GPP TS 24.147 Release 12)".

[3]   ETSI TS 186 010-1: "Core Network and Interoperability Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPP Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)".

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.

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

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.

[i.1]   ISO/IEC 9646-1: "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General concepts".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI TS 124 605 [1] and the following apply:

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

PICS pro forma: Refer to ISO/IEC 9646-1 [i.1].

Point of Control and Observation: Refer to ISO/IEC 9646-1 [i.1].

Protocol Implementation Conformance Statement (PICS): Refer to ISO/IEC 9646-1 [i.1].

System Under Test (SUT): Refer to ISO/IEC 9646-1 [i.1].

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

NOTE: This may contain additional information.

3.2 Symbols

For the purposes of the present document, the symbols given in ETSI TS 124 605 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI TS 124 605 [1] and the following apply:

CONF	CONFerence calling
IUT	Implementation Under Test
SUT	System Under Test
UE	User Equipment

4 Test Suite Structure (TSS) and configuration

4.1 Table of Test Suite Structure

Table 4.1-1: Test suite structure

ConferenceFocus		
	CreateConf	CONF_N01_xxx
	JoinConf	CONF_N02_xxx
	InviteToConf	CONF_N03_xxx
	LeaveConf	CONF_N04_xxx
	RemoveFromConf	CONF_N05_xxx
	TerminateConf	CONF_N06_xxx
UserEquipment		
		CONF_U01_xxx
Interaction		
	TIR	CONF_N08_xxx
	OIR	CONF_N09_xxx
	ACR-CB	CONF_N10_xxx

4.2 Configuration

4.2.0 Introduction

The scope of the present document is to test the signalling and procedural aspects of the stage 3 requirements as described in ETSI TS 124 605 [1]. The stage 3 description respects the requirements to several network entities and also to requirements regarding to end devices. Therefore several interfaces (reference points) are addressed to satisfy the test of the different entities.

4.2.1 Testing of the AS

The AS entity is responsible for performing and managing services. The ISC interface is the appropriate access point for testing.
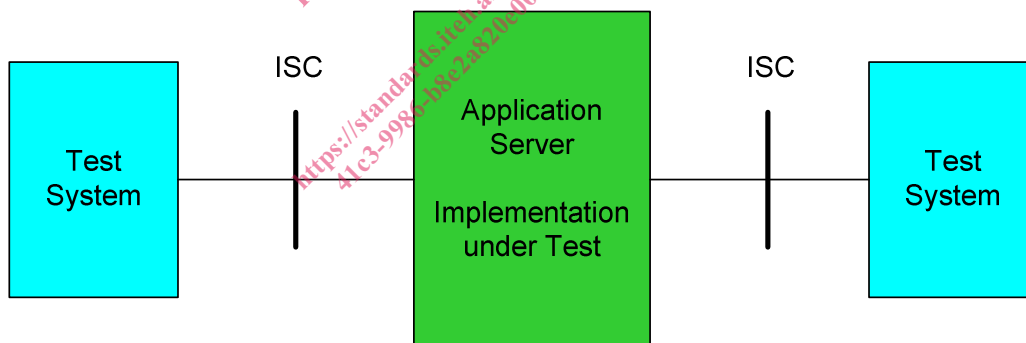

Figure 4.2-1: Applicable interface to test AS functionalities

If the ISC interface is not accessible it is also possible to perform the test of the AS using any NNI (Mw, Mg, Mx) interface (see figure 4.2-2). In case only the Gm interface is accessible this interface can be used instead for testing, but the verification of all requirements may not be possible.
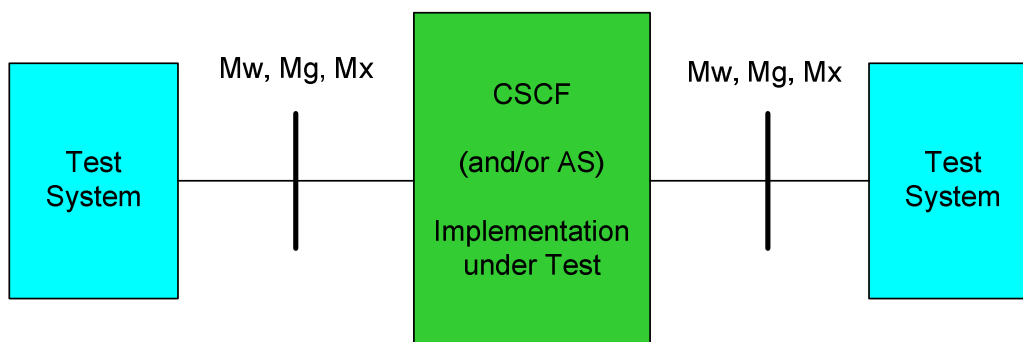
Figure 4.2-2: Applicable interfaces for tests using a (generic) NNI interface

4.2.2   Testing of the UE

There are special clauses in the protocol standard describing the procedures that apply at the originating and terminating user equipment. Therefore the test configuration in figure 4.2-3 has been chosen.
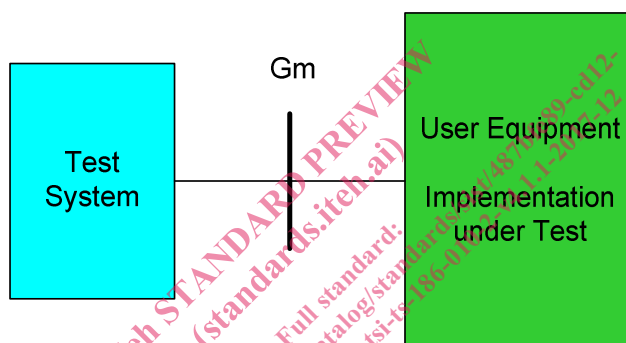
Figure 4.2-3: Applicable configuration to test UE functionalities

5   Test Purposes (TP)

5.1   Introduction

5.1.1   TP naming convention

TPs are numbered, starting at 001, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite and whether it applies to the network or the user (see table 5.1-1).

Table 5.1-1: TP identifier naming convention scheme

Identifier:	**<ss>_<iut><group>_<nnn>**		
<ss>	=	supplementary service:	e.g. "CONF"
<iut>	=	type of IUT:	U User N Network yyy service
<group>	=	group	2 digit field representing group reference according to TSS
<nnn>	=	sequential number	(001-999)

5.1.2 Test strategy

As the base standard ETSI TS 124 605 [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 186 010-1 [3].

5.2 Signalling requirements

5.2.1 Conference Focus

5.2.1.1 Conference creation

TSS	TP	Reference	Selection expression
ConferenceFocus/CreateConf	CONF_N01_001	5.3.2.3.1, 5.3.3 [2]	PICS 4.5.1/2
Test purpose			
*Conference creation with a **conference factory URI**. Conference event package subscribed.* Ensure that a conference can be created by a UE using the conference factory URI. The "isfocus" feature parameter indicated in Contact header is received in the 200 OK (INVITE). In addition the conference participant subscribes to the conference event package and receives a NOTIFY request describing the conference status.			
SIP header values: INVITE: Request URI indicating the conference factory URI 200 OK: conference URI and "isfocus" feature parameter included in Contact header field SUBSCRIBE: Request URI indicating the conference URI Event header contains "conference" NOTIFY: Event contains **conference**; Subscription-State contains **active; expires=xxxx**			
Comments: ISC#1　　　　　　　　　　　　　　　　　**Focus** INVITE　　　　　　　　　　→ 200 OK (INVITE)　　　　　　← ACK　　　　　　　　　　　　→ SUBSCRIBE　　　　　　　　→ 200 OK (SUBSCRIBE)　　　← NOTIFY　　　　　　　　　　← 200 OK NOTIFY　　　　　　→ 　　　　　　　　　**Apply post test routine**			

TSS	TP	Reference	Selection expression
ConferenceFocus/CreateConf	CONF_N01_002	5.3.2.3.1 [2]	PICS 4.5.1/2
Test purpose			
*Conference creation with a **conference factory URI**. Conference event package not subscribed.* Ensure that a conference can be created by a UE using the conference factory URI. The "isfocus" feature parameter indicated in Contact header is received in the 200 OK (INVITE). The conference participant does not subscribe to the conference event package.			
SIP header values: INVITE: Request URI indicating the conference factory URI 200 OK: conference URI and "isfocus" feature parameter included in Contact header field			
Comments: ISC#1　　　　　　　　　　　　　　　　　**Focus** INVITE　　　　　　　　　　→ 200 OK (INVITE)　　　　　　← ACK　　　　　　　　　　　　→ 　　　　　　　**Apply post test routine**			

TSS	TP	Reference	Selection expression
ConferenceFocus/CreateConf	CONF_N01_003	5.3.2.3.2, 5.3.3 [2]	PICS 4.5.1/2

Test purpose

*Conference creation with a **conference URI**. Conference event package subscribed.*

Ensure that a conference can be created by a UE using the conference URI. The "isfocus" feature parameter indicated in Contact header is received in the 200 OK (INVITE). In addition the conference participant subscribes to the conference event package and receives a NOTIFY request describing the conference status.

SIP header values:

INVITE:	Request URI indicating the conference URI
200 OK:	"isfocus" feature parameter included in Contact header field
	conference URI contained in the Contact header field
SUBSCRIBE:	Request URI indicating the conference URI
	Event header contains "conference"
NOTIFY:	Event contains **conference**; Subscription-State contains **active; expires=xxxx**

Comments:

ISC#1   **Focus**

INVITE   →

200 OK (INVITE)   ←
ACK   →

SUBSCRIBE   →
200 OK (SUBSCRIBE)   ←
NOTIFY   ←
200 OK NOTIFY   →

Apply post test routine

TSS	TP	Reference	Selection expression
ConferenceFocus/**CreateConf**	CONF_N01_004	5.3.2.3.2 [2]	PICS 4.5.1/2

Test purpose

*Conference creation with a **conference URI**. Conference event package not subscribed.*

Ensure that a conference can be created by a UE using the conference URI. The "isfocus" feature parameter indicated in Contact header is received in the 200 OK (INVITE). The conference participant does not subscribe to the conference event package.

SIP header values:

INVITE:	Request URI indicating the conference URI
200 OK:	"isfocus" feature parameter indicated in Contact header field
	conference URI contained in the Contact header field

Comments:

ISC#1   **Focus**

INVITE   →

200 OK (INVITE)   ←
ACK   →

Apply post test routine

ETSI

TSS ConferenceFocus/CreateConf	TP CONF_N01_005	Reference 5.3.2.3.1 [2]	Selection expression PICS 4.5.1/2 AND PICS 4.7.1/4
Test purpose *Conference creation with a conference factory URI. Preconditions indicated a conference URI is sent in the first provisional response.* Ensure that a conference can be created by a UE using the conference factory URI. Preconditions are requested by the originating UE. The "isfocus" feature parameter indicated in Contact header is received in the 200 OK (INVITE).			

SIP header values:
INVITE: Request URI indicating the conference factory URI
    SDP   a=curr:qos local none
             a=curr:qos remote none
             a=des:qos mandatory local sendrecv
             a=des:qos none remote sendrecv
 	
183   conference URI contained in the Contact header field
    SDP   a=curr:qos local none
             a=curr:qos remote none
             a=des:qos mandatory local sendrecv
             a=des:qos mandatory remote sendrecv
             a=conf:qos remote sendrecv
 	
UPDATE:
    SDP   a=curr:qos local sendrecv
             a=curr:qos remote none
             a=des:qos mandatory local sendrecv
             a=des:qos mandatory remote sendrecv
 	
200 OK UPDATE
    SDP   a=curr:qos local sendrecv
             a=curr:qos remote sendrecv
              a=des:qos mandatory local sendrecv
             a=des:qos mandatory remote sendrecv
 	
200 OK: "isfocus" feature parameter included in Contact header field
            conference URI contained in the Contact header field			

Comments: **ISC#1** **Focus** INVITE ➔ 183 Session Progress ← PRACK ➔ 200 OK PRACK ← UPDATE ➔ 200 OK UPDATE ← 200 OK (INVITE) ← ACK ➔ **Apply post test routine**			

TSS ConferenceFocus/CreateConf	TP CONF_N01_006	Reference 5.3.2.3.1 [2]	Selection expression PICS 4.5.1/2
Test purpose *Conference creation with a conference factory URI not allocated in the focus, unsuccessful.* Ensure that a conference cannot be created by a UE using a conference factory URI not allocated in the focus. The request is rejected by the focus with a **488 Not Acceptable Here** final response.			
SIP header values: INVITE: Request URI indicating a conference factory URI not allocated in the focus			
Comments: **ISC#1** **Focus** INVITE ➔ 488 Not Acceptable Here ← ACK ➔			