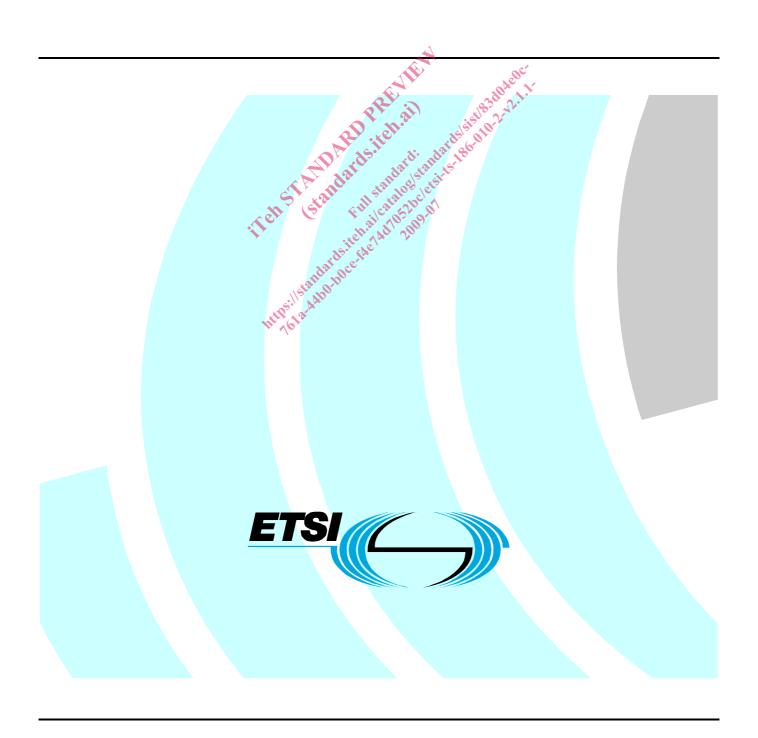
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Technical Specification

Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN);
PSTN/ISDN simulation services;
Conference (CONF);

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



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Contents

Intelle	ectual Property Rights	4
Forev	vord	4
1	Scope	5
	-	
2 2.1	References	
2.1	Informative references	
3	Definitions and abbreviations	<i>6</i>
3.1	Definitions	6
3.2	Abbreviations	6
4	Test Suite Structure (TSS) and configuration	6
4.1	Configuration	
5	Test Purposes (TP)	7
5.1	Introduction	
5.1.1		_
5.1.2	Test strategy	7
5.2	Signalling requirements	8
5.2.1	TP naming convention Test strategy Signalling requirements Conference Focus 1 Conference creation 2 Joining a conference 3 Inviting other users to a conference 4 Leaving a conference	8
5.2.1.1	1 Conference creation	8
5.2.1.2	2 Joining a conference	11
5.2.1.3	Inviting other users to a conference	12
5.2.1.4	4 Leaving a conference	23
5.2.1.5	S Removing a conference participant from a conference	
5.2.1.6	5 Conference termination	25
5.2.2	Conference termination Conference Notification Service Actions at the UE	26
5.2.3	Actions at the UE	34
5.3	Interaction with other supplementary services	42
5.3.1	Terminating Identification Restriction (TIR)	42
5.3.2	Originating Identification Restriction (OIR)	
5.3.3	Anonymous Communication Rejection and Communication Barring (ACR/CB)	
Histor	ry	

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 2 of a multi-part deliverable covering the PSTN/ISDN simulation services; Conference (CONF) 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 for the user".

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1 Scope

The present document specifies the Protocol implementation conformance statement (PICS) for the Conference (CONF) service based on stage one and two of the ISDN CONF supplementary service. Within the Next Generation Network (NGN) the stage 3 is specified using the IP-Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP), TS 183 005 [1].

A further part of the present document specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma based on the present document.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

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

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

2.1 Normative references

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

- [1] ETSI TS 183 005: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services: Conference (CONF); Protocol specification".
- [2] ETSI TS 186 010-1: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services; Conference (CONF); Part 1: Protocol implementation Conformance Statement (PICS)".
- [3] ETSI TS 124 147: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3 (3GPP TS 24.147 version 8.2.0 Release 8)".

2.2 Informative references

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

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in [1] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in [1] apply.

4 Test Suite Structure (TSS) and configuration

ConferenceFocus CONF_N01_xxx CONF_N02_xxx CONF_N03_xxx CONF_N04_xxx CONF_N05_xxx CONF N06_xxx CONF_N07_xxx UserEquipment CONF_U01_xxx Interaction CONF N08 xxx TIR OIR CONF N09 xxx ACR CONF_N10_xxx

Table 1: Test suite structure

4.1 Configuration

The scope of the present document is to test the signalling and procedural aspects of the stage 3 requirements as described in [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.

Therefore to test the appropriate entities the configurations below are applicable:

Testing of the Application Server. This entity is responsible to perform the service. Hence the ISC interface is the appropriate access point. Figure 1 points to this.

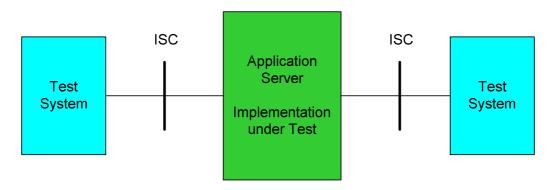


Figure 1: Applicable interface to test AS functionalities

If the ISC interface is not accessible it is also applicable to perform the test of the AS using any NNI (Mw, Mg, Mx) interface (consider figure 2). In case only the Gm interface is accessible this shall be used instead. In this case, be aware that the verification of several requirements is impeded.

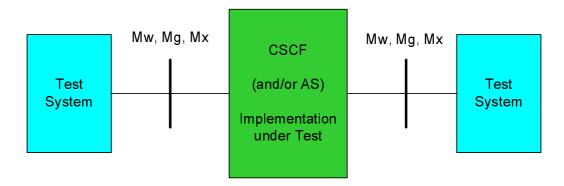


Figure 2: Applicable interfaces to test using the (generic) NNI interface

Figure 2 illustrates the usage of any NNI interface.

5 Test Purposes (TP)

5.1 Introduction

For each test requirement a TP is defined.

5.1.1 TP naming convention

TPs are numbered, starting at 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 2) are added to identify the actual test suite and whether it applies to the network or the user (see table 2).

Table 2: TP identifier naming convention scheme

Identifier: <s< th=""><th>SS>_•</th><th><iut><group>_<nm< th=""><th></th><th></th></nm<></group></iut></th></s<>	SS>_•	<iut><group>_<nm< th=""><th></th><th></th></nm<></group></iut>		
<ss></ss>	=	supplementary service:	e.g. "CONF	1
<iut></iut>	=	type of IUT:	U N yyy	User Network service
<group></group>	=	group	2 digit field r	representing group reference according to TSS
<nnn></nnn>	=	sequential number	(001-999)	

5.1.2 Test strategy

As the base standard TS 183 005 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification TS 186 010-1 [2].

5.2 Signalling requirements

5.2.1 Conference Focus

5.2.1.1 Conference creation

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF_N01_00	1 5.3.2.3/ [3]	-
Test purpose			
Conference creation with a confe	rence factory URI . Conferen	ce event package su	ıbscribed.
Ensure that a conference can be			
parameter indicated in Contact he	ader is received in the 200 O	K (INVITE). The conf	ference participant shall store
the content of the received Contact	t header as the conference	URI. In addition the of	conference participant
subscribes to the conference ever	it package.		
SIP header values:			
INVITE: Request URI contai	ned the conference factory U	RI	
	rameter indicated in Contact		
conference URI cor	tained in the Contact header	field	
SUBSCRIBE: Request URI contai	ned the conference URI		
Event header contains "con	nference"		
NOTIFY: Event contains confere	nce; Subscription-State conf	ains active; expires	=XXXX
Comments:		Ae	7
ISC#1	F	ocus all	7. **
INVITE	→ 0 7	المرود في الم	
	0, 10	isist of h	
	St. Ker	delate	
200 OK (INVITE)	35.	4: 9a1 86	
ACK	₹	te kalle ks. I	
	Tell Standards itely	d strait	
SUBSCRIBE	all still all	000	
200 OK (SUBSCRIBE)	10 (Sta Call call	712 01	
NOTIFY	Tell Standards ite	ocus Aliandardasis (Aliandardardardardardardardardardardardardard	

TSS	1/2.00		Selection expression
ConferenceFocus	CONF_N01_002	5.3.2.3/[3]	
-			

Apply post test routine

Test purpose

200 OK NOTIFY

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 shall store the content of the received Contact header as the **conference URI**. The conference participant does not subscribe to the conference event package.

SIP header values:

INVITE: Request URI contained the conference factory 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)

Apply post test routine

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF_N01_003	5.3.2.3/[3]	PICS 1/5

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). The conference participant shall store the content of the received Contact header as the conference URI. In addition the conference participant subscribes to the conference event package.

SIP header values:

INVITE: Request URI contained the conference URI

200 OK: "isfocus" feature parameter indicated in Contact header field

conference URI contained in the Contact header field

SUBSCRIBE: Request URI contained 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 A Reference	Selection expression
ConferenceFocus	CONF_N01_004 5.3.2.3/[3]	PICS 1/5

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 QK (INVITE). The conference participant shall store the content of the received Contact header as the **conference URI**. The conference participant does not subscribe to the conference event package.

SIP header values:

INVITE: Request URI contained 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

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF_N01_005	5.3.2.3/[3]	NOT PICS 1/4
			AND PICS 1/7

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). The conference participant shall store the content of the received Contact header as the conference URI.

SIP header values:

INVITE: Request URI contained the conference factory URI

> SDP a=curr:qos local none a=curr:qos remote none

> > a=des:qos mandatory local sendrecv a=des:gos none remote sendrecv

conference URI contained in the Contact header field 183

SDP a=curr:gos local none a=curr:gos remote none

a=des:gos mandatory local sendrecv a=des:gos mandatory remote sendrecy

UPDATE:

SDP

200 OK UPDATE

SDP

200 OK:

conference URI contained in the Contact header field SUBSCRIBE: Request URI contained the conference URI

...qos local sendrecv
a=curr:qos remote sendrecv
a=des:qos mandatory local sendrecv
a=des:qos mandatory remote sendrecv
"isfocus" feature parameter indicated in nee URI contained in the Contained the Comments: ISC#1 **INVITE** 183 Session Progress **PRACK** 200 OK PRACK **UPDATE** 200 OK UPDATE 200 OK (INVITE) **ACK** Apply post test routine

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF N01 007	5.3.2.3/[3]	

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 the 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:

Request URI contained the conference factory URI not allocated in the focus INVITE:

Comments:

ISC#1 Focus INVITE 488 Not Acceptable Here **← → ACK**

5.2.1.2 Joining a conference

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF_N02_001	5.3.2.4/[3]	NOT PICS 1/6

Test purpose

Participant dial-in the conference, the conference URI is used.

ISC#1 established a conference. ISC#2 joins in that conference after has been received a REFER request and the Refer-To header referring to the Focus. The UE sends an INVITE request to the conferencing AS the conference URI is known at the ISC#2. The request is successful.

SIP header values:

REFER: Request URI=ISC#2

Refer-To=Focus; method=INVITE

Referred-By=ISC#1

INVITE 2: Focus

"isfocus" feature parameter indicated in Contact header field
 OK: "isfocus" feature parameter indicated in Contact header field conference URI contained in the Contact header field

conference URI conta	ained in the Contact header field	
Comments:		
ISC#1	Focus ISC#2	
	Conference creation	
INVITE	→ INVITE	
200 OK (INVITE)	← 200 OK (INVITE)	
ACK	→ ACK	
Hort	THE LORD	
	ISC#2 joining in the conference	
REFER	→ REFER	
	← 202 Accepted	
202 Accepted		
NOTIFY (400)	NOTIFY (100) 200 OK (NOTIFY) **AUTHORITIES** **AUTHORIT	
NOTIFY (100)	NOTIFY (100)	
200 OK (NOTIFY)	NOTIFY (100) 200 OK (NOTIFY) **NOTIFY (100) 200 OK (NOTIFY) **NOTIFY (100) 200 OK (NOTIFY)	
	18x → 18x 200 OK INVITE → 200 OK INVITE	
	NVITE ← INVITE 2	
	the first state of 18x → 18x	
	200 ON INVITE - 200 ON INVITE	
	LEN AND ACK ← ACK	
	36. CAE	
NOTIFY (200)	← NOTIFY (200)	
200 OK (NOTIFY)	→ 200 OK (NOTIFY)	
	Apply post test routine	

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF_N02_002	5.3.2.4/[3]	

Test purpose

Participant dial-in the conference, the conference URI is not allocated, the request is rejected.

ISC#1 established a conference. ISC#2 joins in that conference. The conference URI in the INVITE request is not allocated at the focus. The request is rejected with the final response 4xx.

SIP header values:

INVITE 2: Request URI contained the conference URI not allocated in the focus (PIXIT)

Comments: ISC#1		Focus		ISC#2	
		Conference creation			
INVITE	→	INVITE			
200 OK (INVITE)	+	200 OK (INVITE)			
ACK	→	ACK			
	IS	C#2 joining in the conference			
		INVITE	←	INVITE 2	
		4xx	→	4xx	
		VCK.	4	ACK	

5.2.1.3 Inviting other users to a conference

TSS	TP	Reference	Selection expression
ConferenceFocus	CONF_N03_001	5.3.1.5.3/[3]	NOT PICS 1/6

Test purpose

Inviting participant by sending REFER to the focus.

ISC#1 established a conference. ISC#1 invites ISC#2 to join into the conference. The ISC#1 sends a REFER to the focus; the focus sends an INVITE request to ISC#2 to invite the ISC#2 to the conference.

SIP header values:

REFER: Request URI contained the conference URI

Refer-To contains the URI of ISC#2, method=invite

Referred-By contains SIP URI of ISC#1

INVITE 2: Request URI contained the conference URI

The P-Asserted-Identity contains the conference URI.

"isfocus" feature parameter indicated in Contact header field

conference URI contained in the Contact header field

Referred-By contains SIP or tel URI of ISC#1

NOTIFY 1 Event contains conference; Subscription-State contains active

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY 2 Event contains conference; Subscription-State contains active

message/sipfrag contains SIP/2.0 200 OK

