ETSI TS 101 588-1 V5.1.1 (2012-10)

Technical Specification

**IMS Network Testing (INT);
Completion of Communications to Busy Subscriber (CCBS)
and Completion of Communications by No Reply (CCNR) using
IP Multimedia (IM) Core Network (CN) subsystem;
Conformance Test Specification;
Part 1: Protocol Implementation Conformance
Statement (PICS)**

Reference

DTS/INT-00064-1

Keywords

CCBS, CCNR, IMS, PICS, testing

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

Individual copies of the present document can be downloaded from:
http://www.etsi.org

The present document may be made available in more than one electronic version or in print. In any case of existing or
perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF).
In case of dispute, the reference shall be the printing on ETSI printers of the 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
http://portal.etsi.org/tb/status/status.asp

If you find errors in the present document, please send your comment to one of the following services:
http://portal.etsi.org/chaircor/ETSI_support.asp

Copyright Notification

Contents

Intellectual Property Rights

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 (http://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.

Foreword

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

The present document is part 1 of a multi-part deliverable covering Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification as identified below:

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

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

Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunication specification. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

1 Scope

The present document specifies the protocol implementation conformance statement of the Completion of Communications to Busy Subscriber (CCBS) service and the Completion of Communication on no Reply (CCNR) service, based on stage three of the IMS simulation services. Within the Next Generation Network (NGN) the stage 3 description is specified using the IP-Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP).

2 References

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

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

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

2.1 Normative references

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

[1] ETSI TS 124 642: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.642 Release 10)".

[2] ETSI ETS 300 406 (1995): "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[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".

2.2 Informative references

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

Not applicable.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 124 642 [1], ETS 300 406 [2], ISO/IEC 9646-1 [3], ISO/IEC 9646-7 [4] and the following apply:

Implementation Conformance Statement (ICS): statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented

NOTE: The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, API ICS, etc.

ICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

Protocol ICS (PICS): ICS for an implementation or system claimed to conform to a given protocol specification

3.2 Symbols

For the purposes of the present document, the symbols given in TS 124 642 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TS 124 642 [1] and the following apply:

ICS	Implementation Conformance Statement
IUT	Implementation Under Test
SCS	System Conformance Statement
SUT	System Under Test
PICS	Protocol ICS

4 Protocol Implementation Conformance Statement proforma

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the PICS proforma in this clause so that it can be used for its intended purposes and may further publish the completed PICS.

4.1 Instructions for completing the PICS proforma

4.1.1 More detailed instructions are given at the beginning of the different clauses of the PICS proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. If necessary, the supplier may provide additional comments separately in clause 5.

4.1.1.1 Purposes and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in reference specification [1] may provide information about the implementation in a standardized manner.

The PICS proforma is subdivided into clauses for the following categories of information:

- instructions for completing the PICS proforma;

- identification of the implementation;

- identification of the reference protocol specification;

- PICS proforma tables (containing the global statement of conformance).

4.1.2   Abbreviations and conventions

The PICS proforma is composed of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4]:

Item column

It contains a number that identifies the item in the table.

Item description column

It describes each respective item (e.g. parameters, timers, etc.).

Reference column

It gives reference to the CCBS/CCNR specification [1], except where explicitly stated otherwise.

Status column

The following notations, defined in ISO/IEC 9646-7 [4], are used for the status column:

m   mandatory - the capability is required to be supported.

n/a   not applicable - in the given context, it is impossible to use the capability. No answer in the support column is required.

o   optional - the capability may be supported or not.

o.i   qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table.

ci   conditional - the requirement on the capability ("m", "o" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status expression that is defined immediately following the table. For nested conditional expressions, the syntax "IF ... THEN (IF ... THEN ... ELSE...) ELSE ..." shall be used to avoid ambiguities. If an ELSE clause is omitted, "ELSE n/a" shall be implied.

NOTE: Support of a capability means that the capability is implemented in conformance to the specification [1].

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [4], are used for the support column:

Y or y   supported by the implementation;

N or n   not supported by the implementation;

N/A or n/a- no answer required (allowed only if the status is N/A, directly or after evaluation of a conditional status).

4.2   Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides - the System Under Test (SUT) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

4.2.1   Date of the statement

Date of the statement:	

4.2.2   Implementation Under Test (IUT) identification

IUT name:	
IUT version:	

4.2.3   System Under Test (SUT) identification

SUT name:	
Hardware configuration:	
Operating system:	

4.2.4   Product supplier

Name:	
Address:	
Telephone number:	
Facsimile number:	
Additional information:	

4.2.5   Client

Name:	
Address:	
Telephone number:	
Facsimile number:	
Additional information:	

4.2.6   PICS contact person

Name:	
Telephone number:	
Facsimile number:	
Additional information:	

4.3   PICS proforma tables

4.3.1   Global statement of conformance

Table 4.3.1-1: Global statement of conformance

	(Yes/No)
Are all mandatory capabilities implemented?	

4.3.2   Network capabilities

Table 4.3.2-1: Network capabilities

Item	Item description	Reference	Status	Support	
1	Is the CCBS/CCNR request retention option supported?	4.5.4.2.3.2.4/ [1]	o		
2	Is the retain option supported?	4.5.4.3.4.2/ [1]	o		
3	Is it possible to activate a further CCBS or CCNR request for an identical communication, determined by the stored basic communication information?	4.5.4.2.1.1.1/ [1]	o		
4	Has the originating AS knowledge that UE-A does not support the REFER method extension, the originating AS starts the 3rd party call control procedure?	4.5.4.2.3/ [1]	o		
5	Does the originating CC-AS reduce the number of request entries for the caller?	4.5.4.2.1.1.3/ [1]	o		
6	Does the terminating CC-AS reduce the number of request entries for the callee?	4.5.4.3.2/ [1]	o		
7	Does the terminating CC-AS sends an indication to the originating CC-AS that CCBS or CCNR is possible if the terminating user has activated CFU while the recall is in progress?	4.6.8.2/ [1]	o		
8	It is possible that an outstanding CC request can be revoked by the user using service code commands?	4.5.4.2.2.1.2/ [1]	o		
9	Does the Application Server suppoerts "Completion of Communications on Not Logged in"?	4.5.4.2.1.1.1/ [1] 4.5.4.3.1.1/ [1]	o		
10	Does the originating CC-AS include a Date header in the 486 (Busy Here) or 480 (Temporarily unavailable) sent to the originating user if the CC-Invocation was successful?	4.5.4.2.1.1.6/ [1]	o		
11	Does the originating CC-AS include a "an message/external-body MIME type" in the 486 (Busy Here) or 480 (Temporarily unavailable) sent to the originating user if the CC-Invocation was successful?	4.5.4.2.1.1.6/ [1]	o		
12	Does the originating AS in case of receipt of a CCNR invocation confirmation, terminate the original communication by sending a CANCEL request to UE-B?	4.5.4.2.1.1.4/ [1]	o		

Table 4.3.2-2: Timer

Item	Timer number	Reference	Status	Support	Values in seconds	
					Allowed	**Supported**
	CC-T1	4.8.1/ [1]	m		15	
	CC-T2	4.8.1/ [1]	m		> 10	
	CC-T3	4.8.1/ [1]	m		≤ 10 800	
	CC-T4	4.8.1/ [1]	m		≤ 20	
	CCNR-T5	4.8.1/ [1]	m		≤ 20	
	CC-T7	4.8.1/ [1]	m		≤ 11 400	
	CC-T8	4.8.1/ [1]	m		≤ 10	
	CC-T9	4.8.1/ [1]	m		≤ 30	

5   Additional informations for PICS

If necessary, the supplier may provide additional comments in this clause.

History

Document history		
V5.1.1	October 2012	Publication