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IMS Network Testing (INT);
Anonymous Communication Rejection (ACR)
and Communication Barring (CB) using IP Multimedia (IM)
Core Network (CN) subsystem
Conformance Testing Specification;
Part 1: Protocol Implementation
ConformanceStatement (PICS)

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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 the Conformance Test Specification of Anonymous Communication Rejection (ACR) and Communication Barring (CB) 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".

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 provides the Protocol Implementation Conformance Statement (PICS) proforma for the Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem defined in [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETS 300 406 [2].

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 124 611: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.611 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".

[5] Void.

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.

[i.1] ETSI TS 124 607: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.607 Release 10)".

[i.2] ETSI TS 124 604: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.604 Release 10)".

[i.3] ETSI TS 124 605: "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 Release 10)".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-7 [4] and in particular, the following defined in ISO/IEC 9646 1 [3] apply:

Implementation Conformance Statement (ICS): A statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented. The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

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

Protocol ICS (PICS): An 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 [1] apply.

3.3 Abbreviations

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

ICS	Implementation Conformance Statement
IUT	Implementation Under Test
PDU	Protocol Data Unit
PICS	Protocol ICS
SCC	Service Code Command
SCS	System Conformance Statement
SUT	System Under Test

4 PICS proforma for TS 124 611

4.1 Guidance for completing the PICS proforma

4.1.1 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 TS 124 611 [1] may provide information about the implementation in a standardized manner.

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

- guidance for completing the PICS proforma;
- identification of the implementation;
- identification of the ETSI TS 124 611
- global statement of conformance;
- roles;

- user role;
  - major capabilities;
- network role;
  - major capabilities
  - supplementary service capabilities

4.1.2 Abbreviations and conventions

The PICS proforma contained in this clause is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4].

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

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.
o	optional - the capability may be supported or not.
n/a	not applicable - in the given context, it is impossible to use the capability.
x	prohibited (excluded) - there is a requirement not to use this capability in the given context.
o.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies an 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", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying an unique conditional status expression which is defined immediately following the table.

Reference column

The reference column makes reference to TS 124 611 [1], except where explicitly stated otherwise.

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

If this PICS proforma is completed in order to describe a multiple-profile support in a system, it is necessary to be able to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter the unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space for comments provided at the bottom of the table. It uses predicates defined in the SCS, each of which refers to a single profile and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE 1: ?3: IF prof1 THEN Y ELSE N

NOTE: As stated in ISO/IEC 9646-7 [4], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

Values allowed column

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: <min value> .. <max value>
  example: 5 .. 20

- list of values: <value1>, <value2>, ..., <valueN>
  example: 2 ,4 ,6 ,8, 9
  example: '1101'B, '1011'B, '1111'B
  example: '0A'H, '34'H, '2F'H

- list of named values: <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>)
  example: reject(1), accept(2)

- length: size (<min size> .. <max size>)
  example: size (1 .. 8)

Values supported column

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

References to items

For each possible item answer (answer in the support column) within the ICS proforma a unique reference exists, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.), respectively.

EXAMPLE 2: 4.5/4 is the reference to the answer of item 4 in table 4.5.

Prerequisite line

A prerequisite line takes the form: Prerequisite: <predicate>.

A prerequisite line after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

4.1.3 Instructions for completing the PICS proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in clause 4.1.2.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

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

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

.....

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:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

4.2.5 Client (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

4.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the ICS)

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

4.3 Identification of the TS 124 611

This PICS proforma applies to the following standard:

ETSI TS 124 611 (2012-01): "Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem" (Release 10).

4.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No) .....

NOTE: Answering "No" to this question indicates non-conformance to the TS 124 611 [1] specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

4.5 Roles

Table 4.5.1: Roles

Item	Role	Reference	Status	Support
1	User	4.5.2.13	o.1	
2	Network	4.5.2.4, 4.5.2.6	o.1	
o..1: It is mandatory to support exactly one of these items.				
Comments:				

4.6 User role

This clause contains the ICS proforma tables related to the user role. They need to be completed only for user implementations:

Prerequisite: 4.5.1/1 -- user role

4.6.1 Major capabilities

Table 4.6.1: User Equipment capabilities

Item	Call direction	Reference	Status	Support
1	The User Equipment is able to send a 603 (Decline) response including a Reason header field containing 603 Decline when the communication status is in early dialog to indicate the barring?	4.5.2.13	o	
2	The User Equipment is able to send a BYE request including a Reason header field containing 603 Decline when the communication status is in confirmed status to indicate the barring?	4.5.2.13	o	
3	The User Equipment is able to send an initial INVITE request including an SCC command after the session is released to indicate the barring?	4.5.2.13	o	
4	The User Equipment is able to send an INVITE request including an SCC command to use using SIP based user configuration?	4.5.0	o	
o..2: It is mandatory to support at least one of these items.				
Comments:				

4.7 Network role

This clause contains the PICS proforma tables related to the network role. They need to be completed only for network implementations:

Prerequisite: 4.5.1/2 network role

4.7.1 Major capabilities

Table 4.7.1: Roles and network capabilities

Item	Role	Reference	Status	Support
1	Is the Communication Barring service provided?	4.3.1	o	
2	Is the Incoming Communications Barring (ICB**)** service supported?	4.3.1	c1	
3	Is the Outgoing Communications Barring (OCB) service supported?	4.3.1	c1	
4	Can an announcement be provided to the originating user before terminating the communication?	4.5.2.6	c2	
5	Is the communication forwarded to a voice message service instead of rejecting the communication?	4.5.2.6.2	c2	
6	Does the network support the **outgoing communication barring** configuration for evaluating '**identity**' using the Ut interface?	4.5.0	o	
7	Does the network support the **outgoing communication barring** configuration for evaluating '**identity**' using the SIP based user configuration mechanism?	4.5.0	o	
8	Does the network supports the **outgoing communication barring** configuration for evaluating '**external-list**' using the Ut interface?	4.5.0	o	
9	Does the network supports the **outgoing communication barring** configuration for evaluating '**external-list**' using the SIP based user configuration mechanism?	4.5.0	o	
10	Does the network support the **incoming communication barring** configuration for evaluating '**identity**' using the Ut interface?	4.5.0	o	
11	Does the network support the **incoming communication barring** configuration for evaluating '**identity**' using the SIP based user configuration mechanism?	4.5.0	o	
12	Does the network supports the **incoming communication barring** configuration for evaluating '**external-list**' using the Ut interface?	4.5.0	o	
13	Does the network supports the **incoming communication barring** configuration for evaluating '**external-list**' using the SIP based user configuration mechanism?	4.5.0	o	
14	Does the network support the incoming communication barring configuration for evaluating '**anonymous**' using the Ut interface?	4.5.0	o	
15	Does the network support the incoming communication barring configuration for evaluating '**anonymous**' using the SIP based user configuration mechanism?	4.5.0	o	
16	Does the network support the incoming communication barring configuration for evaluating '**communication-diverted**' using the Ut interface?	4.5.0	o	
17	Does the network support the incoming communication barring configuration for evaluating '**communication-diverted**' using the SIP based user configuration mechanism?	4.5.0	o	
18	Does the network support the outgoing communication barring configuration for evaluating '**international-exHC**' using the Ut interface?	4.5.0	o	
19	Does the network support the outgoing communication barring configuration for evaluating '**international-exHC**' using the SIP based user configuration mechanism?	4.5.0	o	
20	Does the network support the outgoing communication barring configuration for evaluating '**international**' using the Ut interface?	4.5.0	o	
21	Does the network support the outgoing communication barring configuration for evaluating '**international**' using the SIP based user configuration mechanism?	4.5.0	o	
22	Does the network support the dynamic incoming communication barring service to extend the ICB functionality using the Ut interface?	4.5.0	o	
23	Does the network support the dynamic incoming communication barring service to extend the ICB functionality using the SIP based user configuration mechanism?	4.5.0 4.5.2.6.1	o	
c1: IF 4.5.1/1 THEN o1 ELSE n/a. c2: IF 4.5.1/1 THEN o ELSE n/a.				
Comments:				

4.7.2 Supplementary service capabilities

Table 4.7.2: Supplementary service capabilities

Item	Item description	Reference	Status	Support
1	The network supports the Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem simulation service?	[i.1	o	
2	The network supports the Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem simulation service?	[i.2]	o	
3	The network supports the Conference(CONF) using IP Multimedia (IM) Core Network (CN) subsystem?	[i.3]	o	
Comments:				

Annex A (informative): Bibliography

ETSI TS 124 238: "Universal Mobile Telecommunications System (UMTS); LTE; Session Initiation Protocol (SIP) based user configuration; Stage 3 (3GPP TS 24.238 Release 10)".

History

Document history		
V1.0.0	June 2008	Publication
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