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SERIES Q: SWITCHING AND SIGNALLING

Testing specifications – Testing specifications for SIP-IMS

**Explicit communication transfer using IP
multimedia core network subsystem;
Conformance testing – Part 1: Network side and
user side; Protocol implementation
conformance statement**

Recommendation ITU-T Q.4007.1



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Recommendation ITU-T Q.4007.1

Explicit communication transfer using IP multimedia core network subsystem; Conformance testing – Part 1: Network side and user side; Protocol implementation conformance statement

Summary

Recommendation ITU-T Q.4007.1 v.1 (2016) is Part 1 of the testing specifications for explicit communication transfer (ECT) using IP multimedia core network subsystem on the user side and network side. The standard specifies the protocol implementation conformance statement (PICS) that can be used for testing against Recommendation ITU-T Q.3623 v.1.

The version number, v.1, indicates that this is version one of Recommendation ITU-T Q.4007.1, and that it relates to Release 10 of the relevant 3GPP/ETSI standard.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T Q.4007.1 v.1	2016-08-29	11	11.1002/1000/12993

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Explicit communication transfer, ECT, IP multimedia subsystem, IMS, network side, PICS, session description protocol, SDP, session initiation protocol, SIP, testing, user side.

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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Recommendation ITU-T Q.4007.1

Explicit communication transfer using IP multimedia core network subsystem; Conformance testing – Part 1: Network side and user side; Protocol implementation conformance statement

1 Scope

This Recommendation provides the protocol implementation conformance statement (PICS) proforma for the protocol specification as defined in [ITU-T Q.3623 v.1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in [ITU-T X.296].

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T Q.3623 v.1] Recommendation ITU-T Q.3623 v.1 (2016), *Explicit communication transfer using IP multimedia core network subsystem – Protocol specification*.
- [ITU-T X.290] Recommendation ITU-T X.290 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – General concepts*.
- [ITU-T X.296] Recommendation ITU-T X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements*.
- [ETSI TS 123 228] ETSI TS 123 228 (2011), *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Subsystem (IMS); Stage 2 (3GPP TS 23.228 version 10.5.0 Release 10)*.
- [ETSI TS 124 628] ETSI TS 124 628 (2011), *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Common Basic Communication procedures using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.628 version 10.3.0 Release 10)*.
- [ETSI TS 124 607] ETSI TS 124 607 (2011), *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 version 10.0.0 Release 10)*.
- [ETSI TS 124 611] ETSI TS 124 611 (2012), *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 version 10.2.0 Release 10)*.

[ETSI TS 124 605] ETSI TS 124 605 (2011), *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 10.0.0 Release 10)*.

3 Definitions

For the purposes of this Recommendation, the terms and definitions given in [ITU-T X.290] apply:

3.1 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.

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

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

NOTE – This may contain additional information.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ICS Implementation Conformance Statement

IUT Implementation Under Test

PICS Protocol ICS

SUT System Under Test

UE User Equipment

URI Uniform Resource Identifier

5 Conformance to this PICS proforma specification

If it claims to conform to this Recommendation, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in clause 4, and shall preserve the numbering/naming and ordering of the proforma items.

A PICS which conforms to this Recommendation shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause 5.1.

5.1 Guidance for completing the PICS proforma

5.1.1 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 [ITU-T Q.3623 v.1] may provide information about the implementation in a standardized manner.

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

- guidance for completing the PICS proforma;
- identification of the implementation;
- identification of the <reference specification type>;

- global statement of conformance;
- roles;
- user role;
 - major capabilities;
- network role;
 - major capabilities;
- Timers.

5.1.2 Abbreviations and conventions

The PICS proforma contained in this clause is comprised of information in tabular form in accordance with the guidelines presented in [ITU-T X.296].

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 [ITU-T X.296], 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.

Reference column

The reference column makes reference to [ITU-T Q.3623 v.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 [ITU-T X.296], 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).

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.

5.1.3 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 column boxes provided, using the notation described in clause 5.1.2.

However, the tables comprising "user role" clause shall only be completed for user implementations, and those comprising "network role" clause shall only be completed for network implementations.

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

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

5.2 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 ICS should be named as the contact person.

5.2.1 Date of the statement

.....

5.2.2 Implementation Under Test (IUT) identification

IUT name:

.....
.....

IUT version:

.....

5.2.3 System Under Test (SUT) identification

SUT name:

.....
.....

Hardware configuration:

.....
.....
.....

Operating system:

.....

5.2.4 Product supplier

Name:

.....

Address:

.....
.....
.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

5.2.5 Client (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

5.2.6 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:

.....

5.3 Identification of the ITU-T Q.3623 v.1

This PICS proforma applies to the following standard:

ITU-T Q.3623 v.1

5.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)

NOTE – Answering "No" to this question indicates non-conformance to the <reference specification type> 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.

5.5 Roles

Table 5.5-1 – Roles

Item	Role	Reference	Status	Support
1	User equipment	Clause 4.4 of [ITU-T Q.3623 v.1]	o.1	
2	Network (application server)	Clause 4.5 of [ITU-T Q.3623 v.1]	o.1	
o..1: It is mandatory to support exactly one of these items.				
Comments:				

5.6 User equipment role

This clause contains the PICS proforma tables related to the user equipment (UE) role. They need to be completed only for user implementations:

Prerequisite: 4.5.1/1 -- user role

5.6.1 Major capabilities

Table 5.6-1 – Major capabilities

Item	Item description	Reference	Status	Support
1	Is the blind transfer supported?	Clause 5.11.6 of [ETSI TS 123 228]	o.11	
2	Is the assured transfer supported?	Clause 5.11.6 of [ETSI TS 123 228]	o.11	
3	Is the consultative transfer supported?	Clause 5.11.6 of [ETSI TS 123 228]	o.11	
4	[Transferor] Is the UE able to issue a REFER request in the original communications dialog to invoke the transfer of the session?	Clause 4.5.2.1 of [ITU-T Q.3623 v.1]	c11	
5	[Transferee] Is the UE able to handle a received REFER to transfer the current session?	Clause 4.5.2.5 of [ITU-T Q.3623 v.1]	o	

Table 5.6-1 – Major capabilities

Item	Item description	Reference	Status	Support
o.11: It is mandatory to support at least one of these items.				
c11: IF 4.6.1/1 OR 4.6.1/2 OR 4.6.1/3 THEN m ELSE n/a.				
Comments:				

5.7 Network role

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

Prerequisite: 5.5.1/2 -- network role

5.7.1 Major capabilities

Table 5.7-1 – Major capabilities

Item	Item description	Reference	Status	Support
1	Is the blind transfer supported?	Clause 5.11.6 of [ETSI TS 123 228]	o.21	
2	Is the assured transfer supported?	Clause 5.11.6 of [ETSI TS 123 228]	o.21	
3	Is the consultative transfer supported?	Clause 5.11.6 of [ETSI TS 123 228]	o.21	
4	The AS initiate the special REFER handling procedures when a 403 Forbidden or 501 Not implemented is received after the REFER request is forwarded to the Transferee?	Clauses 4.5.2.4.1.2.3, 4.7.2.9.7 of [ITU-T Q.3623 v.1]	o	
5	The AS of the initiator of the REFER request that has prior knowledge that the remote party is not allowed to receive or does not support the REFER method, initiates the special REFER handling procedures directly?	Clauses 4.5.2.4.1.2.3, 4.7.2.9.7 of [ITU-T Q.3623 v.1]	o	
6	Does the Transferee AS reject the INVITE request sent to the Transfer Target if the Referred-By header does not match the stored Referred-By header of the received REFER?	Clause 4.5.2.7.3 of [ITU-T Q.3623 v.1]	c21	
7	Does the Transferee AS replace the URI of the Referred-By header in the INVITE sent to the Transfer Target with the URI stored from the received REFER request, if there is no match?	Clause 4.5.2.7.3 of [ITU-T Q.3623 v.1]	c22	
8	Does the Transferee AS insert a Referred-By header in the INVITE request sent to the Transfer Target if the Referred-By header is absent and the value is equal to the stored value received in the REFER request.	Clause 4.5.2.7.3 of [ITU-T Q.3623 v.1]	o	
o.21: It is mandatory to support at least one of these items.				
c21: IF NOT 4.7.1/7 THEN o ELSE n/a.				
c22: IF NOT 4.7.1/6 THEN o ELSE n/a.				
Comments:				

5.7.2 Supplementary service capabilities

Table 5.7-2 – Supplementary service capabilities

Item	Item description	Reference	Status	Support
1	Does the network support the originating identification restriction (OIR) supplementary services?	[ETSI TS 124 607]	o	
2	Does the network support the anonymous communication rejection (ACR) and communication barring (CB) supplementary services?	[ETSI TS 124 611]	o	
3	Does the network support the conference (CONF) supplementary services?	[ETSI TS 124 605]	o	
Comments:				

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