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SERIES Q: SWITCHING AND SIGNALLING

Testing specifications – Testing specifications for SIP-IMS

Message waiting indication using IP multimedia core network subsystem – Part 1: Protocol implementation conformance statement

Recommendation ITU-T Q.4010.1

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SWITCHING AND SIGNALLING

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Recommendation ITU-T Q.4010.1

Message waiting indication using IP multimedia core network subsystem – Part 1: Protocol implementation conformance statement

Summary

Recommendation ITU-T Q.4010.1 v.1 (2016) provides the testing requirements for message waiting indication (MWI) using IP multimedia (IM) core network (CN) subsystem – Part 1: Protocol implementation conformance statement (PICS) (based on Recommendation ITU-T Q.3626 v.1).

The version number, v.1, indicates that this is version one of Recommendation ITU-T Q.4010.1, 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.4010.1 v.1	2016-08-29	11	11.1002/1000/13001

Keywords

IMS, IP multimedia subsystem, message waiting indication, MWI, testing, test suite structure and test purposes, TSS&TP

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* To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11830-en.

FOREWORD

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Message waiting indication using IP multimedia core network subsystem – Part 1: Protocol implementation conformance statement

1   Scope

This Recommendation is part 1 of a multi-part deliverable covering message waiting indication (MWI) using IP multimedia (IM) core network (CN) subsystem – Part 1: Protocol implementation conformance statement (PICS), as identified below:

Part 1: "Protocol implementation conformance statement (PICS)";

Part 2:   "Test suite structure and test purposes; Network side";

Part 3:   "Test suite structure and test purposes (TSS&TP); User side".

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.3626 v.1]	Recommendation ITU-T Q.3626 v.1 (2016), *Message waiting indication using IP multimedia core network subsystem – Protocol specification.*
[IETF RFC 3842]	IETF RFC 3842 (2004), *A Message Summary and Message Waiting Indication Event Package for the Session Initiation Protocol (SIP).*
[ITU-T X.290]	Recommendation ITU-T X.290 (1994), *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.*

3   Definitions

3.1   Terms defined elsewhere

For the purposes of this Recommendation, the terms and definitions given in [ITU-T Q.3626 v.1], [ITU-T X.290], [ITU-T X.296] and the following apply:

3.1.1   PICS proforma: Document, in the form of a questionnaire, which when completed for an implementation or system becomes a PICS.

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

NOTE – This may contain additional information.

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ICS Implementation Conformance Statement

IUT Implementation Under Test

MA Message Account

MIME Multipurpose Internet Mail Extensions

MNUA MWI Notifier User Agent

MSUA MWI Subscriber User Agent

MWI Message Waiting Indication

PDU Protocol Data Unit

PICS Protocol Implementation Conformance Statement

SCS System Conformance Statement

SUT System Under Test

5 Conventions

None.

6 Guidance for completing the ICS proforma

6.1 General overview of ICS proforma

6.1.1 Purposes and structure

The purpose of this protocol implementation conformance statement (PICS) proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in [ITU-T Q.3626 v.1] may provide information about the implementation in a standardized manner.

The implementation conformance statement (ICS) proforma is subdivided into clauses for the following categories of information:

–   guidance for completing the ICS proforma;

–   identification of the implementation;

–   identification of the <reference specification type>;

–   global statement of conformance;

–   roles;

–   user role;

–   network role.

6.1.2 Abbreviations and conventions

The PICS proforma contained in this Recommendation 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.

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 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", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status expression which is defined immediately following the table.

Reference column

The reference column makes reference to [ITU-T Q.3626 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).

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 system conformance statement (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

In case of protocol, the following text should be added:

NOTE – As stated in [ITU-T X.296], support for a received protocol data unit (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.

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.

6.1.3 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 6.1.2.

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

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.

6.2 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.

6.2.1 Date of the statement

....

6.2.2 Implementation Under Test (IUT) identification

IUT name:

....

....

IUT version:

....

6.2.3 System Under Test (SUT) identification

SUT name:

....

....

Hardware configuration:

....

....

....

Operating system:

....

6.2.4   Product supplier

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

6.2.5   Client (if different from product supplier)

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

6.2.6 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:

....

....

....

6.3 Identification of the MWI specification

This PICS proforma applies to the following standard: [ITU-T Q.3626 v.1].

6.4 Global statement of conformance

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

NOTE – Answering "No" to this question indicates non-conformance to the message waiting indication (MWI) 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.

6.5 Roles

Table 6-1 – Roles

Item	Role	Reference	Status	Support
1	MWI subscriber user agent (MSUA)	Clause 4.4.1 of [ITU-T Q.3626 v.1]	o	
2	MWI notifier user agent (MNUA)	Clause 4.4.2 of [ITU-T Q.3626 v.1]	m	
3	Message account (MA)	Clause 4.4.3 of [ITU-T Q.3626 v.1]	m	

Comments:

6.6 User role

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

Prerequisite: 6.1/1   -- user role

6.6.1 Major capabilities

Table 6-2 – MWI subscriber user agent capabilities

Item	Item description	Reference	Status	Support
1	The user equipment is able to address the message account using the public service identity	Clause 4.4.3.2 of [ITU-T Q.3626 v.1]	o.1	
2	The user equipment is able to address the message account using the public user identity	Clause 4.4.3.2 of [ITU-T Q.3626 v.1]	o.1	

o.1:   It is mandatory to support at least one of these items.

Comments:

6.7 Network role

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

Prerequisite: 6.1/2   network role

Table 6.3 – MWI Notifier User Agent (MNUA) capabilities

Item	Item description	Reference	Status	Support
1	The MNUA includes the message account in the MIME body to identify the served user	Clause 3.5 of [IETF RFC 3842]	o	
2	The MNUA includes the message summary line in the MIME body to identify the served user	Clause 3.5 of [IETF RFC 3842]	o	
3	The MNUA append message headers, which further describe newly added messages as "opt-msg-headers"	Clause 3.5 of [IETF RFC 3842]	o	

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