



**Core Network and Interoperability Testing (INT);  
Communication Diversion (CDIV) using IP Multimedia (IM)  
Core Network (CN) subsystem;  
(3GPP™ Release 12);  
Part 1: Protocol Implementation Conformance  
Statement (PICS)**

IP Multimedia (IM) Core Network (CN) subsystem (3GPP™ Release 12) Part 1: Protocol Implementation Conformance Statement (PICS) V3.1.1 (2017-12)  
<https://standards.1e11.com/standards/etsi/186-014-1-v3-1-1-2017-12-4658-81d6-fcbbc26-776>

---

**Reference**

RTS/INT-00143-1

---

**Keywords**

conformance, CDIV, PICS, SIP, 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**

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (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

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

---

**Copyright Notification**

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2017.

All rights reserved.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

**3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

**oneM2M** logo is protected for the benefit of its Members.

**GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

# Contents

Intellectual Property Rights .....	4
Foreword.....	4
Modal verbs terminology.....	4
Introduction .....	4
1 Scope .....	5
2 References .....	5
2.1 Normative references .....	5
2.2 Informative references.....	6
3 Definitions and abbreviations.....	6
3.1 Definitions.....	6
3.2 Abbreviations .....	6
4 Conformance to this PICS pro forma specification.....	7
4.0 The right to copy .....	7
4.1 Guidance for completing the PICS pro forma .....	7
4.1.0 Introduction.....	7
4.1.1 Purposes and structure .....	7
4.1.2 Abbreviations and conventions.....	7
4.1.3 Instructions for completing the PICS pro forma.....	9
4.2 Identification of the implementation .....	9
4.2.0 Introduction.....	9
4.2.1 Date of the statement .....	9
4.2.2 Implementation Under Test (IUT) identification .....	9
4.2.3 System Under Test (SUT) identification .....	9
4.2.4 Product supplier .....	10
4.2.5 Client (if different from product supplier) .....	10
4.2.6 PICS contact person.....	11
4.3 Identification of the ETSI TS 124 604 .....	11
4.3.0 Introduction.....	11
4.4 Global statement of conformance.....	11
4.5 Roles.....	12
4.6 User role .....	12
4.6.0 Introduction.....	12
4.6.1 Major capabilities .....	12
4.7 Network role.....	13
4.7.0 Introduction.....	13
4.7.1 Service capabilities .....	13
4.7.2 Network capabilities .....	13
4.7.3 Subscription options .....	14
4.7.4 Simulation services .....	15
4.7.5 Values .....	15
<b>Annex A (informative): Bibliography.....</b>	<b>16</b>
History .....	17

---

# Intellectual Property Rights

## Essential patents

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 (<https://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.

## Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

---

# Foreword

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

The present document is part 1 of a multi-part deliverable covering Communication Diversion (CDIV), 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".

---

# Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

---

# 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 an Implementation Conformance Statement (PICS).

---

# 1 Scope

The present document specifies the Protocol Implementation Conformance Statement (PICS) for Communications Diversion (CDIV) services, ETSI TS 124 604 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [7] and ETSI ETS 300 406 [8].

The Communications Diversion (CDIV) services enables diverting user, to divert the communications addressed to diverting user to another destination.

---

## 2 References

### 2.1 Normative 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 <https://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.

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

- [1] ETSI TS 124 604: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.604 Release 12)".
- [3] ETSI TS 124 607 (V10.0.0): "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)".
- [4] ETSI TS 124 608: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.608 Release 12)".
- [5] ETSI TS 124 611 (V10.2.0): "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)".
- [6] ETSI TS 124 629: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.629 Release 12)".
- [7] ISO/IEC 9646-7: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 7: Implementation Conformance Statements".
- [8] ETSI ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

## 2.2 Informative 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.

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

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] ISO/IEC 9646-1: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 1: General concepts".

---

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-1 [i.1], ISO/IEC 9646-7 [7] and the following apply.

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

**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, etc.

**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 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI TS 124 604 [1] and the following apply:

CDIV	Communication DIVersion
CDIVN	Communication DIVersion Notification
CFB	Communication Forwarding Busy
CFNL	Communication Forwarding on No Logged-in
CFNR	Communication Forwarding No Reply
CFU	Communication Forwarding Unconditional
ICB	Incoming Communications Barring
ICS	Implementation Conformance Statement
IP	Internet Protocol
IUT	Implementation under Test
OCB	Outgoing Communication Barring
OIP	Originating Identification Presentation
OIR	Originating Identification Restriction
PICS	Protocol Implementation Conformance Statement
SIP	Session Initiation Protocol
SUT	System Under Test
TIP	Terminating Identification Presentation
TIR	Terminating Identification Restriction
TP	Test Purpose
UE	User Equipment

URI Universal Resource Identifier

---

## 4 Conformance to this PICS pro forma specification

### 4.0 The right to copy

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 ICS proforma in this clause so that it can be used for its intended purposes and may further publish the completed ICS.

### 4.1 Guidance for completing the PICS pro forma

#### 4.1.0 Introduction

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

A PICS which conforms to the present document shall be a conforming PICS pro forma completed in accordance with the guidance for completion given in clause 4.1.

#### 4.1.1 Purposes and structure

The purpose of this ICS pro forma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ETSI TS 124 604 [1] may provide information about the implementation in a standardized manner.

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

- guidance for completing the PICS pro forma;
- identification of the implementation;
- identification of the ETSI TS 124 604 [1];
- global statement of conformance;
- roles;
- user role:
  - major capabilities;
- network role:
  - clause 4.7.1;
  - clause 4.7.2;
  - clause 4.7.3;
  - clause 4.7.4;
  - clause 4.7.5.

#### 4.1.2 Abbreviations and conventions

The ICS pro forma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [7].

### 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 the requirement or option supported by the implementation?".

### Status column

The following notations, defined in ISO/IEC 9646-7 [7], 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.
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 a unique conditional status expression which is defined immediately following the table.

### Reference column

The reference column makes reference to ETSI TS 124 604 [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 [7], 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).

### 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.

### 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 pro forma

The supplier of the implementation shall complete the PICS pro forma 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.

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 pro forma.

## 4.2 Identification of the implementation

### 4.2.0 Introduction

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.

#### 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:

.....  
 .....