



**Methods for Testing and Specification (MTS);
TTCN-3 Conformance Test Suite;
Part 3: Abstract Test Suite (ATS) and
Implementation eXtra Information for Testing (IXIT)**

ReferenceRTS/MTS-1029505-3ed161 IXIT

Keywords

ATS, conformance, testing, TTCN

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/CommitteeSupportStaff.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 Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks 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 Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	4
Foreword.....	4
Modal verbs terminology.....	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	7
4 Abstract Test Method (ATM).....	7
5 The ATS development process.....	8
5.1 Requirements and test purposes	8
5.2 ATS structure	8
5.2.1 Test case grouping	8
5.2.2 Test case identifiers	9
5.3 ATS specification framework.....	10
5.3.1 Use of TTCN-3	10
5.3.1.1 General	10
5.3.1.2 TTCN-3 naming conventions.....	10
5.3.1.3 TTCN-3 comment tags.....	11
5.4 ATS archive.....	14
6 PIXIT conformance.....	14
7 ATS conformance	14
Annex A (normative): Abstract Test Suite (ATS)	15
A.1 The ATS in TTCN-3 core (text) format	15
Annex B (normative): Partial IXIT pro forma.....	16
B.0 The right to copy	16
B.1 Introduction	16
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 Methods for Testing and Specification (MTS).

The present document is part3 of a multi-part deliverable covering a TTCN-3 conformance test suite, as identified below:

- Part 1: "Implementation Conformance Statement (ICS)";
- Part 2: "Test Suite Structure and Test Purposes (TSS & TP)";
- Part 3: "Abstract Test Suite (ATS) and Implementation eXtra Information for Testing (IXIT)".**

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.

1 Scope

The present document specifies the Abstract Test Suite (ATS) for the TTCN-3 conformance test suite, as defined in ETSI ES 201 873-1 [1] in compliance with the relevant guidance given in the pro forma for TTCN-3 reference test suite ETSI TS 102 950-2 [8].

The objective of the present document is to provide a basis for conformance tests for TTCN-3 tools giving a high probability of standard conformance with respect to TTCN-3 tools from different vendors. In the present document only the core language features, specified in ETSI ES 201 873-1 [1] have been considered but not the tool implementation (see [i.1] and [i.2]), language mapping (see [i.3], [i.4] and [i.5]) and language extension (see e.g. [i.6], [i.7] and [i.8]) aspects. The test notation used in the ATS attached in a zipped file is in TTCN-3 and it is part of the present document.

Annex A provides the Tree and Tabular Combined Notation (TTCN-3) part of the ATS.

Annex B provides the Partial Implementation Extra Information for Testing (PIXIT) pro forma of the ATS.

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 ES 201 873-1: "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 1: TTCN-3 Core Language".
- [2] ETSI ES 201 873-10: "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 10: TTCN-3 Documentation Comment Specification".
- [3] ETSI TS 102 351: "Methods for Testing and Specification (MTS); Internet Protocol Testing (IPT); IPv6 Testing: Methodology and Framework".
- [4] ISO/IEC 9646-1 (1992): "Information Technology - Open Systems Interconnection - Conformance Testing Methodology and Framework - Part 1: General concepts".
- [5] ISO/IEC 9646-4: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization".
- [6] ISO/IEC 9646-5: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process".
- [7] ISO/IEC 9646-7 (1994): "Conformance testing methodology and framework - Part 7: Implementation Conformance Statement".
- [8] ETSI TS 102 950-2: "Methods for Testing and Specification (MTS); TTCN-3 Conformance Test Suite; Part 2: Test Suite Structure and Test Purposes (TSS&TP)".