

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.3941.4

(06/2011)

SERIES Q: SWITCHING AND SIGNALLING

Signalling requirements and protocols for the NGN –
Testing for NGN networks

**Network integration testing between SIP and
ISDN/PSTN network signalling protocols –
Part 4: Abstract test suite and partial protocol
implementation extra information for testing
proforma specification for SIP-SIP**

Recommendation ITU-T Q.3941.4

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Recommendation ITU-T Q.3941.4

Network integration testing between SIP and ISDN/PSTN network signalling protocols – Part 4: Abstract test suite and partial protocol implementation extra information for testing proforma specification for SIP-SIP

Summary

The purpose of Recommendation ITU-T Q.3941.4 is to provide the abstract test suite and partial protocol implementation extra information for testing proforma for network integration testing (NIT) to verify the overall compatibility of SIP networks based on session initiation protocol (SIP) and session description protocol (SDP) as specified in TS 124 229 in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 and ETS 300 406.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T Q.3941.4	2011-06-29	11

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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Recommendation ITU-T Q.3941.4

Network integration testing between SIP and ISDN/PSTN network signalling protocols – Part 4: Abstract test suite and partial protocol implementation extra information for testing proforma specification for SIP-SIP

1 Scope

The purpose of the present Recommendation is to provide the abstract test suite (ATS) and partial protocol implementation extra information for testing (PIXIT) proforma for network integration testing (NIT) to verify the overall compatibility of SIP networks based on session initiation protocol (SIP) and session description protocol (SDP) as specified in [ETSI TS 124 229] in compliance with the relevant requirements and in accordance with the relevant guidance given in [ITU-T X.296] and [ETSI ETS 300 406].

The present Recommendation is part 4 of a multi-part deliverable covering network integration testing between SIP and ISDN/PSTN network signalling protocols:

- Part 1: Test suite structure and test purposes for SIP-ISDN.
- Part 2: Abstract test suite and partial protocol implementation extra information for testing proforma specification for SIP-ISDN.
- Part 3: Test suite structure and test purposes for SIP-SIP.
- Part 4: Abstract test suite and partial protocol implementation extra information for testing proforma specification for SIP-SIP.

The content of the present document is written according to the guidelines of ISO/IEC 9646-1 and [ETSI ETS 300 406].

The following test specification and design considerations can be found in the body of the present document:

- the overall test suite structure;
- the testing architecture;
- the test methods and port definitions;
- the test configurations;
- the design principles, assumptions, and used interfaces to the TTCN3 tester (System Simulator);
- TTCN styles and conventions;
- the partial PIXIT proforma;
- the modules containing the TTCN-3 ATS.

Annex A of [ETSI TS 186 001-4] provides the partial implementation extra information for testing (PIXIT) proforma of the ATS.

Annex B of [ETSI TS 186 001-4] provides the testing and test control notation (TTCN-3) part of the ATS.

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 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 124 229] ETSI TS 124 229 (2011), *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229 Release 9).*
- [ETSI TS 186 001-3] ETSI TS 186 001-3 (2010), *IMS Network Testing (INT); Network Integration Testing; Part 3: Test Suite Structure and Test Purposes (TSS&TP) for SIP-SIP.*
- [ETSI TS 186 001-4] ETSI TS 186 001-4 (2010), *IMS Network Testing (INT); Network Integration Testing; Part 4: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification.*
- [ETSI ETS 300 406] ETSI ETS 300 406 (1995), *Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology.*

3 Endorsement

The text of [ETSI TS 186 001-4] was approved by ITU-T as the basis for Recommendation ITU-T Q.3941.4 as modified below.

4 Modifications

Page 4, Intellectual Property Rights

Delete the whole section.

Page 4, Foreword

Delete the whole section.

Page 5, Scope

Replace the whole clause with the following:

"1 Scope

See clause 1, Scope, of Recommendation ITU-T Q.3941.4."

Page 28, History

Delete the whole section.

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