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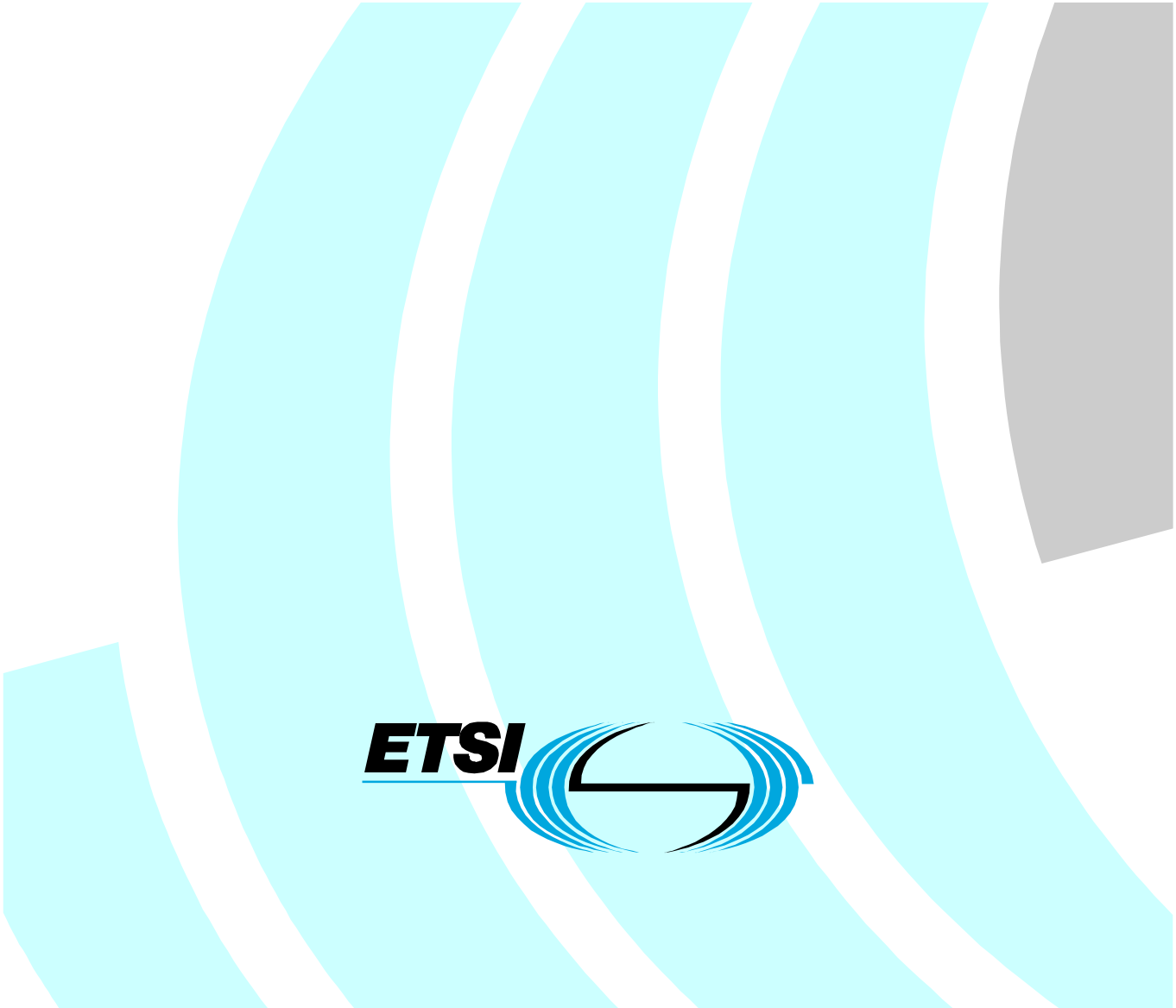
Technical Specification

Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Technology Compliance Specification; Draft IETF SIP RFC2543bis-04; Part 1: Test Suite Structure and Test Purposes (TSS&TP) specification



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Contents

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Foreword

This Technical Specification (TS) has been produced by ETSI Project Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON).

The present document is part 1 of a multi-part deliverable covering Technology Compliance Specification; Draft IETF SIP RFC2543bis-04, as identified below:

Part 1: "Test Suite Structure and Test Purposes (TSS&TP) specification";

Part 2: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

1 Scope

The present document proposes a Test Suite Structure and Test Purposes (TSS&TP) for the SIP protocol as described in Draft IETF RFC 2543bis-04 [1], "Session Initiation Protocol" issued in July 2001.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] Draft IETF SIP RFC 2543bis-04 (2001): "SIP: Session Initiation Protocol".

[2] IETF RFC 2327: "SDP: Session Description Protocol".

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

[4] ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".

[5] ISO/IEC 9646-3: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

- terms defined in Draft IETF SIP RFC 2543bis-04 [1];
- terms defined in ISO/IEC 9646-1 [3], ISO/IEC 9646-2 [4] and ISO/IEC 9646-3 [5].

Callee: SIP entity that is requested to participate to a session by receiving an INVITE message

Caller: SIP entity that initiates a session by sending an INVITE message

Call leg: identifier defined as the combination of the remote address, local address, and Call-ID

Inopportune: test group that handles invalid signalling exchanges of messages, which are properly structured and correctly encoded

Invalid: test group that handles valid signalling exchanges of messages, which are either not properly structured or incorrectly encoded

Test Purpose (TP): Non-formal high-level description of a test, mainly using text. This test description can be used as the basis for a formal test specification (e.g. Abstract Test Suite in TTCN). See ISO/IEC 9646.

Valid: test group that handles valid signalling exchanges of messages, which are properly structured and correctly encoded

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ATS	Abstract Test Suite
CE	Call Establishment
CR	Call Release
I	Invalid
ICMP	Internet Control Message Protocol
IUT	Implementation Under Test
MG	Messaging
O	Inopportune
OE	Originating Endpoint
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PR	Proxy
RD	ReDirect server
RG	ReGistration
RR	RegistRar
RT	RegisTrant
SDP	Session Description Protocol
SM	Session Modification
SS	SeSsion
TCP	Transmission Control Protocol
TE	Terminating Endpoint
TP	Test Purpose
TSS	Test Suite Structure
UA	User Agent
UAC	User Agent Client
UAS	User Agent Server
UDP	User Datagram Protocol
V	Valid

4 Test Suite Structure (TSS)

4.1 Introduction

4.1.1 SIP Entities

Test Purposes have been written for SIP entities according to the Draft IETF SIP RFC 2543bis-04 [1].

Three kinds of entities are considered successively as Implementation Under Test (IUT):

- User Agent (UA) behaving as client or Server.
- Proxy (outbound and simple proxy).
- ReDirect server (RD).

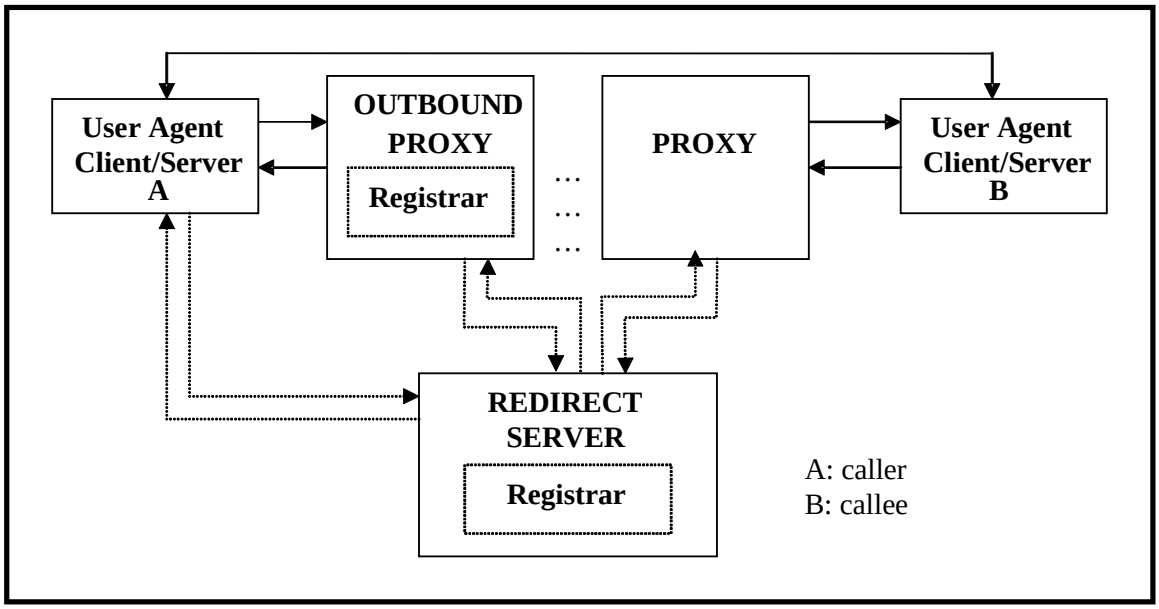

Figure 1: SIP Protocol Entities

4.1.2 General assumptions

Test purposes have been written for behaviours requested with "MUST" or that appear as obvious in present form.

Several proxy servers may forward the requests, but the Test Purposes are written from the point of view of one SIP entity only. The client can be either a user agent client or the client portion of a proxy server.

SDP has been considered as the method used to describe the session, but no Test Purposes have been written to check the SDP content itself as it is out of the scope of the present document.

Proxy, redirect server and registrar shall support both UDP and TCP as transport layer while UA shall support at least UDP.

SIP entities are considered in the present document to be addressed with SIP-URLs, except for Test Purposes that validate the IUT's behaviour upon reception of non SIP-URLs. The features listed below are not covered by the present document. Reasons are described along with their description:

- ICMP Handling:

  Draft IETF SIP RFC 2543bis-04 [1] states that host, network, port, parameter or protocol errors SHOULD be treated as a 4xx response (Client-Server), which SHOULD therefore cause the server to cease retransmitting the response. Others (source quench ICMP messages and TTL exceeds) SHOULD be ignored.

- Timers T1, T2:

  Draft IETF SIP RFC 2543bis-04 [1] states in its clause 14.3.1 that retransmission of requests other than INVITE and ACK SHOULD be implemented when a SIP client is using an unreliable protocol (UDP).

- OPTION:

  Draft IETF SIP RFC 2543bis-04 [1] states in its clause 8 that the OPTION method MUST be supported, but MAY be answered. Therefore, there is no guarantee that the IUT will respond to an option message. A Test Purpose is then not applicable.

- 380 (Alternative Service) message:

  Draft IETF SIP RFC 2543bis-04 [1] states that this message indicates, for an unsuccessful call, that Alternative services are possible. But, the alternative services are described in the message body content, which is not considered.

Selection and status of Test Purposes will be fulfilled when the PICS and the profile will be written.

The verb "ignore" in Test Purpose means that the IUT does not react with an error message and does not take into account the element to be ignored. When this element is an undefined header field, according to 10 [1], proxy shall not remove or modify it.

The adjective "unknown" means in the Test Purpose not defined in [1] while "non-understood" means unknown from the point of view of the IUT.

The mandatory header fields like CALL-ID, Cseq, From, TO and Via are supposed to be present in all messages without stressing this requirement in each Test Purpose.

4.1.3 System under test

In SIP, a client can either sends its request directly to the Request-URI or to its outbound proxy. It can also ask for SIP-URL to a redirect server before sending its request. Test purpose will apply depending of the current tested configuration.

Three kinds of session have been considered in the present document:

- Call using a proxy.
- Direct call with no proxy.
- Call using a redirect server.

4.2 Overview of the Test Suite Structure

The Test Suite Structures is based on SIP entities and assumptions as described above.

The following figure shows the Test Suite Structure.

Last sub groups may be subdivided in three subgroups: Valid behaviour (V), Invalid behaviour (I), inopportune behaviour (O).

Test Suite	Main Functionalities	Role	Functionalities subgroups	Test group
SIP	Registration	Registrant		V
		Registrar		V-I-O
	Session	Originating Endpoint	Call establishment	V
			Call release	V-I
		Terminating Endpoint	Call establishment	V-I
			Call release	V-I
			Session Modification	V
		Proxy	Call establishment	V
			Call release	V
			Session Modification	V
		Redirect server	Call establishment	V
			Call release	V
	Messaging	Registrant		V-I
		Registrar		V-I
		Originating Endpoint		V-I
		Terminating Endpoint		V-I
		Proxy		V-I
		Redirect Server		V-I

Figure 2: TSS of TIPHON profile for SIP

5 Test Purposes (TP)

5.1 Introduction

5.1.1 TP naming convention

Table 1: TP identifier naming convention scheme

Identifier: **<protocol>_<main functionality>_<role>_<functionality>_<type>_<nn>**	
<protocol>	SIP
<main functionality>	ReGistration (RG), Session (SS), MessaGing (MG).
<role>	RegisTrant (RT), RegistRar (RR) Originating Endpoint (OE), Terminating Endpoint (TE), PRoxy (PR), ReDirect (RD).
<functionality> (optional)	Call Establishment (CE), Call Release(CR), Session Modification (SM).
<type>	Valid behaviour (V), Invalid behaviour (I), inopportune behaviour (O).
<nnn>	sequential number (001-999).

5.1.2 State Definitions during a call

For more clarity and consistency, states defined in figures 10 and 11 in [1], have been reused in the wording of Test Purposes.

5.1.3 TP structure

Each Test Purpose is decomposed in seven keyword.

The TPId gives a unique identifier to each Test Purpose.

The Status specifies whether the Test Purpose or the group is mandatory or optional according to [1]. The group status applies to all Test Purposes belonging to this group.

The SUT describes which entity is being tested.

The Precondition determines the initial state of the SUT.

The Ref. outlines the references in [1] used to create the Test Purpose.

The purpose describes the objective of the test.

5.2 Test Purposes for Registration

5.2.1 Registrant

GroupSelection: Registration being listed as an option, the Test Purpose is applicable if the SUT is declared as supporting periodic registration and can behave as User Agent.

Status: Optional

5.2.1.1 Valid Behaviour

TPId: **SIP_RG _RT _V_001**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: None

Ref: 2.2, 7.1, 10.14 [1]

Purpose: Ensure that the IUT, in order to be registered, sends a REGISTER request to its proxy (Home server, outbound proxy) with the action field set to "proxy" in the Contact header field, without user name in the Request-URI and with a SIP URL as request-URI.

TPId: **SIP_RG _RT _V_002**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: None

Ref: 2.2, 7.1, 10.14 [1]

Purpose: Ensure that the IUT, in order to be registered, sends a REGISTER request to its redirect server with the action field set to "redirect" in the Contact header field, without user name in the Request-URI and with a SIP URL as request-URI.

TPId: **SIP_RG _RT _V_003**

Status: optional

SUT: A UA visiting a domain

Precondition: None

Ref: 7.1, 7.2 [1]

Purpose: Ensure that the IUT sends a REGISTER request to the visited proxy with the action field set to "proxy" in the Contact header field, with an empty user name in the Request-URI, with a SIP URL as Request-URI and a FROM address consisting of the URL-escaped user identity at the visited domain.

TPId: **SIP_RG _RT _V_004**

Status: Mandatory

SUT: A UA configured to behave with a redirect server or a proxy

Precondition: None

Ref: 7.5 [1]

Purpose: Ensure that the IUT having sent a REGISTER request is able to receive a Success (200 OK) response containing its current registration list in the Contact header and an expires parameter in the header.

TPId: **SIP_RG _RT _V_005**

Status: optional

SUT: A UA configured to behave with no local outbound proxy

Precondition: None

Ref: 7.1 [1]

Purpose: Ensure that the IUT, in order to be registered, sends a REGISTER request to the well-known "all SIP servers" multicast address "sip.mcast.net" (224.0.1.75) and without username.

TPId: **SIP_RG _RT _V_006**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 7.4 [1]

Purpose: Ensure that the IUT, already registered, sends at least one REGISTER request, during the shortest lifetime indicated in the contact parameters of the Success (200 OK) response it has received.

TPId: **SIP_RG _RT _V_007**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 7.4 [1]

Purpose: Ensure that the IUT, already registered, sends at least one REGISTER requests, sharing the same action value, during the shortest lifetime indicated in the Header field Expires of the Success (200 OK) response it has received.

TPId: **SIP_RG _RT _V_008**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 7, 9.1.1, 11.4 [1]

Purpose: Ensure that the IUT having sent a REGISTER message, on receipt of a Temporarily not available (480 Temporarily not available) response does not consider to be registered.

TPId: **SIP_RG _RT _V_09**

Status: Optional

SUT: A UA configured to behave with a redirect server or a proxy

Precondition: None

Ref: 10.11, 11.4, A.2 [1]

Purpose: Ensure that the IUT having sent a REGISTER message, on receipt of an Unauthorized (401 Unauthorized) response including a WWW-Authenticate field, repeats its REGISTER request with an Authorization field.

5.2.2 Registrar

GroupSelection: IUT is a proxy or a redirect server entity.

5.2.2.1 Valid Behaviour

TPId: **SIP_RG _RR _V_001**

Status: Mandatory

SUT: A proxy

Precondition: None

Ref: 7, 10.14, 7.3 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including an action in contact parameter header field set to "proxy" and without user name in the Request-URI, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_002**

Status: Mandatory

SUT: A redirect server

Precondition: None

Ref: 7, 10.14, 7.3 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including an action in contact parameter header field set to "redirect" and without user name in the Request-URI, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_003**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7, 7.3, 10.14 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including multiple contact header fields sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_004**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.2, 10.12 [1]

Purpose: Ensure that the IUT on receipt of a successive REGISTER with the same Call-ID but with different contact header fields answers successively each of them with a Success (200 OK) response.

TPId: **SIP_RG _RR _V_005**

Status: Optional

SUT: A proxy

Precondition: None

Ref: 7.1, 7.2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a Request-URI addressing a domain that is different to the domain addressed by the TO field (visitors registration) and a FROM address consisting of the URL-escaped user identity at the visited domain field sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_006**

Status: Optional

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.3 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a FROM field addressing a different entity than that addressed by the TO field (third party registration), sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_007**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.4, 10.12 [1]

Purpose: Ensure that the IUT on receipt of periodic REGISTER request with the same Call-ID and contact header fields, answers each of them with a Success (200 OK) response.

TPId: **SIP_RG _RR _V_008**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.5, 10.24 [1]

Purpose: Ensure that the IUT when the UA is already registered, on receipt of REGISTER request without contact field, sends a Success (200 OK) response including the expiration time of the registration in an Expires header field.

TPId: **SIP_RG _RR _V_09**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.4, 10.24 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including an Expires header field set to a date, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_010**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.4, 10.24 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including an Expires header field set to a delay, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_011**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.4, 10.24 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including an Expires parameter in the contact header field set to a date, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_012**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.21 [1]

Purpose: Ensure that the IUT when it uses absolute expirations time, on receipt of a REGISTER request, sends a Success (200 OK) response including a Date header field.

TPId: **SIP_RG _RR _V_013**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.14 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a Contact header field without display name, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_014**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.6, 10.14 [1]

Purpose: Ensure that the IUT when contacts have been already registered, on receipt of a REGISTER request including a Contact header field set to * and an Expires header field set to zero, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_015**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.6 [1]

Purpose: Ensure that the IUT when contacts have been already registered, on receipt of a REGISTER request including a Contact header field with an Expires parameter set to zero, sends a Success (200 OK) response.

TPId: **SIP_RG _RR _V_016**

Status: Mandatory

SUT: A redirect server or a proxy

Ref: 7.3 [1]

Purpose: Ensure that the IUT when a call is currently established, on receipt of a REGISTER request, sends a Success (200 OK) response.

5.2.2.2 Invalid Behaviour

TPId: **SIP_RG _RR _I_001**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.3 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including Contact header fields set to different action values, sends a Conflict (409) response.

TPId: **SIP_RG _RR _I_002**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a user name in the Request-URI, sends a Client-error (4XX) response.

TPId: **SIP_RG _RR _I_003**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2.2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a non SIP-URL in the Request-URI, sends a Client-error (4XX) response.

5.2.2.3 Inopportune Behaviour

TPId: **SIP_RG _RR _O_001**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7.2, 7.3 [1]

Purpose: Ensure that the IUT on receipt of successive REGISTER requests with out-of order Cseq header field, sends Success (200 OK) responses.

5.3 Test Purposes for Session

Ref: 1.4.4 [1]

5.3.1 Originating Endpoint

Group Selection: IUT can behave as User Agent client.

5.3.1.1 Call establishment

5.3.1.1.1 Valid Behaviour

TPId: **SIP_SS _OE_CE_V_001**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: None

Ref: 1.4.4, 5.1, 15.1 [1]

Purpose: Ensure that the IUT when it is registered to an outbound proxy, to establish a call sends an INVITE request to its proxy including in the Request-URI and the TO fields the address of the callee, a TAG in the FROM field and a single CONTACT field set to its location.

TPId: **SIP_SS _OE_ CE_V_002**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: None

Ref: 1.4.4, 15.1 [1]

Purpose: Ensure that the IUT when it is registered to a redirect server, to establish a call sends an INVITE request to its redirect server including in the Request-URI and the TO fields the address of the callee, a TAG in the FROM field and with a single CONTACT field set to its location.

TPId: **SIP_SS _OE_ CE_V_003**

Status: Mandatory

SUT: A UA configured to behave without proxy or redirect server

Ref: 1.4.4, 5.1, 15.1 [1]

Purpose: Ensure that the IUT to establish a call sends an INVITE request to the called User Agent directly including in the Request-URI and the TO fields the address of the callee, a TAG in the FROM field and a single CONTACT field set to its location.

TPId: **SIP_SS _OE_ CE_V_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 10, 15.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Trying (100 Trying) response enters in the call proceeding state.

TPId: **SIP_SS _OE_ CE_V_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 10, 15.1 [1]

Purpose: Ensure that the IUT in call proceeding state, on receipt of a Trying (100 Trying) response stays in the call proceeding state.

TPId: **SIP_SS _OE_ CE_V_006**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 10.20, 15.1, 15.3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response sends an ACK request to its proxy with the same CSeq field value as the INVITE request and the same Tag in the TO field as the Success (200 OK) response.

TPId: **SIP_SS _OE_ CE_V_007**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 10.20, 15.1 [1]

Purpose: Ensure that the IUT in call proceeding state, on receipt of a Success (200 OK) response sends an ACK request to its proxy with the same CSeq field value as the INVITE request and the same Tag in the TO field as the Success (200 OK) response.

TPId: **SIP_SS _OE_ CE_V_008**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 10.20, 15.3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of Success (200 OK) responses with the call leg differing only on the tag in the TO field, sends an ACK request for each received Success (200 OK) responses.

TPId: **SIP_SS _OE_ CE_V_009**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 10.20, 11.3.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Multiple Choices (300 Multiple Choices) response sends an ACK request to its redirect server with the same CSeq field value as the INVITE request and the same Tag in the TO field as the Multiple Choices (300 Multiple Choices) response.

TPId: **SIP_SS _OE_ CE_V_010**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 11.3.1, 15.3 [1]

Purpose: Ensure that the IUT in call proceeding state, on receipt of a Multiple Choices (300 Multiple Choices) response sends an ACK request to its redirect server.

TPId: **SIP_SS _OE_ CE_V_011**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 15.3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Moved Permanently (301 Moved Permanently) response sends an ACK request to its redirect server.

TPId: **SIP_SS _OE_ CE_V_012**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 15.3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Moved Temporarily (302 Moved Temporarily) response sends an ACK request to its redirect server.

TPId: **SIP_SS _OE_ CE_V_013**

Status: Mandatory

SUT: A UA configured to behave without proxy or redirect server

Precondition: None

Ref: 1.4.4, 5.1, figure 10, 10.20, 15.3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response sends an ACK request to the callee with the same Cseq field value as the INVITE request and the same Tag in the TO field as the Success (200 OK) response.

TPId: **SIP_SS _OE_ CE_V_014**

Status: Mandatory

SUT: A UA configured to behave without proxy or redirect server

Precondition: None

Ref: 1.4.4, 5.1, figure 10, 15.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Use Proxy (305 Use Proxy) response sends an INVITE request to the proxy given by the Contact field.

TPId: **SIP_SS _OE_CE _V_015**

Status: Mandatory

SUT: A UA configured to behave with a proxy or a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Not Found (404 Not Found) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_016**

Status: Mandatory

SUT: A UA configured to behave with a proxy or a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1.1, 5.2, figure 10 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Gone (410 Gone) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_017**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, 5.2, figure 10 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Temporarily Unavailable (480 Temporarily Unavailable) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_018**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, 5.2, figure 10, 15.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Busy Here (486 Busy Here) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_019**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, 5.2, figure 10 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Server Internal Error (500 Server Internal Error) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_020**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, 5.2, figure 10 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Busy Everywhere (600 Busy Everywhere) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_021**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, 5.2, figure 10 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Decline (603 Decline) response sends an ACK request.

TPId: **SIP_SS _OE_CE _V_022**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 15.4 [1]

Purpose: Ensure that the IUT in completed state, sends an INVITE request including a Request-URI set to the location given in the 3XX response previously received

TPId: **SIP_SS _OE_CE _V_023**

Status: Mandatory

SUT: A UA configured to behave with a redirect server

Precondition: Registration of the UA

Ref: 1.4.4, 5.1, figure 10, 15.3 [1]

Purpose: Ensure that the IUT having sent an INVITE to the location get from the redirect server, on receipt of a Success (200 OK) response sends an ACK request to the same location.

TPId: **SIP_SS _OE_CE _V_024**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 5.1 [1]

Purpose: Ensure that the IUT while is establishing a call, sends a unique session description either in the INVITE request that can be repeated in the ACK request or in the ACK request only.

TPId: **SIP_SS _OE_CE _V_025**

Status: Mandatory

SUT: A UA configured to behave without proxy

Precondition: Registration of the UA if needed

Ref: 10.11, figure 10, A.2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of an Unauthorized (401 Unauthorized) response including a WWW-Authenticate field, sends an ACK request.

TPId: **SIP_SS _OE_CE _V_026**

Status: Optional

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 10.11, figure 10, A.2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Proxy Authentication Required (407 Proxy Authentication Required) response including a Proxy-Authenticate header field, sends an ACK request.

TPId: **SIP_SS _OE_ CE_V_027**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 16.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response that contains a Record-Route header sends an ACK request to its proxy with a Request-URI set to the top URI of the Record-Route header.

TPId: **SIP_SS _OE_ CE_V_028**

Status: Mandatory

SUT: A UA configured to behave with a proxy

Precondition: Registration of the UA

Ref: 16.1, 16.4 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response that contains a Record-Route header sends an ACK request to its proxy with a Route header set to the reverse representation of the received Record-Route (Top URI being popped) with the Contact header appended.

5.3.1.2 Call release

5.3.1.2.1 Valid Behaviour

TPId: **SIP_SS _OE_CR _V_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, 15.4 [1]

Purpose: Ensure that the IUT in completed state, to release it sends a BYE request with a higher CSeq field value and the same call leg.

TPId: **SIP_SS _OE_CR _V_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, 15.4 [1]

Purpose: Ensure that the IUT in completed state, having sent a BYE request, on receipt of a Success (200 OK) response returns in the initial state.

TPId: **SIP_SS _OE_CR _V_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, 15.4 [1]

Purpose: Ensure that the IUT in completed state, having sent a BYE request, on receipt of a Call Leg/Transaction Does Not Exist (481 Request Terminated) response returns in the initial state.

TPId: **SIP_SS _OE_CR _V_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, 15.4 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request, sends a Success (200 OK) response.

TPId: **SIP_SS _OE_CR _V_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 5.2, 15.4 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a CANCEL request sends a Success (200 OK) response.

TPId: **SIP_SS _OE_CR _V_006**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 5.2, 15.4 [1]

Purpose: Ensure that the IUT in call proceeding state, on receipt of a CANCEL request, sends a Success (200 OK) response.

5.3.1.2.2 Invalid Behaviour

TPId: **SIP_SS _OE_CR _I_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, 15.5 [1]

Purpose: Ensure that the IUT having established a call, on receipt of a BYE request with a lower CSeq field on the same call leg, rejects it with a 400-class response.

5.3.2 Terminating Endpoint

GroupSelection: IUT can behave as User Agent server.

5.3.2.1 Call establishment

5.3.2.1.1 Valid Behaviour

TPId: **SIP_SS _TE_CE _V_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 11 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including session description parameters that it can accept, sends a Success (200 OK) response including a media session description, preceded optionally by informational (1XX) response.

TPId: **SIP_SS _TE_CE _V_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 11 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including no message body, sends a Success (200 OK) response including a media session description, preceded optionally by informational (1XX) response.

TPId: **SIP_SS _TE_CE _V_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10, 5.1, figure 11, 15.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request, sends a Success (200 OK) or an informational (1XX) response including the fields TO, FROM, Call-ID, CSeq and Via copy from the INVITE request received with an additional tag on the TO field.

TPId: **SIP_SS _TE_CE _V_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 11, 15.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request, sends a Success (200 OK) or an informational (1XX) response including a single Contact header field.

TPId: **SIP_SS _TE_CE _V_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10, 5.1, figure 11, 16.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request, sends a Success (200 OK) and optionally or informational (1XX) response including all header fields Record-Route copy from the INVITE request, in the same order.

TPId: **SIP_SS _TE_CE _V_006**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 11, 15.2 [1]

Purpose: Ensure that the IUT in success state, on receipt of an ACK request, enters in the confirmed state.

TPId: **SIP_SS _TE_CE _V_007**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 11, 15.3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request with a Request-URI that does not correspond to one of its configured addresses, sends a Not Found (404 Not Found) response.

TPId: **SIP_SS _TE_CE _V_008**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 1.4.4, 5.1, figure 11 [1]

Purpose: Ensure that the IUT having established a session, on receipt of an INVITE request with a higher Cseq number for the same call leg with a different session description, adjust the session parameter.

TPId: **SIP_SS _TE_CE _V_009**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.15 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including session description parameters that it cannot accept and a Content-Disposition including a handling set to "optional", sends a Success (200 OK) or an informational (1XX) response (ignores the message body).

TPId: **SIP_SS _TE_CE _V_010**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.15 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including session description parameters that it cannot accept and a Content-Disposition including a handling set to "required", sends an Unsupported Media Type (415 Unsupported Media Type) response.

TPId: **SIP_SS _TE_CE _V_011**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.15, 11.4.24, 11.6.4 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including session description parameters that it cannot accept and a Content-Disposition without handling parameter, sends an Unsupported Media Type (415 Unsupported Media Type) response, or a Not Acceptable (606 - Not Acceptable) response or a Not Acceptable Here (488 Not Acceptable Here) response.

TPId: **SIP_SS _TE_CE _V_012**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.16 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Content-Encoding set to content-coding values that it does not support, sends an Unsupported Media Type (415 Unsupported Media Type) response.

TPId: **SIP_SS _TE_CE _V_013**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.25 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a FROM field without a TAG parameter, sends a Success (200 OK) or an informational (1XX) response.

TPId: **SIP_SS _TE_CE _V_014**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.35 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request with a Require header field set to an option value that the IUT does not support, sends a Bad Extension (420 Bad Extension) response including those options in the Unsupported header.

TPId: **SIP_SS _TE_CE _V_015**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.42, figure 11 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Timestamp header field, sends a Success (200 OK) response, preceded optionally by informational (1XX) response, including a Timestamp header set to the exact same value.

TPId: **SIP_SS _TE_ CE_V_016**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 16.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request that contains a Record-Route header sends Success (200 OK) response with a Record-Route header copied from the INVITE request without re-ordering.

5.3.2.1.2 Invalid Behaviour

TPId: **SIP_SS _TE_CE _I_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 5.1 [1]

Purpose: Ensure that the IUT on receipt of two INVITE requests for the same call leg with different Cseq values, sends a Bad Request (400 Bad Request) response including a Retry-After header field set to a randomly chosen value between 0 and 10.

5.3.2.2 Call release

5.3.2.2.1 Valid Behaviour

TPId: **SIP_SS _TE_CR _V_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, figure 11 [1]

Purpose: Ensure that the IUT in the completed state, on receipt of a BYE request sends a Success (200 OK) response and returns in the initial state.

TPId: **SIP_SS _TE_CR _V_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, figure 11 [1]

Purpose: Ensure that the IUT in the completed state, to release it sends a BYE request with a higher CSeq field value and the same call leg.

TPId: **SIP_SS _TE_CR _V_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 6, figure 11 [1]

Purpose: Ensure that the IUT in completed state, having sent a BYE request, on receipt of a Success (200 OK) response returns in the initial state.

5.3.2.2.2 Invalid Behaviour

TPId: **SIP_SS _TE_CR _I_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.20, figure 11 [1]

Purpose: Ensure that the IUT on receipt of a BYE request with a CSeq field set to a lower value than in the preceding INVITE request, sends a Bad Request (400 Bad Request) response.

5.3.2.3 Session Modification

5.3.2.3.1 Valid Behaviour.

TPId: **SIP_SS _TE_SM _V_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA

Ref: 1.4.6, 5.1, figure 10, 10.20 [1]

Purpose: Ensure that the IUT in completed state, on receipt of an INVITE request for the same Call Leg (As the established call) with a higher CSeq and a different session description sends a Success (200 OK) response including the last received CSeq.

5.3.3 Proxy

GroupSelection: IUT is a Proxy.

5.3.3.1 Call establishment

5.3.3.1.1 Valid Behaviour

TPId: **SIP_SS _PR_CE _V_001**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of terminal simulated UA to the IUT

Ref: 1.4.4, 17.3.1, 10.46.6 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request forwards the message after having inserted in first position a Via header field set to its location with a branch parameter to the received list of Via header fields.

TPId: **SIP_SS _PR_CE _V_002**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 17.3 [1]

Purpose: Ensure that the IUT after having forwarded an INVITE request, on receipt of a Success (200 OK) response forwards the message after having removed the Via header field corresponding to its location.

TPId: **SIP_SS _PR_CE _V_003**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 17.3.2 [1]

Purpose: Ensure that the IUT after having forwarded an INVITE request, on receipt of a Success (200 OK) response with the topmost Via field that does not match to its location, drops the message.

TPId: **SIP_SS _PR_CE _V_004**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT and a successful session

Ref: 5.1.1 [1]

Purpose: Ensure that the IUT after having forwarded a Success (200 OK) response, on receipt of an ACK request forwards the message with the Via header field including the UAC location.

TPId: **SIP_SS _PR_CE _V_005**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1 [1]

Purpose: Ensure that the IUT after having forwarded a Success (200 OK) response, on receipt of an ACK request including Route headers field forwards the message with its Route header field.

TPId: **SIP_SS _PR_CE _V_006**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1 17.3.5, 17.3.6 [1]

Purpose: Ensure that the IUT on receipt of a Ringing (180 Ringing) provisional response, forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_007**

Status: Mandatory

SUT: A stateless Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.3 [1]

Purpose: Ensure that the IUT on receipt of a Moved Temporarily (302 Moved Temporarily) Redirection response, forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_008**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.6, 17.4, 10.46.6 [1]

Purpose: Ensure that the IUT on receipt of a Moved Temporarily (302 Moved Temporarily) Redirection response, sends an ACK request, with the same field Via and branch parameter as in the previous INVITE, to the UAS and forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_009**

Status: Mandatory

SUT: A stateless Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.3 [1]

Purpose: Ensure that the IUT on receipt of a Gone (410 Gone) Request failure response, forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_010**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.6, 17.4, 10.46.6 [1]

Purpose: Ensure that the IUT on receipt of a Gone (410 Gone) Request failure response, sends an ACK request, with the same field Via and branch parameter as in the previous INVITE, to the UAS and forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_011**

Status: Mandatory

SUT: A stateless Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.3 [1]

Purpose: Ensure that the IUT on receipt of a Server Internal Error (500 Server Internal Error) server failure response, forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_012**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.6, 17.4, 10.46.6 [1]

Purpose: Ensure that the IUT on receipt of a Server Internal Error (500 Server Internal Error) server failure response, sends an ACK request, with the same field Via and branch parameter as in the previous INVITE, to the UAS and forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_013**

Status: Mandatory

SUT: A stateless Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.3 [1]

Purpose: Ensure that the IUT on receipt of a Decline (603 Decline) Global failure response, forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_014**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3, 10.46.6 [1]

Purpose: Ensure that the IUT on receipt of a Decline (603 Decline) Global failure response, sends an ACK request, with the same field Via and branch parameter as in the previous INVITE, to the UAS and forwards it to the UAC.

TPId: **SIP_SS _PR_CE _V_015**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and an initiated session

Ref: 5.1.1, 17.3.6, 17.4 [1]

Purpose: Ensure that the IUT having already sent an ACK request to the UAS and a non-200 class final response to the UAC, on receipt of an ACK request from the UAC does not forward it.

TPId: **SIP_SS _PR_CE _V_016**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 17.3.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request to a multicast group that already appears in a Via header field does not forward the message.

TPId: **SIP_SS _PR_CE _V_017**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and a session initiated

Ref: 17.3.6 [1]

Purpose: Ensure that the IUT on receipt of a Success (200 OK) response with a Call-ID that differs to the CALL-ID of the previous INVITE, forwards the Success (200 OK) response.

TPId: **SIP_SS _PR_CE _V_018**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT and a session initiated

Ref: 17.3.6 [1]

Purpose: Ensure that the IUT on receipt of a Success (200 OK) response with the same call leg but a branch parameter in the Via field that differs to the value in the previous INVITE, does not forward the Success (200 OK) response.

TPId: **SIP_SS _PR_CE _V_019**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 17.3.2 [1]

Purpose: Ensure that the IUT having already forwarded a Success (200 OK) response, on receipt of an INVITE request with the same fields TO, FROM, CSeq and Call-ID, sends again the Success (200 OK) response.

TPId: **SIP_SS _PR_CE _V_020**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 1.7.3.4 [1]

Purpose: Ensure that the IUT having already forwarded a Not Found (404 Not Found) response, on receipt of an INVITE request with the same fields TO, FROM, CSeq and Call-ID, sends again the Not Found (404 Not Found) response.

TPId: **SIP_SS _PR_CE _V_021**

Status: Optional

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT with multiple locations

Ref: 1.4.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request for A UA registered to several locations, try the addresses sequentially or in parallel until receiving a Successful (200 OK) response.

TPId: **SIP_SS _PR_CE _V_022**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.24 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including an Expires header field, on expiration of date without receiving a Successful (200 OK) response, sends a Request Timeout (408 Request Timeout) response to the UAC.

TPId: **SIP_SS _PR_CE _V_023**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.27 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Max-Forwards header field set to 5, forwards it to the UAC after having decreasing this counter of one.

TPId: **SIP_SS _PR_CE _V_024**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.27 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Max-Forwards header field set to 1, forwards it to the UAC after having decreasing this counter of one.

TPId: **SIP_SS _PR_CE _V_025**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.27 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Max-Forwards header field set to 0, sends a Too many hops (483 Too many hops) request failure response to the UAC.

TPId: **SIP_SS _PR_CE _V_026**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.31 [1]

Purpose: Ensure that the IUT having already proxy an INVITE request, on receipt of a Proxy Authentication Required (407 Proxy Authentication Required) response including a Proxy-Authenticate header field, forwards the response to the UAC with the Proxy-Authenticate header field.

TPId: **SIP_SS _PR_CE _V_027**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.31, 10.48 [1]

Purpose: Ensure that the IUT having already proxy an INVITE request, on receipt of an Unauthorized (401 Unauthorized) response including a Proxy-Authenticate and WWW-Authenticate header fields, forwards the response to the UAC with the Proxy-Authenticate and the WWW-Authenticate header fields.

TPId: **SIP_SS _PR_CE _V_028**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.33, 10.44 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Proxy-Require header field set to a value that it does not understand, sends a Bad Extension (420 Bad Extension) request failure response including a list of the options that it does not support in the Unsupported header, to the UAC.

TPId: **SIP_SS _PR_CE _V_029**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.35 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Require header field set to a value that it does not understand, proxies the INVITE request.

TPId: **SIP_SS _PR_CE _V_030**

Status: Mandatory

SUT: A proxy

Precondition: Registration of simulated terminal UA to the IUT and a successful session

Ref: 16.5 [1]

Purpose: Ensure that the IUT, after having forwarded a Success (200 OK) response, on receipt of an ACK request that does contain a Route header, pops the top Route header and places it (including all URI parameters) in the Request-URI before forwarding the ACK.

TPId: **SIP_SS _PR_CE _V_031**

Status: Mandatory

SUT: A proxy

Precondition: Registration of simulated terminal UA to the IUT and a successful session

Ref: 16.5 [1]

Purpose: Ensure that the IUT, after having forwarded a Success (200 OK) response, on receipt of an ACK request that contains a Route header including a method parameter pops the top route header and places it in the Request-URI after removing the method parameter before forwarding the ACK.

TPId: **SIP_SS _PR_CE _V_032**

Status: Mandatory

SUT: A proxy

Precondition: Registration of simulated terminal UA to the IUT and a successful session

Ref: 16.5 [1]

Purpose: Ensure that the IUT, after having forwarded a Success (200 OK) response, on receipt of an ACK request that contains a Route header including a headers parameter pops the top route header and places it in the Request-URI after removing the headers parameter before forwarding the ACK.

5.3.3.2 Call Release

5.3.3.2.1 Valid Behaviour

TPId: **SIP_SS _PR_CR _V_001**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT and a session established

Ref: 6, 10.46.6 [1]

Purpose: Ensure that the IUT while a session has been established, on receipt of a BYE request forwards the message after having inserted a Via header field set to its location with a new branch.

TPId: **SIP_SS _PR_CR _V_002**

Status: Mandatory

SUT: A stateful Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 5.2, 10.46.6 [1]

Purpose: Ensure that the IUT having already forwarded an INVITE request, on receipt of a CANCEL request, sends a Successful (200 OK) response to the UAC and a CANCEL request to the UAS with a Via header set to its location and the same branch parameter as in the INVITE request.

TPId: **SIP_SS _PR_CR _V_003**

Status: Mandatory

SUT: A stateless Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 5.2 [1]

Purpose: Ensure that the IUT while a session has been already established, on receipt of a CANCEL request forwards it to the UAS.

5.3.3.3 Session Modification

5.3.3.3.1 Valid Behaviour.

TPId: **SIP_SS _PR_SM _V_001**

Status: Mandatory

SUT: A proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 1.4.6, 5.1, figure 10, 10.20 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request for the same Call Leg (As an already established call) with a higher CSeq and a different session description forwards the message after having inserted in first position a via header field set to its location with a branch parameter to the received list of Via header fields.

5.3.4 Redirect Server

GroupSelection: IUT is a Redirect Server.

5.3.4.1 Call establishment

5.3.4.1.1 Valid Behaviour

TPId: **SIP_SS _RD_CE _V_001**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 1.4.4, 1.4.5, 10.43 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request, sends a 3XX redirection response to the caller including a contact header field set to the registered location of the callee and the TO header field set to the received value with an additional TAG.

TPId: **SIP_SS _RD_CE _V_002**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 1.4.4, 10.46.4 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request, sends a 3XX redirection response to the caller after having copy the received Via header.

TPId: **SIP_SS _RD_CE _V_003**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 1.4.4 [1]

Purpose: Ensure that the IUT having sent a 3XX redirection response, accepts an ACK request.

TPId: **SIP_SS _RD_CE _V_004**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 1.4.4, 1.4.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request, send a 3XX redirection response to the caller including a contact header field set to the list of locations of the callee previously registered.

TPId: **SIP_SS _RD_CE _V_005**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.35 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Require header field set to a value that it does not understand, sends a 3XX redirection response to the caller.

TPId: **SIP_SS _RD_CE _V_006**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 11.4.16 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request for a UA for which the registration has expired, sends a Temporarily Unavailable (480 Temporarily Unavailable) request failure response to the caller.

5.3.4.2 Call release

5.3.4.2.1 Valid Behaviour

TPId: **SIP_SS _RD_CR _V_001**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 5.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request immediately followed by a CANCEL request with the same Call-ID, TO, FROM, top Via header, Request URI and CSeq, sends a Request Terminated (487 Request Terminated) request failure to the caller.

TPId: **SIP_SS _RD_CR _V_002**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 5.2 [1]

Purpose: Ensure that the IUT on receipt of a CANCEL request whose Call-ID does not match a pending request, sends a Call Leg/Transaction Does Not Exist (481 Call Leg/Transaction Does Not Exist) request failure to the caller.

5.4 Test Purposes for Transport

Ref: 1.5.2 [1]

5.5 Test Purposes for Messaging

5.5.1 Registrant

GroupSelection: Registration being listed as an option, the Test Purpose is applicable if the SUT is declared as supporting periodic registration.

5.5.1.1 Valid Behaviour

TPId: **SIP_MG _RT _V_001**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a valid Success (200 OK) response including non-understood URL parameters in SIP-URL of the CONTACT header field, ignores it and considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _V_002**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a valid Success (200 OK) response including header parameters in the SIP-URL of the CONTACT header field, considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _V_003**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a valid Success (200 OK) response including CR and LF as line terminators.

TPId: **SIP_MG _RT _V_004**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a valid Success (200 OK) response including the combination CRCR to terminate the message header.

TPId: **SIP_MG _RT _V_005**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a valid Success (200 OK) response including the combination LFLF to terminate the message header.

TPId: **SIP_MG _RT _V_006**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a valid Success (200 OK) response beginning with several CRLF, CR and LF.

TPId: **SIP_MG _RT _V_007**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 9.1.1 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a valid Success (299 OK) response with non-defined last two digits considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _V_008**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 9.1.1 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a valid Success (200 PERFECT) response with an unknown reason phrase considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _V_009**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 9.1 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a Success (200 OK) response including CR characters at the end of the status-line before the CRLF character.

TPId: **SIP_MG _RT _V_010**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 9.1 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a Success (200 OK) response including LF characters at the end of the status-line after the CRLF character.

TPId: **SIP_MG _RT _V_011**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a Success (200 OK) response including a Header Fields named with upper and lower cases.

TPId: **SIP_MG _RT _V_012**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a Success (200 OK) response including an Header fields set with values preceded by several leading white space and properly extended over multiple lines.

TPId: **SIP_MG _RT _V_013**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, is able to receive a Success (200 OK) response including a Header fields set with short field names.

5.5.1.2 Invalid Behaviour

TPId: **SIP_MG _RT _I_001**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a Success (200 OK) response with transport parameters in the FROM and TO header fields considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _I_002**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a Success (200 OK) response with a ttl parameter in the FROM and TO header fields ignores them and considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _I_003**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a Success (200 OK) response with an URI including a Header parameter in the TO and FROM header fields ignores them and considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _I_004**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a Success (200 OK) response with a method parameter in the TO and FROM header fields ignores them and considers to have received a Success (200 OK).

TPId: **SIP_MG _RT _I_005**

Status: Mandatory

SUT: A UA

Precondition: None

Ref: 10, table 4 [1]

Purpose: Ensure that the IUT, having sent a REGISTER request, on receipt of a Session Progress (183 Session Progress) response with a header field Contact ignores it and accepts the following Success (200 OK).

5.5.2 Registrar

GroupSelection: IUT is a proxy or a redirect server entity.

5.5.2.1 Valid Behaviour

TPId: **SIP_MG _RR _V_001**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including escaped characters in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_002**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including escaped delimiters in SIP-URL of the CONTACT header field, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_003**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including non-understood URL parameters in SIP-URL of the CONTACT header field, ignores it and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_004**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a header parameter in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_005**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a method parameter set to "REGISTER" in the SIP-URL of CONTACT header field, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_006**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2.2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a non-SIP URL in the CONTACT header field, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_007**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request including CR and LF as line terminators, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_008**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request including the combination CRCR to terminate the message header, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_009**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request including the combination LFLF to terminate the message header, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_010**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request beginning with several CRLF, CR and LF, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_011**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 4.1 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request including CR character at the end of the Request-Line before CRLF character, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_012**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 4.1 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request including LF character at the end of the Request-Line after CRLF character, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_013**

Status: Mandatory

SUT: A redirect server or a proxy

Ref: 4.2 [1]

Purpose: Ensure that the IUT on receipt of a request including a non-supported Method, sends a Not Implemented (501 Not Implemented) response.

TPId: **SIP_MG _RR _V_014**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 4.3 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request with a Request-URI indicating an unknown scheme, sends a Bad Request (400 Bad Request) response.

TPId: **SIP_MG _RR _V_015**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 4.3 [1]

Purpose: Ensure that the IUT on receipt of a valid REGISTER request with SIP version in lower case, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_016**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 7 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including non SIP URI schemes in the list of URI of the CONTACT header field, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_017**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including unknown Header fields, ignores them and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_018**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including Header fields named with upper and lower cases, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_019**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including Header fields set with values preceded by several leading white space and properly extended over multiple lines, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_020**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a CONTACT Header field set with multiple values separated by a comma, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_021**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including multiple CONTACT Headers, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_022**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including an expires parameter named with upper and lower cases of CONTACT Header, sends a Success (200 OK) response.

TPId: **SIP_MG _RR _V_023**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 13 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including Header fields set with short field names, sends a Success (200 OK) response.

5.5.2.2 Invalid Behaviour

TPId: **SIP_MG _RR _I_001**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including ttl parameters in the FROM and TO header fields ignores them and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _I_002**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including header parameters in the SIP-URL of the FROM and TO header fields ignores them and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _I_003**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including method parameters set to "INVITE" in the SIP-URL of the FROM and TO header fields ignores them and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _I_004**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including method parameters set to "INVITE" in the SIP-URL of the Request-URI ignores it and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _I_005**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 10, table 4 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a header field Alert-Info ignores it and sends a Success (200 OK) response.

TPId: **SIP_MG _RR _I_006**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 11.5.6 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a SIP-version set to a version that it does not support, sends a Version Not Supported (505 Version Not Supported) response.

TPId: **SIP_MG _RR _I_007**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a TO header field set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

TPId: **SIP_MG _RR _I_008**

Status: Mandatory

SUT: A redirect server or a proxy

Precondition: None

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT on receipt of a REGISTER request including a Request-URI set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

5.5.3 Originating Endpoint

Group Selection: IUT can behave as User Agent client.

5.5.3.1 Valid Behaviour

TPId: **SIP_MG _OE_V_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including non-understood URL parameters in SIP-URL of the FROM header field, ignores it and sends an ACK request.

TPId: **SIP_MG _OE_V_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including header parameters in the SIP-URL of the CONTACT header field, sends an ACK request.

TPId: **SIP_MG _OE_V_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including CR and LF as line terminators, sends an ACK request.

TPId: **SIP_MG _OE_V_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including the combination CRCR to terminate the message header, sends an ACK request.

TPId: **SIP_MG _OE_V_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including the combination LFLF to terminate the message header, sends an ACK request.

TPId: **SIP_MG _OE_V_006**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response beginning with several CRLF, CR and LF, sends an ACK request.

TPId: **SIP_MG _OE_V_007**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 9.1.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (299 OK) response with non-defined last two digits, sends an ACK request.

TPId: **SIP_MG _OE_V_008**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 9.1.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 PERFECT) response with an unknown reason phrase, sends an ACK request.

TPId: **SIP_MG _OE_V_009**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 9.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including CR characters at the end of the status-line before the CRLF character, sends an ACK request.

TPId: **SIP_MG _OE_V_010**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 9.1 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including LF characters at the end of the status-line after the CRLF character, sends an ACK request.

TPId: **SIP_MG _OE_V_011**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including an Header Fields named with upper and lower cases, sends an ACK request.

TPId: **SIP_MG _OE_V_012**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including an Header fields set with values preceded by several leading white space and properly extended over multiple lines, sends an ACK request.

TPId: **SIP_MG _OE_V_013**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including a Header fields set with short field names, sends an ACK request.

TPId: **SIP_MG _OE_V_014**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including escaped characters in the SIP-URL of the FROM header field, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_015**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including escaped delimiters in the SIP-URL of the FROM header field, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_016**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including non-understood URL parameters in the SIP-URL of the BYE Request-URI, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_017**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including CR and LF as line terminators, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_018**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including the combination CRCR to terminate the message header, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_019**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including the combination LFLF to terminate the message header, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_020**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request beginning with several CRLF, CR and LF, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_021**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.1 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including CR character at the end of the Request-Line before CRLF character, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_022**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.1 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including LF character at the end of the Request-Line after CRLF character, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_023**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.3 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request with a Request-URI indicating an unknown scheme, sends Bad Request (400 Bad Request) response.

TPId: **SIP_MG _OE_V_024**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.3 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request with SIP version in lower case, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_025**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including unknown header fields, ignores it and sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_026**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including Header fields named with upper and lower cases sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_027**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including Header fields set with values preceded by several leading white space and properly extended over multiple lines, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_028**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 13 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including Header fields set with short field names, sends a Success (200 OK) response.

TPId: **SIP_MG _OE_V_029**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a 65 535 bytes long Success (200 OK) response including session description parameters that it can accept, transported by UDP, sends an ACK request.

5.5.3.2 Invalid Behaviour

TPId: **SIP_MG _OE_I_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including transport parameters in the FROM and TO header fields, ignores them and sends an ACK request.

TPId: **SIP_MG _OE_I_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response with a ttl parameter in the FROM and TO header fields, ignores them and sends an ACK request.

TPId: **SIP_MG _OE_I_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response with an URI including a Headers parameter in the TO and FROM header fields ignores them and sends an ACK request.

TPId: **SIP_MG _OE_I_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response with a method parameter in the TO and FROM header fields ignores them and sends an ACK request.

TPId: **SIP_MG _OE_I_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2, 10.25, 10.43 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including maddr parameters in the FROM and TO header fields ignores them and sends a Success (200 OK) response without maddr parameter.

TPId: **SIP_MG _OE_I_006**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including header parameters in the SIP-URL of the FROM and TO header fields ignores them and sends a Success (200 OK) response.

TPId: **SIP_MG _OE_I_007**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including method parameters set to "CANCEL" parameter in the SIP-URL of the FROM and TO header fields ignores them and sends a Success (200 OK) response.

TPId: **SIP_MG _OE_I_008**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including method parameters set to "CANCEL" parameter in the SIP-URL of the Request-URI ignores it and sends a Success (200 OK) response.

TPId: **SIP_MG _OE_I_009**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10, table 4 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including a header field In-Reply-To ignores it and sends a Success (200 OK) response.

TPId: **SIP_MG _OE_I_010**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3, 11.5.7 [1]

Purpose: Ensure that the IUT in calling state, on receipt of a Success (200 OK) response including session description parameters that it can accept, longer than its capabilities, sends a Message Too Large (513 Message Too Large) response.

TPId: **SIP_MG _OE_I_011**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 11.5.6 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including a SIP-version set to a version that it does not support, sends a Version Not Supported (505 Version Not Supported) response.

TPId: **SIP_MG _ OE _I_012**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including a TO header field set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

TPId: **SIP_MG _ OE _I_013**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT in completed state, on receipt of a BYE request including a Request-URI set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

5.5.4 Terminating Endpoint

GroupSelection: IUT can behave as User Agent server.

5.5.4.1 Valid Behaviour

TPId: **SIP_MG _TE_ V_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including escaped characters in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including escaped delimiters in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including non-understood URL parameters in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a header parameter in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a method parameter set to "INVITE" in the SIP-URL of the CONTACT header field, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_006**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a non-SIP URL in the FROM header field, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_007**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including CR and LF as line terminators, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_008**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including CRCR to terminate the message header, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_009**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including LFLF to terminate the message header, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_010**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request beginning with several CRLF, CR and LF, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_011**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including CR character at the end of the Request-Line before CRLF character, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_012**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including LF character at the end of the Request-Line after CRLF character, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_013**

Status: Mandatory

Precondition: Registration of the UA if needed

Ref: 4.2 [1]

Purpose: Ensure that the IUT on receipt of a request including a non-supported Method, sends a Not Implemented (501 Not Implemented) response.

TPId: **SIP_MG _TE_ V_014**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request with a Request-URI indicating an unknown scheme, sends a Bad Request (400 Bad Request) response.

TPId: **SIP_MG _TE_ V_015**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 4.3.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request with SIP version in lower case, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_016**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including unknown Header fields, ignores them and sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_017**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including Header fields named with upper and lower cases, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_018**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including Header fields set with values preceded by several leading white space and properly extended over multiple lines, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_019**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a VIA Header field set with multiple values separated by a comma, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_020**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including multiple VIA Header fields, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_021**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a branch parameter named with upper and lower cases of VIA Header, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ V_022**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 13 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including Header fields set with short field names, sends a Success (200 OK) response preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE _V_023**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a 65 535 bytes long INVITE request including session description parameters that it can accept, transported by UDP, sends a Success (200 OK) response, preceded optionally by informational (1XX) response.

5.5.4.2 Invalid Behaviour

TPId: **SIP_MG _TE_ I_001**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2, 10.25, 10.43 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a maddr parameter in the FROM and TO header fields, ignores them and sends a Success (200 OK) response without maddr parameter, preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ I_002**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including header parameters in the SIP-URL of the FROM and TO header fields, ignores them and sends a Success (200 OK) response, preceded optionally by informational (1XX) response.

TPId: **SIP_MG _TE_ I_003**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including method parameters set to "CANCEL" in the SIP-URL of the FROM and TO header fields, ignores them and sends a Success (200 OK) response, preceded optionally by informational (1XX) response .

TPId: **SIP_MG _TE_ I_004**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including method parameters set to "CANCEL" in the SIP-URL of the Request-URI ignores it and sends a Success (200 OK) response, preceded optionally by informational (1XX) response .

TPId: **SIP_MG _TE_I_005**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 3, 11.5.7 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including session description parameters that it can accept, longer than its capabilities, sends a Message Too Large (513 Message Too Large) response.

TPId: **SIP_MG _TE_I_006**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 11.5.6 [1]

Purpose: Ensure that the IUT on receipt of a INVITE request including a SIP-version set to a version that it does not support, sends a Version Not Supported (505 Version Not Supported) response.

TPId: **SIP_MG _TE_I_007**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a TO header field set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

TPId: **SIP_MG _TE_I_008**

Status: Mandatory

SUT: A UA

Precondition: Registration of the UA if needed

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a Request-URI set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

5.5.5 Proxy

GroupSelection: IUT is a Proxy.

5.5.5.1 Valid Behaviour

TPId: **SIP_MG _PR_ V_001**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including escaped characters in the SIP-URL of the CONTACT header field forwards the message.

TPId: **SIP_MG _PR_ V_002**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including escaped delimiters in the SIP-URL of the CONTACT header field forwards the message.

TPId: **SIP_MG _PR_ V_003**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including non-understood URL parameters in the SIP-URL of the CONTACT header field forwards the message.

TPId: **SIP_MG _PR_ V_004**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a header parameter in the SIP-URL of the CONTACT header field forwards the message.

TPId: **SIP_MG _PR_ V_005**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a method parameter set to "INVITE" in the SIP-URL of the CONTACT header field forwards the message.

TPId: **SIP_MG _PR_ V_006**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a non-SIP URL in the FROM header field forwards the message.

TPId: **SIP_MG _PR_ V_007**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including CR and LF as line terminators forwards the message.

TPId: **SIP_MG _PR_ V_008**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including CRCR to terminate the message header forwards the message.

TPId: **SIP_MG _PR_ V_009**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including LFLF to terminate the message header forwards the message.

TPId: **SIP_MG _PR_ V_010**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request beginning with several CRLF, CR and LF forwards the message.

TPId: **SIP_MG _PR_ V_011**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including CR character at the end of the Request-Line before CRLF character forwards the message.

TPId: **SIP_MG _PR_ V_012**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including LF character at the end of the Request-Line after CRLF character forwards the message.

TPId: **SIP_MG _PR_ V_013**

Status: Mandatory

SUT: A Proxy not registrar

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.2 [1]

Purpose: Ensure that the IUT on receipt of a request including a non-supported Method forwards the message.

TPId: **SIP_MG _PR_ V_014**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.3.1 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request with SIP version in lower case forwards the message.

TPId: **SIP_MG _PR_ V_015**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10, 18.2 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including an Authorization Header fields followed by Header fields that have not to be modify by the proxy, forwards the message without removing or modifying those fields.

TPId: **SIP_MG _PR_ V_016**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including unknown Header fields forwards the message without removing or modifying those fields.

TPId: **SIP_MG _PR_ V_017**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including Header fields named with upper and lower cases forwards the message.

TPId: **SIP_MG _PR_ V_018**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including Header fields set with values preceded by several leading white space and properly extended over multiple lines forwards the message.

TPId: **SIP_MG _PR_ V_019**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5, 10.46.4 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a VIA Header field set with multiple values separated by a comma forwards the message after having inserted its own VIA header field value without changing the order of these field values.

TPId: **SIP_MG _PR_ V_020**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5, 10.46.4 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including multiple VIA Header fields forwards the message after having inserted its own VIA header field value but without changing the order of these fields.

TPId: **SIP_MG _PR_ V_021**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including a branch parameter named with upper and lower cases in VIA Header field forwards the message.

TPId: **SIP_MG _PR_ V_022**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 9.1.1 [1]

Purpose: Ensure that the IUT after having forwarded an INVITE request, on receipt of a Success (299 OK) response with non-defined last two digits forwards the message.

TPId: **SIP_MG _PR_ V_023**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 9.1.1 [1]

Purpose: Ensure that the IUT after having forwarded an INVITE request, on receipt of a Success (200 PERFECT) response with an unknown reason phrase forwards the message.

TPId: **SIP_MG _PR_ V_024**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 9.1 [1]

Purpose: Ensure that the IUT after having forwarded an INVITE request, on receipt a Success (200 OK) response including CR characters at the end of the status-line before the CRLF character forwards the message.

TPId: **SIP_MG _PR_ V_025**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 9.1 [1]

Purpose: Ensure that the IUT, after having forwarded an INVITE request, on receipt a Success (200 OK) response including LF characters at the end of the status-line before the CRLF character, forwards the message.

TPId: **SIP_MG _PR_ V_026**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 13 [1]

Purpose: Ensure that the IUT on receipt of an INVITE request including Header fields set with short field names forwards the message.

TPId: **SIP_MG _PR_ V_027**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a 65 535 bytes long INVITE request forwards the message

5.5.5.2 Invalid Behaviour

TPId: **SIP_MG _PR_ I_001**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a transport parameter in the FROM and TO header fields, ignores them and forwards the message.

TPId: **SIP_MG _PR_ I_002**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including header parameters in the SIP-URL of the FROM and TO header fields, ignores them and forwards the message.

TPId: **SIP_MG _PR_ I_003**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including method parameters set to "CANCEL" in the SIP-URL of the FROM and TO header fields, ignores them and forwards the message.

TPId: **SIP_MG _PR_ I_004**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including method parameters set to "CANCEL" in the SIP-URL of the Request-URI, ignores them and forwards the message.

TPId: **SIP_MG _PR_ I_005**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3, 11.5.7 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a message body, longer than its capabilities, sends a Message Too Large (513 Message Too Large) response.

TPId: **SIP_MG _PR_I_006**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of simulated terminal UA to the IUT

Ref: 11.5.6 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a SIP-version to a version that it does not support, sends a Version Not Supported (505 Version Not Supported) response.

TPId: **SIP_MG _PR_I_007**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of the simulated UA

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a TO header field set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

TPId: **SIP_MG _PR_I_008**

Status: Mandatory

SUT: A Proxy

Precondition: Registration of the simulated UA

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a Request-URI set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

5.5.6 Redirect server

GroupSelection: IUT is a Redirect Server.

5.5.6.1 Valid Behaviour

TPId: **SIP_MG _RD _V_001**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including escaped characters in the SIP-URL of the CONTACT header field, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_002**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including escaped delimiters in the SIP-URL of the CONTACT header field, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_003**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including non-understood URL parameters in the SIP-URL of the CONTACT header field, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_004**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a header parameter in the SIP-URL of the CONTACT header field, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_005**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a method parameter set to "INVITE" in the SIP-URL of the CONTACT header field, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_006**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2.2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a non-SIP URL in the FROM header field, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_007**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including CR and LF as line terminators, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_008**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including CRCR to terminate the message header, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_009**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including LFLF to terminate the message header, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_010**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request beginning with several CRLF, CR and LF, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_011**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.1 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including CR character at the end of the Request-Line before CRLF character, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_012**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.1 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including LF character at the end of the Request-Line after CRLF character, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_013**

Status: Mandatory

SUT: A redirect server not registrar

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.2 [1]

Purpose: Ensure that the IUT, on receipt of a request including a non-supported Method, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_014**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 4.3.1 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request with SIP version in lower case, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_015**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including unknown Header fields, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_016**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including Header fields named with upper and lower cases, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_017**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including Header fields set with values preceded by several leading white space and properly extended over multiple lines, sends a 3XX redirection response to the caller.

TPId: **SIP_MG _RD _V_018**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5, 10.46.4 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a VIA Header field set with multiple values separated by a comma, sends a 3XX redirection response including the received VIA header field values, without changing their order, to the caller.

TPId: **SIP_MG _RD _V_019**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5, 10.46.4 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including multiple VIA Header fields, sends a 3XX redirection response including the received VIA header field values, without changing their order, to the caller.

TPId: **SIP_MG _RD _V_020**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 10.5 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a branch parameter named with upper and lower cases in VIA Header field, sends a 3XX redirection to the caller.

TPId: **SIP_MG _RD _V_021**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 13 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including Header fields set with short field names, sends a 3XX redirection to the caller.

TPId: **SIP_MG _RD _V_022**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3 [1]

Purpose: Ensure that the IUT on receipt of a 65 535 bytes long INVITE request sends a 3XX redirection to the caller.

5.5.6.2 Invalid Behaviour

TPId: **SIP_MG _RD _I_001**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a transport parameter in the FROM and TO header fields, ignores them and sends a 3XX redirection to the caller.

TPId: **SIP_MG _RD _I_002**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including header parameters in the SIP-URL of the FROM and TO header fields, ignores them and sends a 3XX redirection to the caller.

TPId: **SIP_MG _RD _I_003**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including method parameters set to "CANCEL" in the SIP-URL of the FROM and TO header fields, ignores them and sends a 3XX redirection to the caller.

TPId: **SIP_MG _RD _I_004**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 2 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including method parameters set to "CANCEL" in the SIP-URL of the Request-URI, ignores it and sends a 3XX redirection to the caller.

TPId: **SIP_MG _RD _I_005**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 3, 11.5.7 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a message body, longer than its capabilities, sends a Message Too Large (513 Message Too Large) response.

TPId: **SIP_MG _RD_I_006**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of simulated terminal UA to the IUT

Ref: 11.5.6 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a SIP-version set to a version that it does not support, sends a Version Not Supported (505 Version Not Supported) response.

TPId: **SIP_MG _RD_I_007**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of the simulated UA

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a TO header field set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

TPId: **SIP_MG _RD_I_008**

Status: Mandatory

SUT: A redirect server

Precondition: Registration of the simulated UA

Ref: 11.4.20 [1]

Purpose: Ensure that the IUT, on receipt of an INVITE request including a Request-URI set to an incomplete address, sends an Address Incomplete (484 Address Incomplete) response.

Annex A (informative): Bibliography

- ETSI ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

History

Document history		
V1.1.1	August 2002	Publication