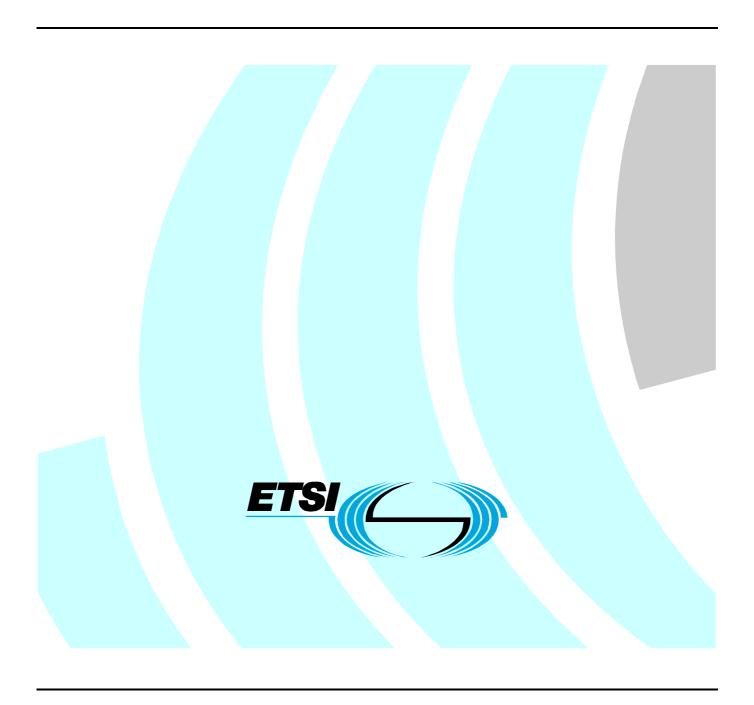
ETSITS 186 016-2 V2.1.1 (2009-02)

Technical Specification

Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN);
PSTN/ISDN simulation services;
Closed User Group (CUG);
Part 2: Test Suite Structure and
Test Purposes (TSS&TP)



Reference RTS/TISPAN-06050-2-NGN-R2

Keywords
CUG, IMS, testing, TSS&TP

ETSI

650 Route des Lucioles F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C Association à but non lucratif enregistrée à la Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from: <u>http://www.etsi.org</u>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

http://portal.etsi.org/tb/status/status.asp

If you find errors in the present document, please send your comment to one of the following services: http://portal.etsi.org/chaircor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2009. All rights reserved.

DECTTM, **PLUGTESTS**TM, **UMTS**TM, **TIPHON**TM, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP[™] is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **LTE**[™] is a Trade Mark of ETSI currently being registered

for the benefit of its Members and of the 3GPP Organizational Partners. **GSM**® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

| Intelle | ectual Property Rights | 4 |
|---------|---|----|
| Forew | vord | 4 |
| 1 | Scope | 5 |
| 2 | References | 5 |
| 2.1 | Normative references | |
| 2.2 | Informative references | 5 |
| 3 | Definitions and abbreviations | 6 |
| 3.1 | Definitions | |
| 3.2 | Abbreviations | 6 |
| 4 | Test Suite Structure (TSS) | 7 |
| 5 | Test Purposes (TP) | 7 |
| 5.1 | Introduction | |
| 5.1.1 | TP naming convention | 7 |
| 5.1.2 | Test strategy | |
| 5.2 | Test Purposes for Closed User Group (CUG) | 8 |
| 5.2.1 | TPs at the originating UA | |
| 5.2.2 | Test Purposes at the Application Server of the originating User | 10 |
| 5.2.3 | Actions at the AS of the terminating User | 35 |
| 5.3 | Interaction with other services | 43 |
| 5.3.1 | Conference calling (CONF) | 43 |
| 5.3.2 | Communication Diversion Services (CDIV) | |
| 5.3.2.1 | | |
| 5.3.3 | Explicit Communication Transfer (ECT) | 44 |
| 5.4 | Test purposes for the ISUP/SIP Interworking | |
| 5.4.1 | Interworking at the I-MGCF | |
| 5.4.2 | Interworking at the O-MGCF | |
| Histo | ry | 51 |
| | | |

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://webapp.etsi.org/IPR/home.asp).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 2 of a multi-part deliverable covering PSTN/ISDN simulation services; Closed User Group (CUG), as identified below:

- Part 1: "Protocol Implementation Conformance Statement (PICS)";
- Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";
- Part 3: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

1 Scope

The present document specifies the test suite structure and test purposes of the Closed User Group (CUG) service, based on stage three of the IMS closed user group (CUG) simulation services. Within the Next Generation Network (NGN) the stage 3 description is specified using the IP-Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP).

2 References

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.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

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

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

- [1] ETSI TS 183 054: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services; Protocol specification Closed User Group (CUG)".
- [2] ETSI TS 186 016-1: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services; Closed User Group (CUG); Protocol Implementation Conformance Statement (PICS)".
- [3] ETSI TS 181 002: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Multimedia Telephony with PSTN/ISDN simulation services".
- [4] IETF RFC 3261: "SIP: Session Initiation Protocol".
- [5] ETSI ES 283 027: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Endorsement of the SIP-ISUP Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 181 002 [3] and the following apply:

escaped character: See RFC 3261 [4].

NOTE: This may contain additional information.

3.2 Abbreviations

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

ACK ACKnowledgement

ACM Address Complete Message

ANM ANswer Message AS Application Server

CDIV Communication Diversion Services

CFU Communication Forwarding Unconditional

CONF
CUG
Closed User Group
ECT
Explicit Call Transfer
HOLD
IMS
IP Multimedia Subsystem

IP Internet Protocol

ISDN Integrated Service Data Network

ISUP ISDN User Part

MCID Malicious Communication IDentification

NGN Next Generation Network

OAI Outgoing Access, Implicit outgoing access for all communications

OCB Outgoing Communication Barring (OCB)

PIXIT Protocol Implementation eXtra Information for Testing

PSTN Public Switched Telephone Network

REL RELease message

RLC ReLease Complete message
SDP Session Description Protocol
SIP Session Initiation Protocol
SS Supplementary Services

SUBSubaddressingSUTSystem Under TestTPTest PurposesTSSTest Suite Structure

UA User Agent UE User Equipment

XML eXtensible Markup Language

4 Test Suite Structure (TSS)

| CUG | | | |
|----------|----------------|------|-------------|
| | originating_UE | | CUG_U01_xxx |
| | originating_AS | | CUG_N01_xxx |
| | terminating_AS | | CUG_N02_xxx |
| | interaction | CONF | CUG_N03_xxx |
| | | CDIV | CUG_N04_xxx |
| | | ECT | CUG_N05_xxx |
| SIP-ISUP | | | |
| | SS | CUG | TP516xxx |
| ISUP-SIP | | | |
| | SS | CUG | TP608xxx |

5 Test Purposes (TP)

5.1 Introduction

For each test requirement a TP is defined.

5.1.1 TP naming convention

TPs are numbered, starting at 001, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite and whether it applies to the network or the user (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: <ss>_<iut><group>_<nnn> <SS> supplementary service: e.g. "CUG" U <iut> type of IUT: User – equipment Network 2 digit field representing group reference according to TSS <group> group <nnn> sequential number (001-999)

5.1.2 Test strategy

As the base standard TS 183 054 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification TS 186 016-1 [2]. The criteria applied include the following:

• Whether or not a test case can be built from the TP is not considered.

5.2 Test Purposes for Closed User Group (CUG)

5.2.1 TPs at the originating UA

| | | TP | SUB | reference | Selection expression |
|---|--|-------------------|--------------|--|-----------------------|
| CUG/originating_UE | | CUG_U01_001 | claus | se 4.5.2.1 | |
| Test purpose | | | | | |
| Explicit request of CUG service | ce. | | | | |
| The originating user requests | | | g in the | initial INVITE | an xml CUGrequestType |
| containing the preferred CUG | and an outgoing a | ccess request. | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| <cug></cug> | | | | | |
| <cugcalloperation></cugcalloperation> | | | | | |
| <outgoingaccessrequ< td=""><td>iest>TRUE<td>ingAccessRequest:</td><td>></td><td></td><td></td></td></outgoingaccessrequ<> | iest>TRUE <td>ingAccessRequest:</td> <td>></td> <td></td> <td></td> | ingAccessRequest: | > | | |
| <cugindex>[PIXIT]<td>ugIndex></td><td></td><td></td><td></td><td></td></cugindex> | ugIndex> | | | | |
| | | | | | |
| | | | | | |
| · g | | | | | |
| Comments: | | | | | |
| Comments: | | | | Test equipn | nent |
| Comments: UA C | → | | → | Test equipn | nent |
| Comments: UA C INVITE | → | | → | | nent |
| Comments: UA C INVITE 100 Trying | = | | _ | INVITE | nent |
| Comments: UA C INVITE 100 Trying 180 Ringing | ← | | - | INVITE 100 Trying | |
| Comments: UA C INVITE 100 Trying 180 Ringing 200 OK INVITE | + | | (| INVITE 100 Trying 180 Ringing | |
| Comments: UA C INVITE 100 Trying 180 Ringing 200 OK INVITE | + + | Communication | + + | INVITE 100 Trying 180 Ringing 200 OK INVI | |
| Comments: UA C INVITE 100 Trying | + + | Communication | + + | INVITE 100 Trying 180 Ringing 200 OK INVI | |

| TSS | | TP | SUB | reference | Selection expression |
|---|--|----------------------|--------------|------------------------------|-------------------------|
| CUG/originating_UE | | CUG_U01_002 | claus | se 4.5.2.1 | |
| Test purpose | | | | | |
| Explicit request of CUG service | 9. | | | | |
| The originating user requests e | explicitly the CUG | service by including | g in the | initial INVITE an | xml CUGrequestType does |
| not contain the preferred CUG | and an outgoing a | access request. | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| <cug></cug> | | | | | |
| <cugcalloperation></cugcalloperation> | | | | | |
| <outgoingaccessreque< td=""><td>est>FALSE<td>oingAccessRequest</td><td>></td><td></td><td></td></td></outgoingaccessreque<> | est>FALSE <td>oingAccessRequest</td> <td>></td> <td></td> <td></td> | oingAccessRequest | > | | |
| <cugindex>[PIXIT]<td>gIndex></td><td></td><td></td><td></td><td></td></cugindex> | gIndex> | | | | |
| | | | | | |
| | | | | | |
| Comments: | | | | | |
| UA C | | | | Test equipme | nt |
| INVITE | → | | → | INVITE | |
| 111 V I I L | | | | | |
| 100 Trying | ← | | ← | 100 Trying | |
| | + | | + | 100 Trying 180 Ringing | |
| 100 Trying | | | | , , | <u> </u> |
| 100 Trying 180 Ringing | ← | | ← | 180 Ringing | Ē |
| 100 Trying 180 Ringing 200 OK INVITE | + + | Communication | + | 180 Ringing 200 OK INVITE | : |
| 100 Trying 180 Ringing 200 OK INVITE | + + | Communication | + | 180 Ringing 200 OK INVITE | ≣ |

| TSS | · | TP | SUE | reference | Selection expression |
|--|---|-------------|----------------------------|---|-----------------------|
| CUG/originating_UE | | CUG_U01 | _003 clau | se 4.5.2.1 | |
| Test purpose | | | | | |
| Explicit request of CUG servi | ce. | | | | |
| The originating user requests | | | | initial INVITE | an xml CUGrequestType |
| containing the preferred CUG | and an outgoing a | ccess reque | st. | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| <cug></cug> | | | | | |
| <cugcalloperation></cugcalloperation> | | | | | |
| <outgoingaccessrequ< td=""><td>.est>TRUE<td>ngAccessRe</td><td>equest></td><td></td><th></th></td></outgoingaccessrequ<> | .est>TRUE <td>ngAccessRe</td> <td>equest></td> <td></td> <th></th> | ngAccessRe | equest> | | |
| | | | | | |
| | | | | | |
| Comments: | | | | | |
| | | | | Test equipm | nent |
| | | | | INI\/ITC | |
| INVITE | → | | → | INVITE | |
| INVITE 100 Trying | - | | - | 100 Trying | |
| INVITE 100 Trying 180 Ringing | + + | | + | 100 Trying 180 Ringing | |
| INVITE 100 Trying 180 Ringing 200 OK INVITE | + + | | + + | 100 Trying 180 Ringing 200 OK INVI | TE |
| INVITE 100 Trying 180 Ringing 200 OK INVITE | + + | | ← ← ← → | 100 Trying 180 Ringing | TE |
| 180 Ringing 200 OK INVITE ACK | ÷ + + | Communi | ← ← ← → cation | 100 Trying 180 Ringing 200 OK INVI ACK | TE |
| INVITE 100 Trying 180 Ringing 200 OK INVITE | + + | Communi | ← ← ← → | 100 Trying 180 Ringing 200 OK INVI | |

| TSS | | TP | SUB | reference | Selection expression |
|--|---|-------------------|--------------------|---|---------------------------|
| CUG/originating_UE | | CUG_U01_004 | claus | se 4.5.2.1 | |
| Test purpose | | | | | |
| Explicit request of CUG servi | ice. | | | | |
| The originating user requests | | | in the | initial INVITE | an xml CUGrequestType doe |
| not contain the preferred CU | G and an outgoing a | access request. | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| <cug></cug> | | | | | |
| <cugcalloperation></cugcalloperation> | | | | | |
| <outgoingaccessrequ< td=""><td>uest>FALSE<td>pingAccessRequest</td><td>></td><td></td><td></td></td></outgoingaccessrequ<> | uest>FALSE <td>pingAccessRequest</td> <td>></td> <td></td> <td></td> | pingAccessRequest | > | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Comments: | | | | T1 | |
| Comments: UA C | • | | | Test equipm | ent |
| Comments: UA C INVITE |) | | > | INVITE | ent |
| Comments: UA C INVITE 100 Trying | ← | | ← | INVITE 100 Trying | ent |
| Comments: UA C INVITE 100 Trying 180 Ringing | + | | + | INVITE 100 Trying 180 Ringing | |
| Comments: UA C INVITE 100 Trying 180 Ringing 200 OK INVITE | + + | | + + | INVITE 100 Trying 180 Ringing 200 OK INVI | |
| Comments: UA C INVITE 100 Trying 180 Ringing 200 OK INVITE | + | Communication | + | INVITE 100 Trying 180 Ringing | |
| Comments: UA C INVITE 100 Trying 180 Ringing 200 OK INVITE ACK | + + + + + | Communication | + + + + + + | INVITE 100 Trying 180 Ringing 200 OK INVI ACK | |
| Comments: UA C INVITE 100 Trying 180 Ringing | + + | Communication | + + | INVITE 100 Trying 180 Ringing 200 OK INVI | |

| TSS | | TP | SUB | reference | Selection expression |
|----------------------------------|-------------------|----------------------|----------|--------------------|-------------------------|
| CUG/originating_UE | | CUG_U01_005 | claus | se 4.5.2.1 | |
| Test purpose | | | | | |
| Implicit request of CUG service. | | | | | |
| The originating user with CUG s | subscription requ | ests the CUG service | e with | out including a xm | I CUGrequestType in the |
| initial INVITE. | | | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| Comments: | | | | | |
| UA C | | | | Test equipmer | it |
| INVITE | → | | → | INVITE | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |

5.2.2 Test Purposes at the Application Server of the originating User

| TSS | TP | SUB reference | Selection expression |
|--|------------------------------|--|----------------------------------|
| CUG/originating_AS | CUG_N01_001 | clause 4.5.2.4 | PICS 1/1 |
| Test purpose | | | |
| CUG without preference: INVITE with C | CUG index and no outgoing | AccessRequest, succe | essful. |
| In case of subscription "CUG without pro | | | |
| INVITE with CUGIndex and without out | | | |
| cugInterlockBinaryCode (PIXIT), the net | tworkIndicator (PIXIT) and | cugCommunicationInc | licator set to "11" (CUG without |
| outgoing access). | | | |
| Preconditions: CUG without preference | е | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| <outgoingaccessrequest>FALS</outgoingaccessrequest> | SE <td>st></td> <td></td> | st> | |
| <pre><cugindex>[PIXIT]</cugindex></pre> | | | |
| | | | |
| | | | |
| IND ATE | | | |
| INVITE: | | | |
| <cug></cug> | ddadiootor | | |
| <pre><networkindicator>[PIXIT]<!-- networ <cugInterlockBinaryCode-->[PIXIT]</networkindicator></pre> | | | |
| <pre><cugcommunicationindicator>11</cugcommunicationindicator></pre> | | _ | |
| | LugCommunicationmuicator | <i>></i> | |
| | | | |
| Comments: | | | |
| UA C | SUT | UA S | |
| INVITE 1 | → | → INVITE 2 | |
| 100 Trying | ← | 100 Trying | |
| 180 Ringing | ← | ← 180 Ringing | |
| 200 OK INVITE | ← | ← 200 OK INV | ITE |
| ACK | → | → ACK | |
| | Communication | | |
| BYE | → | → BYE← 200 OK BYE | |
| 200 OK BYE | ← | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_002 | clause 4.5.2.4 | PICS 1/2 |

CUG+OAE without preference: INVITE with CUG index and no outgoingAccessRequest, successful. In case of subscription "CUG and Outgoing access, explicit request required without preference", ensure that the validation check for the CUG request contained in an INVITE with CUGIndex and without outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "11" (CUG without outgoing access).

Preconditions: CUG+OAE without preference

```
SIP header values:
```

INVITE:

<cug>

<cugCallOperation>

<outgoingAccessRequest>FALSE</outgoingAccessRequest>

<cugIndex>[PIXIT]</cugIndex>

</cugCallOperation>

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>

<cugCommunicationIndicator>11

| Comments: | | | | |
|---------------|----------|--------------|---------------|--|
| UA C | SU | Τ | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | (| 100 Trying | |
| 180 Ringing | ← | (| 180 Ringing | |
| 200 OK ĬNŬITE | ← | (| 200 OK ĬNŬITE | |
| ACK | → | → | ACK | |
| | Commur | nication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_003 | clause 4.5.2.4 | PICS 1/3 |
| | | | |

CUG+OAI without preference: INVITE with CUG index and no outgoingAccessRequest, successful. In case of subscription "CUG and Outgoing access, implicit outgoing access for all communications without preference", ensure that the validation check for the CUG request contained in an INVITE with CUGIndex and without outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "11" (CUG without outgoing access).

Preconditions: CUG+OAI without preference

```
SIP header values:
```

```
INVITE:
<cug>
    <ugCallOperation>
        <outgoingAccessRequest>FALSE</outgoingAccessRequest>
        <cugIndex>[PIXIT]</cugIndex>
    </cugCallOperation>
```

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>

<cugCommunicationIndicator>11</cugCommunicationIndicator>

| Comments: | | | | |
|---------------|----------|-----------|---------------|--|
| UA C | SI | UT | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | + | 100 Trying | |
| 180 Ringing | ← | + | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | Comm | unication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--|--|---|--|
| CUG/originating_AS | CUG_N01_004 | clause 4.5.2.4 | PICS 1/4 |
| Test purpose CUG with preference: INVITE with C In case of subscription "CUG with pre INVITE with CUGIndex and without c cugInterlockBinaryCode (PIXIT), the outgoing access). Preconditions: CUG with preference SIP header values: INVITE: <cug> <cugcalloperation></cugcalloperation></cug> | UG index and no outgoingAcceference", ensure that the valid outgoingAccessRequest is such networkIndicator (PIXIT) and compared to the compare | essRequest, successiblation check for the Classification and the control of the Classification and the control of the control | ful. UG request contained in an ITE contains the |
| INVITE: <cug> <networkindicator>[PIXIT]</networkindicator>[PIXIT][PIXIT] 11 <cugcommunicationindicator> 11 </cugcommunicationindicator></cug> | <pre></pre> | > | |
| Comments: UA C INVITE 1 100 Trying 180 Ringing 200 OK INVITE ACK | SUT + + + + + + | UAS → INVITE 2 ← 100 Trying ← 180 Ringing ← 200 OK INV → ACK | |

Communication

→

BYE 200 OK BYE

BYE 200 OK BYE

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_005 | clause 4.5.2.4 | PICS 1/5 |

CUG+OAE with preference: INVITE with CUG index and no outgoingAccessRequest, successful. In case of subscription "CUG and Outgoing access, explicit request required with preference", ensure that the validation check for the CUG request contained in an INVITE with CUGIndex and without outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "11" (CUG without outgoing access).

Preconditions: CUG+OAE with preference

```
SIP header values:
```

INVITE:

<cug>

<cugCallOperation>

<outgoingAccessRequest>FALSE</outgoingAccessRequest>

<cugIndex>[PIXIT]</cugIndex>

</cugCallOperation>

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>

<cugCommunicationIndicator>11</cugCommunicationIndicator>

| Comments: | | | | |
|---------------|----------|--------------|---------------|--|
| UA C | SU | T | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | (| 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK ĬNŬITE | |
| ACK | → | → | ACK | |
| | Commu | nication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--|--------------------------------|-----------------------|-------------------------------|
| CUG/originating_AS | CUG_N01_006 | clause 4.5.2.4 | PICS 1/6 |
| Test purpose | | | |
| CUG+OAI with preference: INVITE wi | ith CUG index and no outgoin | gAccessRequest, suc | cessful. |
| In case of subscription "CUG and Out | going access, implicit outgoir | g access for all comm | nunications with preference", |
| ensure that the validation check for th | • | | |
| outgoingAccessRequest is successful | | | |
| networkIndicator (PIXIT) and cugCom | municationIndicator set to "1 | I" (CUG without outgo | oing access). |
| Preconditions: CUG+OAI with prefer | rence | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| <outgoingaccessrequest>FAL</outgoingaccessrequest> | | t> | |
| <pre><cugindex>[PIXIT]</cugindex></pre> | > | | |
| | | | |
| | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| todge | 11 2 4 | | |

| Comments: | | | | |
|---------------|----------|--------------|---------------|--|
| UA C | SU | Τ | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | (| 100 Trying | |
| 180 Ringing | ← | (| 180 Ringing | |
| 200 OK ĬNŬITE | ← | (| 200 OK ĬNŬITE | |
| ACK | → | → | ACK | |
| | Commur | nication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

<networkIndicator > [PIXIT] </ networkIndicator>
<cugInterlockBinaryCode> [PIXIT] </ cugInterlockBinaryCode>
<cugCommunicationIndicator>11 </ cugCommunicationIndicator>

</cug>

ACK

| TSS | TP | SUB reference | Selection expression |
|---|--------------------------|------------------------|--------------------------|
| CUG/originating_AS | CUG_N01_007 | clause 4.5.2.4 | - |
| Test purpose | | | |
| No CUG: INVITE with CUG index and no of | | | |
| In case of subscription "No CUG", ensure the | | | |
| CUGIndex and without outgoingAccessRed | quest is not successful. | The Application Server | r sends a 403 Forbidden. |
| Preconditions: No CUG subscription | | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| <pre><outgoingaccessrequest>FALSE</outgoingaccessrequest></pre> | outgoingAccessReques | st> | |
| <cuglndex>[PIXIT]</cuglndex> | | | |
| | | | |
| | | | |
| 403 Forbidden: | | | |
| Comments: | | | |
| UA C | SUT | UA S | |
| INVITE | → | | |
| 403 Forbidden | ← | | |

| TSS | TP | SUB reference | Selection expression |
|---|--------------------------------|-------------------------|-------------------------------|
| CUG/originating_AS | CUG_N01_008 | clause 4.5.2.4 | PICS 1/1 |
| Test purpose | | | |
| CUG without preference: INVITE with | CUG index and outgoingAcco | essRequest, successi | ful. |
| In case of subscription "CUG without | preference", ensure that the v | alidation check for the | e CUG request contained in a |
| INVITE with CUGIndex and outgoing A | | | |
| cugInterlockBinaryCode (PIXIT), the r | networkIndicator (PIXIT) and c | cugCommunicationInd | licator set to "10" (outgoing |
| access allowed). | | | |
| Preconditions: CUG without prefere | nce | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| <outgoingaccessrequest>TRI</outgoingaccessrequest> | 0 0 1 | > | |
| <pre><cugindex>[PIXIT]</cugindex></pre> | > | | |
| | | | |
| | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <networkindicator>[PIXIT]<!-- netw</td--><td>orkIndicator></td><td></td><td></td></networkindicator> | orkIndicator> | | |
| <pre><cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode></pre> | | | |
| <cugcommunicationindicator>10</cugcommunicationindicator> | c/cugCommunicationIndicator: | > | |
| 2/0U0> | | | |

| Comments: | | | | | |
|---------------|----------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |
| | | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_009 | clause 4.5.2.4 | PICS 1/2 |
| | | | |

CUG+OAE without preference: INVITE with CUG index and outgoingAccessRequest, successful. In case of subscription "CUG and Outgoing access, explicit request required without preference", ensure that the validation check for the CUG request contained in an INVITE with CUGIndex and outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "10" (outgoing access allowed).

Preconditions: CUG+OAE without preference

```
SIP header values:
```

INVITE:

<cug>

<cugCallOperation>

<outgoingAccessRequest>TRUE</outgoingAccessRequest>

<cugIndex>[PIXIT]</cugIndex>

</cugCallOperation>

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>

<cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | |
|---------------|----------|---------------|---------------|--|
| UA C | | SUT | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | ← | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK ĬNŬITE | |
| ACK | → | → | ACK | |
| | C | Communication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--|-------------------------------|-----------------------|----------------------|
| CUG/originating_AS | CUG_N01_010 | clause 4.5.2.4 | PICS 1/3 |
| Test purpose | | | |
| CUG+OAI without preference: INVITE v | vith CUG index and outgoing | gAccessRequest, suc | cessful. |
| In case of subscription "CUG and Outgo | oing access, implicit outgoin | g access for all comm | unications without |
| preference", ensure that the validation of | check for the CUG request c | ontained in an INVITE | E with CUGIndex and |
| outgoingAccessRequest is successful. | The sent INVITE contains th | e cugInterlockBinary(| Code (PIXIT), the |
| networkIndicator (PIXIT) and cugComm | unicationIndicator set to "10 | " (outgoing access al | lowed). |
| Preconditions: CUG+OAI without prefe | erence | | |

SIP header values:

<networkIndicator >[PIXIT]</ networkIndicator>
 <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
 <cugCommunicationIndicator>10</cugCommunicationIndicator>
</cug>

| Comments: | | | | | |
|---------------|--------------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | (| | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | (| | ← | 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--|---------------------------|----------------------|----------------------|
| CUG/originating_AS | CUG_N01_011 | clause 4.5.2.4 | PICS 1/4 |
| Test purpose | | | |
| CUG with preference: INVITE with CUG I | index and outgoingAccess | Request, successful. | |
| In case of subscription "CUG with prefere INVITE with CUGIndex and outgoingAcco cugInterlockBinaryCode (PIXIT), the netwaccess allowed). | essRequest is successful. | The sent INVITE conf | ains the |
| Preconditions: CUG with preference | | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| <pre><outgoingaccessrequest>TRUE</outgoingaccessrequest></pre> | <pre></pre> | > | |
| <pre><cugindex>[PIXIT]</cugindex></pre> | | | |
| | | | |
| | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <networkindicator>[PIXIT]<!-- network</td--><td>Indicator></td><td></td><td></td></networkindicator> | Indicator> | | |
| <pre><cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode></pre> | ıgInterlockBinaryCode> | | |
| <cugcommunicationindicator>10</cugcommunicationindicator> | qCommunicationIndicator: | > | |

| Comments: | | | | |
|---------------|-----------|----------|---------------|--|
| UA C | SUT | | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | ← | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | Communica | ation | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |
| | | | | |

| TSS | - | | | | | | | |
|---|---------------------------|----------------------|----------|--|--|--|--|--|
| CUG/originating_AS | CUG_N01_012 | clause 4.5.2.4 | PICS 1/5 | | | | | |
| Test purpose | | | | | | | | |
| CUG+OAE with preference: INVITE with | CUG index and outgoingA | AccessRequest, succe | essful. | | | | | |
| In case of subscription "CUG and Outgoing access, explicit request required with preference", ensure that the | | | | | | | | |
| validation check for the CUG request contained in an INVITE with CUGIndex and outgoingAccessRequest is | | | | | | | | |
| successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and | | | | | | | | |
| cugCommunicationIndicator set to "10" (| outgoing access allowed). | | | | | | | |
| Preconditions: CUG+OAE with preferen | ice | | | | | | | |

SIP header values:

```
INVITE:
<cug>
```

<cugCallOperation>

<outgoingAccessRequest>TRUE</outgoingAccessRequest>

<cugIndex>[PIXIT]</cugIndex>

</cugCallOperation>

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
<cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | |
|---------------|----------|--------------|---------------|--|
| UA C | SU | T | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | (| 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK ĬNŬITE | |
| ACK | → | → | ACK | |
| | Commu | nication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

| TSS | TP | SUB refere | ence | Selection expression |
|---|---|------------------|------------|----------------------|
| CUG/originating_AS | CUG_N01_01: | clause 4.5.2 | 2.4 | PICS 1/6 |
| Test purpose | | | | |
| CUG+OAI with preference: INVITE | | | | |
| In case of subscription "CUG and C | | | | |
| ensure that the validation check for | • | | | |
| outgoingAccessRequest is success | | | | |
| networkIndicator (PIXIT) and cugC | | '10" (outgoing a | ccess allo | owed). |
| Preconditions: CUG+OAI with pre | eference | | | |
| SIP header values: | | | | |
| INVITE 1: | | | | |
| <cug></cug> | | | | |
| <cugcalloperation></cugcalloperation> | | | | |
| | TRUE <td>est></td> <td></td> <td></td> | est> | | |
| <pre><cugindex>[PIXIT]</cugindex></pre> | ex> | | | |
| | | | | |
| | | | | |
| INVITE 2: | | | | |
| <cug></cug> | | | | |
| <pre><networkindicator>[PIXIT]</networkindicator></pre> | etworkIndicator> | | | |
| <cuginterlockbinarycode>[PIXI</cuginterlockbinarycode> | IT] | | | |
| <pre><cugcommunicationindicator>1</cugcommunicationindicator></pre> | 10 <td>or></td> <td></td> <td></td> | or> | | |
| | | | | |
| Comments: | | | | |
| UA C | SUT | UA S | S | |
| INVITE 1 | → | | ITF 2 | |
| 100 Trying | É | | Trying | |
| 180 Ringing | ← | | Ringing | |
| 200 OK INVITE | - | | OK INVIT | ΓE |
| ACK | → | → ACK | (| |
| | Communication | on | | |
| - : - | → | → BYE | | |
| BYE | | / DIL | - | |

| TSS | TP | SUB reference | Selection expression |
|---|-----------------------------------|-----------------------|----------------------|
| CUG/originating_AS | CUG_N01_014 | clause 4.5.2.4 | - |
| Test purpose | | | |
| No CUG: INVITE with CUG index | and outgoingAccessRequest, un | successful. | |
| In case of subscription "No CUG", | | | |
| CUGIndex and outgoingAccessRe | equest is not successful. The App | lication Server sends | a 403 Forbidden. |
| Preconditions: No CUG subscript | tion | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| 3 3 1 | TRUE <td>></td> <td></td> | > | |
| <pre><cugindex>[PIXIT]</cugindex></pre> | iex> | | |
| | | | |
| | | | |
| 403 Forbidden: | | | |
| Comments: | | | |
| UA C | SUT | UA S | |
| INVITE | → | | |
| 403 Forbidden | ← | | |

ACK

| no outgoingAccessRequest, unsuccessful. that the validation check for the CUG request contained in an equest is successful. The Application Server sends a 403 |
|--|
| that the validation check for the CUG request contained in an |
| that the validation check for the CUG request contained in an |
| • |
| equest is successful. The Application Server sends a 403 |
| |
| |
| |
| |
| |
| |
| ssRequest> |
| 5011044001 |
| |
| |
| |
| |
| UT UA S |
| UT UA S |
| UT UA S |
| U |

| TSS | TP | SUB reference | Selection expression |
|---|--------------|------------------------------|------------------------------|
| CUG/originating_AS | CUG_N01_0 | 16 clause 4.5.2.4 | PICS 1/2 |
| Test purpose | | | |
| CUG+OAE without preference: INVITE without C | UG index and | I no outgoingAccessReques | st, unsuccessful. |
| In case of subscription "CUG and Outgoing acces | | | |
| validation check for the CUG request contained in | | vithout CUGIndex and without | out outgoingAccessRequest is |
| successful. The Application Server sends a 403 F | Forbidden. | | |
| Preconditions: CUG+OAE without preference | | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <cugcalloperation></cugcalloperation> | | | |
| <outgoingaccessrequest> FALSE</outgoingaccessrequest> FALSE | oingAccessRe | quest> | |
| | | | |
| | | | |
| 403 Forbidden: | | | |
| Comments: | | | |
| UA C | SUT | UA S | |
| INVITE → | | | |
| 403 Forbidden | | | |
| ACK → | | | |
| | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------------------------|------------------------------|----------------------|----------------------|
| CUG/originating_AS | CUG_N01_017 | clause 4.5.2.4 | PICS 1/3 |
| Test purpose | | | |
| CLIG+OAL without preference: INIVITE | without CLIG index and no or | utanina Access Reaue | et no CLIG call |

CUG+OAI without preference: INVITE without CUG index and no outgoingAccessRequest, no CUG call. In case of subscription "CUG and Outgoing access, implicit outgoing access for all communications without preference", ensure that the validation check for the CUG request contained in an INVITE without CUGIndex and without outgoingAccessRequest is successful. The sent INVITE does not contain the cugInterlockBinaryCode, the networkIndicator and cugCommunicationIndicator.

Preconditions: CUG+OAI without preference

INVITE 2:

</cug>

No <cug> XML attachment

| | SUT | | UA S | |
|--------------|---------------|---------------|-----------------------------|---|
| → | | → | INVITE 2 | |
| ← | | ← | 100 Trying | |
| (| | ← | | |
| (| | ← | 200 OK INVITE | |
| → | | → | ACK | |
| (| Communication | | | |
| → | | → | BYE | |
| ← | | ← | 200 OK BYE | |
| | ÷ ÷ ÷ | Communication | → ← ← ← ← → Communication → | → INVITE 2 ← 100 Trying ← 180 Ringing ← 200 OK INVITE → ACK Communication → BYE |

| TSS | TP | SUB reference | Selection expression |
|-------------------------------------|-----------------------------|---------------------|----------------------|
| CUG/originating_AS | CUG_N01_018 | clause 4.5.2.4 | PICS 1/4 |
| Test purpose | | | |
| CUG with preference: INVITE without | t CUG index and no outgoing | ccessRequest, succe | essful. |

In case of subscription "CUG with preference", ensure that the validation check for the CUG request contained in an INVITE without CUGIndex and without outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (preferential CUG PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "11" (CUG without outgoing access).

Preconditions: CUG with preference

```
SIP header values:
```

INVITE: <cuq>

<cugCallOperation>

<outgoingAccessRequest> FALSE</outgoingAccessRequest>

</cugCallOperation>

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
<cugCommunicationIndicator>11</cugCommunicationIndicator>

| Comments: | | | | | |
|---------------|----------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_019 | clause 4.5.2.4 | PICS 1/5 |
| Took numbers | | | |

CUG+OAE with preference: INVITE without CUG index and no outgoingAccessRequest, successful. In case of subscription "CUG and Outgoing access, explicit request required with preference", ensure that the validation check for the CUG request contained in an INVITE without CUGIndex and without outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (preferential CUG PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "11" (CUG without outgoing access).

Preconditions: CUG+OAE with preference

SIP header values:

INVITE:

<cuq>

<cugCallOperation>

<outgoingAccessRequest> FALSE</outgoingAccessRequest>

</cugCallOperation>

</cug>

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

<cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>

<cugCommunicationIndicator>11</cugCommunicationIndicator>

| Comments: | | |
|---------------|---------------|---------------|
| UA C | SUT | UA S |
| INVITE 1 → | → | INVITE 2 |
| 100 Trying ← | ← | 100 Trying |
| 180 Ringing ← | ← | 180 Ringing |
| 200 OK INVITE | ← | 200 OK INVITE |
| ACK → | → | ACK |
| | Communication | |
| BYE → | → | BYE |
| 200 OK BYE ← | ← | 200 OK BYE |

| TSS | TP | SUB reference | Selection expression | | | |
|---|------------------------------|---------------------|----------------------|--|--|--|
| CUG/originating_AS | CUG_N01_020 | clause 4.5.2.4 | PICS 1/6 | | | |
| Test purpose | | | | | | |
| CUG+OAI with preference: INVITE | vithout CUG index and no out | goingAccessRequest, | successful. | | | |
| In case of subscription "CUG and Outgoing access, implicit outgoing access for all communications with preference", | | | | | | |
| ensure that the validation check for | | | | | | |

outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "11" (CUG without outgoing access).

Preconditions: CUG+OAI with preference

```
SIP header values:
INVITE:
<cuq>
   <cugCallOperation>
      <outgoingAccessRequest> FALSE</outgoingAccessRequest>
   </cugCallOperation>
</cug>
```

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator> <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode> <cugCommunicationIndicator>11</cugCommunicationIndicator>

<cugCommunicationIndicator>10</cugCommunicationIndicator> </cug>

| Comments: | | | | |
|---------------|----------|--------------|---------------|--|
| UA C | | SUT | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | (| 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | C | ommunication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |
| | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_021 | clause 4.5.2.4 | - |

No CUG: INVITE without CUG index and no outgoingAccessRequest, unsuccessful.

In case of subscription "No CUG", ensure that the validation check for the CUG request contained in an INVITE without CUGIndex and without outgoingAccessRequest is not successful. The Application Server sends a 403 Forbidden.

| Preconditions: No CUG subscription |
|---|
| SIP header values: |
| INVITE: |
| <pre><cug> <cugcalloperation> <outgoingaccessrequest> FALSE</outgoingaccessrequest> </cugcalloperation> </cug></pre> |

403 Forbidden:

| Comments: UA C | | SUT | UA S | |
|-------------------|--------------|-----|------|--|
| INVITE | → | | | |
| 403 Forbidden | - | | | |
| ACK | → | | | |
| | | | | |

| TSS | TP | | SUB reference | Selection expression |
|---|-----------------|----------|--------------------|----------------------|
| CUG/originating_AS | CUG_N01 | _022 | clause 4.5.2.4 | PICS 1/1 |
| Test purpose | | | | |
| CUG without preference: INVITE without CUC | G index and out | tgoingAc | cessRequest, unsuc | ccessful. |
| In case of subscription "CUG without preferer INVITE without CUGIndex and outgoingAcces | | | | |
| Preconditions: CUG without preference | | | | |
| SIP header values: | | | | |
| INVITE: | | | | |
| <pre><cug> <cugcalloperation> <outgoingaccessrequest>TRUE</outgoingaccessrequest></cugcalloperation></cug></pre> | goingAccessRe | equest> | | |
| | | | | |
| 403 Forbidden: | | | | |
| Comments: | | | | |
| UA C | SUT | | UA S | |
| | → | | | |
| | - | | | |
| ACK - | → | | | |
| | | | | |

| TSS | TP | SUB reference | Selection expression |
|---|----------------------------------|---------------------|-----------------------|
| CUG/originating_AS | CUG_N01_023 | clause 4.5.2.4 | PICS 1/2 |
| Test purpose | | | |
| CUG+OAE without preference: INVITE w | ithout CUG index and out | goingAccessRequest, | no CUG call. |
| In case of subscription "CUG and Outgoing | | | |
| validation check for the CUG request con | tained in an INVITE <i>witho</i> | ut CUGIndex and out | goingAccessRequest is |
| successful. The Application Server sends | a 403 Forbidden. | | |
| Preconditions: CUG+OAE without prefe | rence | | |
| SIP header values: | | | |
| | | | |

INVITE 1:

<cug>

<cugCallOperation>

<outgoingAccessRequest>TRUE</outgoingAccessRequest>
</cugCallOperation>

</cug>

INVITE 2:

No <cug> XML attachment

| Comments: | CII | · T | LIAC | |
|---------------|----------|------------|---------------|--|
| UA C | SU | 11 | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | ← | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | Commu | inication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |

| TSS | TP | | SUB | reference | Selection expression |
|---|---|-----------------|--------------|-----------------|----------------------|
| CUG/originating_AS | CUG | _N01_024 | claus | e 4.5.2.4 | PICS 1/3 |
| Test purpose | | | | | |
| CUG+OAI without preference: IN | VITE without CUG ind | dex and outgo | oingAcc | essRequest, r | no CUG call. |
| In case of subscription "CUG and | Outgoing access, im | plicit outgoing | g acces | s for all comm | unications without |
| preference", ensure that the validation | | | | | |
| outgoingAccessRequest is succes | ssful. The sent INVIT | E does not co | ontain th | ne cugInterlock | kBinaryCode, the |
| networkIndicator and cugCommui | nicationIndicator. | | | | |
| Preconditions: CUG+OAI withou | t preference | | | | |
| SIP header values: | | | | | |
| INVITE 1: | | | | | |
| <cug></cug> | | | | | |
| <cugcalloperation></cugcalloperation> | | | | | |
| <outgoingaccessrequest></outgoingaccessrequest> | TRUE <td>essRequest></td> <td>•</td> <td></td> <td></td> | essRequest> | • | | |
| | | | | | |
| | | | | | |
| | | | | | |
| INVITE 2: | | | | | |
| No <cug> XML attachment</cug> | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE 1 | → | 301 | → | INVITE 2 | |
| 100 Trying | - | | - | 100 Trying | |
| 180 Ringing | - | | - | 180 Ringing | |
| 200 OK INVITE | - | | - | 200 OK INVI | TE |
| ACK | → | | → | ACK | 16 |
| 7011 | 7 | | , | AUIX | |

| 155 | IP | SUB reference | Selection expression | | | |
|--|-------------|----------------|----------------------|--|--|--|
| CUG/originating_AS | CUG_N01_025 | clause 4.5.2.4 | PICS 1/4 | | | |
| Test purpose | | | | | | |
| CUG with preference: INVITE without CUG index and outgoingAccessRequest, unsuccessful. | | | | | | |

Communication

BYE

200 OK BYE

BYE

200 OK BYE

403 Forbidden

ACK

```
In case of subscription "CUG with preference", ensure that the validation check for the CUG request contained in an INVITE without CUGIndex and outgoingAccessRequest is successful. The Application Server sends a 403 Forbidden.

Preconditions: CUG with preference
SIP header values:
INVITE:
 <cug>
     <cugCallOperation>
          <outgoingAccessRequest>TRUE</outgoingAccessRequest>
     </cugCallOperation>
 </cug>
403 Forbidden:
Comments:
UA C
                                                                            SUT
                                                                                                        UA S
 INVITE
                                                            →
```

←

| TSS | | TP | SUB r | eference | Selection expression |
|---|---|---------------------|--------------|---------------|----------------------|
| CUG/originating_AS | | CUG_N01_026 | clause | 4.5.2.4 | PICS 1/5 |
| Test purpose | | | | | |
| CUG+OAE with preference: INV | | | | | |
| In case of subscription "CUG an | | | | | |
| validation check for the CUG rec | | | | | |
| successful. The sent INVITE doe | es not contain th | e cugInterlockBinar | yCode, | the networkIn | dicator and |
| cugCommunicationIndicator. | | | | | |
| Preconditions: CUG+OAE with | preference | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| <cug></cug> | | | | | |
| <pre><cugcalloperation> <outgoingaccessreques< pre=""></outgoingaccessreques<></cugcalloperation></pre> | t>TPLIE-/outgo | ingAccesePeguest> | | | |
| | i>TNOL <td>ingAccessivequesiz</td> <td>•</td> <td></td> <td></td> | ingAccessivequesiz | • | | |
| | | | | | |
| 4.00.9 | | | | | |
| INVITE 2: | | | | | |
| No <cug> XML attachment</cug> | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | (| 100 Trying | |
| 180 Ringing | (| | (| 180 Ringing | |
| 200 OK INVITE | (| | (| 200 OK INVI | IE |
| ACK | → | Communication | → | ACK | |
| 5)/5 | _ | Communication | _ | D) /E | |

BYE 200 OK BYE

→

BYE 200 OK BYE

| TSS | TP | SUB reference | Selection expression |
|--|--------------------------------------|------------------------|----------------------|
| CUG/originating_AS | CUG_N01_027 | clause 4.5.2.4 | PICS 1/6 |
| Test purpose | | | |
| | ITE without CUG index and outgoin | | |
| | nd Outgoing access, implicit outgoin | | |
| | for the CUG request contained in a | | |
| | essful. The sent INVITE contains th | | |
| | gCommunicationIndicator set to "10 |)" (outgoing access al | lowed). |
| Preconditions: CUG+OAI with | preference | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <pre><cugcalloperation></cugcalloperation></pre> | ots TRUE / outgoing / oppositions | | |
| <pre></pre> | st>TRUE <td>></td> <td></td> | > | |
| | | | |
| | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <networkindicator>[PIXIT]<</networkindicator> | / networkIndicator> | | |
| <pre><cuginterlockbinarycode>[F</cuginterlockbinarycode></pre> | PIXIT] | | |
| <cugcommunicationindicate< p=""></cugcommunicationindicate<> | or>10 <td>></td> <td></td> | > | |
| | | | |
| | | | |
| Comments: | | | |
| UA C | SUT | UA S | |
| INVITE 1 | → | → INVITE 2 | |
| 100 Trying | ← | ← 100 Trying | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_028 | clause 4.5.2.4 | |

Communication

180 Ringing

200 OK BYE

ACK

BYE

200 OK INVITE

Test purpose

180 Ringing

200 OK BYE

ACK

BYE

200 OK INVITE

No CUG: INVITE without CUG index and outgoingAccessRequest, unsuccessful.

In case of subscription "No CUG", ensure that the validation check for the CUG request contained in an INVITE without CUGIndex and outgoingAccessRequest is not successful. The Application Server sends a 403 Forbidden. Preconditions: No CUG subscription SIP header values: INVITE: <cug> <cugCallOperation> <outgoingAccessRequest>TRUE</outgoingAccessRequest> </cugCallOperation> </cug> 403 Forbidden: Comments: UA C SUT **UAS** INVITE **→** 403 Forbidden **← →** ACK

| 1 | P | SUB reference | Selection expression |
|----------|------------------|--|---|
| C | CUG_N01_022 | clause 4.5.2.4 | PICS 1/1 |
| | | | |
| -CUG con | nmunication, uns | uccessful. | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | SUT | UA S | |
| → | | | |
| ← | | | |
| → | | | |
| | | | |
| | equest is | ference", ensure that the valequest is successful. | CUG_N01_022 clause 4.5.2.4 a-CUG communication, unsuccessful. ference", ensure that the validation check for the request is successful. The Application Server senses SUT UAS |

| TSS | | TP | SUB reference | Selection expression |
|--|--------------|--------------|---------------------|----------------------|
| CUG/originating_AS | | CUG_N01_023 | clause 4.5.2.4 | PICS 1/2 |
| Test purpose | | | | |
| CUG+OAE without preference: INVIT | E for Non-Cl | JG communica | tion, unsuccessful. | |
| In case of subscription "CUG and Out validation check for a non CUG reque | | | | |
| Preconditions: CUG+OAE without p | reference | | | |
| SIP header values: | | | | |
| INVITE 1: | | | | |
| No <cug> XML attachment</cug> | | | | |
| 403 Forbidden: | | | | |
| Comments: | | | | |
| UA C | | SUT | UA S | |
| INVITE | → | | | |
| 403 Forbidden | ← | | | |
| ACK | → | | | |

| TSS | | TP | SUB | reference | Selection expression |
|---------------------------------|------------------|------------------------|----------|-----------------|----------------------|
| CUG/originating_AS | | CUG_N01_024 | claus | se 4.5.2.4 | PICS 1/3 |
| Test purpose | | | | | |
| CUG+OAI without preference: | INVITE for Non-C | CUG communication | , no C | UG call. | |
| n case of subscription "CUG a | nd Outgoing acce | ess, implicit outgoing | acces | ss for all comm | unications without |
| oreference", ensure that the va | | | | | |
| not contain the cugInterlockBin | | | | | |
| Preconditions: CUG+OAI with | | | | | |
| SIP header values: | | | | | |
| INVITE 1: | | | | | |
| No <cug> XML attachment</cug> | | | | | |
| | | | | | |
| INVITE 2: | | | | | |
| No <cug> XML attachment</cug> | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVI | TE |
| | → | | → | ACK | |
| | | | | | |
| ACK | - | Communication | | | |
| | <i>→</i> | Communication | → | BYE | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_025 | clause 4.5.2.4 | PICS 1/4 |

CUG with preference: INVITE for Non-CUG communication, successful.

In case of subscription "CUG with preference", ensure that the validation check for a non CUG request in an INVITE without CUGIndex and outgoingAccessRequest is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "10" (outgoing access allowed).

Preconditions: CUG with preference

SIP header values:

INVITE 1:

No < cug> XML attachment

INVITE 2:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

</cua>

| Comments: | | | | | |
|---------------|--------------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | (| | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | (| | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | (| | ← | 200 OK BYE | |
| | | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_026 | clause 4.5.2.4 | PICS 1/5 |

Test purpose

CUG+OAE with preference: INVITE for Non-CUG communication, successful.

In case of subscription "CUG and Outgoing access, explicit request required with preference", ensure that the validation check for a non CUG request in an INVITE is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "10" (outgoing access allowed).

Preconditions: CUG+OAE with preference

SIP header values:

INVITE:

No <cug> XML attachment

INVITE 2:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | |
|---------------|----------|--------------|---------------|--|
| UA C | SU | Γ | UA S | |
| INVITE 1 | → | → | INVITE 2 | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | ← | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | Commur | nication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | (| 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_027 | clause 4.5.2.4 | PICS 1/6 |

CUG+OAI with preference: INVITE for Non-CUG communication, successful.

In case of subscription "CUG and Outgoing access, implicit outgoing access for all communications with preference", ensure that the validation check for a non CUG request in an INVITE is successful. The sent INVITE contains the cugInterlockBinaryCode (PIXIT), the networkIndicator (PIXIT) and cugCommunicationIndicator set to "10" (outgoing access allowed).

Preconditions: CUG+OAI with preference

SIP header values:

INVITE:

No < cug> XML attachment

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | | |
|---------------|----------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |
| | | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|----------------|----------------------|
| CUG/originating_AS | CUG_N01_028 | clause 4.5.2.4 | i i |

Test purpose

No CUG: INVITE for Non-CUG communication, unsuccessful.

In case of subscription "No CUG", ensure that the validation check for a non CUG request in an INVITE is not successful. The sent INVITE does not contain the cugInterlockBinaryCode, the networkIndicator and cugCommunicationIndicator

Preconditions: No CUG subscription

SIP header values:

INVITE:

No < cug> XML attachment

INVITE 2:

| Comments: | | | | | |
|---------------|----------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE 1 | → | | → | INVITE 2 | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | + | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | + | | ← | 200 OK BYE | |
| | | | | | |

| TSS | 1 | ГР | | SUB reference | Selection expression |
|--|-------------------|-------------|----------|-------------------------|-------------------------------|
| CUG/originating_AS | C | CUG_N01 | _029 | clause 4.5.2.4 | - |
| Test purpose | | | | | |
| Outgoing communications barring a | applies, the call | is rejected | d. | | |
| Ensure that a CUG request and out | going communi | cations ba | arring a | pplies is rejected with | a 603 Decline final response. |
| Preconditions: CUG without prefer | rence | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| <cug></cug> | | | | | |
| <pre><cugcalloperation> <outgoingaccessrequest>F <cugindex>[PIXIT]</cugindex></outgoingaccessrequest></cugcalloperation></pre> | • | gAccessR | equest | > | |
| | | | | | |
| 603 Decline: | | | | | |
| Comments: | | | | | |
| IIA C | | SUT | | UA S | |
| UA C | | | | | |
| INVITE | → | | | | |
| | → | | | | |

| TSS | T | P | SUB reference | Selection expression |
|---|----------------|-------------------|------------------------|----------------------------|
| CUG/originating_AS | C | CUG_N01_030 | clause 4.5.2.4 | |
| Test purpose | | | | · |
| Outgoing communications barring a | | | | |
| Ensure that a CUG request and out | going communic | cations barring a | pplies is delivered to | vard the terminating user. |
| Preconditions: CUG+OAI without | preference | | | |
| SIP header values: | | | | |
| INVITE: | | | | |
| <cug></cug> | | | | |
| | | | | |
| <cugcalloperation></cugcalloperation> | | | | |
| <outgoingaccessrequest>T</outgoingaccessrequest> | 0 0 | AccessRequest | > | |
| <pre>coutgoingAccessRequest>T <cugindex>[PIXIT]</cugindex></pre> | 0 0 | AccessRequest | > | |
| <pre><outgoingaccessrequest>T</outgoingaccessrequest></pre> | 0 0 | AccessRequest | > | |
| <pre>coutgoingAccessRequest>T <cugindex>[PIXIT]</cugindex></pre> | 0 0 | AccessRequest | • | |
| <pre><outgoingaccessrequest>T</outgoingaccessrequest></pre> | 0 0 | AccessRequesta | > | |
| <pre><outgoingaccessrequest>T</outgoingaccessrequest></pre> | 0 0 | AccessRequest | > | |
| <pre><outgoingaccessrequest>T</outgoingaccessrequest></pre> | 0 0 | AccessRequest: | UA S | |
| <pre><outgoingaccessrequest>T</outgoingaccessrequest></pre> | 0 0 | | | |
| <pre><outgoingaccessrequest>T</outgoingaccessrequest></pre> | x> | | | |

5.2.3 Actions at the AS of the terminating User

| TSS | TP | SUB reference | Selection expression |
|---|-----------------------|------------------------|------------------------------|
| CUG/terminating_AS | CUG_N02_001 | clause 4.5.2.10 | - |
| Test purpose | | | |
| CUG call -OA to a CUG user, -IA, -ICB in the sa | me CUG. | | |
| Ensure that call setup is successful if the origina | | | |
| XML cug instance in the received INVITE and the | e terminating user is | s incoming access not | allowed and incoming call is |
| not barred. Both users are in the same CUG. | | - | - |
| Preconditions: Terminating user is a CUG user | incoming access no | ot allowed incoming ca | all not barred. |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <networkindicator>[PIXIT]</networkindicator> | or> | | |
| <cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode> | | | |
| <cugcommunicationindicator>11</cugcommunicationindicator> | nunicationIndicator> | • | |
| | | | |
| Comments: | | · | · |

| UA C | SUT | | UA S |
|---------------|---------------|----------|---------------|
| INVITE | → | → | INVITE |
| 100 Trying | ← | ← | 100 Trying |
| 180 Ringing | ← | ← | 180 Ringing |
| 200 OK INVITE | ← | ← | 200 OK INVITE |
| ACK | → | → | ACK |
| | Communication | | |
| BYE | → | → | BYE |
| 200 OK BYE | ← | ← | 200 OK BYE |
| | | | |
| | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_002 | clause 4.5.2.10 | |

Test purpose

CUG call -OA to a CUG user, -IA, +ICB in the same CUG.

Ensure that call setup is not successful if the originating user is a CUG user outgoing access not allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access not allowed and incoming call is barred. Both users are in the same CUG. The call setup is rejected with a 603 Decline final response.

Preconditions: Terminating user is a CUG user incoming access not allowed incoming call barred.

SIP header values:

INVITE:

<cug>

<networkIndicator >[PIXIT]</networkIndicator>

- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>11</cugCommunicationIndicator>

| Comments: UA C | | SUT | UA S | |
|---------------------------|--------------|-----|------|--|
| INVITE | → | | | |
| 100 Trying | ← | | | |
| 100 Trying 603 Decline | (| | | |
| ACK | → | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_003 | clause 4.5.2.10 | - |

CUG call -OA to a CUG user, +IA, -ICB in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access not allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access allowed and incoming call is not barred. Both users are in the same CUG.

Preconditions: Terminating user is a CUG user incoming access allowed incoming call not barred.

SIP header values:

INVITE:

<cua>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>11</cugCommunicationIndicator>

</cua>

| Comments: | _ | | | |
|---------------|----------|--------------|---------------|--|
| UA C | S | SUT | UA S | |
| INVITE | → | → | INVITE | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | ← | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | Comm | nunication | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | (| 200 OK BYE | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_004 | clause 4.5.2.10 | |

Test purpose

CUG call -OA to a CUG user, +IA, +ICB in the same CUG.

Ensure that call setup is not successful if the originating user is a CUG user outgoing access not allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access allowed and incoming call is barred. Both users are in the same CUG. The call setup is rejected with a 603 Decline final response.

Preconditions: Terminating user is a CUG user incoming access allowed and incoming call barred.

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>11</cugCommunicationIndicator>

| Comments: | | | | |
|---------------------------|--------------|-----|------|--|
| UA C | | SUT | UA S | |
| INVITE | → | | | |
| 100 Trying | ← | | | |
| 100 Trying 603 Decline | (| | | |
| ACK | → | | | |
| | | | | |

| TSS | TP | SUB reference | Selection expression |
|--|---------------------------|-------------------------|-------------------------------|
| CUG/terminating_AS | CUG_N02_005 | clause 4.5.2.10 | |
| Test purpose | | | |
| CUG call -OA to a non CUG user. | | | |
| Ensure that call setup is not successful i | | | |
| by a XML cug instance in the received If | NVITE and the terminating | g user is not a CUG use | r. The call setup is rejected |
| with a 403 Forbidden final response. | | | |
| Preconditions: Terminating user is a no | on CUG user. | | |
| SIP header values: | | | |
| INVITE: | | | |
| <cug></cug> | | | |
| <networkindicator>[PIXIT]<!-- networl</td--><td>kIndicator></td><td></td><td></td></networkindicator> | kIndicator> | | |
| <pre><cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode></pre> | cugInterlockBinaryCode> | | |
| <pre><cugcommunicationindicator>11<td></td><td>or></td><td></td></cugcommunicationindicator></pre> | | or> | |
| | | | |
| Comments: | | | |
| UA C | SUT | UA S | |
| INVITE | → | | |
| 100 Trying | ← | | |
| 403 Forbidden | ← | | |
| ACK | → | | |

| TSS | TP | SUB reference | Selection expression | | | | | |
|---|----------------------|--------------------------|----------------------------|--|--|--|--|--|
| CUG/terminating_AS | CUG_N02_006 | clause 4.5.2.10 | | | | | | |
| Test purpose | | | | | | | | |
| CUG call -OA to a CUG user, -IA not in the same | CUG. | | | | | | | |
| Ensure that call setup is not successful if the orig | inating user is a CU | G user outgoing access | not allowed represented | | | | | |
| by a XML cug instance in the received INVITE an | d the terminating us | ser is incoming access r | ot allowed. Both users are | | | | | |
| not in the same CUG. The call setup is rejected v | vith a 403 Forbidder | n final response. | | | | | | |
| Preconditions : Terminating user is a CUG user | incoming access no | t allowed. | | | | | | |
| SIP header values: | | | | | | | | |
| INVITE: | | | | | | | | |
| <cug></cug> | | | | | | | | |
| <networkindicator>[PIXIT]<!-- networkIndicato</td--><td>r></td><td></td><td></td></networkindicator> | r> | | | | | | | |
| <pre><cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode></pre> | ckBinaryCode> | | | | | | | |
| <cugcommunicationindicator>11</cugcommunicationindicator> | unicationIndicator> | | | | | | | |
| | | | | | | | | |
| Comments: | | | | | | | | |
| UA C | SUT | UA S | | | | | | |
| INVITE → | | | | | | | | |
| 100 Trying ← | | | | | | | | |
| 403 Forbidden | | | | | | | | |
| ACK → | | | | | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_007 | clause 4.5.2.10 | - |

Test purpose

CUG call -OA to a CUG user, +IA not in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access not allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access allowed and. Both users are not in the same CUG. The call setup is rejected with a 403 Forbidden final response.

Preconditions: Terminating user is a CUG user incoming access allowed.

SIP header values:

INVITE:

<cua>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>11</cugCommunicationIndicator>

</cug>

Comments:

UA C SUT UA S

INVITE →
100 Trying ←
403 Forbidden ←
ACK →

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG N02 008 | clause 4.5.2.10 | |

Test purpose

CUG call +OA to a CUG user, -IA, -ICB in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access not allowed and incoming call is not barred. Both users are in the same CUG.

Preconditions: Terminating user is a CUG user incoming access not allowed incoming call not barred.

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | | |
|---------------|----------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE | → | | → | INVITE | |
| 100 Trying | + | | ← | 100 Trying | |
| 180 Ringing | + | | ← | 180 Ringing | |
| 200 OK INVITE | + | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |
| | | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_009 | clause 4.5.2.10 | |

Test purpose

CUG call +OA to a CUG user, -IA, +ICB in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access not allowed and incoming call is barred. Both users are in the same CUG. The call setup is rejected with a 603 Decline final response.

Preconditions: Terminating user is a CUG user incoming access, allowed incoming call barred.

SIP header values:

INVITE:

<cua>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

</cug>

 Comments:
 UA C
 SUT
 UA S

 INVITE
 →
 100 Trying
 ←

100 Trying ←
603 Decline ←
ACK →

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_010 | clause 4.5.2.10 | |

Test purpose

CUG call +OA to a CUG user, +IA, -ICB in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access allowed and incoming call is not barred. Both users are in the same CUG.

Preconditions: Terminating user is a CUG user incoming access allowed incoming call not barred.

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | |
|---------------|-----------|----------|---------------|--|
| UA C | SUT | | UA S | |
| INVITE | → | → | INVITE | |
| 100 Trying | ← | ← | 100 Trying | |
| 180 Ringing | ← | ← | 180 Ringing | |
| 200 OK INVITE | ← | ← | 200 OK INVITE | |
| ACK | → | → | ACK | |
| | Communica | ation | | |
| BYE | → | → | BYE | |
| 200 OK BYE | ← | ← | 200 OK BYE | |
| | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_011 | clause 4.5.2.10 | - |

Test purpose

CUG call+-OA to a CUG user, +IA, +ICB in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access allowed and incoming call is barred. Both users are in the same CUG.

Preconditions: Terminating user is a CUG user incoming access allowed incoming call barred.

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

</cuq>

| Comments: | | | | |
|---------------|----------|---------------|----------|---------------|
| UA C | | SUT | | UA S |
| INVITE | → | | → | INVITE |
| 100 Trying | ← | | ← | 100 Trying |
| 180 Ringing | ← | | ← | 180 Ringing |
| 200 OK INVITE | ← | | ← | 200 OK INVITE |
| ACK | → | | → | ACK |
| | | Communication | | |
| BYE | → | | → | BYE |
| 200 OK BYE | ← | | ← | 200 OK BYE |
| | | | | |

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_012 | clause 4.5.2.10 | |

Test purpose

CUG call +OA to a non CUG user.

Ensure that call setup is successful on a non CUG call basis, if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is not in CUG.

Preconditions: Terminating user is a non CUG user

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | | | | |
|---------------|----------|---------------|----------|---------------|--|
| UA C | | SUT | | UA S | |
| INVITE | → | | → | INVITE | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITE | |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |
| | | | | | |

| TSS | TP | SUB reference | Selection expression | | |
|--|---------------------------------|--------------------|------------------------------|--|--|
| CUG/terminating_AS | CUG_N02_013 | clause 4.5.2.10 | - | | |
| Test purpose | | | | | |
| CUG call +OA to a CUG user, -IA not in the same CUG. | | | | | |
| Engure that call pature is not augocoeful | if the eriainating uper ic a Cl | IC was sutasing as | and allowed represented by a | | |

Ensure that call setup is not successful if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access not allowed. Both users are not in the same CUG. The call setup is rejected with a 403 Forbidden final response.

Preconditions: Terminating user is a CUG user incoming access not allowed.

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

</cug>

 Comments:
 SUT
 UA S

 INVITE
 →

 100 Trying
 ←

 403 Forbidden
 ←

 ACK
 →

| TSS | TP | SUB reference | Selection expression |
|--------------------|-------------|-----------------|----------------------|
| CUG/terminating_AS | CUG_N02_014 | clause 4.5.2.10 | |

Test purpose

CUG call +OA to a CUG user, +IA not in the same CUG.

Ensure that call setup is successful if the originating user is a CUG user outgoing access allowed represented by a XML cug instance in the received INVITE and the terminating user is incoming access allowed and. Both users are not in the same CUG.

Preconditions: Terminating user is a CUG user incoming access allowed.

SIP header values:

INVITE:

<cug>

- <networkIndicator >[PIXIT]</networkIndicator>
- <cugInterlockBinaryCode>[PIXIT]</cugInterlockBinaryCode>
- <cugCommunicationIndicator>10</cugCommunicationIndicator>

| Comments: | | |
|-----------------|---------------|---------------|
| UA C | SUT | UA S |
| INVITE -> | → | INVITE |
| 100 Trying ← | ← | 100 Trying |
| 180 Ringing ← | ← | 180 Ringing |
| 200 OK ÎNVÎTE ← | ← | 200 OK INVITE |
| ACK → | → | ACK |
| | Communication | |
| BYE → | → | BYE |
| 200 OK BYE ← | ← | 200 OK BYE |
| | | |

| TSS | | TP | SUB reference | Selection expression |
|--|------------------|-----------------|-----------------|----------------------|
| CUG/terminating_AS | | CUG_N02_015 | clause 4.5.2.10 | |
| Test purpose | | | | |
| Non CUG call to a CUG -IA use | r. | | | |
| Ensure that call setup is not suc received and the terminating us | | | | |
| response. | | | | |
| Preconditions: Terminating use | er is a CUG user | incoming access | not allowed. | |
| SIP header values: | | | | |
| INVITE: | | | | |
| Comments: | | | | |
| UA C | | SUT | UA S | |
| | → | | | |
| INVITE | | | | |
| INVITE 100 Trying | É | | | |
| | = | | | |

| TSS | | TP | SUB | reference | Selection expression |
|------------------------------------|----------------|-------------------|----------|----------------|------------------------|
| CUG/terminating_AS | | CUG_N02_016 | claus | se 4.5.2.10 | |
| Test purpose | | | | | |
| Non CUG call to a CUG +IA user. | | | | | |
| Ensure that call setup is successf | | | JG use | er, no XML cug | instance in the INVITE |
| received and the terminating user | is incoming ac | cess allowed. | | | |
| Preconditions: Terminating user | is a CUG user | incoming access a | llowed. | • | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE | → | | → | INVITE | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | (| | ← | 180 Ringing | |
| 200 OK INVITE | (| | ← | 200 OK INVI | TE |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |

5.3 Interaction with other services

5.3.1 Conference calling (CONF)

| TSS | | TP | SUB | reference | Selection expression |
|----------------------|----------|---------------|----------|---------------|----------------------|
| CUG/interaction/CONF | | CUG_N03_001 | claus | se 4.5.2.4 | - |
| Test purpose | | | | | |
| | | | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE | → | | → | INVITE | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVITI | E |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |
| | | | | | |
| | | | | | |

5.3.2 Communication Diversion Services (CDIV)

5.3.2.1 Communication Forwarding Unconditional (CFU)

| TSS | • | TP | SUB | reference | Selection expression |
|----------------------|----------|---------------|----------|--------------|----------------------|
| CUG/interaction/CDIV | | CUG_N04_001 | claus | se 4.5.2.4 | _ |
| Test purpose | | | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE | → | | → | INVITE | |
| 100 Trying | ← | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK INVITE | ← | | ← | 200 OK INVIT | E |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |

5.3.3 Explicit Communication Transfer (ECT)

| TSS | | TP | SUB | reference | Selection expression |
|---------------------|----------|---------------|----------|-------------|----------------------|
| CUG/interaction/ECT | | CUG_N05_001 | claus | se 4.5.2.4 | _ |
| Test purpose | | | | | |
| | | | | | |
| Preconditions: | | | | | |
| SIP header values: | | | | | |
| INVITE: | | | | | |
| Comments: | | | | | |
| UA C | | SUT | | UA S | |
| INVITE | → | | → | INVITE | |
| 100 Trying | + | | ← | 100 Trying | |
| 180 Ringing | ← | | ← | 180 Ringing | |
| 200 OK ĬNŬITE | ← | | ← | 200 OK INVI | TE |
| ACK | → | | → | ACK | |
| | | Communication | | | |
| BYE | → | | → | BYE | |
| 200 OK BYE | ← | | ← | 200 OK BYE | |
| | | | | | |
| | | | | | |

5.4 Test purposes for the ISUP/SIP Interworking

5.4.1 Interworking at the I-MGCF

| TP516001 | SIP reference: RFC 3261 [4] | ISUP reference: 7.4.1.1 |
|----------------|--|---|
| TSS reference: | SIP-ISUP/SS/CUG/ | |
| SIP selection | | |
| criteria: | | |
| ISUP selection | PICS 5/7 | |
| criteria: | | |
| Test purpose: | Mapping of <cug> XML element in the receive "00" Ensure that the <cugcommunicationindicator< th=""><th>Ç</th></cugcommunicationindicator<></cug> | Ç |
| | XML body is sent in a optional forward call inc | |
| | of the optional forward call indicator have to b | |
| | <networkindicator> and <cuginterlockbinaryc< th=""><th>ode> into Closed User Group interlock code.</th></cuginterlockbinaryc<></networkindicator> | ode> into Closed User Group interlock code. |
| SIP Parameter | INVITE: | |
| values: | <cug></cug> | |
| | <networkindicator>[PIXIT]</networkindicator> cugInterlockBinaryCode>[PIXIT] <cugcommunicationindicator>00</cugcommunicationindicator> | erlockBinaryCode> |
| ISUP Parameter | IAM: | |
| values: | Optional Forward Call Indicator CUG call indicator when optional forward call indicator have to be to "0". | |
| Comments: | SIP SU | IT ISUP |
| | INVITE → | → IAM |
| | 180 Ringing ← | ← ACM |
| | Ringin | g tone |
| | 200 OK INVITE ← | ← ANM |
| | ACK → | |
| | Conve | rsation |
| | BYE ← | ← REL |
| | 200 OK BYE → | → RLC |

| TP516002 | SIP reference: RFC 3261 [4] | ISUP reference: 7.4.1.1 |
|----------------|--|---|
| TSS reference: | SIP-ISUP/SS/CUG/ | |
| SIP selection | | |
| criteria: | | |
| ISUP selection | PICS 5/7 | |
| criteria: | | |
| Test purpose: | Mapping of <cug> XML element in the receiv "01"</cug> | red INVITE cugCommunicationIndicator value |
| | Ensure that the <cugcommunicationindicator <networkindicator="" an="" be="" body="" call="" call.="" coptional="" forward="" has="" in="" indicator="" is="" mapping="" no="" not="" of="" optional="" sent="" sent,="" to="" xml=""> and < Group interlock code.</cugcommunicationindicator> | all indicator - CUG call indicator. If the the CUG call indicator is set to "00" no CUG |
| SIP Parameter | INVITE: | |
| values: | <cug></cug> | |
| | <pre><networkindicator>[PIXIT]</networkindicator>[PIXIT][PIXIT][PIXIT]</pre> | terlockBinaryCode> |
| ISUP Parameter | IAM: | |
| values: | Optional Forward Call Indicator CUG call indi When optional forward call indicator have to be to "0". | |
| Comments: | SIP | UT ISUP |
| | INVITE → | → IAM |
| | 180 Ringing ← | ← ACM |
| | Ringir | ng tone |
| | 200 OK INVITE | ← ANM |
| | ACK → | |
| | | ersation |
| | BYE ← | ← REL |
| | 200 OK BYE → | → RLC |

| TP516003 | SIP reference: RFC 326 | 61 [4] | | ISUP reference: 7.4.1.1 |
|----------------|--|--|---------------------------------------|-------------------------------------|
| TSS reference: | SIP-ISUP/SS/CUG/ | | 1 | 7.4.1.1 |
| SIP selection | SIP-150P/55/C0G/ | | | |
| criteria: | | | | |
| ISUP selection | PICS 5/7 | | | |
| criteria: | 1 103 3/1 | | | |
| Test purpose: | Mapping of <cug> XML element</cug> | in the receive | ed INVITE cui | aCommunicationIndicator value |
| rest purpose. | "10" | in the receive | sa nvvii E ca | goonimameationmateator value |
| | Ensure that the <cugcommunic< th=""><th>ationIndicator</th><th>> value "10" c</th><th>contained in the INVITE <cua></cua></th></cugcommunic<> | ationIndicator | > value "10" c | contained in the INVITE <cua></cua> |
| | XML body is sent in a optional for | | | |
| | <pre><cug> <networkindicator> is m</networkindicator></cug></pre> | | | |
| | Network identity and the XML - | | | ryCode> is mapped into the |
| | IAM Closed User Group interloc | k code Binar | y code. | |
| SIP Parameter | INVITE: | | | |
| values: | <cug></cug> | | | |
| | <networkindicator>[PIXIT]<th></th><th></th><th></th></networkindicator> | | | |
| | <pre><cuginterlockbinarycode>[P</cuginterlockbinarycode></pre> | | | |
| | < cugCommunicationIndicato | r>10 <th>mmunicationi</th> <th>ndicator></th> | mmunicationi | ndicator> |
| ISUP Parameter | | | | |
| values: | Optional Forward Call Indicator | CLIC call indi | cator - "10" | |
| values. | Closed User Group interlock cod | | Dato1 = 10 | |
| | Binary code derived from IN | | odv <cualnte< b=""></cualnte<> | rlockBinarvCode> |
| | Network identity derived from | | | |
| Comments: | SIP | SU | JT | ISUP |
| | INVITE | → | → | IAM |
| | 180 Ringing | ← | ← | ACM |
| | | Ringin | g tone | |
| | 200 OK INVITE | ← | ← | ANM |
| | ACK | → | | |
| | | Conve | rsation | |
| | BYE | ← | ← | REL |
| | 200 OK BYE | → | → | RLC |

| TP516004 | SIP reference: RFC 3261 [4 |] | | ISUP reference: 7.4.1.1 |
|----------------|--|---|--------------|-------------------------------|
| TSS reference: | SIP-ISUP/SS/CUG/ | | | |
| SIP selection | | | | |
| criteria: | | | | |
| ISUP selection | PICS 5/7 | | | |
| criteria: | | | | |
| Test purpose: | Mapping of <cug> XML element in to "11"</cug> | he receive | d INVITE cu | gCommunicationIndicator value |
| | Ensure that the <cugcommunication< th=""><th></th><th></th><th></th></cugcommunication<> | | | |
| | XML body is sent in a optional forward | | | |
| | <pre><cug> <networkindicator> is mapp</networkindicator></cug></pre> | | | |
| | Network identity and the XML < cug IAM Closed User Group interlock co | | | ryCode> is mapped into the |
| SIP Parameter | INVITE: | de Dillai y | coue. | |
| values: | <cug></cug> | | | |
| 14.00 | <pre><networkindicator>[PIXIT]</networkindicator></pre> | orkIndicat | or> | |
| | <pre><cuginterlockbinarycode>[PIXI7</cuginterlockbinarycode></pre> | | | Code> |
| | <pre><cugcommunicationindicator>1</cugcommunicationindicator></pre> | 1 <th>nmunicationI</th> <th>ndicator></th> | nmunicationI | ndicator> |
| | | | | |
| ISUP Parameter | IAM: | | | |
| values: | Optional Forward Call Indicator CUC | 3 call indic | ator = "11" | |
| | Closed User Group interlock code | | d | wla aleDinameCa da |
| | Binary code derived from INVIT Network identity derived from II | | | |
| Comments: | SIP | SU | | ISUP |
| Gommonto. | INVITE → | | → | |
| | 180 Ringing ← | | É | ACM |
| | Too ranging | Ringing | tone - | 7.C.III |
| | 200 OK INVITE ← | | + | ANM |
| | ACK → | | | |
| | | Conver | sation | |
| | BYE | | ← | REL |
| | 200 OK BYE → | | → | RLC |

| TP516005 | SIP reference: RFC 3261 [4] | | ISUP reference: 7.4.1.1 | | |
|----------------|---|-------------------|--------------------------------|--|--|
| TSS reference: | | | 7.4.1.1 | | |
| SIP selection | SIP-15UP/SS/CUG/ | SIP-ISUP/SS/CUG/ | | | |
| criteria: | | | | | |
| ISUP selection | NOT PICS 5/7 | | | | |
| criteria: | INOT PICS 5/7 | | | | |
| Test purpose: | Manning of sough YML element in the re | caived INIVITE cu | aCommunicationIndicator value | | |
| rest purpose. | Mapping of <cug> XML element in the received INVITE cugCommunicationIndicator value "10". The PSTN/ISDN network does not support CUG.</cug> | | | | |
| | Ensure that the <cugcommunicationindia< th=""><th></th><th>contained in the INVITE < curs</th></cugcommunicationindia<> | | contained in the INVITE < curs | | |
| | XML body is not sent in a optional forwar | | | | |
| | the PSTN/ISDN does not support CUG. I | | | | |
| | the CUG call indicator is set to "00" no C | | | | |
| | <cuginterlockbinarycode> into Closed U</cuginterlockbinarycode> | | | | |
| SIP Parameter | INVITE: | | | | |
| values: | <pre><cug></cug></pre> | | | | |
| | <networkindicator>[PIXIT]</networkindicator> | | | | |
| | <cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode> | | | | |
| | <cugcommunicationindicator>10</cugcommunicationindicator> | | | | |
| | | | | | |
| ISUP Parameter | IAM: | | | | |
| values: | Optional Forward Call Indicator CUG call indicator = "00" | | | | |
| | When optional forward call indicator have to be sent in case of another indicator is not set to "0" | | | | |
| Comments: | SIP | SUT | ISUP | | |
| Comments. | INVITE - | 301 → | | | |
| | 180 Ringing | | | | |
| | | = | ACIVI | | |
| | 200 OK INVITE ← | nging tone | ANM | | |
| | ACK → | ~ | AINIVI | | |
| | - | nyaraatian | | | |
| | BYE ← | onversation | REL | | |
| | <u> </u> | ÷ | • •== | | |
| | 200 OK BYE → | <u>→</u> | RLC | | |

| TP516006 | SIP reference: RFC | 3261 [4] | | ISUP reference: 7.4.1.1 |
|-----------------|---|--------------|-----|----------------------------------|
| TSS reference: | SIP-ISUP/SS/CUG/ | | | |
| SIP selection | | | | |
| criteria: | | | | |
| ISUP selection | NOT PICS 5/7 | | | |
| criteria: | | | | |
| Test purpose: | Mapping of <cug> XML element in the received INVITE cugCommunicationIndicator value "11". The PSTN/ISDN network does not support CUG. Ensure that the <cugcommunicationindicator> value "11" contained in the INVITE <cug></cug></cugcommunicationindicator></cug> | | | |
| | | | | JG call indicator ="11". The XML |
| | <cug> <networkindicator> is mapped into the IAM Closed User Group interlock code</networkindicator></cug> | | | |
| | Network identity and the XML <cug> <cuginterlockbinarycode> is mapped into the</cuginterlockbinarycode></cug> | | | |
| | IAM Closed User Group interlock code Binary code. | | | |
| SIP Parameter | INVITE: | | | |
| values: | <cug></cug> | | | |
| | <networkindicator>[PIXIT]</networkindicator> | | | |
| | <pre><cuginterlockbinarycode>[PIXIT]</cuginterlockbinarycode></pre> | | | |
| | <cugcommunicationindicator>11</cugcommunicationindicator> | | | |
| ICUD Devementes | | | | |
| ISUP Parameter | | | | |
| values: | ein | | CUT | ICUD |
| Comments: | SIP | | SUT | ISUP |
| | INVITE | → | | |
| | 403 Forbidden | (| | |
| | ACK | <u>→</u> | | |

5.4.2 Interworking at the O-MGCF

| TP608001 | SIP refere | ence: RFC 3261 [4] | | ISUP reference: |
|-----------------------|--|--|-------------|---|
| | | | | 7.4.1.2 |
| TSS reference: | ISUP-SIP/SS/CU | G/ | | |
| SIP selection | NOT PICS 5/7 | | | |
| criteria: | | | | |
| ISUP selection | | | | |
| criteria: | | | | |
| Test purpose: | normal call. Ensure that the S indicator coded a indicator coded a signalling proced | SUT if an IAM is received with s "CUG call with outgoing a | Optional fo | orcess allowed is interworked in a prward call indicator, CUG call d CUG interlock code or CUG call ll indicator is absent, the SIP |
| SIP Parameter values: | No mapping | | | |
| ISUP Parameter | | | | |
| values: | | | | |
| Comments: | ISUP/BICC | SUT | | SIP |
| | IAM | → | → | INVITE |
| | ACM | ← | ← | 180 Ringing |
| | | Ringing tone | | 0 0 |
| | ANM | ₹ | + | 200 OK INVITE |
| | | | → | ACK |
| | | Conve | rsation | 1.2.1 |
| | REL | → | → | BYE |
| | RLC | | ← | 200 OK BYE |

| TP608002 | SIP reference | : RFC 3261 | 4] | ISUP reference: ES 283 027 [5], clause 7.4.16 |
|--------------------------|--|------------|-----|--|
| TSS reference: | ISUP-SIP/SS/CUG/ | | L | |
| SIP selection criteria: | NOT PICS 5/7 | | | |
| ISUP selection criteria: | | | | |
| Test purpose: | SIP network does not support CUG; CUG with outgoing access not allowed is rejected. Ensure that the SUT if an IAM is received with Optional forward call indicator, CUG call indicator coded as "CUG call without outgoing access" and CUG interlock code, a REL is sent. No INVITE is sent into the SIP network. | | | |
| SIP Parameter | No action | | | |
| values: | | | | |
| ISUP Parameter | REL: Cause #29 | | | |
| values: | | | | |
| Comments: | ISUP/BICC | | SUT | SIP |
| | IAM | → | | |
| | REL | ← | | |
| | RLC | → | | |

| TP608003 | SIP reference: RFC 3261 [4 |] | ISUP reference: 7.4.1.2 | |
|----------------|---|---|-----------------------------------|--|
| TSS reference: | ISUP-SIP/SS/CUG/ | | 7.7.1.2 | |
| SIP selection | PICS 5/7 | | | |
| criteria: | 1 100 0/7 | | | |
| ISUP selection | | | | |
| criteria: | | | | |
| Test purpose: | SIP network supports CUG. CUG ca | II indicator value "10 |)" received. | |
| | Ensure that Optional Forward Call In | | | |
| | <cug> < cugCommunicationIndicator</cug> | | | |
| | Network identity is mapped into <cu< th=""><th></th><th>or> and the Binary code is</th></cu<> | | or> and the Binary code is | |
| | mapped into the <cug> <cuginterloc< th=""><th>kBinaryCode>.</th><th></th></cuginterloc<></cug> | kBinaryCode>. | | |
| SIP Parameter | INVITE: | | | |
| values: | <pre><cug> <networkindicator>[derived from IAM Network identity]</networkindicator></cug></pre> | | | |
| | | | | |
| | | <pre><cuginterlockbinarycode>[derived from IAM Binary code]</cuginterlockbinarycode></pre> /cugInterlockBinaryCode> | | |
| | <pre><cugcommunicationindicator>10</cugcommunicationindicator> </pre> | | | |
| ISUP Parameter | IAM: | | | |
| values: | Optional Forward Call Indicator CUG call indicator = "10" | | | |
| | Closed User Group interlock code | | | |
| | Binary code derived from INVITE XML body <cuginterlockbinarycode></cuginterlockbinarycode> | | | |
| | Network identity derived from INVITE XML body <networkindicator></networkindicator> | | | |
| Comments: | ISUP/BICC | SUT | SIP | |
| | IAM → | → | INVITE | |
| | ACM ← | + | 180 Ringing | |
| | Ringing tone | | | |
| | ANM ← | (| 200 OK INVITE | |
| | | → | ACK | |
| | Conversation | | | |
| | REL → | → | BYE | |
| | RLC ← | | 200 OK BYE | |

| TP608004 | SIP reference: RFC 3261 [4] | | ISUP reference: | |
|-------------------------|--|---------------------|----------------------------------|--|
| TSS reference: | | | 7.4.1.2 | |
| | ISUP-SIP/SS/CUG/ | | | |
| SIP selection criteria: | PICS 5/7 | | | |
| ISUP selection | | | | |
| criteria: | | | | |
| Test purpose: | SIP network supports CUG. CUG call indica | tor value "11" | received. | |
| | Ensure that Optional Forward Call Indicator | Parameter CL | IG call indicator is mapped into | |
| | <pre><cug> < cugCommunicationIndicator>, the 0</cug></pre> | | | |
| | Network identity is mapped into <cug> <ne< th=""><th></th><th>r> and the Binary code is</th></ne<></cug> | | r> and the Binary code is | |
| | mapped into the <cug> <cuginterlockbinary< th=""><th>Code>.</th><th></th></cuginterlockbinary<></cug> | Code>. | | |
| SIP Parameter | INVITE: | | | |
| values: | <cug></cug> | | | |
| | <networkindicator>[derived from IAM Network identity]</networkindicator> | | | |
| | <pre><cuginterlockbinarycode>[derived from IAM Binary code]</cuginterlockbinarycode></pre> /cugInterlockBinaryCode> | | | |
| | <pre><cugcommunicationindicator>11</cugcommunicationindicator></pre> | | | |
| IOUD Developed | | | | |
| ISUP Parameter values: | IAM: | | | |
| values: | Optional Forward Call Indicator CUG call indicator = "11" | | | |
| | Closed User Group interlock code Binary code derived from INVITE XML body <cuginterlockbinarycode></cuginterlockbinarycode> | | | |
| | Network identity derived from INVITE XML body Network identity derived from INVITE XML body networkIndicator | | | |
| Comments: | ISUP/BICC SUT | • | SIP | |
| | IAM → | → | INVITE | |
| | ACM ← | ← | 180 Ringing | |
| | Ringing tone | | | |
| | ANM ← | ← | 200 OK INVITE | |
| | | → | ACK | |
| | Conv | ersation | | |
| | REL → | → | BYE | |
| | RLC ← | + | 200 OK BYE | |

History

| Document history | | | |
|------------------|---------------|-------------|--|
| V2.1.1 | February 2009 | Publication | |
| | | | |
| | | | |
| | | | |
| | | | |