**3GPP TSG- Meeting #**

**, , -**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** | **2** | **Current version:** |  |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | The current document describes the reporting of IRI for SIP sessions, but it does not make clear that when party address translation is handled by the network, these translations should be reported in a way that makes it possible for the LEA to correlate the pre-translation party address with the post translation party address as well as the associated call/session. |
|  |  |
| ***Summary of change:*** | Adds a clause clarifying the requirement and adds a new parameter to IMS messages allowing the reporting of any number translations. |
|  |  |
| ***Consequences if not approved:*** | Requirements for reporting number translations will remain unclear. |
|  |  |
| ***Clauses affected:*** | New 7.12.2.4.X, 7.12.2.9, 7.12.4.2.1, New 7.12.4.3.8, New 7.12.4.3.9, New 7.12.4.3.10, Attachments TS33128Payloads.asn |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |

|  |
| --- |
| This CR is associated with the following changes in the Forge:Merge request: [!267](https://forge.3gpp.org/rep/sa3/li/-/merge_requests/267) Commit hash: [1494fea2f1f6780ee530febd58e49df4307d77a2](https://forge.3gpp.org/rep/sa3/li/-/merge_requests/267/diffs?commit_id=1494fea2f1f6780ee530febd58e49df4307d77a2) |

 |
|  |  |
| ***This CR's revision history:*** | s3i240433, s3i240473 |

## \*\*\*\* START OF FIRST CHANGE (MAIN DOCUMENT) \*\*\*\*

##### 7.12.2.4.X Called party address translation

In networks which use IMS, called party address translation may occur where, for example, a telephony application server translates a called party address to another address for routing purposes (e.g., toll free number translation).

In this case, the IRI reported shall include information regarding the translated called party address, i.e. the pre-translation called party address as well as the post translation called party address along with information for correlation to the associated call/session, where such called party address translation information is available to the CSP.

For example when reporting SIP signalling, this can be accomplished by reporting both the SIP message sent to the server performing called party address translation (containing the pre-translation called party address) and the resultant SIP message containing the post translation called party address using the same correlation information for the call/session with which the translation applies.

## \*\*\*\* START OF NEXT CHANGE (MAIN DOCUMENT) \*\*\*\*

#### 7.12.2.9 Handling of correlation information

##### 7.12.2.9.1 Correlation of IRI and CC

The IRI records delivered to the LEMF over the LI\_HI2 and the CC delivered to the LEMF over LI\_HI3 shall be correlated.

According to the protocol defined in ETSI TS 103 221-1 [7] and ETSI TS 103 221-2 [8], the xIRI messages and the xCC carry the CorrelationID which enables the MDF2 and MDF3 to provide the needed correlation between the IRI and CC.

When the CC-POI is triggered by a CC-TF, the CC-TF sends the CorrelationID to the CC-POI over the LI\_T3 interface in the ActivateTask message. The CC-POI uses that CorrelationID in the xCC sent to the MDF3.

NOTE: The IRI-POI and CC-POI may be provided within the same NF (e.g. PTC Server, RCS Server). When the CC-POI is triggered from a CC-TF, the IRI-POI and CC-TF may be provided within the same NF (e.g. P-CSCF, AS/MRFC) or in different NFs (e.g. IRI-POI in S-CSCF and CC-TF in P-CSCF).

When the IRI-POI and CC-POI (or CC-TF in a triggered CC-POI case) are in the same NF, the procedures can be similar to the way the correlation of xIRI and xCC are done in the packet core system (e.g. IRI-POI and CC-TF in the SMF). The details of any needed interactions between those LI functions are not defined in the present document.

When the IRI-POI and CC-TF are in separate NFs, any additional procedures that may be needed are also implementation specific and the details of the same are not described in the present document.

##### 7.12.2.9.2 Correlation for sessions with called party address translation

When an interception is triggered for a session where called party address translation occurs, the IRI-POI and CC-POI shall assign the same CorrelationID to the LI product for that session both before and after the address translation occurs. Similarly, the MDF2/MDF3 shall assign the same CIN to LI product for the session both before and after the address translation occurs.

## \*\*\*\* START OF NEXT CHANGE (MAIN DOCUMENT) \*\*\*\*

##### 7.12.4.2.1 IMS Message

For an intercepted IMS based communication (see clause 7.12.2.8), the IRI-POI present in the IMS Signalling Function shall generate the xIRI IMSMessage from the SIP message used to handle that IMS based communication. All SIP messages use the same xIRI record as shown in table 7.12.4.2-1.

Table 7.12.4.2-1: Payload for IMSMessage record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| payload | IMSPayload | 1 | Contains the payload of the SIP Message. See clause 7.12.4.3.1. | M |
| sessionDirection | SessionDirection | 1 | Indicates the direction of the SIP session. See clause 7.12.4.3.2.(see NOTE). | M |
| voIPRoamingIndication | VoIPRoamingIndication | 0..1 | Indicates the roaming mode in use by the target for the reported message. Shall be present if the target is in a roaming state. See clause 7.12.4.3.3. | C |
| location | Location | 0..1 | Location with timestamp, if available.Shall include all location information for the target UE available at the NF where the POI is located encoded as a *Location*.*iMSLocation* parameter. | C |
| accessNetworkInformation | SEQUENCE OF SIPAccessNetworkInformation | 0..MAX | Provides non-location related access network information. Shall be present if available at the NF where the POI is located. One instance of *SIPAccessNetworkInformation* shall be used for each P-Access-Network-Information header. | C |
| cellularNetworkInformation | SEQUENCE OF SIPCellularNetworkInformation | 0..MAX | Provides non-location related cellular network information. Shall be present if available at the NF where the POI is located. One instance of *SIPCellularNetworkInformation* shall be used for each Cellular-Network-Info header. | C |
| numberTranslationInformation | SEQUENCE OF NumberTranslation | 0..MAX | Provides information on any number translations handled by the network. Shall be present if available at the NF where the POI is located. One instance of *NumberTranslation* shall be used for each number translation available at the NF. | C |
| NOTE: When an incoming call to a target is redirected to another user, the *sessionDirection* field shall be set to *toTarget*. When an incoming call from a target non-local ID to an IMS user is redirected to, the *sessionDirection* field shall be set to *fromTarget*. |

Table 7.12.4.2-2: Void

The IRI-POI present in the IMS Signalling Function generating an xIRI containing an IMSMessage record shall set:

- The Payload Direction field in the PDU header to the direction of the signalling message carried in the IRI payload (see ETSI TS 103 221-2 [8] clause 5.2.6). If the signalling message was sent from the target, the Direction Value "3" (sent from the target) shall be used, if the signalling message was sent to the target, the Direction Value "2" (sent to the target) shall be used; if the direction could not be determined reliably, the Direction Value "1" (not known to the POI) shall be used. If the SIP message is sent from and to the target, the Direction Value "4" (more than one direction) shall be used. For the SIP messages generated by the network, the Direction Value "5" (not applicable) shall be used.

- The conditional source IPv4 address or source IPv6 address field in the PDU header to the source IP address of the intercepted SIP message (see ETSI TS 103 221-2 [8] clause 5.3). It shall contain the source address of the packet from the 32-bit "Source Address" field in IPv4, as defined in IETF RFC 791 [34], or from the 128-bit "Source Address" field in IPv6, as defined in IETF RFC 2460 [27].

- The conditional destination IPv4 address or destination IPv6 address field in the PDU header to the destination IP address of the intercepted SIP message (see ETSI TS 103 221-2 [8] clause 5.3). It shall contain the destination address of the packet from the 32-bit "Source Address" field in IPv4, as defined in IETF RFC 791 [34], or from the 128-bit "Source Address" field in IPv6, as defined in IETF RFC 2460 [27].

## \*\*\*\* START OF NEXT CHANGE (MAIN DOCUMENT) \*\*\*\*

##### 7.12.4.3.8 Type: NumberTranslation

Table 7.12.4.3.8-1 contains the details for the NumberTranslation type.

Table 7.12.4.3.8-1: Structure of the NumberTranslation type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| partyIndication | PartyIndication | 1 | Indicates whether the number translation being reported is the calling party's number of the called party's number. | M |
| translationInput | TranslationInput | 1 | Shall be populated with the address being translated from. | M |

##### 7.12.4.3.9 Enumeration: PartyIndication

The PartyIndication indicates the session party to whose information the parent structure applies.

Table 7.12.4.3.9-1 contains the details for the PartyIndication type.

Table 7.12.4.3.9-1: Enumeration PartyIndication

|  |  |
| --- | --- |
| Enumeration value | Description |
| callingParty(1) | The parent structure applies to information for the calling party. |
| calledParty(2) | The parent structure applies to information for the called party. |

##### 7.12.4.3.10 Type: TranslationInput

Table 7.12.4.3.10-1 contains the details for the TranslationInput type.

Table 7.12.4.3.10-1: Definition of Choices for TranslationInput

|  |  |  |
| --- | --- | --- |
| CHOICE | Type | Description |
| iMSIdentities | IMSSubscriberIDs | Shall be chosen if the identities being reported are IMS Identities. |

## \*\*\*\* END OF MAIN DOCUMENT CHANGES \*\*\*\*

## \*\*\*\* START OF FIRST CHANGE (ATTACHMENTS) \*\*\*\*

---a/33128/r18/TS33128Payloads.asn
+++b/33128/r18/TS33128Payloads.asn

@@ -4215,14 +4215,15 @@ PTCAccessPolicyFailure ::= ENUMERATED

4215 4215 -- See clause 7.12.4.2.1 for details of this structure

4216 4216 IMSMessage ::= SEQUENCE

4217 4217 {

4218 - payload [1] IMSPayload,

4219 - sessionDirection [2] SessionDirection,

4220 - voIPRoamingIndication [3] VoIPRoamingIndication OPTIONAL,

 4218 + payload [1] IMSPayload,

 4219 + sessionDirection [2] SessionDirection,

 4220 + voIPRoamingIndication [3] VoIPRoamingIndication OPTIONAL,

4221 4221 -- Tag [4] is not used.

4222 4222 -- Tag [5] is not used.

4223 - location [6] Location OPTIONAL,

4224 - accessNetworkInformation [7] SEQUENCE OF SIPAccessNetworkInformation OPTIONAL,

4225 - cellularNetworkInformation [8] SEQUENCE OF SIPCellularNetworkInformation OPTIONAL

 4223 + location [6] Location OPTIONAL,

 4224 + accessNetworkInformation [7] SEQUENCE OF SIPAccessNetworkInformation OPTIONAL,

 4225 + cellularNetworkInformation [8] SEQUENCE OF SIPCellularNetworkInformation OPTIONAL,

 4226 + numberTranslationInformation [9] SEQUENCE OF NumberTranslation OPTIONAL

4226 4227 }

4227 4228

4228 4229 -- See clause 7.12.4.2.2 for details of this structure

@@ -4274,6 +4275,18 @@ ModifiedSIPMessage ::= SEQUENCE

4274 4275 modifications [2] PayloadModifications

4275 4276 }

4276 4277

 4278 + NumberTranslation ::= SEQUENCE

 4279 + {

 4280 + partyIndication [1] PartyIndication,

 4281 + translationInput [2] TranslationInput

 4282 + }

 4283 +

 4284 + PartyIndication ::= ENUMERATED

 4285 + {

 4286 + callingParty(1),

 4287 + calledParty(2)

 4288 + }

 4289 +

4277 4290 SIPMessage ::= SEQUENCE

4278 4291 {

4279 4292 iPSourceAddress [1] IPAddress,

@@ -4281,6 +4294,11 @@ SIPMessage ::= SEQUENCE

4281 4294 sIPContent [3] OCTET STRING

4282 4295 }

4283 4296

 4297 + TranslationInput ::= CHOICE

 4298 + {

 4299 + iMSIdentities [1] IMSSubscriberIDs

 4300 + }

 4301 +

4284 4302 VoIPRoamingIndication ::= ENUMERATED

4285 4303 {

4286 4304 roamingLBO(1),

## \*\*\*\* END OF ALL CHANGES \*\*\*\*