**3GPP TSG- Meeting #**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** | **22** | **rev** | **1** | **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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** | SA3-LI () | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | | 29 |
|  |  | | | |  | |  | | |  |
| ***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 can be 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:*** | | Many AMF records errantly do not currently support the ability to send more than one identifier, e.g. GPSI. This CR adds such a capability. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add new additonalUserIdentifiers parameter using exiting UserIdentifiers definition to allow for signalling of more than one of any given type of identifier. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Specification will remain incomplete and CSPs may not be able to fully meet LI obligations. Lack of complete reporting will not be addressed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.2.2.2.2, 6.2.2.2.3, 6.2.2.2.4, 6.2.2.2.5, 6.2.2.2.6, 6.2.2.2.7, 6.2.2.2.8, attachments ASN.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Schema changes for this CR can be found on the Forge:  Merge Request 310: <https://forge.3gpp.org/rep/sa3/li/-/merge_requests/310/diffs?commit_id=2f5c5583ff0997d18a6ffc8731a2e70f3e44e179>  Commit Hash: 2f5c5583ff0997d18a6ffc8731a2e70f3e44e179 | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**\*\* START OF CHANGES \*\***

**\*\* START OF FIRST CHANGE \*\***

##### 6.2.2.2.2 Registration

The IRI-POI in the AMF shall generate an xIRI containing an AMFRegistration record when the IRI-POI present in the AMF detects that a UE matching one of the target identifiers provided via LI\_X1 has successfully registered to the 5GS via 3GPP NG-RAN or non-3GPP access. Accordingly, the IRI-POI in the AMF generates the xIRI when the following event is detected:

- AMF sends a N1: REGISTRATION ACCEPT message to the target UE and the UE 5G Mobility Management (5GMM) state for the access type (3GPP NG-RAN or non-3GPP access) within the AMF is changed to 5GMM-REGISTERED.

Table 6.2.2-1: Payload for AMFRegistration record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| registrationType | Specifies the type of registration, see TS 24.501 [13] clause 9.11.3.7. This is derived from the information received from the UE in the REGISTRATION REQUEST message. | M |
| registrationResult | Specifies the result of registration, see TS 24.501 [13] clause 9.11.3.6. | M |
| slice | Provide, if available, one or more of the following:  - allowed NSSAI (see TS 24.501 [13] clause 9.11.3.37).  - configured NSSAI (see TS 24.501 [13] clause 9.11.3.37).  - rejected NSSAI (see TS 24.501 [13] clause 9.11.3.46).  This is derived from the information sent to the UE in the REGISTRATION ACCEPT message. | C |
| sUPI | SUPI associated with the registration (see clause 6.2.2.4). | M |
| sUCI | SUCI used in the registration, if available. | C |
| pEI | PEI provided by the UE during the registration, if available. | C |
| gPSI | GPSI obtained in the registration, if available as part of the subscription profile. | C |
| gUTI | 5G-GUTI provided as outcome of initial registration or used in other cases, see TS 24.501 [13] clause 5.5.1.2.2. | M |
| location | Location information determined by the network during the registration, if available.  Encoded as a *userLocation* parameter (*location>locationInfo>userLocation*) and, when Dual Connectivity is activated, as an *additionalCellIDs* parameter (*location>locationInfo>additionalCellIDs*), see Annex A. | C |
| non3GPPAccessEndpoint | UE's local IP address used to reach the N3IWF, TNGF or TWIF, if available. IP addresses are given as 4 octets (for IPv4) or 16 octets (for IPv6) with the most significant octet first (network byte order). | C |
| fiveGSTAIList | List of tracking areas associated with the registration area within which the UE is current registered, see TS 24.501 [13] clause 9.11.3.9 (see NOTE) | C |
| sMSoverNASIndicator | Indicates whether SMS over NAS is supported. Provide, if included in registrationResult, see TS 24.501 [13] clause 9.11.3.6. | C |
| oldGUTI | GUTI or 5G-GUTI, if provided in the REGISTRATION REQUEST message, see TS 24.501 [13] clause 5.5.1.2.2. | C |
| eMM5GRegStatus | UE Status, if provided in the REGISTRATION REQUEST message, see TS 24.501 [13] clause 9.11.3.56. | C |
| nonIMEISVPEI | MACAddress or EUI-64 used as UE equipment identity if IMEI or IMEISV based PEI is not available. Provide if known, see TS 24.501 [13] clause 8.2.26.4. | C |
| mACRestIndicator | Indicates whether the non-IMEISV PEI MACAddress can be used as an equipment identifier. Required if non-IMEISVPEI is used, see TS 24.501 [13] clause 9.11.3.4. | C |
| pagingRestrictionIndicator | Indicates if paging is restricted or the type of paging allowed, Include if sent in the REGISTRATION REQUEST message. Encoded per TS 24.501 [13] clause 9.11.3.77.2, omitting the first two octets. | C |
| rATType | RAT Type shall be present if known by the AMF. RAT Type is determined by the AMF during registration. See TS 23.501 [2] clause 5.3.2.3 | C |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |
| NOTE: List shall be included each time there is a change to the registration area. | | |

##### 6.2.2.2.3 Deregistration

The IRI-POI in the AMF shall generate an xIRI containing an AMFDeregistration record when the IRI-POI present in the AMF detects that a UE matching one of the target identifiers provided via LI\_X1 has deregistered from the 5GS over at least one access type. Accordingly, the IRI-POI in AMF generates the xIRI when any of the following events is detected:

- For network initiated de-registration, when the AMF receives the N1: DEREGISTRATION ACCEPT message from the target UE or when implicit deregistration timer expires; and in both cases the UE 5GMN state for the access type (3GPP NG-RAN or non-3GPP access) within the AMF is changed to 5GMM-DEREGISTERED.

- For UE initiated de-registration, when the AMF sends the N1: DEREGISTRATION ACCEPT message to the target UE or when the AMF receives the N1: DEREGISTRATION REQUEST message from the target UE with deregistration type value of “switch off”; and in both cases the UE 5GMN state for the access type (3GPP NG-RAN or non-3GPP access) within the AMF is changed to 5GMM-DEREGISTERED.

- For network initiated AMF UE relocation, the AMFDeregistration xIRI shall not be sent unless the 5GMM COMMON PROCEDURE INITIATED (see TS 24.501 [13] clause 5.1.3.2.3.3) results in deregistration.

Table 6.2.2-2: Payload for AMFDeregistration record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| deregistrationDirection | Indicates whether the deregistration was initiated by the network or by the UE. | M |
| accessType | Indicates the access for which the deregistration is handled, see TS 24.501 [13] clause 9.11.3.20. | M |
| sUPI | SUPI associated with the deregistration (see clause 6.2.2.4), if available. | C |
| sUCI | SUCI used in the deregistration, if available (see NOTE). | C |
| pEI | PEI used in the deregistration, if available (see NOTE). | C |
| gPSI | GPSI associated to the deregistration, if available as part of the subscription profile. | C |
| gUTI | 5G-GUTI used in the deregistration, if available, see TS 24.501 [13] clause 5.5.2.2.1 (see NOTE). | C |
| cause | Indicates the 5GMM cause value for network-initiated deregistration, see TS 24.501 [13] clause 9.11.3.2. | C |
| location | Location information determined by the network during the deregistration, if available.  Encoded as a *userLocation* parameter (*location>locationInfo>userLocation*), see Annex A. | C |
| switchOffIndicator | Indicates whether the deregistration type is normal or switch off, if available, see TS 24.501 [13] clause 9.1.3.20.1. | C |
| reRegRequiredIndicator | Indicates whether UE re-registration is required in the DEREGISTRATION REQUEST message, if available, see TS 24.501 [13] clause 9.1.3.20.1. | C |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |
| NOTE: At least one among SUCI, PEI and GUTI shall be provided. | | |

##### 6.2.2.2.4 Location update

The IRI-POI in the AMF shall generate an xIRI containing an AMFLocationUpdate record each time the IRI-POI present in an AMF detects that the target’s UE location is updated due to target UE mobility or as a part of an AMF service procedure and the reporting of location information is not restricted by service scoping. The generation of such separate xIRI is not required if the updated UE location information is obtained as a part of a procedure producing some other xIRIs (e.g. mobility registration). In that case the location information is included into the respective xIRI.

The UE mobility events resulting in generation of an AMFLocationUpdate xIRI include the *N2 Path Switch Request* (*Xn based inter NG-RAN handover* procedure described in TS 23.502 [4] clause 4.9.1.2) and the *N2 Handover Notify* (*Inter NG-RAN node N2 based handover* procedure described in TS 23.502 [4] clause 4.9.1.3).

The AMFLocationUpdate xIRI is also generated when the AMF receives an NG-RAN NGAP *PDU Session Resource Modify Indication* message as a result of Dual Connectivity activation/release for the target UE, as described in TS 37.340 [37] clause 10.

Optionally, based on operator policy, other NG-RAN NGAP messages that do not generate separate xIRI but carry location information (e.g. RRC INACTIVE TRANSITION REPORT) may trigger the generation of an xIRI AMFLocationUpdate record.

Additionally, based on regulatory requirements and operator policy, the location information obtained by AMF from NG-RAN or LMF in the course of some service operation (e.g. emergency services, LCS) may generate xIRI AMFLocationUpdate record. The AMF services providing the location information in these cases include the AMF Location Service (ProvideLocInfo, ProvidePosInfo, NotifiedPosInfo and EventNotify service operations) and the AMF Exposure Service (AmfEventReport with LOCATION\_REPORT) (see TS 29.518 [22]). Additionally, the AMF Communication Service (Namf\_Communication\_N1MessageNotify service operation) may be monitored to capture the location information in the scenarios described in TS 23.273 [42] clause 6.3.1. Also, in the case of Mobile Originated LCS service invoked by the target, the location information may be derived from a Nlmf\_Location\_DetermineLocation Response to AMF (see TS 23.273 [42] clause 6.2).

Table 6.2.2-3: Payload for AMFLocationUpdate record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| sUPI | SUPI associated with the location update (see clause 6.2.2.4). | M |
| sUCI | SUCI associated with the location update, if available, see TS 24.501 [13]. | C |
| pEI | PEI associated with the location update, if available. | C |
| gPSI | GPSI associated with the location update, if available as part of the subscription profile. | C |
| gUTI | 5G-GUTI associated with the location update, if available, see TS 24.501 [13]. | C |
| location | Updated location information determined by the network.  Depending on the service or message type from which the location information is extracted, it may be encoded in several forms (Annex A):  1) as a *userLocation* parameter (*location>locationInfo>userLocation*) in the case the information is obtained from an NGAP message, except the LOCATION REPORT message (see TS 38.413 [23]);  2) as a *locationInfo* parameter (*location>locationInfo*) in the case the information is obtained from a **ProvideLocInfo** (TS 29.518 [22] clause 6.4.6.2.6);  3) as a *locationPresenceReport* parameter (*location>locationPresenceReport*) in the case the information is obtained from an **AmfEventReport** (TS 29.518 [22] clause 6.2.6.2.5) with event type **Location-Report** or **Presence-In-AOI-Report;**  4) as a *positionInfo* parameter (*location>positioningInfo>positionInfo*) in the case the information is obtained from a **ProvidePosInfo** (TS 29.518 [22] clause 6.4.6.2.3) or a **NotifiedPosInfo** (TS 29.518 [22] clause 6.4.6.2.4). | M |
| sMSoverNASIndicator | No longer used in present version of this specification. | C |
| oldGUTI | No longer used in the present version of the specification. | C |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |

##### 6.2.2.2.5 Start of interception with registered UE

The IRI-POI in the AMF shall generate an xIRI containing an AMFStartOfInterceptionWithRegisteredUE record when the IRI-POI present in the AMF detects that interception is activated on a UE that has already been registered in the 5GS (see clause 6.2.2.4 on identity privacy). A UE is considered already registered to the 5GS when the 5GMM state for the access type (3GPP NG-RAN or non-3GPP access) for that UE is 5GMM-REGISTERED. Therefore, the IRI-POI present in the AMF shall generate the xIRI AMFStartOfInterceptionWithRegisteredUE record when it detects that a new interception for a UE is activated (i.e. provisioned by the LIPF) and the 5G mobility management state for the access type (3GPP NG-RAN or non-3GPP access) within the AMF for that UE is 5GMM-REGISTERED. If the UE is registered over both 3GPP NG-RAN and non-3GPP access, the IRI-POI present in the AMF shall generate an xIRI containing an AMFStartOfInterceptionWithRegisteredUE record for each access type.

Table 6.2.2-4: Payload for AMFStartOfInterceptionWithRegisteredUE record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| registrationResult | Specifies the result of registration, see TS 24.501 [13] clause 9.11.3.6. | M |
| registrationType | Specifies the type of registration, see TS 24.501 [13] clause 9.11.3.7, if available. | C |
| slice | Provide, if available, one or more of the following:  - allowed NSSAI (see TS 24.501 [13] clause 9.11.3.37).  - configured NSSAI (see TS 24.501 [13] clause 9.11.3.37). | C |
| sUPI | SUPI associated with the target UE. | M |
| sUCI | SUCI used in the registration, if available. | C |
| pEI | PEI associated with the target UE, if available. | C |
| gPSI | GPSI associated with the target UE, if available. | C |
| gUTI | Latest 5G-GUTI assigned to the target UE by the AMF. | M |
| location | Location information associated with the access type for the target UE, if available.  Encoded as a *userLocation* parameter (*location>locationInfo>userLocation*) and, when Dual Connectivity is activated, as an *additionalCellIDs* parameter (*location>locationInfo>additionalCellIDs*), see Annex A. | C |
| non3GPPAccessEndpoint | UE's local IP address used to reach the N3IWF, TNGF or TWIF, if available. IP addresses are given as 4 octets (for IPv4) or 16 octets (for IPv6) with the most significant octet first (network byte order). | C |
| timeOfRegistration | Time at which the last registration occurred, if available. This is the time stamp when the REGISTRATION ACCEPT message was sent to the UE or (when applicable) when the REGISTRATION COMPLETE was received from the UE.  Shall be given qualified with time zone information (i.e. as UTC or offset from UTC, not as local time). | C |
| fiveGSTAIList | List of tracking areas associated with the target UE for the access type. | C |
| sMSoverNASIndicator | Indicates whether SMS over NAS is supported. Provide, if included in the UE Context. | C |
| oldGUTI | Latest GUTI or 5G-GUTI received from the target UE if different than the latest GUTI assigned by the AMF and the target UE has not acknowledged the latest GUTI assignment. | C |
| eMM5GRegStatus | UE Status, if this parameter can be derived from information available in the UE Context at the AMF. | C |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |
| NOTE: The values of the parameters in the table above are derived from the UE Context at the AMF, see TS 23.502 clause 5.2.2.2.2. | | |

The IRI-POI present in the AMF generating an xIRI containing an AMFStartOfInterceptionWithRegisteredUE record shall set the Payload Direction field in the PDU header to *not applicable* (Direction Value 5, see ETSI TS 103 221-2 [8] clause 5.2.6).

##### 6.2.2.2.6 AMF unsuccessful procedure

The IRI-POI in the AMF shall generate an xIRI containing an AMFUnsuccessfulProcedure record when the IRI-POI present in the AMF detects an unsuccessful procedure for a UE matching one of the target identifiers provided via LI\_X1.

Accordingly, the IRI-POI in the AMF generates the xIRI when any of the following events is detected:

- AMF sends a N1: REGISTRATION REJECT message to the target UE and the UE 5G Mobility Management (5GMM) state for the access type (3GPP NG-RAN or non-3GPP access) within the AMF is changed to 5GMM-DEREGISTERED.

- AMF aborts a registration procedure before the UE 5G Mobility Management (5GMM) state for the access type (3GPP NG-RAN or non-3GPP access) within the AMF is changed to 5GMM-REGISTERED.

- AMF sends a SERVICE REJECT message to the target UE including a PDU session establishment reject message type.

- AMF aborts a UE-initiated NAS transport procedure with payload container type IE set to "SMS".

Unsuccessful registration shall be reported only if the target UE has been successfully authenticated.

Table 6.2.2-5: Payload for AMFUnsuccessfulProcedure record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| failedprocedureType | Specifies the procedure which failed at the AMF. | M |
| failureCause | Provides the value of the 5GSM or 5GMM cause, see TS 24.501 [13] clauses 9.11.3.2 and 9.11.4.2. | M |
| requestedSlice | Slice requested for the procedure, if available, given as a NSSAI (a list of S-NSSAI values as described in TS 24.501 [13] clause 9.11.3.37). | C |
| sUPI | SUPI associated with the procedure, if available (see NOTE). | C |
| sUCI | SUCI used in the procedure, if applicable and if available (see NOTE). | C |
| pEI | PEI used in the procedure, if available (see NOTE). | C |
| gPSI | GPSI used in the procedure, if available (see NOTE). | C |
| gUTI | 5G-GUTI used in the procedure, if available, see TS 24.501 [13] clause 9.11.3.4 (see NOTE). | C |
| location | Location information determined during the procedure, if available.  Encoded as a *userLocation* parameter (*location>locationInfo>userLocation*), see Annex A. | C |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |
| NOTE: At least one identity shall be provided, the others shall be provided if available. | | |

##### 6.2.2.2.7 AMF identifier association

The IRI-POI present in the AMF shall generate an xIRI containing an AMFIdentifierAssociation record when the IRI-POI present in the AMF detects a new identifier association for a UE matching one of the target identifiers provided via LI\_X1. Generation of this record is subject to this record type being enabled for a specific target (see clause 6.2.2.2.1).

Table 6.2.2-6: Payload for AMFIdentifierAssociation record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| sUPI | SUPI associated with the procedure (see NOTE 1). | M |
| sUCI | SUCI used in the procedure, if applicable and if available. | C |
| pEI | PEI used in the procedure, if available (see NOTE 1). | C |
| gPSI | GPSI used in the procedure, if available (see NOTE 1). | C |
| gUTI | 5G-GUTI used in the procedure, see TS 24.501 [13] clause 9.11.3.4. | M |
| location | Location information available when identifier association occurs.  Encoded as a *userLocation* parameter (*location>locationInfo>userLocation*) and, when Dual Connectivity is activated, as an *additionalCellIDs* parameter (*location>locationInfo>additionalCellIDs*), see Annex A. | M |
| fiveGSTAIList | List of tracking areas associated with the registration area within which the UE is current registered, see TS 24.501 [13], clause 9.11.3.9. (see NOTE 2) | C |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |
| NOTE 1: SUPI shall always be provided, in addition to the warrant target identifier if different to SUPI. Other identifiers shall be provided if available.  NOTE 2: List shall be included each time there is a change to the registration area. | | |

The IRI-POI present in the AMF generating an xIRI containing an AMFIdentifierAssociation record shall set the Payload Direction field in the PDU header to *not applicable* (Direction Value 5, see ETSI TS 103 221-2 [8] clause 5.2.6).

##### 6.2.2.2.8 Positioning info transfer

The IRI-POI present in the AMF shall generate an xIRI containing an AMFPositioningInfoTransfer when the IRI-POI present in the AMF detects one of the following events :

- an NRPPa (see TS 38.455 [86]) message related to a target UE has been exchanged between the LMF and NG-RAN via the AMF.

- a LPP (see TS 37.355 [85]) message related to a target UE has been exchanged between the LMF and the target UE via the AMF.

Accordingly, the IRI-POI in AMF generates the xIRI when any of the following events is detected:

- AMF receives an Namf\_Communication\_N1N2MessageTransfer (see TS 29.518 [22]) from LMF to request the transfer of a NRPPa request to the serving NG-RAN node for a target UE as part of a UE associated NRPPa positioning activity. The NRPPa request may be E-CID MEASUREMENT INITIATION REQUEST or OTDOA INFORMATION REQUEST.

- AMF sends a Namf\_Communication\_N2InfoNotify [22] to the LMF to forward the NRPPa response or report received from the NG-RAN for a target UE. The NRPPa response or report may be E-CID MEASUREMENT INITIATION RESPONSE, E-CID MEASUREMENT REPORT or OTDOA INFORMATION RESPONSE.

- AMF receives an Namf\_Communication\_N1N2MessageTransfer ([22]) from LMF to request the transfer of a LPP message to a target UE as part of a LPP positioning activity.

- AMF sends an Namf\_Communication\_N1MessageNotify ([22]) to LMF to forward a LPP message received from the target UE.

Table 6.2.2-6A: Payload for AMFPositioningInfoTransfer record

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| sUPI | SUPI associated with the procedure (see NOTE 1 in table 6.2.2-6). | M |
| sUCI | SUCI used in the procedure, if applicable and if available. | C |
| pEI | PEI used in the procedure, if available (see NOTE 1 in table 6.2.2-6). | C |
| gPSI | GPSI used in the procedure, if available (see NOTE 1 in table 6.2.2-6). | C |
| gUTI | 5G-GUTI used in the procedure, see TS 24.501 [13] clause 9.11.3.4. | C |
| nRPPaMessage | Any UE associated NRPPa message exchanged between the LMF and NG-RAN via AMF. | C |
| lPPMessage | Any LPP message exchanged between the LMF and the target UE via AMF. | C |
| lcsCorrelationId | LCS correlation ID (see TS 29.572 [24] clause 6.1.6.3.2) related to a location session, found in the Namf\_CommunicationN1N2MessageTransfer and corresponding Namf\_Communication\_N2InfoNotify or Namf\_CommunicationN1MessageNotify. All the AMFPositioningInfoTransfer records related to the same location session have the same lcsCorrelationId. | M |
| additionalUserIdentifiers | Provides additional user identifiers known at the AMF or stored in AMF context, e.g. additional GPSI. | C |

**\*\*\*END OF FIRST CHANGE\*\*\***

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

**\*\*START OF ATTACHMENT CHANGES\*\***

START OF CHANGE 1

---a/33128/r17/TS33128Payloads.asn  
+++b/33128/r17/TS33128Payloads.asn

@@ -1187,7 +1187,8 @@ AMFRegistration ::= SEQUENCE

1187 1187 nonIMEISVPEI [15] NonIMEISVPEI OPTIONAL,

1188 1188 mACRestIndicator [16] MACRestrictionIndicator OPTIONAL,

1189 1189 pagingRestrictionIndicator [17] PagingRestrictionIndicator OPTIONAL,

1190 - rATType [18] RATType OPTIONAL

1190 + rATType [18] RATType OPTIONAL,

1191 + additionalUserIdentifiers [19] UserIdentifiers OPTIONAL

1191 1192 }

1192 1193

1193 1194 -- See clause 6.2.2.2.3 for details of this structure

@@ -1203,7 +1204,8 @@ AMFDeregistration ::= SEQUENCE

1203 1204 cause [8] FiveGMMCause OPTIONAL,

1204 1205 location [9] Location OPTIONAL,

1205 1206 switchOffIndicator [10] SwitchOffIndicator OPTIONAL,

1206 - reRegRequiredIndicator [11] ReRegRequiredIndicator OPTIONAL

1207 + reRegRequiredIndicator [11] ReRegRequiredIndicator OPTIONAL,

1208 + additionalUserIdentifiers [12] UserIdentifiers OPTIONAL

1207 1209 }

1208 1210

1209 1211 -- See clause 6.2.2.2.4 for details of this structure

@@ -1216,7 +1218,8 @@ AMFLocationUpdate ::= SEQUENCE

1216 1218 gUTI [5] FiveGGUTI OPTIONAL,

1217 1219 location [6] Location,

1218 1220 sMSOverNASIndicator [7] SMSOverNASIndicator OPTIONAL,

1219 - oldGUTI [8] EPS5GGUTI OPTIONAL

1221 + oldGUTI [8] EPS5GGUTI OPTIONAL,

1222 + additionalUserIdentifiers [9] UserIdentifiers OPTIONAL

1220 1223 }

1221 1224

1222 1225 -- See clause 6.2.2.2.5 for details of this structure

@@ -1236,7 +1239,8 @@ AMFStartOfInterceptionWithRegisteredUE ::= SEQUENCE

1236 1239 fiveGSTAIList [12] TAIList OPTIONAL,

1237 1240 sMSOverNASIndicator [13] SMSOverNASIndicator OPTIONAL,

1238 1241 oldGUTI [14] EPS5GGUTI OPTIONAL,

1239 - eMM5GRegStatus [15] EMM5GMMStatus OPTIONAL

1242 + eMM5GRegStatus [15] EMM5GMMStatus OPTIONAL,

1243 + additionalUserIdentifiers [16] UserIdentifiers OPTIONAL

1240 1244 }

1241 1245

1242 1246 -- See clause 6.2.2.2.6 for details of this structure

@@ -1250,7 +1254,8 @@ AMFUnsuccessfulProcedure ::= SEQUENCE

1250 1254 pEI [6] PEI OPTIONAL,

1251 1255 gPSI [7] GPSI OPTIONAL,

1252 1256 gUTI [8] FiveGGUTI OPTIONAL,

1253 - location [9] Location OPTIONAL

1257 + location [9] Location OPTIONAL,

1258 + additionalUserIdentifiers [10] UserIdentifiers OPTIONAL

1254 1259 }

1255 1260

1256 1261 -- See clause 6.2.2.2.8 on for details of this structure

@@ -1263,7 +1268,8 @@ AMFPositioningInfoTransfer ::= SEQUENCE

1263 1268 gUTI [5] FiveGGUTI OPTIONAL,

1264 1269 nRPPaMessage [6] OCTET STRING OPTIONAL,

1265 1270 lPPMessage [7] OCTET STRING OPTIONAL,

1266 - lcsCorrelationId [8] UTF8String (SIZE(1..255))

1271 + lcsCorrelationId [8] UTF8String (SIZE(1..255)),

1272 + additionalUserIdentifiers [9] UserIdentifiers OPTIONAL

1267 1273 }

1268 1274

1269 1275 --See clause 6.2.2.2.9 on for details of this structure

@@ -3861,13 +3867,14 @@ PDSRSummaryTrigger ::= ENUMERATED

3861 3867

3862 3868 AMFIdentifierAssociation ::= SEQUENCE

3863 3869 {

3864 - sUPI [1] SUPI,

3865 - sUCI [2] SUCI OPTIONAL,

3866 - pEI [3] PEI OPTIONAL,

3867 - gPSI [4] GPSI OPTIONAL,

3868 - gUTI [5] FiveGGUTI,

3869 - location [6] Location,

3870 - fiveGSTAIList [7] TAIList OPTIONAL

3870 + sUPI [1] SUPI,

3871 + sUCI [2] SUCI OPTIONAL,

3872 + pEI [3] PEI OPTIONAL,

3873 + gPSI [4] GPSI OPTIONAL,

3874 + gUTI [5] FiveGGUTI,

3875 + location [6] Location,

3876 + fiveGSTAIList [7] TAIList OPTIONAL,

3877 + additionalUserIdentifiers [8] UserIdentifiers OPTIONAL

3871 3878 }

3872 3879

3873 3880 MMEIdentifierAssociation ::= SEQUENCE

END OF CHANGE 1

**\*\*\*END ATTACHMENT CHANGES\*\*\***

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