**3GPP TSG-SA3 Meeting #90-LI *s3i230413***

**Prague, Czech Republic, 27th Jun 2023 - 30th Jun 2023**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.128** | **CR** | **0559** | **rev** | **1** | **Current version:** | **18.4.0** |  |
|  | | | | | | | | |
| *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:*** | Correction to EPS PDN Connection Modification record | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (OTD\_US, Ericsson) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI18 | | | | |  | ***Date:*** | | | 2023-06-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The current version of the EPS PDN Connection Modification record includes bearerContextsModified as a mandatory parameter. The value described in the description for this parameter may not always be present. This CR updates the description so that this parameter can always be populated. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The description of the field is updated to state that if the record is being generated due to the creation or release of a dedicated bearer, the field is populated with the default bearer information. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | It will be unclear how to populate the field when the record is being generated due to a dedicated bearer being activated or deleted. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.3.2.3, 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: [!197](https://forge.3gpp.org/rep/sa3/li/-/merge_requests/197)  Commit hash: [2096dcad7f6caa582ae896329ef7cfa392de3b4e](https://forge.3gpp.org/rep/sa3/li/-/merge_requests/197/diffs?commit_id=2096dcad7f6caa582ae896329ef7cfa392de3b4e) | | | | | | | | |
|  | |  | | | | | | | | |
| ***This’CR's revision history:*** | | s3i230395 | | | | | | | | |

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

##### 6.3.3.2.3 PDU Session Modification message reporting PDU session modification, PDN Connection modification or inter-system handover

The IRI-POI in the SMF+PGW-C shall generate an xIRI containing an SMFPDUSessionModification record (see clause 6.2.3.2.3) when the IRI-POI present in the SMF+PGW-C detects that a single-access PDU Session or PDN Connection has been modified for the target UE. The IRI-POI present in the SMF+PGW-C shall generate the xIRI for the following events:

- The SMF+PGW-C modifies an existing PDN Connection in the target UE context of the SMF+PGW-C (see TS 23.401 [50] clause 5.7.4).

- The SMF+PGW-C modifies an existing PDU Session context or SM Context for the target UE (see TS 29.502 [16] clause 5.2.2.3 and clause 5.2.2.8).

- The SMF+PGW-C transfers an existing PDU Session to EPS (see TS 23.502 [4] clauses 4.11.1.2.1 and 4.11.2.2).

- The SMF+PGW-C transfers an existing PDN Connection to 5GS (see TS 23.502 [4] clauses 4.11.1.2.2 and 4.11.2.3).

When the SMFPDUSessionModification record (see clause 6.2.3.2.3) is used to report the modification of a PDN Connection:

- The ePSPDNConnectionModification field shall be populated with the information in Table 6.3.3-8.

- If there is no SUPI associated to the SM context for the target UE, the SUPI field of the SMFPDUSessionModification record shall be populated with the value of the IMSI from the target UE context.

- If there is no PDU Session ID present in the PCO of the request or response messages or associated to the context for the PDN connection, the pDUSessionID field of the SMFPDUSessionModification record shall be populated with the EBI of the default bearer for the PDN Connection.

- If there is no 5G UP tunnel present in the context associated to the PDN Connection, the gTPTunnelID field of the SMFPDUSessionModification record shall be populated with the F-TEID for the PGW S5 or S8 interface for the default bearer of the PDN Connection.

Table 6.3.3-8: Payload for ePSPDNConnectionModification parameter

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| ePSSubscriberIDs | EPSSubscriberIDs | 1 | EPS Subscriber Identities associated with the PDN connection (e.g. as provided by the MME or SGW in the associated network message or as associated with the PDN connection in the context known at the NF). The IMSI shall be present except for unauthenticated emergency . | M |
| iMSIUnauthenticated | IMSIUnauthenticatedIndication | 0..1 | Shall be present if an IMSI is present in the ePSSubscriberIDs and set to “true” if the IMSI has not been authenticated, or “false” if it has been authenticated. | C |
| defaultBearerID | EPSBearerID | 1 | Shall contain the EPS Bearer Identity of the default bearer associated with the PDN connection. | M |
| gTPTunnelInfo | GTPTunnelInfo | 0..1 | Contains the information for the Control Plane GTP Tunnels present in the network message or known in the context at the SGW or PGW. See Table 6.2.3-1B. If the gTPTunnelInfo received in the network message is different than the gTPTunnelInfo in the context for the PDN Connection, this message shall be populated with the new information. | C |
| pDNConnectionType | PDNConnectionType | 1 | Identifies selected PDN session type, see TS 29.274 [13] clause 8.34. | M |
| uEEndpoints | SEQUENCE OF UEEndpointAddress | 0..MAX | UE endpoint address(es) if available. Derived from the PDN Address portion of the PDN Address Allocation parameter (see TS 29.274 [87] clause 8.14) present in the network message or the IP Address associated to the PDN Connection in the context known at the NF (see TS 23.401 [50] clauses 5.7.3 and 5.7.4). | C |
| non3GPPAccessEndpoint | UEEndpointAddress | 0..1 | UE's local IP address used to reach the ePDG, if present in the network message (see TS 29.274 [87], clauses 7.2.4, 7.2.7 and 7.2.16) or known at the context at the SGW or PGW. | C |
| location | Location | 0..1 | Location information present in the network message (see TS 29.274 [87], clause 8.21) or known in the context at the SGW or PGW. | C |
| additionalLocation | Location | 0..1 | Additional location information present in the network message, known in the context at the SGW or PGW, or known at the MDF. | C |
| aPN | APN | 1 | Access Point Name associated with the PDN connection present in the network message (see TS 29.274 [87] clause 8.6) or known at the context at the SGW or PGW (see TS 23.401 [50] clause 5.6.4), as defined in TS 23.003[19] clause 9.1. | M |
| requestType | EPSPDNConnectionRequestType | 0..1 | Type of request as derived from the Request Type described in TS 24.301 [50] clause 9.9.4.14 and TS 24.008 [95] clause 10.5.6.17, if available. | C |
| accessType | AccessType | 0..1 | Access type associated with the PDN connection (i.e. 3GPP or non-3GPP access). | C |
| rATType | RATType | 0..1 | RAT Type associated with the PDN connection. Shall be present if included in the network message (see TS 29.274 [87] clauses 7.2.3, 7.2.4, 7.2.7, 7.2.8, 7.2.9, 7.2.10, 7.2.15 and 7.2.16) or known at the context at the SGW or PGW (see TS 23.401 [50] clause 5.6.4). | C |
| protocolConfigurationOptions | PDNProtocolConfigurationOptions | 0..1 | Shall be present if the network message (see TS 29.274 [87]) contains the Protocol Configuration Options, Additional Protocol Configuration Options or extended Protocol Configuration Options IE. See Table 6.3.3-4. | C |
| servingNetwork | SMFServingNetwork | 0..1 | Shall be present if this IE is in the network message or the context for the PDN connection at the SGW/PGW. | C |
| sMPDUDNRequest | SMPDUDNRequest | 0..1 | Contents of the SM PDU DN Request container, if available, as described in TS 24.501 [13] clause 9.11.4.15. | C |
| bearerContextsCreated | SEQUENCE OF EPSBearerContextCreated | 0..MAX | Shall include a list of the Bearer Contexts created if the event that resulted in the generation of the message was the activation of a dedicated Bearer. Shall contain the contents of the Bearer Context field of the Create Bearer Response message (see TS 29.274 [87] clause 7.2.4). See Table 6.3.3-2. | C |
| bearerContextsModified | SEQUENCE OF EPSBearerContextModified | 1..MAX | If the event that resulted in the generation of the message was the modification of an existing bearer, shall be populated from the contents of the Bearer Contexts Modified field of the Modify Bearer Response message (see TS 29.274 [87] clause 7.2.8) or the Bearer Contexts within the Update Bearer Response message (see TS 29.274 [87] clause 7.2.16).  If the event that resulted in the generation of the message was the establishment or release of a dedicated bearer context, then it shall be populated with the information for the default bearer.  See Table 6.3.3-9. | M |
| bearerContextsMarkedForRemoval | SEQUENCE OF EPSBearerContextForRemoval | 0..MAX | Shall include a list of the Bearer Contexts to be removed if the event that resulted in the generation of the message included the removal of an existing bearer. (see TS 29.274 [87] clause 7.2.8 and 7.2.10). See Table 6.3.3-3. | C |
| bearersDeleted | SEQUENCE OF EPSBearersDeleted | 0..MAX | Shall include a list of the Bearers to be deleted if the event that resulted in the generation of the message included a Delete Bearer Request or Response. (see TS 29.274 [87] clauses 7.2.9 and 7.2.10). See Table 6.3.3-10 | C |
| indicationFlags | PDNConnectionIndicationFlags | 0..1 | Shall be included if the Indication Flaeporte is present in the network message (see TS 29.274 [87] clauses 7.2.3, 7.2.4, 7.2.7, 7.2.8, 7.2.9, 7.2.10, 7.2.15 and 7.2.16). The value of this parameter shall be set to the value of the Indication IE (see TS 29.274 [87] clause 8.12) starting with octet 5. | C |
| handoverIndication | PDNHandoverIndication | 0..1 | Shall be present if the Handover Indication is set to 1 in the Modify Bearer Request (see TS 29.274 [87] clauses 7.2.7 and 8.12). | C |
| nBIFOMSupport | PDNNBIFOMSupport | 0..1 | Shall be present if the NBIFOM Support Indication is set to 1 in the message that triggered the generation of the xIRI or known at the context (see TS 29.274 [87] clauses 7.2.1, 7.2.7 and 8.12). | C |
| fiveGSInterworkingInfo | FiveGSInterworkingInfo | 0..1 | Shall be present if the 5GS Interworking Indication is present in the Create Session Request (see TS 29.274 [87] clauses 7.2.1 and 8.12). See Table 6.3.3-5. | C |
| cSRMFI | CSRMFI | 0..1 | Shall be present if the Create Session Request Message Forwarded Indication (CSRMFI) is present in the Create Session Request (see TS 29.274 [87] clauses 7.2.1 and 8.12). Indicates the Create Session Request message has been forwarded by a PGW. | C |
| restorationOfPDNConnectionsSupport | RestorationOfPDNConnectionsSupport | 0..1 | Shall be present if the Restoration of PDN connection after an PGW-C/SMF Change Support Indication is present in the message that triggered the generation of the xIRI or known at the context (see TS 29.274 [87] clauses 7.2.1, 7.2.7 and 8.12). | C |
| pGWChangeIndication | PGWChangeIndication | 0..1 | Shall be present if the PGW Change Indication is present in the Create Session Request (see TS 29.274 [87] clauses 7.2.1 and 8.12). | C |
| pGWRNSI | PGWRNSI | 0..1 | Shall be present if the PGW Redirection due to mismatch with Network Slice subscribed by the UE Support Indication is present in the Create Session Request (see TS 29.274 [87] clauses 7.2.1 and 8.12). | C |



Table 6.3.3-9: Structure of the EPSBearerContextModified type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| ePSBearerID | EPSBearerID | 1 | Shall include the EPS bearer ID for the EPS Bearer (See TS 29.274 [87] clauses 7.2.7, 7.2.8, 7.2.15 and 7.2.16). | M |
| cause | EPSBearerModificationCauseValue | 1 | Shall indicate whether the bearer handling was successful and if not, it gives information on the reason (See TS 29.274 [87] clauses 7.2.7, 7.2.8, 7.2.15 and 7.2.16). Sent as an integer cause value (see TS 29.274 [87] Table 8.4-1) | M |
| gTPTunnelInfo | GTPTunnelInfo | 0..1 | Contains the information for the User Plane GTP Tunnels for the bearer context if present in the Request or Response (see TS 29.274 [87] clauses 7.2.7, 7.2.8, 7.2.15, 7.2.16 and 8.15) or known at the context at the SGW or PGW (see TS 23.401 [50] clause 5.6.4). See Table 6.2.3-1B. | C |
| bearerQOS | EPSBearerQOS | 0..1 | Shall include the QOS information for the bearer if present in the Request or Response (see TS 29.274 [87] clauses 7.2.7, 7.2.8, 7.2.15, 7.2.16 and 8.15) or known at the context at the SGW or PGW (see TS 23.401 [50] clause 5.6.4). See Table 6.3.3-7. | C |
| protocolConfigurationOptions | PDNProtocolConfigurationOptions | 0..1 | Shall be present if the Bearer Context reported (see TS 29.274 [87] clauses 7.2.7, 7.2.8, 7.2.15, 7.2.16 and 8.15) contains the Protocol Configuration, Additional Protocol Configuration Options or extended Protocol Configuration Options IE. See Table 6.3.3-4. | C |
| linkedEPSBearerIDs | SEQUENCE OF EPSBearerID | 0..MAX | Shall be present if there are any linked EPS bearers. If the bearer context beieporte dis is the default bearer, then this list shall be populated with all dedicated bearers linked to that default bearer. If the bearer being reported is a dedicated bearer, then this field shall be populated with the default bearer. | C |



Table 6.3.3-10: Structure of the EPSBearersDeleted type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| linkedEPSBearerID | EPSBearerID | 0..1 | Shall include the EBI for the default bearer associated with the PDN being disconnected if all bearers belonging to a PDN connection are being released (See TS 29.274 [87] clause 7.2.9). | C |
| ePSBearerIDs | SEQUENCE OF EPSBearerID | 0..MAX | Shall include a list of the EPS Bearer IDs to be deleted if only some of the EPS Bearers belonging to a PDN Connection are being released (see TS 29.274 [87] clause 7.2.9). | C |
| protocolConfigurationOptions | PDNProtocolConfigurationOptions | 0..1 | Shall be present if the Delete Bearer Request or Response reported (see TS 29.274 [87] clauses 7.2.9) contains the Protocol Configuration, Additional Protocol Configuration Options or extended Protocol Configuration Options IE. See Table 6.3.3-4. | C |
| cause | EPSBearerDeletionCauseValue | 0..1 | Shall indicate the reason the EPS Bearers are being deleted (See TS 29.274 [87] clause 7.2.9). Sent as an integer cause value (see TS 29.274 [87] Table 8.4-1) | C |
| deleteBearerResponse | EPSDeleteBearerResponse | 1 | Shall contain information from the Delete Bearer Response (See TS 29.274[87] clause 7.2.10). See Table 6.3.3-11. | M |



Table 6.3.3-11: Structure of the EPSDeleteBearerResponse type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| cause | EPSBearerDeletionCauseValue | 1 | Indicates whether the bearers requested for deletion were successfully deleted (See TS 29.274 [87] clause 7.2.10). | M |
| linkedEPSBearerID | EPSBearerID | 0..1 | Shall include the EBI for the default bearer associated with the PDN being disconnected if all bearers belonging to a PDN connection are being released (See TS 29.274 [87] clause 7.2.10). | C |
| bearerContexts | SEQUENCE OF EPSDeleteBearerContext | 0..MAX | Shall include a list of the EPS Bearer Contexts requested for deletion along with details on whether they were successfully deleted. Shall be included if only some of the EPS Bearers belonging to a PDN Connection are being released (see TS 29.274 [87] clause 7.2.10). See Table 6.3.3-12. | C |
| protocolConfigurationOptions | PDNProtocolConfigurationOptions | 0..1 | Shall be present if the Delete Bearer Request or Response reported (see TS 29.274 [87] clauses 7.2.9) contains the Protocol Configuration, Additional Protocol Configuration Options or extended Protocol Configuration Options IE. See Table 6.3.3-4. | C |



Table 6.3.3-12: Structure of the EPSDeleteBearerContext type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| cause | EPSBearerDeletionCauseValue | 1 | Indicates whether the bearers requested for deletion were successfully deleted (See TS 29.274 [87] clause 7.2.10). | M |
| ePSBearerID | EPSBearerID | 1 | Shall include the EBI for the bearer (See TS 29.274 [87] clause 7.2.10). | M |
| protocolConfigurationOptions | PDNProtocolConfigurationOptions | 0..1 | Shall be present if the Delete Bearer Request or Response reported (see TS 29.274 [87] clauses 7.2.9) contains the Protocol Configuration, Additional Protocol Configuration Options or extended Protocol Configuration Options IE. See Table 6.3.3-4. | C |
| rANNASCause | EPSRANNASCause | 0..1 | Shall be present if the RAN/NAS Release Cause is present in the delete session response bearer context (see TS 29.274 [87] clause 7.2.10). Shall be sent as an Octet String encoded as specified in TS 29.274 [87] clause 8.103. | C |



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

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

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

@@ -2321,7 +2321,7 @@ EPSPDNConnectionModification ::= SEQUENCE

2321 2321 servingNetwork [15] SMFServingNetwork OPTIONAL,

2322 2322 sMPDUDNRequest [16] SMPDUDNRequest OPTIONAL,

2323 2323 bearerContextsCreated [17] SEQUENCE OF EPSBearerContextCreated OPTIONAL,

2324 - bearerConcextsModified [18] SEQUENCE OF EPSBearerContextModified,

- 2324 bearerContextsModified [18] SEQUENCE OF EPSBearerContextModified,

2325 2325 bearerContextsMarkedForRemoval [19] SEQUENCE OF EPSBearerContextForRemoval OPTIONAL,

2326 2326 bearersDeleted [20] SEQUENCE OF EPSBearersDeleted OPTIONAL,

2327 2327 indicationFlags [21] PDNConnectionIndicationFlags OPTIONAL,

@@ -2477,7 +2477,8 @@ EPSBearerContextModified ::= SEQUENCE

2477 2477 cause [2] EPSBearerModificationCauseValue,

2478 2478 gTPTunnelInfo [3] GTPTunnelInfo OPTIONAL,

2479 2479 bearerQOS [4] EPSBearerQOS OPTIONAL,

2480 - protocolConfigurationOptions [5] PDNProtocolConfigurationOptions OPTIONAL

- 2480 protocolConfigurationOptions [5] PDNProtocolConfigurationOptions OPTIONAL,

- 2481 linkedBearerIDs [6] SEQUENCE OF EPSBearerID OPTIONAL

2481 2482 }

2482 2483

2483 2484 EPSBearersDeleted ::= SEQUENCE

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