**3GPP TSG- Meeting #**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **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:***  |  |
|  |  |
| ***Source to WG:*** | SA3LI () |
| ***Source to TSG:*** | SA3 |
|  |  |
| ***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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | Tables 6.2.3-6 and 6.2.3-9 refer to the "CorrelationNumber" field in ETSI TS 103 221-1. This field is actually called "CorrelationID". |
|  |  |
| ***Summary of change:*** | Corrected field name. |
|  |  |
| ***Consequences if not approved:*** | Incorrect specification. |
|  |  |
| ***Clauses affected:*** | 6.2.3.3.1, 6.2.3.4 |
|  |  |
|  | **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's revision history:*** |  |

 FIRST CHANGE

##### 6.2.3.3.1 LI\_T3 interface specifics

When interception of communication contents is required, the CC-TF present in the SMF sends a trigger to the CC-POI present in the UPF over the LI\_T3 interface.

When the CC-TF in the SMF detects that a PDU session is being established for a target UE (i.e. when the SMF sends the N4: Session Establishment Request), it shall send an activation message to the CC-POI in the UPF over the LI\_T3 interface. The activation message shall contain the correlation identifiers that the CC-POI in the UPF shall use with the xCC. This can be achieved by sending an ActivateTask message as defined in ETSI TS 103 221-1 [7] clause 6.2.1 with the following details.

Table 6.2.3-6: ActivateTask message for triggering the CC-POI in the UPF

|  |  |  |
| --- | --- | --- |
| ETSI TS 103 221-1 field name | Description | M/C/O |
| XID | Allocated by the CC-TF as per ETSI TS 103 221-1 [7]. | M |
| TargetIdentifiers | Packet detection criteria as determined by the CC-TF in the SMF, which enables the UPF to isolate target traffic. The CC-POI in the UPF shall support at least the identifier types given in Table 6.2.3-7.NOTE: This value is the target identifier for the CC-POI in the UPF and may be different from the target identifier specified in the warrant. | M |
| DeliveryType | Set to “X3Only”. | M |
| ListOfDIDs | Delivery endpoints for LI\_X3. These delivery endpoints shall be configured by the CC-TF in the SMF using the CreateDestination message as described in ETSI TS 103 221-1 [7] clause 6.3.1 prior to first use. | M |
| CorrelationID | Correlation ID to assign to X3 PDUs generated by the CC-POI in the UPF. | M |
| ProductID | Shall be set to the XID of the Task Object associated with the interception at the CC-TF. This value shall be used by the CC-POI in the UPF to fill the XID of X3 PDUs. | M |

Table 6.2.3-7: Target Identifier Types for LI\_T3

|  |  |  |
| --- | --- | --- |
| Identifier type | ETSI TS 103 221-1 TargetIdentifier type | Definition |
| GTP Tunnel ID | gtpuTunnelId | F-TEID (see XSD schema) |
| UE IP Address | ipAddress | See ETSI TS 103 221-1 [7] |
| UE IP Address and port | ipAddressPort | See ETSI TS 103 221-1 [7] |
| PFCP Session ID | TargetIdentifierExtension / FSEID | F-SEID (see XSD schema) |
| PDR ID | TargetIdentifierExtension / PDRID | 32 bit unsigned integer (see XSD schema) |
| QER ID | TargetIdentifierExtension / QERID | 32 bit unsigned integer (see XSD schema) |
| Network Instance | TargetIdentifierExtension / NetworkInstance | Octet string (see XSD schema) |
| GTP Tunnel Direction | TargetIdentifierExtension / GTPTunnelDirection | Enumeration (see XSD schema) |

When the CC-TF in the SMF detects that a targeted PDU session is changing (i.e. when the SMF sends the N4 Session Modification Request to the UPF) in a way that requires changes to the interception already activated by the CC-POI in the UPF, the CC-TF shall modify the interception at the CC-POI in the UPF over the LI\_T3 interface. This is achieved by sending a ModifyTask message as defined in ETSI TS 103 221-1 [7] clause 6.2.2. The ModifyTask message contains the same details as the ActivateTask message with the following fields updated as appropriate.

Table 6.2.3-8: Parameters that may be changed in a ModifyTask message when updating interception at the CC-POI in the UPF

|  |  |  |
| --- | --- | --- |
| ETSI TS 103 221-1 field name | Description | M/C/O |
| TargetIdentifiers | Updated packet detection criteria as determined by the CC-TF in the SMF.NOTE: See notes on TargetIdentifiers in Table 6.2.3-6. | M |

When the CC-TF in the SMF detects that a targeted PDU session is changing (i.e., when the SMF sends the N4 Session Modification Request to the UPF) for which the interception had not been previously activated in the CC-POI in the UPF (e.g., in case of previous unsuccessful LI activation at the CC-POI in the UPF by the CC-TF in the SMF), the CC-TF shall send an activation message to the CC-POI in the UPF over the LI\_T3 interface. The activation message shall contain the correlation identifiers that the CC-POI in the UPF shall use with the xCC. This can be achieved by sending an ActivateTask message as defined in ETSI TS 103 221-1 [7] clause 6.2.1 with the details provided by Table 6.2.3-6.

When the CC-TF in the SMF detects that the PDU session has been released (i.e. when the SMF sends the N4: Session Release Request to the UPF) for a target UE, it shall send a deactivation message to the CC-POI in the UPF over the LI\_T3 interface. When using ETSI TS 103 221-1 [7] this is achieved by sending a DeactivateTask message with the XID field set to the XID associated with the interception, as described in ETSI TS 103 221-1 [7] clause 6.2.3.

By default, interception shall occur at the anchor UPF as described in 6.2.3.3.3.

When a warrant that includes the service scoping of CC is activated for a target UE with an established PDU session and when the IRI-POI present in the SMF generates the xIRI containing an SMFStartOfInterceptionWithEstablishedPDUSession record (see clause 6.2.3.2.5), the CC-TF present in the SMF shall send an activation message to the CC-POI present in the UPF to generate the xCC.

 SECOND CHANGE

#### 6.2.3.4 IRI-POI in UPF triggering over LI\_T2

When interception of Packet Data Headers is required, and if the approach 1 as specified in TS 33.127 [5] for packet data information reporting is used, the IRI-TF in the SMF sends a trigger to the IRI-POI in the UPF over the LI\_T2 interface.

When the IRI-TF in the SMF detects that a PDU session has been established for a target UE, it shall send an activation message to the IRI-POI in the UPF over the LI\_T2 interface. The activation message shall contain the correlation ID that the IRI-POI in the UPF shall use when generating xIRI. This shall be achieved by sending an ActivateTask message as defined in TS 103 221-1 [7] clause 6.2.1 with the following details.

Table 6.2.3-9: ActivateTask message for triggering the UPF IRI-POI

|  |  |  |
| --- | --- | --- |
| ETSI TS 103 221-1 field name | Description | M/C/O |
| XID | Allocated by the IRI-TF as per ETSI TS 103 221-1 [7]. | M |
| TargetIdentifiers | Packet detection criteria as determined by the IRI-TF in the SMF, which enable the UPF IRI-POI to isolate target traffic. The IRI-POI in the UPF shall support at least the identifier types given in Table 6.2.3-7.NOTE: This value is the target identifier for the IRI-POI in the UPF and may be different from the target identifier specified in the warrant. | M |
| DeliveryType | Set to “X2Only”. | M |
| TaskDetailsExtensions/HeaderReporting | Header reporting-specific tag to be carried in the *TaskDetailsExtensions* field of ETSI TS 103 221-1 [7]. | M |
| ListOfDIDs | Delivery endpoints of LI\_X2. These delivery endpoints shall be configured by the IRI-TF in the SMF using the *CreateDestination* message as described in ETSI TS 103 221-1 [7] clause 6.3.1 prior to first use. | M |
| CorrelationID | Correlation ID to assign for xIRI generated by the IRI-POI in the UPF. | M |
| ProductID | Shall be set to the XID of the Task Object associated with the interception at the IRI-TF. This value shall be used by the IRI-POI in the UPF to fill the XID of X2 PDUs. | M |

Table 6.2.3-10: ActivatePDHReporting Parameters

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| pDHType | This field shall be set to either:* “PDHR,” for packet-by-packet reporting.
* “PDSR,” for summarized reporting.
 | M |
| pDSRType | If pDHType is PDSR, this field shall be set to one of the following triggers:1. timer expiry (along with a timer value and unit).
2. packet count (along with a value for the number of packets detected before a summary is to be triggered).
3. byte count (along with a value for the cumulative byte size reached across all packets belonging to the summary before said summary is to be triggered).

Summary reports shall not be cumulative, i.e., each summary report shall describe only the packets contained in its respective range, and each new summary shall start its count (of whichever attribute from the numbered list above applies) from zero, i.e., the information in the (n+1)’th summary report starts immediately after the end of the n’th summary report. | C |

When the IRI-TF in the SMF detects that a targeted PDU session has changed in a way which requires changes to the interception by the IRI-POI in the UPF, the IRI-TF in the SMF shall modify the interception at the IRI-POI in the UPF over the LI\_T2 interface. This is achieved by sending an ModifyTask message as defined in ETSI TS 103 221-1[ [7] clause 6.2.2. The ModifyTask message contains the same details as the ActivateTask message with the following fields updated as appropriate.

Table 6.2.3-11: Parameters that may be changed in a ModifyTask message when updating interception at the IRI-POI in the UPF

|  |  |  |
| --- | --- | --- |
| Field name | Description | M/C/O |
| TargetIdentifiers | Updated packet detection criteria as determined by the IRI-TF in the SMF.NOTE: See notes on TargetIdentifiers in Table 6.2.3-6. | M |

When the IRI-POI in the SMF detects that the PDU session has been released for a target UE, it shall send a deactivation message to the IRI-POI in the UPF over the LI\_T2 interface. When using ETSI TS 103 221-1 [7] this is achieved by sending a DeactivateTask message with the XID field set to the XID associated with the interception, as described in ETSI TS 103 221-1 [7] clause 6.2.3.

When a PDU session involves multiple UPFs, the selection of UPF to provide the IRI-POI functions shall be done in the same way an UPF is selected to provide the CC-POI functions as described in clauses 6.2.3.3.2 and 6.2.3.3.3.

When a warrant that does not include the service scoping of CC (but includes the service scoping of IRI) is activated for a target UE with an established PDU session and when the IRI-POI present in the SMF generates the xIRI containing an SMFStartOfInterceptionWithEstablishedPDUSession record, if the approach 1 specified in TS 33.127 [5] is used for packet data header information reporting, then the IRI-TF present in the SMF shall send an activation message to the IRI-POI present in the UPF to generate the Packet Data Header report related xIRIs from the user plane packets of that PDU session.

 END OF CHANGES