**3GPP TSG-CT WG4 Meeting #101eC4-205xxx**

**E-Meeting, 03rd – 13th November 2020 *Revision of C4-205322***

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.502** | **CR** | **0394** | **rev** | **1** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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:*** | EBI and ARP mapping update | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2020-10-21 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | During the network requested PDU session modification, e.g. to update the APR of the QoS flow, SMF will include the EbiArpMapping in VsmfUpdateData IE to I-SMF. I-SMF shall send the EbiArpMapping to AMF.  This shall be covered in the service operation description. | | | | | | | | |
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| ***Summary of change:*** | | Update the service operation description for EBI and ARP mapping update. | | | | | | | | |
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| ***Consequences if not approved:*** | | Different implementation on EBI and ARP mapping update may cause error. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.2.8.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 does not change the OpenAPI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

###### 5.2.2.8.3.2 Network (e.g. H-SMF, SMF) requested PDU session modification

The requirements specified in clause 5.2.2.8.3.1 shall apply with the following modifications.

1. Same as step 1 of Figure 5.2.2.8.3.1-1, with the following modifications.

The requestIndication shall be set to NW\_REQ\_PDU\_SES\_MOD.

As part of the modification instructions, the NF Service Consumer may request to modify QoS parameters applicable at the PDU session level (e.g. modify the authorized Session AMBR values) or at the QoS flow level (e.g. modify the MFBR of a particular QoS flow).   
  
The NF Service Consumer may request to establish, modify and/or release QoS flows by including the qosFlowsAddModifyRequestList IE and/or the qosFlowsReleaseRequestList IE in the payload body.

The H-SMF or SMF may provide alternative QoS profiles for each GBR QoS flow with Notification control enabled, to allow the NG-RAN to accept the setup of the QoS flow if the requested QoS parameters or at least one of the alternative QoS parameters sets can be fulfilled at the time of setup. If the H-SMF or SMF provides a new list of alternative QoS profile(s) for a given GBR Qos flow, the V-SMF or I-SMF shall replace any previously stored list for this Qos flow with it.

The NF Service Consumer may include epsBearerInfo IE(s), if the PDU session may be moved to EPS during its lifetime and the EPS Bearer(s) information has changed (e.g. a new EBI has been assigned or the mapped EPS bearer QoS for an existing EBI has changed).

The NF Service Consumer may include the modifiedEbiList IE if the PDU session modification procedure resulted in the change of ARP for a QoS flow that has already been allocated an EBI.

The NF Service Consumer may include the revokeEbiList IE to request the V-SMF or I-SMF to release some EBI(s) and delete any corresponding EPS bearer context stored in the V-SMF or I-SMF. The V-SMF or I-SMF shall disassociate the EBI(s) with the QFI(s) with which they are associated.

2. Same as step 2 of Figure 5.2.2.8.3.1-1, with the following modifications.

The V-SMF or I-SMF may accept all or only a subset of the QoS flows requested to be created or modified within the request.  
  
The list of QoS flows which have been successfully setup or modified, and those which failed to be so, if any, shall be included in the qosFlowsAddModList IE and/or the qosFlowsFailedtoAddModList IE respectively.

The V-SMF or I-SMF may report an alternative QoS profile which the NG-RAN currently fulfils in the currentQosProfileIndex IE of the corresponding Qos flow in the qosFlowsAddModList IE, or report that the NG-RAN cannot even fulfil the lowest alternative QoS profile by setting the nullQoSProfileIndex IE to "true" for the corresponding Qos flow in the qosFlowsAddModList IE.

If the NG-RAN rejects the establishment of a voice QoS flow due to EPS Fallback for IMS voice (see clause 4.13 of 3GPP TS 23.502 [3]), the V-SMF or I-SMF shall return the cause indicating that "mobility due to EPS fallback for IMS voice is on-going" for the corresponding flow in the qosFlowsFailedtoAddModifyList IE.

The list of QoS flows which have been successfully released, and those which failed to be so, if any, shall be included in the qosFlowsReleaseList and/or qosFlowsFailedtoReleaseList IE respectively.  
  
For a QoS flow which failed to be modified, the V-SMF or I-SMF shall fall back to the configuration of the QoS flow as it was configured prior to the reception of the PDU session update request from the NF Service Consumer.

The V-SMF or I-SMF shall store any EPS bearer information received from the H-SMF or SMF. If the revokeEbiList IE is present in the request, the V-SMF or I-SMF shall request delete the corresponding EPS bearer contexts and request the AMF to release the EBIs listed in this IE. If the modifiedEbiList IE is present in the request, the V-SMF or I-SMF shall request the AMF to update the mapping of EBI and ARP.

If the request received from the H-SMF or SMF contains the alwaysOnGranted attribute set to true, the V-SMF or I-SMF shall check and determine whether the PDU session can be established as an always-on PDU session based on local policy.

\* \* \* End of Changes \* \* \* \*