**3GPP TSG-CT WG3 Meeting #130 *C3-234383***

**Xiamen, China, 9 - 13 October, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.513** | **CR** | **0502** | **rev** | **-** | **Current version:** | **18.3.0** |  |
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| *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:*** | Policy Authorization for AF requested QoS for a UE or group of UEs not identified by a UE address | | | | | | | | | |
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| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | GMEC | | | | |  | ***Date:*** | | | 2023-09-30 |
|  |  | | | |  | |  | | |  |
| ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | QoS mapping in the PCF when the QoS information is obtained from UDR (AF requested QoS for a UE or group of UEs not identified by a UE address) is missing from the specification | | | | | | | | |
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| ***Summary of change:*** | | Indication that the QoS mapping function applies as specified when the QoS information is retrieved from UDR | | | | | | | | |
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| ***Consequences if not approved:*** | | It is missing how the QoS mapping takes place when the information is retrieved from UDR | | | | | | | | |
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| ***Clauses affected:*** | | 7.1, 7.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* Start of Changes \* \* \* \*

## 7.1 Overview

Several QoS parameters mapping functions are needed during PCC interaction.

The main purpose of these mapping functions is the conversion of QoS parameters from one format to another. QoS information may be:

- parts of a session description language (SDI), e.g. SDP, MPD;

- QoS parameters; and

- access specific QoS parameters.

For PCC deployments not supporting MBS, QoS parameters mapping functions are located at the AF, PCF, SMF and UE and are described in this clause and the rest of clauses under clause 7.

When PCC is deployed in an MBS architecture as defined in 3GPP TS 23.247 [54], QoS parameter mapping functions are defined as described in clause 7.5.

One QoS mapping function is located at the AF, which maps the application specific information into the appropriate information that are carried over the Rx as specified in 3GPP TS 29.214 [18] or N5 interface as specified in 3GPP TS 29.514 [10].

For IMS, the AF may pass service information to the PCF over the Rx interface or over the N5 interface if the PCF and the P-CSCF support the "IMS\_SBI" feature. The AF derives information about the service from the SDI or from other sources. The mapping is application specific. If SDP (IETF RFC 4566 [16]) is used as SDI, the AF should apply the mapping described in clause 7.2. If MPD (3GPP TS 26.247 [17]) is used, the AF may apply the mapping described in Annex I in 3GPP TS 26.247 [17]. Clause 7.2 specifies the QoS parameter mapping functions at the AF. For IMS, the mapping rules in clause 7.2 shall be used at the P-CSCF.

One QoS mapping function is located at the PCF, which maps the service information received over the Rx or N5 interface, or if the "GMEC" feature is supported, obtained from UDR into QoS parameters (e.g. 5QI, GBR, MBR, and ARP). This mapping is access independent. Clause 7.3 specifies the QoS mapping functions at the PCF applicable for all accesses.

The mapping functions located at SMF is specified in clause 7.4. The mapping function in UE is implementation dependent and not specified within this specification.

The PCF notes and authorizes the service data flows described within this service information by mapping from service information to Authorized QoS parameters for transfer to the SMF via the N7 interface. The SMF will map from the Authorized QoS parameters to the access specific QoS parameters.

For 3GPP 5GS, the network sets up QoS flow(s) with a suitable QoS and indicates to the UE the QoS characteristics of those QoS flow(s). Therefore the flow of QoS related information will be unidirectional as indicated in the figure 7.1-1.



NOTE: Access Specific QoS parameters with Authorized Access-Specific QoS parameters comparison.

Figure 7.1-1: QoS mapping framework

1. The AF shall perform mapping from an SDI received within the AF session signalling to service information passed to the PCF over the Rx or N5 interface (see clause 7.2 if SDP is used as SDI).

2. The PCF shall perform mapping from the service information received over the Rx or N5 interface to the Authorized QoS parameters that shall be passed to the SMF via the N7 interface. The mapping is performed for each service data flow. The PCF combines per direction the individual Authorized QoS parameters per flow (see clause 7.3).

3. The SMF shall perform mapping from the Authorized QoS parameters received from PCF to the access specific QoS parameters.

\* \* \* \* Next change \* \* \* \*

### 7.3.1 Introduction

The QoS authorization process consists of the derivation of the parameters Authorized 5G QoS Identifier (5QI), Authorized Allocation and Retention Priority (ARP) and Authorized Maximum/Guaranteed Data Rate UL/DL. And such process also includes the derivation of the QoS Notification Control (QNC), Reflective QoS Indication (RQI), Priority Level (PL), Averaging Window (AW) and Maximum Data Burst Volume (MDBV).

When a session is initiated or modified the PCF shall derive Authorized QoS parameters from the service information received from an AF supporting Rx interface or from an AF supporting N5 interface.

When the "GMEC" feature is supported, the AF provides the requested QoS for a UE or group of UE(s) not identified by UE address(es) and the service information is stored in UDR as specified in 3GPP TS 29.519 [12], the PCF shall derive the Authorized QoS parameters from the obtained information from the UDR.

\* \* \* \* End of change \* \* \* \*