**3GPP TSG-RAN WG3 Meeting #123R3-240890**

**Athens, Greece, 26th Feb – 1st Mar 2024**

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| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **1278** | **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 | **X** | Core Network |  |

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|  |
| ***Title:***  | Introduction of separate uplink and downlink PDU set QoS parameters |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Xiaomi, Ericsson, Qualcomm Inc., Samsung, China Telecom, ZTE, Huawei, CATT, CMCC |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_XR\_enh-Core |  | ***Date:*** | 2024-02-29 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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)****S*** *(adding to the sourcing companies’ CR statistics)*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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | SA2 agreed provisioning separate DL and UL PDU Set QoS Parameters to NG-RAN. |
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| ***Summary of change:*** | Add the support for provisioning separate DL and UL PDU Set QoS Parameters to gNB-DU. |
|  |  |
| ***Consequences if not approved:*** | Cannot support separate DL and UL PDU Set QoS Parameters |
|  |  |
| ***Clauses affected:*** | 9.3.1.45, 9.3.1.319, 9.4.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 38.300 CRTS 37.483 CR 0104TS 38.413 CR 1085TS 38.423 CR 1149 |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Rev 1: updated based on online comments to reuse existing IE. |

*Start of Change*

#### 9.3.1.45 QoS Flow Level QoS Parameters

This IE defines the QoS to be applied to a QoS flow, or to a DRB, or to a BH RLC channel, or to a Uu Relay RLC channel, or to a PC5 Relay RLC channel.

NOTE: For a BH RLC channel, the listed mandatory IEs and the *GBR QoS Flow Information* IE are applicable, where *GBR QoS Flow Information* IE may be present if BH RLC channel conveys the traffic belonging to a GBR QoS Flow.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| CHOICE *QoS Characteristics* | M |  |  |  | - |  |
| *>Non-dynamic 5QI* |  |  |  |  | - |  |
| >>Non Dynamic 5QI Descriptor | M |  | 9.3.1.49 |  | - |  |
| *>Dynamic 5QI* |  |  |  |  | - |  |
| >>Dynamic 5QI Descriptor | M |  | 9.3.1.47 |  | - |  |
| NG-RAN Allocation and Retention Priority | M |  | 9.3.1.48 |  | - |  |
| GBR QoS Flow Information | O |  | 9.3.1.46 | This IE shall be present for GBR QoS Flows only and is ignored otherwise. | - |  |
| Reflective QoS Attribute | O |  | ENUMERATED (subject to, ...) | Details in TS 23.501 [21]. This IE applies to non-GBR flows only and is ignored otherwise. | - |  |
| PDU Session ID | O |  | INTEGER (0 ..255) | As specified in TS 23.501 [21]. | YES | ignore |
| UL PDU Session Aggregate Maximum Bit Rate | O |  | Bit Rate9.3.1.22 | The PDU session Aggregate Maximum Bit Rate Uplink which is associated with the involved PDU session. | YES | ignore |
| QoS Monitoring Request | O |  | ENUMERATED (UL, DL, Both, …, stop) | Indicates to measure UL, or DL, or both UL/DL delays for the associated QoS flow or stop the corresponding QoS monitoring.  | YES | ignore |
| PDCP Terminating Node DL Transport Layer Address | O |  | Transport Layer Address9.3.2.3 | DL Transport Layer Address of node terminating PDCP. Included for MN-terminated SCG bearers and SN-terminated MCG bearers. | YES | ignore |
| PDU Set QoS Parameters |  | 0..1 |  |  | YES | ignore |
| >UL PDU Set QoS Information | O |  | PDU Set QoS Information9.3.1.319 |  | - |  |
| >DL PDU Set QoS Information | O |  | PDU Set QoS Information9.3.1.319 |  | - |  |

*Next Change*

#### 9.3.1.319 PDU Set QoS Information

This IE defines the PDU Set QoS Information to be applied to a QoS flow.

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| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| PDU Set Delay Budget | O |  | Extended Packet Delay Budget 9.3.1.145 | PDU Set Delay Budget as defined in TS 23.501 [21]. |
| PDU Set Error Rate | O |  | Packet Error Rate 9.3.1.52 | PDU Set Error Rate as defined in TS 23.501 [21]. |
| PDU Set Integrated Handling Information | O |  | ENUMERATED(true, false, …) | PDU Set Integrated Handling Information as defined in TS 23.501 [21]. |

*Next Change*

### 9.4.5 Information Element Definitions

-- ASN1START

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-- Information Element Definitions

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F1AP-IEs {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

<<<<<<<<<<<<<<<<<<<< Unaffected part is skipped >>>>>>>>>>>>>>>>>>>>

PreambleIndex ::= INTEGER(0..63)

PDUSetQoSParameters ::= SEQUENCE {

 ulPDUSetQoSInformation PDUSetQoSInformation OPTIONAL,

 dlPDUSetQoSInformation PDUSetQoSInformation OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PDUSetQoSParameters-ExtIEs } } OPTIONAL

 }

PDUSetQoSParameters-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

PDUSetQoSInformation ::= SEQUENCE {

 pduSetDelayBudget ExtendedPacketDelayBudget OPTIONAL,

 pduSetErrorRate PacketErrorRate OPTIONAL,

 pduSetIntegratedHandlingInformation ENUMERATED {true, false, ...} OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PDUSetQoSInformation-ExtIEs } } OPTIONAL

}

PDUSetQoSInformation-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

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*End of Change*