**3GPP TSG-CT WG4 Meeting #111-eC4-224217**

**E-Meeting, 18th – 26th August 2022**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** | **-** | **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:*** | Reporting Packet Delay Measurement Failure to AF/NEF when direct reporting applies | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eEDGE\_5GC | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***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)*  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:*** | | As specified in TS 29.244, clause 5.24.4.3, a measure report with failure indication should be generated in the UPF and report to the SMF in the following scenarios as AF/NEF expects to receive a report in such situations:  *If the Event Triggered QoS monitoring reporting is required in the reporting frequency, and no time stamp is received in uplink packet for a delay exceeding the Packet Delay Thresholds, the UPF shall generate a QoS monitoring report indicating a packet delay measurement failure to the SMF or to the Local NEF or AF (if direct reporting of QoS monitoring event applies, see clause 5.33.5).*  *If the Periodic QoS monitoring reporting is required in the reporting frequency, and no time stamp is received in uplink packet for a delay exceeding the Measurement Period, the UPF shall generate a QoS monitoring report indicating a packet delay measurement failure to the SMF or to the Local NEF or AF (if direct reporting of QoS monitoring event applies, see clause 5.33.5).*  Figure 8.2.171-1: QoS Monitoring Measurement    Bit 4 – PLMF (Packet Delay Measurement Failure): If this bit is set to "1", this indicates no timestamp is received in uplink packet for a delay exceeding the Packet Delay Thresholds or the Measurement Period.  This is also required by stage 2, e.g. in 23.503 chapter 6.3.1,  *The Reporting threshold(s) may also be used as the threshold for reporting packet delay measurement failure: if no measurement result is received for a delay exceeding this threshold, the UPF shall report to the SMF and the SMF shall report to the PCF or to the AF indicating a packet delay measurement failure*.  So, such PLMF indication shall also be populated to AF/NEF when direct reporting applies. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add measurement failure indication in the data type QoSMonitoringMeasurement. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Stage 2 requirement is not enforced. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.2.4, A.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:*** | | The CR introduces a backwards compatible correction. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

##### 6.1.6.2.4 Type: QosMonitoringMeasurement

Table 6.1.6.2.3-1: Definition of type QosMonitoringMeasurement

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| dlPacketDelay | Uint32 | O | 0..1 | When present, the value of this attribute is set to the measured downlink packet delay in millisecond (ms). |  |
| ulPacketDelay | Uint32 | O | 0..1 | When present, the value of this attribute is set to the measured uplink packet delay in millisecond (ms). |  |
| rtrPacketDelay | Uint32 | O | 0..1 | When present, the value of this attribute is set to the measured round trip packet delay in millisecond (ms). |  |
| measureFailure | boolean | C | 0..1 | This IE shall be present to report packet delay measurement failure.  When present, it shall be set to true to indicate the report is sent due to packet delay measurement failure (where the PLMF is set to “1”) as specified in clauses 5.24.4.3 and 8.2.171 of 3GPP TS 29.244 [15]. |  |

\* \* \* \* Next Change \* \* \* \*

# A.2 Nupf\_EventExposure API

openapi: 3.0.0

info:

title: 'UPF Event Exposure Service'

version: 1.0.0

description: |

UPF Event Exposure Service.

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externalDocs:

description: 3GPP TS 29.564 V17.1.0; 5G System; User Plane Function Services; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.564/

servers:

- url: '{apiRoot}/nupf-ee/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501

\*\*\*\*Skipped for clarity\*\*\*\*\*\*\*\*\*\*

QosMonitoringMeasurement:

type: object

properties:

dlPacketDelay:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

ulPacketDelay:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

rtrPacketDelay:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

measureFailure:

type: boolean

enum:

- true

\*\*\*\*Skipped for clarity\*\*\*\*\*\*\*\*\*\*

\* \* \* \* End of changes \* \* \* \*