**3GPP TSG-CT WG3 Meeting #108-eC3-201122**

[**E-Meeting**](https://www.3gpp.org/ftp/tsg_ct/WG3_interworking_ex-CN3/TSGC3_108_Sophia_Antipolis/)**, 19th -28th February 2020 (Revision of C3-201xyz)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **0125** | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | QoS Monitoring Support | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_URLLC | | | | |  | ***Date:*** | | | 2020-02-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Stage 2 agrees that the AF can request the QoS Monitoring by invoking the Nnef\_AFsessionWithQoS service operation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The procedure of the QoS Monitoring is defined. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The feature of QoS monitoring is not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.4.9, 5.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 doesn’t impact the OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* 1st Change \*\*\*

### 4.4.9 Procedures for setting up an AF session with required QoS

The procedures for setting up an AF session with required QoS in 5GS are described in subclause 4.4.13 of 3GPP TS 29.122 [4] with the following differences:

- description of the SCS/AS applies to the AF;

- description of the SCEF applies to the NEF;

- description of the PCRF applies to the PCF; and

- the NEF may interact with BSF by using Nbsf\_Management\_Discovery service (as defined in 3GPP TS 29.521 [9]) to retrieve the PCF address; and

- the NEF shall interact with the PCF by using Npcf\_PolicyAuthorization service as defined in 3GPP TS 29.514 [7].

- if the "QoSMonitoring\_5G" feature as defined in subclause 5.3.4 of 3GPP TS 29.122 [4] is supported, in order to support the QoS Monitoring, the AF shall include "qosMonInfo" attribute. Within the QosMonitoringInformation data structure, the AF shall include:

- one or more requested QoS Monitoring Parameter(s) within the "reqQosMonParam"; and

- one or more report frequency within the "repFreqs" attribute; and

- when the "repFreqs" attribute includes the "PERIODIC" is set to the value "PERIODIC", the reporting period within the "repPeriod" attribute; and

- when the "repFreqs" attribute set to the value "EVENT\_TRIGGERED", the AF shall include:

- the delay threshold for downlink with the "repThreshDl" attribute;

- the delay threshold for uplink with the "repThreshUl" attribute; and/or

- the delay threshold for round trip with the "repThreshRp" attribute; and

- the minimum waiting time between subsequent reports within the "waitTime" attribute

- when the NEF receives the event notification as defined in subclause 4.4.2 of 3GPP TS 29.508 [26] or subclause 4.2.5.x of 3GPP TS 29.514 [7], the NEF shall include the QoS monitoring report within the "qosMonReport" attribute. Within the QosMonitoringReport data structure, the NEF shall include:

- one or two uplink packet delays within the "ulDelays" attribute;

- one or two downlink packet delays within the "dlDelays" attribute; and/or

- one or two round trip packet delays within the "rtDelays" attribute.

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

## 5.3 Reused APIs

This subclause describes the northbound APIs which are applicable for both EPS and 5GS.

Table 5.3-1: Reused APIs applicable for both EPS and 5GS

|  |  |
| --- | --- |
| API Name | Differences |
| ResourceManagementOfBdt | * The "LocBdt\_5G" feature as described in subclause 5.4.4 of 3GPP TS 29.122 [4] may only be supported in 5G. * The "Group\_Id" feature as described in subclause 5.4.4 of 3GPP TS 29.122 [4] may be supported in 5G. * The "BdtNotification\_5G" feature as described in subclause 5.4.4 of 3GPP TS 29.122 [4] may only be supported in 5G. |
| PfdManagement | The "FailureLocation\_5G" feature as described in subclause 5.11.4 of 3GPP TS 29.122 [4] may only be supported in 5G. |
| MonitoringEvent | * The "Number\_of\_UEs\_in\_an\_area\_notification\_5G" feature as described in subclause 5.3.4 of 3GPP TS 29.122 [4] may only be supported in 5G. * The "Downlink\_data\_delivery\_status\_5G" feature as described in subclause 5.3.4 of 3GPP TS 29.122 [4] may only be supported in 5G. * The "Availability\_after\_DDN\_failure\_notification\_enhancement" feature as described in subclause 5.3.4 of 3GPP TS 29.122 [4] may only be supported in 5G. |
| DeviceTriggering |  |
| CpProvisioning | * The "ExpectedUMT\_5G" and "ExpectedUmtTime\_5G" features as described in subclause 5.10.4 of 3GPP TS 29.122 [4] may only be supported in 5G. * The "ScheduledCommType\_5G" feature as described in subclause 5.10.4 of 3GPP TS 29.122 [4] may only be supported in 5G. |
| ChargeableParty | * The "EthChgParty\_5G" and "MacAddressRange\_5G" features as described in subclause 5.5.4 of 3GPP TS 29.122 [4] may only be supported in 5G. * The events (i.e. LOSS\_OF\_BEARER, RECOVERY\_OF\_BEARER and RELEASE\_OF\_BEARER) do not apply for 5G. |
| AsSessionWithQoS | * The "EthAsSessionQoS\_5G", "MacAddressRange\_5G" and "QoSMonitoring\_5G" features as described in subclause 5.14.4 of 3GPP TS 29.122 [4] may only be supported in 5G. * The events (i.e. LOSS\_OF\_BEARER, RECOVERY\_OF\_BEARER and RELEASE\_OF\_BEARER) do not apply for 5G. |
| MsisdnLessMoSms |  |
| NpConfiguration | The "NpExpiry\_5G” feature as described in subclause 5.13.4 of 3GPP TS 29.122 [4] may only be supported in 5G. |
| NIDD |  |
| RacsParameterProvisioning |  |
| ECRControl |  |

\*\*\* End of Change \*\*\*