**3GPP TSG-CT WG3 Meeting #142 *C3-253574***

**Gothenburg, SE, 25 - 29 August 2025 (Revision of C3-253085)**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0952** | **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 |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | handling update | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | C3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | XRM\_Ph2 | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The "avlBitrateUlThrs" and "avlBitrateDlThrs" attributes are optional, the corresponding details has to be updated in the data model. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The "avlBitrateUlThrs" and "avlBitrateDlThrs" attributes’s presence condition is updated as 0..N. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The "avlBitrateUlThrs" and "avlBitrateDlThrs" attributes are mandated as per the data model. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.14.2.1.6, 5.14.2.1.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 impact the OpenAPI descriptions defined in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

##### 5.14.2.1.6 Type: QosMonitoringInformation

Table 5.14.2.1.6-1: Definition of type QosMonitoringInformation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | Cardinality | Description | Applicability |
| reqQosMonParams | array(RequestedQosMonitoringParameter) | 1..N | Indicates the QoS information to be measured, e.g.UL packet delay, DL packet delay and/or round trip packet delay between the UE and the UPF is to be monitored when the QoS Monitoring for packet delay is enabled for the service data flow.  If the "EnQoSMon" feature is supported, the indication of QoS monitoring for congestion (e.g., the UL and/or the DL congestion indication) or data rate (e.g., the UL and/or the DL data rate indication) may also be provided.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates whether PDV measurement is for the UL, DL and/or round trip packet delay.  If the "EnQoSMon" feature is supported and the "RT\_DELAY\_TWO\_QOS\_FLOWS" event is subscribed, it indicates round trip packet delay.  If the "ListUE\_5G" feature is supported, the indication of QoS monitoring for consolidated data rate (e.g., the UL and/or the DL data rate indication) may also be provided. |  |
| repFreqs | array(ReportingFrequency) | 1..N | Indicates the frequency for the reporting, such as event triggeredand/or periodic. |  |
| repThreshDl | Uinteger | 0..1 | Unsigned integer identifying a threshold in units of milliseconds for DL packet delay measurement reports.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates the threshold for DL PDV measurement reports.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK". |  |
| repThreshUl | Uinteger | 0..1 | Unsigned integer identifying a threshold in units of milliseconds for UL packet delaymeasurement reports.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates the threshold for UL PDV measurement reports.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK". |  |
| repThreshRp | Uinteger | 0..1 | Unsigned integer identifying a threshold in units of milliseconds for round trip packet delay measurement reports.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates the threshold for round trip PDV measurement reports.  If the "EnQoSMon" feature is supported and the "RT\_DELAY\_TWO\_QOS\_FLOWS" event is subscribed, it indicates the threshold for round trip delay for two QoS flows (i.e. the UL traffic and DL traffic of the service data flow are separated into two QoS flows respectively) measurement reports.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "ROUND\_TRIP". |  |
| conThreshDl | Uinteger | 0..1 | Indicates the downlink threshold for congestion reporting, i.e. for the reporting of the received ECN marking percentage for DL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK\_CONGESTION". | EnQoSMon, GMEC |
| conThreshUl | Uinteger | 0..1 | Indicates the uplink threshold for the congestion reporting, i.e. for the reporting of the received ECN marking percentage for UL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK\_CONGESTION". | EnQoSMon, GMEC |
| waitTime | DurationSec | 0..1 | Indicates the minimum waiting time between subsequent reports. It shall be present when the "repFreqs" attribute includes "EVENT\_TRIGGERED". |  |
| repPeriod | DurationSec | 0..1 | Indicates the time interval between successive reporting. It shall be present when the "repFreqs" attribute includes "PERIODIC".  If the feature "PacketDelayFailureReport" is supported, it also indicates the time interval at which a packet delay measurement failure needs to be reported if no measurement result is provided. It shall be present when the requested QoS monitoring parameter is packet delay and when the "repFreqs" attribute includes "PERIODIC" or "EVENT\_TRIGGERED". |  |
| repThreshDatRateDl | BitRate | 0..1 | Indicates the bit rate threshold for the DL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK\_DATA\_RATE". | EnQoSMon, GMEC |
| repThreshDatRateUl | BitRate | 0..1 | Indicates the bit rate threshold for the UL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK\_DATA\_RATE". | EnQoSMon, GMEC |
| consDataRateThrDl | BitRate | 0..1 | Indicates the Downlink Consolidated Data Rate Threshold.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK\_DATA\_RATE". | ListUE\_5G |
| consDataRateThrUl | BitRate | 0..1 | Indicates the Uplink Consolidated Data Rate Threshold.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK\_DATA\_RATE". | ListUE\_5G |
| avlBitrateUlThrs | array(BitRate) | 0..N | Indicates a list of thresholds for uplink available bitrate reporting.  (NOTE) | EnQoSMon\_v2 |
| avlBitrateDlThrs | array(BitRate) | 0..N | Indicates a list of thresholds for downlink available bitrate reporting.  (NOTE) | EnQoSMon\_v2 |
| NOTE: The "avlBitrateUlThrs" and "avlBitrateDlThrs" attributes are only applicable when the "repFreqs" attribute is not supplied or the "repFreqs" is supplied and set to "EVENT\_TRIGGERED", and may contain the bitrate values, the value equal to the Requested Guaranteed Bitrate and the value equal to the Requested Maximum Bitrate (in case it is different). | | | | |

\* \* \* \* Next changes \* \* \* \*

##### 5.14.2.1.7 Type: QosMonitoringInformationRm

This type represents a QoS Monitoring Information which is defined in clause 5.14.2.1.7 but, if the "EnQoSMon" feature is supported, defined with "nullable: true" property so it can be removed in "JSON Merge Patch", as defined in IETF RFC 7396 [39]. It shall comply with the provisions defined in table 5.14.2.1.7-1.

The "repThreshDl", "repThreshUl", "repThreshRp", "conThreshDl", "conThreshUl", "waitTime", "repPeriod", "repThreshDatRateDl", "repThreshDatRateUl", "consDataRateThrDl" and "consDataRateThrUl" are also removable attributes with "JSON Merge Patch".

Table 5.14.2.1.7-1: Definition of type QosMonitoringInformationRm

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | Cardinality | Description | Applicability |
| reqQosMonParams | array(RequestedQosMonitoringParameter) | 0..N | Indicates the QoS information to be measured, e.g.UL packet delay, DL packet delay and/or round trip packet delay between the UE and the UPF is to be monitored when the QoS Monitoring for packet delay is enabled for the service data flow.  If the "EnQoSMon" feature is supported, the indication of QoS monitoring for congestion (e.g., the UL and/or the DL congestion indication) or data rate (e.g., the UL and/or the DL data rate indication) may also be provided.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates whether PDV measurement is for the UL, DL and/or round trip packet delay.  If the "EnQoSMon" feature is supported and the "RT\_DELAY\_TWO\_QOS\_FLOWS" event is subscribed, it indicates round trip packet delay.  If the "ListUE\_5G" feature is supported, the indication of QoS monitoring for consolidated data rate (e.g., the UL and/or the DL data rate indication) may also be provided. |  |
| repFreqs | array(ReportingFrequency) | 0..N | Indicates the frequency for the reporting, such as event triggered and/or periodic. |  |
| repThreshDl | UintegerRm | 0..1 | Unsigned integer identifying a threshold in units of milliseconds for DL packet delay measurement reports.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates the threshold for DL PDV measurement reports.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK". |  |
| repThreshUl | UintegerRm | 0..1 | Unsigned integer identifying a threshold in units of milliseconds for UL packet delay measurement reports.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates the threshold for UL PDV measurement reports.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK". |  |
| repThreshRp | UintegerRm | 0..1 | Unsigned integer identifying a threshold in units of milliseconds for round trip packet delay measurement reports.  If the "EnQoSMon" feature is supported and the "PACK\_DELAY\_VAR" event is subscribed, it indicates the threshold for round trip PDV measurement reports.  If the "EnQoSMon" feature is supported and the "RT\_DELAY\_TWO\_QOS\_FLOWS" event is subscribed, it indicates the threshold for round trip delay for two QoS flows (i.e. the UL traffic and DL traffic of the service data flow are separated into two QoS flows respectively) measurement reports.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "ROUND\_TRIP". |  |
| conThreshDl | UintegerRm | 0..1 | Indicates the downlink threshold for congestion reporting, i.e. for the reporting of the received ECN marking percentage for DL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK\_CONGESTION". | EnQoSMon, GMEC |
| conThreshUl | UintegerRm | 0..1 | Indicates the uplink threshold for congestion reporting, i.e. for the reporting of the received ECN marking percentage for UL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK\_CONGESTION". | EnQoSMon, GMEC |
| waitTime | DurationSecRm | 0..1 | Indicates the minimum waiting time between subsequent reports. It shall be present when the "repFreqs" attribute includes "EVENT\_TRIGGERED". |  |
| repPeriod | DurationSecRm | 0..1 | Indicates the time interval between successive reporting. It shall be present when the "repFreqs" attribute includes "PERIODIC".  If the feature "PacketDelayFailureReport" is supported, it also indicates the time interval at which a packet delay measurement failure needs to be reported if no measurement result is provided. It shall be present when the requested QoS monitoring parameter is packet delay and when the "repFreqs" attribute includes "PERIODIC" or "EVENT\_TRIGGERED". |  |
| repThreshDatRateDl | BitRateRm | 0..1 | Indicates the bit rate threshold for the DL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK\_DATA\_RATE". | EnQoSMon, GMEC |
| repThreshDatRateUl | BitRateRm | 0..1 | Indicates the bit rate threshold for the UL. Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK\_DATA\_RATE". | EnQoSMon, GMEC |
| consDataRateThrDl | BitRateRm | 0..1 | Indicates the Downlink Consolidated Data Rate Threshold.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "DOWNLINK\_DATA\_RATE". | ListUE\_5G |
| consDataRateThrUl | BitRateRm | 0..1 | Indicates the Uplink Consolidated Data Rate Threshold.  Only applicable when the "repFreqs" attribute includes "EVENT\_TRIGGERED" and the "reqQosMonParams" attribute includes "UPLINK\_DATA\_RATE". | ListUE\_5G |
| avlBitrateUlThrs | array(BitRateRm) | 0..N | Indicates a list of thresholds for uplink available bitrate reporting.  (NOTE) | EnQoSMon\_v2 |
| avlBitrateDlThrs | array(BitRateRm) | 0..N | Indicates a list of thresholds for downlink available bitrate reporting.  (NOTE) | EnQoSMon\_v2 |
| NOTE: The "avlBitrateUlThrs" and "avlBitrateDlThrs" attributes are only applicable when the "repFreqs" attribute is not supplied or the "repFreqs" is supplied and set to "EVENT\_TRIGGERED", and may contain the bitrate values, the value equal to the Requested Guaranteed Bitrate and the value equal to the Requested Maximum Bitrate. | | | | |

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