**3GPP TSG-SA5 Meeting #162 *S5-253947***

Goteborg, Sweden, 25 - 29 August 2025

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **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 | **x** |

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| ***Title:***  | Rel-19 CR TS 28.554 Editorial Corrections for Retainability KPI Definition |
|  |  |
| ***Source to WG:*** | Nokia |
| ***Source to TSG:*** | SA5 |
|  |  |
| ***Work item code:*** | PM\_KPI\_5G\_Ph4 |  | ***Date:*** | 2025-08-15 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-19 |
|  | *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 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | Editorial correction for Retainability KPI Definition |
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| ***Summary of change:*** | Editorial correction |
|  |  |
| ***Consequences if not approved:*** | Editorial erros in the specification |
|  |  |
| ***Clauses affected:*** | 6.5.1.2 |
|  |  |
|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

***Start of First change***

### 6.5.1 QoS flow Retainability

#### 6.5.1.1 Definition

a) QoSRetain\_R1, QoSRetain\_R2.

b) This KPI shows how often an end-user abnormally loses a QoS flow during the time the QoS flow is used. It is obtained by number of QoS flows with data in a buffer that was abnormally released, normalized with number of data session time units. The unit of this KPI is “active release / second”. The KPI type is MEAN.

c) To measure QoS flow Retainability for a single QoS level (R1) is fairly straight forward.

However to measure the QoS flow Retainability for UEs is not as straight forward. The measurement R1 is defined to look at the activity level of just one QoS level at the time, so to use this formula and measurements in an aggregated way to get QoS flow Retainability on UE level will not be accurate (e.g. for an UE with multiple QoS flows there might be QoS flows that are active at the same time, hence aggregating the QoS level measurements for session time will give a larger session time than the total UE session time. See picture below).


Hence a measurement QoS flow Retainability on UE level is defined (R2) to provide a measurement for the overall QoS flow Retainability.

d) SubNetwork, NRCellCU

e) The definition of the service provided by 5GS is QoS flows.

#### 6.5.1.2 Extended definition

The retainability rate is defined as:



To define (from a QoS flow Retainability point of view) if a QoS flow is considered active or not, the QoS flows can be divided into two groups:

- For QoS flows with bursty flow, a QoS flow is said to be active if there is user data in the PDCP queue in any of the directions or if any data (UL or DL) has been transferred during the last 100 ms.

- For QoS flows with continuous flow, the QoS flow (and the UE) is seen as being active in the context of this measurement as long as the UE is in RRC connected state, and the session time is increased from the first data transmission on the QoS flow until 100 ms after the last data transmission on the QoS flow.

A particular QoS flow is defined to be of type continuous flow if the mapped 5QI is any of {1, 2, 65, 66}.

***End of change***