**3GPP TSG- Meeting # *rev1***

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
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| *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:*** |  | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
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| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | The measurements name is faulty and needs correction | | | | | | | | |
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| ***Summary of change:*** | | Corrected the Packet Loss Rate measurement name:   * DRB.PacketLossRateUl.*SNSSAI* changed toDRB.PacketLossRateUl and * DRB.F1UPacketLossRateUl.S*NSSAI* changed toDRB.F1UPacketLossRateUl and * DRB.F1UPacketLossRateDl.*SNSSAI* changed toDRB.F1UPacketLossRateDl | | | | | | | | |
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| ***Consequences if not approved:*** | | The measurement name will be incorrect in specification | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.3.1.1, 5.1.3.1.2, 5.1.3.1.3 | | | | | | | | |
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|  | | **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:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

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| **1st modified section** |

#### 5.1.3.1 Packet Loss Rate

##### 5.1.3.1.1 UL PDCP SDU Loss Rate

a) This measurement provides the fraction of PDCP SDU packets which are not successfully received at gNB-CU-UP. It is a measure of the UL packet loss including any packet losses in the air interface, in the gNB-CU and on the F1-U interface. Only user-plane traffic (DTCH) and only PDCP SDUs that have entered PDCP (and given a PDCP sequence number) are considered. The measurement is optionally split into subcounters per QoS level (mapped 5QI or QCI in NR option 3), and subcounters per supported S-NSSAI.

b) SI.

c) This measurement is obtained as: 1000000\* Number of missing UL PDCP sequence numbers, representing packets that are not delivered to higher layers, of a data radio bearer, divided by Total number of UL PDCP sequence numbers (also including missing sequence numbers) of a bearer, starting from the sequence number of the first packet delivered by UE PDCP to gNB-CU-UP until the sequence number of the last packet. If transmission of a packet might continue in another cell, it shall not be included in this count. Separate counters are optionally maintained for mapped 5QI (or QCI for NR option 3) and per supported S-NSSAI.

d) Each measurement is an integer value representing the loss rate multiplied by 1E6. The number of measurements is equal to one. If the optional QoS and S-NSSAI level measurements are perfomed, the measurements are equal to the number of mapped 5QIs and the number of supported S-NSSAIs.

e) The measurement name has the form DRB.PacketLossRateUl and optionally DRB.PacketLossRateUl.*QOS* where *QOS* identifies the target quality of service class, and DRB.PacketLossRateUl.*SNSSAI* where *SNSSAI* identifies the S-NSSAI.

f) GNBCUUPFunction.

NRCellCU.

g) Valid for packet switched traffic.

h) 5GS.

i) One usage of this measurement is for performance assurance within integrity area (user plane connection quality). NRCellCU measurement applies only for 2-split deployment.

##### 5.1.3.1.2 UL F1-U Packet Loss Rate

a) This measurement provides the fraction of PDCP SDU packets which are not successfully received at gNB-CU-UP. It is a measure of the UL packet loss on the F1-U interface. The measurement is optionally split into subcounters per QoS level (mapped 5QI or QCI in NR option 3) and subcounters per supported S-NSSAI.

b) SI

c) This measurement is obtained as: 1000000\* Number of missing UL GTP sequence numbers (TS 29.281), representing packets that are not delivered to higher layers, of a data radio bearer, divided by Total number of UL GTP sequence numbers (also including missing sequence numbers) of a bearer, starting from the GTP sequence number of the first packet delivered by gNB-DU to gNB-CU-UP until the GTP sequence number of the last packet. Separate counters are optionally maintained for mapped 5QI (or QCI for option 3) and per supported S-NSSAI.

d) Each measurement is an integer value representing the loss rate multiplied by 1E6. The number of measurements is equal to one. If the optional QoS and S-NSSAI level measurement are perfomed, the measurements are equal to the number of mapped 5QIs and the number of supported S-NSSAIs.

e) The measurement name has the form DRB.F1UPacketLossRateUl and optionally DRB.F1UPacketLossRateUl.*QOS* where *QOS* identifies the target quality of service class, and DRB.F1UPacketLossRateUl.S*NSSAI* where *SNSSAI* identifies the S-NSSAI.

f) GNBCUUPFunction

g) Valid for packet switched traffic

h) 5GS

i) One usage of this measurement is for performance assurance within integrity area (user plane connection quality).

##### 5.1.3.1.3 DL F1-U Packet Loss Rate

a) This measurement provides the fraction of PDCP SDU packets which are not successfully received at the gNB-DU). It is a measure of the DL packet loss on the F1-U interface. The measurement is optionally split into subcounters per QoS level (mapped 5QI or QCI in NR option 3), and subcounters per supported S-NSSAI.

b) SI

c) This measurement is obtained as: 1000000\* Number of missing DL GTP sequence numbers (TS 29.281), representing packets that are not delivered to lower layers, of a data radio bearer, divided by Total number of UL GTP sequence numbers (also including missing sequence numbers) of a bearer, starting from the sequence number of the first packet delivered by gNB-CU-UP to gNB-DU until the GTP sequence number of the last packet. Separate counters are optionally maintained for mapped 5QI (or QCI for NR option 3) and per supported S-NSSAI.

d) Each measurement is an integer value representing the loss rate multiplied by 1E6. The number of measurements is equal to one. If the optional QoS and S-NSSAI level measurement are perfomed, the measurements are equal to the number of mapped 5QIs and the number of supported S-NSSAIs.

e) The measurement name has the form DRB.F1UPacketLossRateDl and optionally DRB.F1UPacketLossRateDl.*QOS* where *QOS* identifies the target quality of service class, and DRB.F1UPacketLossRateDl.*SNSSAI* where *SNSSAI* identifies the S-NSSAI.

f) NRCellDU

g) Valid for packet switched traffic

h) 5GS

i) One usage of this measurement is for performance assurance within integrity area (user plane connection quality).

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| ***End of changes*** |