**3GPP TSG- Meeting #**

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| *CR-Form-v12.0* |
| **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 |  |

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|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** |  |  | ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | 3gpp TS 28.554 clause 6.3.23 defines following KPIs:*Uplink: UTSNSI “Upstream throughput for network and Network Slice Instance”**Downlink: DTSNSI “Downstream throughput for Single Network Slice Instance”*These KPIs are calculated using following Performance Measurements defined in 3gpp TS 28.522 clause 5.4.1.3/4Uplink: GTP.InDataOctN3UPF “Number of octets of incoming GTP data packets on the N3 interface, from (R)AN to UPF”Downlink: GTP.OutDataOctN3UPF “Number of octets of outgoing GTP data packets on the N3 interface, from UPF to (R)AN”However, the mesurements used are not provided per silce. Hence, the KPIs (UTSNSI, DTSNSI) cannot be claculated correctly. We need to define measurements per slice on UPF. |
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| ***Summary of change:*** | Proposing slice specific sub-counters to the existing measurement on UPF. |
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| ***Consequences if not approved:*** | UTSNSI and DTSNSI KPIs will not work. |
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| ***Clauses affected:*** | 5.4.1 |
|  |  |
|  | **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's revision history:*** |  |

### 5.4.1 N3 interface related measurements

#### 5.4.1.1 Number of incoming GTP data packets on the N3 interface, from (R)AN to UPF

a) This measurement provides the number of GTP data PDUs on the N3 interface which have been accepted and processed by the GTP-U protocol entity on the N3 interface. The measurement can be split into subcounters per NSI identifier (S-NSSAI).

b) CC

c) Reception by the UPF of a GTP-U data PDU on the N3 interface from the (R)AN. See TS 23.501 [4].

d) A single integer value.

e) GTP.InDataPktN3UPF.SNSSAI

f) EP\_N3

g) Valid for packet switching.

h) 5GS

#### 5.4.1.2 Number of outgoing GTP data packets of on the N3 interface, from UPF to (R)AN

a) This measurement provides the number of GTP data PDUs on the N3 interface which have been generated by the GTP-U protocol entity on the N3 interface. The measurement can be split into subcounters per NSI identifier (S-NSSAI).

b) CC

c) Transmission by the UPF of a GTP-U data PDU of on the N3 interface to the (R)AN. See TS 23.501 [4].

d) A single integer value.

e) GTP.OutDataPktN3UPF.SNSSAI

f) EP\_N3

g) Valid for packet switching.

h) 5GS

#### 5.4.1.3 Number of octets of incoming GTP data packets on the N3 interface, from (R)AN to UPF

a) This measurement provides the number of octets of incoming GTP data packets on the N3 interface which have been generated by the GTP-U protocol entity on the N3 interface. The measurement can be split into subcounters per NSI identifier (S-NSSAI).

b) CC

c) Reception by the UPF of a GTP-U data PDU on the N3 interface from (R)AN. See TS 23.501 [4].

d) A single integer value

e) GTP.InDataOctN3UPF.SNSSAI

f) EP\_N3

g) Valid for packet switching

h) 5GS

#### 5.4.1.4 Number of octets of outgoing GTP data packets on the N3 interface, from UPF to (R)AN

a) This measurement provides the number of octets of outgoing GTP data packets on the N3 interface which have been generated by the GTP-U protocol entity on the N3 interface. The measurement can be split into subcounters per NSI identifier (S-NSSAI).

b) CC

c) Transmission by the UPF of a GTP-U data PDU on the N3 interface to the(R)AN, .See TS 23.501 [4].

d) A single integer value

e) GTP.OutDataOctN3UPF.SNSSAI

f) EP\_N3

g) Valid for packet switching

h) 5GS