**3GPP TSG-SA5 Meeting #131e *S5-203060rev1***

**25 May to 03 June 2020, E-meeting**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v11.4* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.552** | **CR** | **0229** | **rev** | **-** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | Add measurements on N9 interface for UPF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Intel | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_SLICE\_ePA | | | | |  | ***Date:*** | | | 2020-05-15 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | The measurements related to data volume and number of GTP data packets on N9 interface are missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Added measurements related to data volume and number of GTP data packets on N9 interface. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The data volume and number of GTP data packets on N9 interface cannot be monitored. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.4.4.x (new), A.x (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

|  |
| --- |
| **1st Modified Section** |

#### 5.4.4.x GTP Data Packets and volume on N9 interface

##### 5.4.4.x.1 Number of incoming GTP data packets on the N9 interface for PSA UPF

a) This measurement provides the number of GTP data PDUs received on the N9 interface by the PSA UPF. This measurement is optionally split into subcounters per S-NSSAI.

b) CC

c) Reception by the PSA UPF of a GTP-U data PDU on the N9 interface from the I-UPF, see TS 23.501 [4].

d) Each measurement is an integer value.

e) GTP.InDataPktN9PsaUpf, and optionally  
GTP.InDataPktN9PsaUpf.*SNSSAI,* where *SNSSAI* identifies the S-NSSAI.

f) EP\_N9

g) Valid for packet switching.

h) 5GS

##### 5.4.4.x.2 Number of outgoing GTP data packets of on the N9 interface for PSA UPF

a) This measurement provides the number of GTP data PDUs sent on the N9 interface by the PSA UPF. This measurement is optionally split into subcounters per S-NSSAI.

b) CC

c) Transmission by the PSA UPF of a GTP-U data PDU of on the N9 interface to the I-UPF, see TS 23.501 [4].

d) Each measurement is an integer value.

e) GTP.OutDataPktN9PsaUpf, and optionally  
GTP.OutDataPktN9PsaUpf.*SNSSAI,* where *SNSSAI* identifies the S-NSSAI

f) EP\_N9

g) Valid for packet switching.

h) 5GS

##### 5.4.4.x.3 Number of octets of incoming GTP data packets on the N9 interface for PSA UPF

a) This measurement provides the number of octets of GTP data PDUs received on the N9 interface by the PSA UPF. This measurement is optionally split into subcounters per S-NSSAI.

b) CC

c) Reception by the PSA UPF of a GTP-U data PDU on the N9 interface from the I-UPF, see TS 23.501 [4].

d) Each measurement is an integer value.

e) GTP.InDataOctN9PsaUpf, and optionally  
GTP.InDataOctN9PsaUpf.*SNSSAI,* where *SNSSAI* identifies the S-NSSAI.

f) EP\_N9

g) Valid for packet switching

h) 5GS

##### 5.4.4.x.4 Number of octets of outgoing GTP data packets on the N9 interface for PSA UPF

a) This measurement provides the number of octets of outgoing GTP data PDUs sent on the N9 interface by the PSA UPF. This measurement is optionally split into subcounters per S-NSSAI.

b) CC

c) Transmission by the PSA UPF of a GTP-U data PDU of on the N9 interface to the I-UPF, see TS 23.501 [4].

d) Each measurement is an integer value.

e) GTP.OutDataOctN9PsaUpf and optionally  
GTP.OutDataOctN9PsaUpf.*SNSSAI,* where *SNSSAI* identifies the S-NSSAI.

f) EP\_N9

g) Valid for packet switching

h) 5GS

|  |
| --- |
| **Next Modified Sections** |

# A.x Monitoring of GTP data packets and volume on N9 interface

In 5GC, the user plane data traffic is transmitted on N9 interface between PSA UPF and I-UPF. The data volume of GTP data packets on N9 interface is helpful for operators to understand the traffic distribution of the 5GC, and evaluate and optimize the bandwidth of the N9 interface. The number of GTP packets on the N9 interface is relevant to the packets processing that may result in larger or smaller packet delay on the interface.

Therefore, the data volume and number of GTP data packets on the N9 interface need to be monitored.

To support the resource allocation and optimization on N9 interface for the network slicing, the data volume and GTP data packets need to be monitored for each S-NSSAI.

|  |
| --- |
| **End of Modified Sections** |