**3GPP TSG- Meeting #**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** | **1** | **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 |  | Core Network | **X** |

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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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | Monitoring of access state is intended to provide information on the availability or unavailability of an access of MA PDU session. Therefore, it is necessary to add the measurement of access state for MA PDU session. |
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| ***Summary of change:*** | Add PMF related measurements：- Number of access state for MA PDU session |
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| ***Consequences if not approved:*** | Cannot monitor the access state for the MA PDU session. |
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| ***Clauses affected:*** | 5.4.13.x(new), A.133 |
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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 ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** | Revison of S5-243979. |

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| **1st change** |

## 5.4 Performance measurements for UPF

### 5.4.13 PMF related measurements

5.4.13.x Number of access state for MA PDU session

a) This measurement provides the access state of the MA PDU by the number of Access Availability report sent to the UPF by the UE. The measurement is filtered per access availability state (3GPP and non-3GPP acess both available, only 3GPP acess available, only non-3GPP acess available and neither of 3GPP nor non-3GPP acess available). Encoding of the access availability state information element is defined in in table 6.2.2.3-1 clause 6.2.2.3 of TS 24.193 [67].

b) CC.

c) On Receipt of PMFP ACCESS REPORT message containing *Access availability state* IE by UPF from UE. Each received PMFP ACCESS REPORT message indicating *Access availability state* IE increments the relevant subcounter per access availability state by 1. Access Availability reports in case of IPv4v6 only one IP address type is counted.

d) Each subcounter is an integer value.

e) GTP.Access3GPP\_*state*

Where *state* identifies the access availability state.

f) EP\_N3 (contained by UPFFunction);
EP\_N9 (contained by UPFFunction).

g) Valid for packet switched traffic.

h) 5GS.

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| **2nd change** |

# A.133 Use case of measurements related to ATSSS rules

The ATSSS feature enables a multi-access PDU Connectivity Service, which can exchange PDUs between the UE and a data network by simultaneously using one 3GPP access network and one non-3GPP access network and two independent N3/N9 tunnels between the PSA and RAN/AN.

ATSSS rules/N4 rules are applied by UE/UPF for deciding how to distribute the downlink/uplink traffic across the two access networks. The PMF protocol enables messages to be exchanged between the PMF in the UE and the PMF in the UPF, e.g. RTT measurements for ATSSS-LL control, reporting of access availability/unavailability, PLR measurements for ATSSS-LL, etc.

The RTT measurements are defined to support several steering modes such as "Smallest Delay", "Load Balancing", "Priority-based" and "Redundant". The number of RTT measurements requests and responses will reflect whether the RTT values is available. These measurements provide reference to help operators to identify whether the steering mode in the ATSSS rules is implemented as expected.

The Access Availability report can help distribute the QoS flow over different accesses in several steering modes. The number of access state measurement will reflect if an access of MA PDU session is available.

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| **End of change** |