**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:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Currently measurements for the DRB Setup comprise all possible setup procedures. To support the monitor of success or failure of the call(/session) setup the monitoring shall differentiate between the DRB Setup executed via Initial Context setup and via PDU Session Resource Setup/Modify procedures. The need for such division is also according to A.29 within the 3GPP TS 28.552. | | | | | | | | |
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| ***Summary of change:*** | | Add new measurements related to DRB Setup attempt/success via Initial Context Setup procedure.  Correction of faulty reference in 5.1.1.13.3.3 | | | | | | | | |
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| ***Consequences if not approved:*** | | Monitor of the attempt/success of the DRB setup via Initial Context Setup is not possible. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.1.10.x, 5.1.1.10.y, A.29, 5.1.1.13.3.3 | | | | | | | | |
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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:*** | | For QoS flow, similar measurements are defined in 5.1.1.13.3.4 and in 5.1.1.13.3.5 | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

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| **1st Modified Section** |

5.1.1.10.x Number of Initial DRBs attempted to setup

a) This measurement provides the number of initial DRBs attempted to setup to support all requested QoS flows in the PDU sessions to be setup by the INITIAL CONTEXT SETUP REQUEST messages received by the gNB from AMF. This measurement is optionally split into subcounters per mapped 5QI and per S-NSSAI.

b) CC.

c) On receipt of "PDU Session Resource Setup Request List" IE in an INITIAL CONTEXT SETUP REQUEST message (see 3GPP TS 38.413 [11]) to gNB from the AMF. Each DRB that is needed to setup in the transmitted RRCReconfiguration message increments the relevant subcounter per mapped 5QI by 1, and optionally the relevant subcounter per S-NSSAI by 1.

d) Each measurement is an integer value.

e) The measurement name has the form.

DRB.InitialEstabAtt.*5QI* where *5QI* identifies the mapped 5QI and

DRB.InitialEstabAtt.*SNSSAI,* where SNSSAIidentifies the S-NSSAI.

f) NRCellCU.

g) Valid for packet switched traffic.

h) 5GS.

i) One usage of this performance measurements is for performance assurance.

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| **Next Modified Section** |

5.1.1.10.y Number of Initial DRBs successfully setup

a) This measurement provides the number of initial DRBs successfully setup to support all requested QoS flows in the PDU sessions to be setup by the INITIAL CONTEXT SETUP REQUEST messages received by the gNB from AMF. This measurement is optionally split into subcounters per mapped 5QI and per S-NSSAI.

b) CC.

c) On transmission of INITIAL CONTEXT SETUP RESPONSE message containing the "PDU Session Resource Setup Response List" IE (see 3GPP TS 38.413 [11]) from the gNB to the AMF. The counter increases by the number of DRBs that was successfully setup indicated by the RRCReconfigurationComplete message from the UE, as the response to the transmitted RRCReconfiguration message that contains the DRBs to add (see 3GPP TS 38.331[20]). Each DRB that was successfully setup to the UE increments the relevant subcounter per mapped 5QI by 1, and optionally the relevant subcounter per S-NSSAI by 1.

d) Each measurement is an integer value.

e) The measurement name has the form:

DRB.InitialEstabSucc.*5QI* where *5QI* identifies the mapped 5QI and

DRB.InitialEstabSucc.*SNSSAI* where SNSSAIidentifies the S-NSSAI.

f) NRCellCU.

g) Valid for packet switched traffic.

h) 5GS.

i) One usage of this performance measurements is for performance assurance.

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| **Next Modified Section** |

# A.29 Monitor of call (/session) setup performance

Call(/session) setup is one of most important step to start delivering services by the networks to users.

The success or failure of a call(/session) setup directly impacts the quality level for delivering the service by the networks, and also the feeling of the end user. So the success or failure of call(/session) setup needs be monitored, this can be achieved by the calculation of call setup success rate which gives a direct view to evaluate the call setup performance, and the analysis of the specific reason causing the failure to find out the problem and ascertain the solutions.

In addition, the time duration of the call(/session) setup need to be monitored as it impacts the end user experience, and by comparison with operator’s benchmark requirements, the optimization may be required according the performance.

To support the monitor of success or failure of the call(/session) setup, the performance measurements related to PDU Session Resource Setup/modify (See 3GPP TS 38.413[11]) and Initial Context Setup (See 3GPP TS 38.413[11]) procedures for each QoS level and each S-NSSAI are needed.

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| **Next Modified Section** |

###### 5.1.1.13.3.3 Number of QoS flow failed to setup

a) This measurement provides the number of QoS flows failed to setup. The measurement is split into subcounters per failure cause.

b) CC.

c) On transmission by the NG-RAN of a PDU SESSION RESOURCE SETUP RESPONSE message, or transmission by the NG-RAN of a INITIAL CONTEXT SETUP RESPONSE message, or transmission by the NG-RAN of a PDU SESSION RESOURCE MODIFY RESPONSE message, each QoS flow failed to establish is added to the relevant measurement per cause, the possible causes are included in TS 38.413 [11]. The sum of all supported per cause measurements shall equal the total number of additional QoS flows failed to setup. In case only a subset of per cause measurements is supported, a sum subcounter will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the *.sum* suffix.

e) The measurement name has the form QF. EstabFailNbr.*Cause*  
where *Cause* identifies the cause resulting in the QoS flow setup failure.

f) NRCellCU.

g) Valid for packet switched traffic.

h) 5GS.

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| **End of Modified Section** |