**3GPP TSG-SA5 Meeting #137eS5-213052**

 **10 - 15 May 2021**

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| *CR-Form-v11.4* |
| **CHANGE REQUEST** |
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|  | **28.554** | **CR** | **0078** | **rev** | **-** | **Current version:** | **17.1.0** |  |
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| *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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | Rel-17 CR 28.554 Definition of the Total DRB Accessibility KPI . |
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| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** | ePM\_KPI\_5G |  | ***Date:*** | 2021-04-30 |
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| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *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)* |
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| ***Reason for change:*** | The definition of the KPI DRB Accessibility for UE services, in the TS 28.554, covering all possible ways the access can be executed (RRC Connection setup, RRC Resume procedure, added DRB setup and fallback to RRC Setup from RRC Resume or RRC Re-establishment procedures) is missing. |
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| ***Summary of change:*** | Addition of new KPI: DRB Accessibility for UE services. |
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| ***Consequences if not approved:*** | There is not KPI named “Total DRB Accessibility for UE services” covering all accesses. |
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| ***Clauses affected:*** | 6.2.x (new) |
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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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| **1st Modified Section** |

### 6.2.x Total DRB Accessibility for UE services

a) Total DRB Accessibility

b) This KPI describes the total DRBs accessibility obtained as the ratio of the number of successfully established DRBs and number of services intended to be setup by the end user that shall result into a DRB establishment via Initial Context setup procedure, Added DRB setup and RRC Resume procedure. The number of services intended to be setup by the end user that shall result into a DRB establishment via Initial Context setup procedure is obtained as number of attempted establishments of DRB via Initial Context setup procedure amplified by inverse of the UE-associated logical NG-connection success ratio further amplified by inverse of the RRC Connection setup state success ratio. The number of services intended to be setup by the end user that shall result into a DRB establishment via added DRB setup procedure is measured directly in gNB via number of attempted establishments of DRB via added DRB setup procedure. Finally the number of services intended to be setup by the end user that shall result into a DRB establishment via RRC Resume procedure is provided as number of attempted establishments of DRB via RRC Resume procedure amplified by inverse of the RRC Resume success ratio. The success rate for RRC connection setup and for UE-associated logical NG-connection setup shall exclude setups with establishment cause mo-Signalling [5]. The success rate for RRC resume shall exclude setups related to RNA update. It is a percentage. The KPI type is RATIO.

c) DRBAccessibility 5QI = 100 \* (DRB.InitialEstabSucc.5QI + (DRB.EstabSucc.5QI-DRB.InitialEstabSucc.5QI) + DRB.ResumeSucc.5QI)/( DRB.InitialEstabAtt.5QI/((RRC connection setup success rate /100)\*( UE-associated logical NG-connection success ratio/100)) + (DRB.EstabAtt.5QI-DRB.InitialEstabAtt.5QI) + DRB.ResumeAtt.5QI/( RRC Resume success rate/100))

DRBAccessibility SNSSAI = 100 \* (DRB.InitialEstabSucc. SNSSAI + (DRB.EstabSucc. SNSSAI -DRB.InitialEstabSucc. SNSSAI) + DRB.ResumeSucc. SNSSAI)/( DRB.InitialEstabAtt. SNSSAI /((RRC connection setup success rate /100)\*( UE-associated logical NG-connection success ratio /100)) + (DRB.EstabAtt. SNSSAI -DRB.InitialEstabAtt. SNSSAI) + DRB.ResumeAtt. SNSSAI /( RRC Resume success rate/100))

Where:

RRC Resume success rate = 100\* ∑RRC.ResumeSucc.cause /∑(RRC.ResumeAtt.cause - RRC.ResumeFallbackToSetupAtt.cause), where all but the causes related to RNA update shall be included.

RRC connection setup success rate = 100\* (∑(RRC.ConnEstabSucc.Cause + RRC.ResumeSuccByFallback.cause) + RRC.ReEstabSuccWithoutUeContext) /(∑(RRC.ConnEstabAtt.Cause + RRC.ResumeFallbackToSetupAtt.cause) + RRC.ReEstabFallbackToSetupAtt)

 UE-associated logical NG-connection success ratio = 100\*(∑UECNTXT.ConnEstabSucc.Cause/∑ UECNTXT.ConnEstabAtt.Cause)

The sum over causes shall exclude the establishment cause mo-Signalling [5].

The sum over causes for RRC resume shall exclude the causes related to RNA update [5].

For KPI on SubNetwork level the measurement shall be the averaged over all NRCellCUs in the SubNetwork

d) SubNetwork, NRCellCU.

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| **End of Modified Section** |