**3GPP TSG-SA5 Meeting #138e *S5-214149rev1***

**23 August to 31 August 2021, E-meeting**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.552** | **CR** | **0313** | **rev** | **1** | **Current version:** | **17.3.1** |  |
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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:*** | Add measurements related to UCMF provisioning for NEF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Intel | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | ePM\_KPI\_5G | | | | |  | ***Date:*** | | | 2021-08-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | 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 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)*  *Rel-17 (Release 17)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The UCMF is used for storage of dictionary entries corresponding to either PLMN-assigned or Manufacturer-assigned UE Radio Capability IDs.  Provisioning of Manufacturer-assigned UE Radio Capability ID entries in the UCMF is performed from an AF that interacts with the UCMF either directly or via the NEF.  Knowing the UE radio capabilities is critical for the 5G system to provide the appropriate control for the UE, missing the UE radio capabilities may cause discretional control for the UEs thus result in failures or performance degradation. Therefore, the performance measurements are needed to assess the performance of UCMF provisioning. | | | | | | | | |
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| ***Summary of change:*** | | Add the measurements related to UCMF provisioning for NEF. | | | | | | | | |
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| ***Consequences if not approved:*** | | The performance of UCMF provisioning for NEF cannot be monitored. | | | | | | | | |
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| ***Clauses affected:*** | | 3.3, 5.9.x (new), A.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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **1st modified section** |

## 3.3 Measurement family

The measurement names defined in the present document are all beginning with a prefix containing the measurement family name. This family name identifies all measurements which relate to a given functionality and it may be used for measurement administration.

The list of families currently used in the present document is as follows:

- DRB (measurements related to Data Radio Bearer).

- RRC (measurements related to Radio Resource Control).

- UECNTX (measurements related to UE Context).

- RRU (measurements related to Radio Resource Utilization).

- RM (measurements related to Registration Management).

- SM (measurements related to Session Management).

- GTP (measurements related to GTP Management).

- IP (measurements related to IP Management).

- PA (measurements related to Policy Association).

- MM (measurements related to Mobility Management).

- VR (measurements related to Virtualized Resource).

- CARR (measurements related to Carrier).

- QF (measurements related to QoS Flow).

- AT (measurements related to Application Triggering).

- SMS (measurements related to Short Message Service).

- PEE (measurements related to Power, Energy and Environment).

- NFS (measurements related to NF service).

- PFD (measurements related to Packet Flow Description).

- RACH (measurements related to Random Access Channel)

- MR (measurements related to Measurement Report)

- L1M (measurements related to Layer 1 Measurement)

- NSS (measurements related to Network Slice Selection)

- PAG (measurements related to Paging)

- NIDD (measurements related to Non-IP Data Delivery)

- EPP (measurements related to external parameter provisioning)

- TI (measurements related to traffic influence)

- CE (measurements related to Connection Establishment)

- SPP (measurements related to Service Parameter Provisioning)

- BDTP (measurements related to Background Data Transfer Policy)

- DM (measurements related to Data Management)

- BDTP (measurements related to Background Data Transfer Policy)

- UCM (measurements related to UE radio Capability Management)

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| **Next modified section** |

### 5.9.x UCMF provisioning

#### 5.9.x.1 UCMF dictionary entry creation

##### 5.9.x.1.1 Number of UCMF dictionary entry creation requests

a) This measurement provides the number of UCMF dictionary entry creation requests received by the NEF.

b) CC

c) Receipt of an Nnef\_UCMFProvisioning\_Create request by the NEF from an AF (see 3GPP TS 23.502 [7]).

d) An integer value

e) UCM.EntryCreateReq

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

##### 5.9.x.1.2 Number of successful UCMF dictionary entry creations

a) This measurement provides the number of successful UCMF dictionary entry creations at the NEF.

b) CC

c) Transmission of an Nnef\_UCMFProvisioning\_Create response by the NEF to an AF indicating a successful UCMF dictionary entry creation (see 3GPP TS 29.522 [44]).

d) An integer value

e) UCM.EntryCreateSucc

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

##### 5.9.x.1.3 Number of failed UCMF dictionary entry creations

a) This measurement provides the number of failed UCMF dictionary entry creations at the NEF.

b) CC

c) Transmission of an Nnef\_UCMFProvisioning\_Create response by the NEF to an AF indicating a failed UCMF dictionary entry creation (see 3GPP TS 29.522 [44]), each message increments the relevant subcounter per failure cause by 1.

d) Each subcounter is an integer value

e) UCM.EntryCreateFail.*cause*  
Where *cause* indicates the failure cause of the UCMF dictionary entry creation.

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

#### 5.9.x.2 UCMF dictionary entry update

##### 5.9.x.2.1 Number of UCMF dictionary entry update requests

a) This measurement provides the number of UCMF dictionary entry update requests received by the NEF.

b) CC

c) Receipt of an Nnef\_UCMFProvisioning\_Update request by the NEF from an AF (see 3GPP TS 23.502 [7]).

d) An integer value

e) UCM.EntryUpdateReq

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

##### 5.9.x.2.2 Number of successful UCMF dictionary entry updates

a) This measurement provides the number of successful UCMF dictionary entry updates at the NEF.

b) CC

c) Transmission of an Nnef\_UCMFProvisioning\_Update response by the NEF to an AF indicating a successful UCMF dictionary entry update (see 3GPP TS 29.522 [44]).

d) An integer value

e) UCM.EntryUpdateSucc

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

##### 5.9.x.2.3 Number of failed UCMF dictionary entry updates

a) This measurement provides the number of failed UCMF dictionary entry updates at the NEF.

b) CC

c) Transmission of an Nnef\_UCMFProvisioning\_Update response by the NEF to an AF indicating a failed UCMF dictionary entry update (see 3GPP TS 29.522 [44]), each message increments the relevant subcounter per failure cause by 1.

d) Each subcounter is an integer value

e) UCM.EntryUpdateFail.*cause*  
Where *cause* indicates the failure cause of the UCMF dictionary entry update.

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

#### 5.9.x.3 UCMF dictionary entry delection

##### 5.9.x.3.1 Number of UCMF dictionary entry deletion requests

a) This measurement provides the number of UCMF dictionary entry deletion requests received by the NEF.

b) CC

c) Receipt of an Nnef\_UCMFProvisioning\_Delete request by the NEF from an AF (see 3GPP TS 23.502 [7]).

d) An integer value

e) UCM.EntryDelReq

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

##### 5.9.x.3.2 Number of successful UCMF dictionary entry deletions

a) This measurement provides the number of successful UCMF dictionary entry deletions at the NEF.

b) CC

c) Transmission of an Nnef\_UCMFProvisioning\_Delete response by the NEF to an AF indicating a successful UCMF dictionary entry deletion (see 3GPP TS 29.522 [44]).

d) An integer value

e) UCM.EntryDelSucc

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

##### 5.9.x.3.3 Number of failed UCMF dictionary entry deletions

a) This measurement provides the number of failed UCMF dictionary entry deletions at the NEF.

b) CC

c) Transmission of an Nnef\_UCMFProvisioning\_Delete response by the NEF to an AF indicating a failed UCMF dictionary entry deletion (see 3GPP TS 29.522 [44]), each message increments the relevant subcounter per failure cause by 1.

d) Each subcounter is an integer value

e) UCM.EntryDelFail.*cause*  
Where *cause* indicates the failure cause of the UCMF dictionary entry deletion.

f) NEFFunction

g) Valid for packet switched traffic

h) 5GS

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| **Next modified section** |

# A.x Monitoring of UCMF provisioning

The UCMF is used for storage of dictionary entries corresponding to either PLMN-assigned or Manufacturer-assigned UE Radio Capability IDs.

Provisioning of Manufacturer-assigned UE Radio Capability ID entries in the UCMF is performed from an AF that interacts with the UCMF either directly or via the NEF.

Knowing the UE radio capabilities is critical for the 5G system to provide the appropriate control for the UE, missing the UE radio capabilities may cause discretional control for the UEs thus result in failures or performance degradation. Therefore, the performance measurements are needed to assess the performance of UCMF provisioning.

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| **End of modified sections** |