**3GPP TSG-CT WG3 Meeting #134C3-242259**

**Changsha, China, 15 - 19 April, 2024 (revision of C3-242abc)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.552** | **CR** | **0094** | **rev** | **-** | **Current version:** | **18.4.0** |  |
|  | | | | | | | | |
| *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:*** | Corrections on the procedure of PFD Determination Analytics | | | | | | | | | |
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| ***Source to WG:*** | Huawei, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph3 | | | | |  | ***Date:*** | | | 2024-04-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | * According to clause 6.16.4 of TS 23.288, the NWDAF may invoke the Nnef\_PFDManagement\_Subscribe service operation to the NEF (PFDF) in order to be informed about the stored PFD information in use from UDR via NEF (PFDF). In the current procedure in clause 5.7.17, the Nnef\_PFDManagement\_ Subscribe service operation was missing. * The HTTP method in step 2a-2b is incorrect. | | | | | | | | |
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| ***Summary of change:*** | | * Complete the procedure of PFD Determination Analytics to include the Nnef\_PFDManagement\_Subscribe and Nnef\_PFDManagement\_Notify service operations. * Correct the HTTP method in step 2a-2b. | | | | | | | | |
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| ***Consequences if not approved:*** | | Incomplete and incorrect specification which will cause misunderstanding. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.7.17 | | | | | | | | |
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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:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

### 5.7.17 PFD Determination Analytics

This procedure is used by the NWDAF service consumer e.g. NEF(PFDF) to obtain PFD determination analytics for the know application(s), which is calculated by the NWDAF based on the information collected from the UPF and the NEF(PFDF).



Figure 5.7.17-1: Procedure for PFD Determination Analytics

1a-1b. In order to obtain the PFD determination analytics, the consumer NF may invoke Nnwdaf\_EventsSubscription\_Subscribe service operation as described in clause 5.2.2.1.

2a-2b. The NWDAF may invoke Nnef\_PFDmanagement\_Subscribe service operation as described in clause 4.2.3 of 3GPP TS 29.551 [39] by sending an HTTP POST request targeting the resource "PFD subscriptions" to subscribe to retrieve PFDs for an Application Identifier(s) from the NEF (PFDF). The NEF (PFDF) responds to the NWDAF an HTTP "201 Created" response, with the content containing a representation of an "Individual application PFD" resource or a "PFD of applications" resource for the requested application identifier(s).

2c-2d. The NWDAF may invoke Nnef\_PFDmanagement\_Notify service operation by sending an HTTP POST request targeting the resource "PFD subscriptions" to retrieve PFDs for an Application Identifier(s) from the NEF (PFDF). The NEF (PFDF) responds to the NWDAF an HTTP "201 Created" response, with the content containing a representation of an "Individual PFD subscription" resource.

2e-2f. If step 2c and step 2d are performed, the NEF (PFDF) may invoke Nnef\_PFDmanagement\_Notify service operation by sending an HTTP POST request to the NWDAF identified by the notification URI received in step 2c. The NWDAF responds to the NEF (PFDF) an HTTP "204 No Content" response.

3. The NWDAF determines whether it needs to collect data.

3a-3b. The NWDAF may invoke Nsmf\_EventExposure\_Subscribe service operation by sending an HTTP POST request targeting the resource "SMF Notification Subscriptions" as described in 3GPP TS 29.508 [6] to subscribe via the SMF to UPF to retrieve the application traffic flow related information for the application. The SMF responds to the NWDAF an HTTP "201 Created" response after having received HTTP "201 Created" response from the UPF.

4a-4b. The SMF subscribes to the UPF on behalf of the NWDAF by invoking Nupf\_EventExposure\_Subscribe service operation as described in clause 5.2.2.2 of 3GPP TS 29.564 [40] to retrieve the application traffic flow related information from the UPF. The UPF responds to the SMF an HTTP "201 Created" response.

5a-5b. The UPF invokes Nupf\_EventExposure\_Notify service operation by sending an HTTP POST request to the NWDAF identified by the notification URI received in step 4a or step 5a. The NWDAF responds to the UPF an HTTP "204 No Content" response.

6. The NWDAF calculates the PFD determination analytics based on the data collected from UPF and NEF (PFDF).

7a-7b. If step 1a and step 1b are performed, the NWDAF invokes Nnwdaf\_EventsSusbcription\_Notify service operation as described in clause 5.2.2.1 containing the PFD determination analytics information in the case that the NWDAF decides the PFD information for the existing Application ID is new or to be updated.

NOTE 1: For details of Nsmf\_EventExposure\_Subscribe/Notify service operations refer to 3GPP TS 29.508 [6].

NOTE 2: For details of Nnwdaf\_EventsSubscription\_Subscribe/Unsubscribe/Notify or Nnwdaf\_AnalyticsInfo\_Request service operations refer to 3GPP TS 29.520 [5].

NOTE 3: For details of Nnef\_PFDManagement\_Fetch service operation refer to 3GPP TS 29.551 [39].

NOTE 4: For details of Nupf\_EventExposure\_Subscribe/Unsubscribe/Notify service operations refer to 3GPP TS 29.564 [40].

\*\*\* End of Changes \*\*\*