**3GPP TSG CT WG3 Meeting #135 *C3-243146r2***

**Hyderabad, IN, 27 - 31 May, 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.513** | **CR** | **0549** | **rev** | **1** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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:*** | Procedure for PFD management based on NWDAF analytics | | | | | | | | | |
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| ***Source to WG:*** | ZTE, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph3 | | | | |  | ***Date:*** | | | 2024-05-20 |
|  |  | | | |  | |  | | |  |
| ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | 4.18.2.2 of TS 23.502 defines the procedure for PFD management based on NWDAF analytics, but the procedure is missing in stage 3. | | | | | | | | |
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| ***Summary of change:*** | | Clause 5.5.2.1A is added to introduce the procedure for PFD management based on NWDAF analytics. | | | | | | | | |
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| ***Consequences if not approved:*** | | The procedure for PFD management based on NWDAF analytics is missing in stage 3. | | | | | | | | |
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| ***Clauses affected:*** | | 5.5.2.1A (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:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

#### 5.5.2.1A PFD management based on NWDAF analytics

This clause describes the procedure triggered by the NWDAF analytics for creation, update or removal of packet flow descriptions of the application(s) in operator's network as depicted in figure 5.5.2.1A-1.



Figure 5.5.2.1A-1: PFD management based on NWDAF analytics

1. The NEF (PFDF) subscribes to "PFD Determination" analytics from the NWDAF for an application identifier to assist determination of PFDs for known application identifiers and may updates the subscription, and is notified with PFD determination analytics information from the NWDAF as described in clause 5.7.17 of 3GPP TS 29.552 [48].

2a. If the NEF (PFDF) does not have the PFDs in use of the application identifier, it invokes the Nudr\_DataRepository\_Query service operation by sending an HTTP GET request message to the UDR to the resource "Individual PFD Data" as specified in 3GPP TS 29.519 [12].

2b. The UDR sends an HTTP GET response message including the requested PFDs to the NEF (PFDF).

3. The NEF (PFDF) may unsubscribe to "PFD Determination" analytics from the NWDAF for the application identifier as described in clause 5.7.17 of 3GPP TS 29.552 [48].

4. The NEF (PFDF) compares the PFDs from UDR with PFD determination analytics from the NWDAF to determine whether to create/update/delete PFDs for the application identifier. If the NEF (PFDF) unsubscribes from "PFD Determination" analytics in step 3, the NEF (PFDF) determines to delete all PFDs that created based on PFD determination analytics from the NWDAF.

* 1. The NEF invokes Nudr\_DataRepository operation service to the UDR as follows:

- if the NEF (PFDF) determines to create PFDs for a new application identifier in step 4, the NEF invokes the Nudr\_DataRepository\_Create service operation by sending an HTTP PUT request message to the resource "Individual PFD Data" for the requested application identifier as specified in 3GPP TS 29.519 [12]. The UDR sends an HTTP "201 Created" response to the NEF (PFDF).

- if the NEF (PFDF) determines to update PFDs for an existing application identifier in step 4 (i.e, add/update/remove PFDs), the NEF (PFDF) invokes the Nudr\_DataRepository\_Update service operation by sending an HTTP PUT request message to the resource "Individual PFD Data" for the requested application identifier as specified in 3GPP TS 29.519 [12]. The UDR sends an HTTP "200 OK" response to the NEF (PFDF).

- if the NEF (PFDF) determines to remove all PFDs for an existing application identifier in step 4, the NEF (PFDF) invokes the Nudr\_DataRepository\_Delete service operation by sending an HTTP DELETE request message to the resource "Individual PFD Data" for the requested application identifier as specified in 3GPP TS 29.519 [12]. The UDR sends an HTTP "204 No Content" response to the NEF (PFDF).

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