**3GPP TSG-CT WG3 Meeting #134 *C3-242180r1***

**Changsha, China, 15-19 April 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.574** | **CR** | **0092** | **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:*** | Completion of Ndccf\_DataManagement\_Notify | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE, Nokia | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph3 | | | | |  | ***Date:*** | | | 2024-04-08 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | DCCF should be added to 4.2.1.3.2 as a consumer of Ndccf\_DataManagement service.  Ndccf\_DataManagement\_Notify service operation is also used by the source DCCF to inform the NF service consumer the successful data subscription transfer, but it’s not relected by a couple of clauses. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 4.2.1.3.2 is updated to add DCCF as consumer.  4.2.2.1, 4.2.2.4.1 and 4.2.2.4.3 are updated to cover successful data subscription transfer notification case. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incomplete specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.1.3.2, 4.2.2.1, 4.2.2.4.1, 4.2.2.4.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 does not have any impact in the OpenAPI specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 4.2.1.3.2 NF Service Consumers

The NF service consumers for the Ndccf\_DataManagement service are as specified in 3GPP TS 29.520 [15] clause 4.2.1.3.2 for the Nnwdaf\_EventsSubscription service, with the following differences:

- The NWDAF as a service consumer supports also (un)subscription to the notification of data collection events from the DCCF.

- The CEF is not a NF service consumer of the Ndccf\_DataManagement service.

- As an NF service consumer of the Ndccf\_DataManagement service, the DCCF supports requesting the transfer of a UE data subscription from source DCCF to target DCCF.

\*\*\* 2nd Change \*\*\*

#### 4.2.2.1 Introduction

Service operations defined for the Ndccf\_DataManagement Service are shown in table 4.2.2.1-1.

Table 4.2.2.1-1: Ndccf\_DataManagement Service Operations

|  |  |  |
| --- | --- | --- |
| Service Operation Name | Description | Initiated by |
| Ndccf\_DataManagement\_Subscribe | This service operation is used by an NF service consumer to subscribe to, or modify a subscription in the DCCF for event notifications. | NF service consumer (NWDAF, PCF, NSSF, AMF, SMF, NEF, AF, LMF, ADRF) |
| Ndccf\_DataManagement\_Unsubscribe | This service operation is used by an NF service consumer to unsubscribe from event notifications. | NF service consumer (NWDAF, PCF, NSSF, AMF, SMF, NEF, AF, LMF, ADRF) |
| Ndccf\_DataManagement\_Notify | This service operation is used by the DCCF to report the detected event(s) to the NF service consumer if subscribed before or inform the NF service consumer the successful data subscription transfer. | DCCF |
| Ndccf\_DataManagement\_Fetch | This service operation is used by an NF service consumer to retrieve collected data from the DCCF. | NF service consumer (NWDAF, PCF, NSSF, AMF, SMF, NEF, AF, LMF, ADRF) |
| Ndccf\_DataManagement\_Transfer | This service operation is used by the source DCCF to transfer UE data subscription context to the target DCCF. | NF service consumer (DCCF) |

\*\*\* 2nd Change \*\*\*

##### 4.2.2.4.1 General

The Ndccf\_DataManagement\_Notify service operation is used by DCCF to notify NF service consumers about subscribed events related to analytics or data or notify NF service consumers about the successful data subscription transfer.

\*\*\* 2nd Change \*\*\*

##### 4.2.2.4.3 Notification about subscribed data event

Figure 4.2.2.4.3-1 shows a scenario where the DCCF sends a request to the NF Service Consumer to notify it about data event(s) or notify it about the successful data subscription transfer.

NWDAF

DCCF

1

.

POST

{

notificationURI

}

2

.

204

No Content or 200 OK

Figure 4.2.2.4.3-1: DCCF notifies the NF service consumer about a subscribed data event

The DCCF shall invoke the Ndccf\_DataManagement\_Notify service operation to notify about a subscribed data event. The DCCF shall send an HTTP POST request with "{notificationURI}" as Resource URI (where "{notificationURI}" has the value of the notification URI received in the NdccfDataSubscription data structure of the Ndccf\_DataManagement\_Subscribe service operation, see clause 5.1.5 for the definition of this notification URI), as shown in figure 4.2.2.4.3-1, step 1. The NdccfDataSubscriptionNotification data structure provided in the request body shall include:

- the data notification correlation identifier within the "dataNotifCorrId" attribute;

- the time stamp which represents the time when DCCF completes preparation of the requested data within the "timeStamp" attribute;

- one of the following:

- the data notification within the "dataNotif" attribute;

- summarized data derived from events based on processing instructions and formatting instructions that occurred in the "dataReports" attribute;

- information for fetching the contents of the notification in the "fetchInstruct" attribute;

- a deletion alert in the "delAlert" attribute, if the "EnhDataMgmt" feature is supported.

The NdccfDataSubscriptionNotification data structure provided in the request body may include:

- a termination request provided by the DCCF within the "terminationReq" attribute;

- a cause for termination in the "termCause" attribute, if the "TerminationCause" feature is supported and the "terminationReq" attribute is set to "true", i.e. DCCF wants to request the termination of this subscription and will send no further notifications for it; and/or

- a pending notification cause for the stored unsent data in the "pendDataNotifCause" attribute if the "EnhDataMgmt" feature is supported.

If the NF service consumer successfully processed and accepted the received HTTP POST request, the NF service consumer shall:

- store the notification;

- respond with HTTP "204 No Content" status code, or with HTTP "200 OK" status code and the NotifResponse data structure in the response body if the "EnhDataMgmt" feature is supported.

If errors occur when processing the HTTP POST request, the NF service consumer shall send an HTTP error response as specified in clause 5.1.7.

If the NWDAF determines the received HTTP POST request needs to be redirected, the NWDAF shall send an HTTP redirect response as specified in clause 6.10.9 of 3GPP TS 29.500 [4].

After the successful processing of the HTTP POST request:

- if the DCCF requests the NF service consumer to retrieve the data with the "fetchInstruct" attribute, the NF service consumer may invoke the Ndccf\_DataManagement\_Fetch service operation to retrieve the notified data as defined in clause 4.2.2.5.

- if the DCCF provided a deletion alert to the NF service consumer, the NF service consumer may invoke the Nadrf\_DataManagement\_RetrievalRequest service operation as defined in 3GPP TS 29.575 [25] clause 4.2.2.5, using the storage transaction identifier received within the "alertStorTransId" attribute of the "delAlert" attribute, in order to retrieve the data that are about to be deleted.

NOTE: The "alertStorTransId" attribute, which is used for retrieving data prior to deletion, does not have to be the same with or related to the storage transaction identifier that is assigned and returned during the storage of the data in the ADRF.

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