**3GPP TSG-CT3 Meeting #134 *C3-242140***

**Changsha, Hunan Province, China, 15th Apr 2024 - 19th Apr 2024**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.574** | **CR** | **0089** | **rev** | **-** | **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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | DCCF Data Management subscription transfer corrections | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, ZTE, Huawei | | | | | | | | | |
| ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The Transfer of DCCF data management subscriptions is a request/response type of operation, which has no reason to be based on the generation of a resource.  The current implementation of Ndccf\_DataManagement\_Transfer service operation has various issues, most notably the fact that it defines an Update and a Cancel operation, which are not only not required by stage 2, but make also no sense and can lead to erroneous implementations, because the transfer of the subscription is specified to be already completed in the initial Transfer request. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Re-designed and implemented Ndccf\_DataManagement\_Transfer with the request/response paradigm, using a custom operation.  Captured also the presence conditons for the "newSubscriptionUri" in the procedure description and the OpenAPI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Erroneous implementation and misalignment with stage 2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.2.4.3, 4.2.2.6.2, 4.2.2.6.3, 4.2.2.6.4, 5.1.3.1, 5.1.3.6, 5.1.3.7, 5.1.4, 5.1.6.1, 5.1.6.2.18, A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 introduces a backwards compatible correction to the OpenAPI file of the Ndccf\_DataManagement API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First 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).

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 new URI of the transferred data subscription (i.e. the resource URI of the Individual DCCF Data Subscription resource created by the target DCCF) in the "newSubscriptionUri" attribute, if the "SubscriptionTransfer" feature is supported and the source DCCF notifies the successful transfer of this subscription.

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.

\* \* \* \* Next change \* \* \* \*

4.2.2.6.2 Request for UE data subscription context transfer

Figure 4.2.2.6.2-1 shows a scenario where the NF Service Consumer (i.e. DCCF) sends a request to the DCCF to request the transfer of UE data subscription context from the NF Service Consumer to the NF Service Producer.

**Figure 4.2.2.6.2-1: NF service consumer requests a data subscription transfer**

The NF Service Consumer shall invoke the Ndccf\_DataManagement\_Transfer service operation to request the transfer of UE data subscription context by sending an HTTP POST request to the "{apiRoot}/ndccf-datamanagement/<apiVersion>/transfer-data-sub" URI, as shown in figure 4.2.2.6.2-1, step 1. The contents of the NdccfDataSubscription data structure provided in the request body are as described in clause 4.2.2.2.4.

Upon the reception of an HTTP POST request to "{apiRoot}/ndccf-datamanagement/<apiVersion>/transfer-data-sub" with NdccfDataSubscription data structure as request body, in the successful case the DCCF shall create a new Individual DCCF Data Subscription resource for the transferred subscription and send an HTTP "200 OK" response with the URI of the created resource in the response body, as shown in figure 4.2.2.6.2-1, step 2; The NF Service Consumer shall then notify the data consumer about the successful data subscription transfer as defined in clause 4.2.2.4.3, including the received URI of the created resource in the "newSubscriptionUri" attribute of the NdccfDataSubscriptionNotification data type.

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

\* \* \* \* Next change \* \* \* \*

4.2.2.6.3 Void

\* \* \* \* Next change \* \* \* \*

4.2.2.6.4 Void

\* \* \* \* Next change \* \* \* \*

5.1.3.1 Overview

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 5.1.3.1-1 depicts the resource URIs structure for the Ndccf\_DataManagement API.

**Figure 5.1.3.1-1: Resource URI structure of the Ndccf\_DataManagement API**

Table 5.1.3.1-1 provides an overview of the resources and applicable HTTP methods.

**Table 5.1.3.1-1: Resources and methods overview**

|  |  |  |  |
| --- | --- | --- | --- |
| **Resource name** | **Resource URI** | **HTTP method or custom operation** | **Description** |
| DCCF Analytics Subscriptions | /analytics-subscriptions | POST | Creates a new Individual DCCF Analytics Subscription resource. |
| Individual DCCF Analytics Subscription | /analytics-subscriptions/{subscriptionId} | PUT | Modifies an existing Individual DCCF Analytics Subscription resource. |
| DELETE | Deletes an Individual DCCF Analytics Subscription identified by {subscriptionId}. |
| DCCF Data Subscriptions | /data-subscriptions | POST | Creates a new Individual DCCF Data Subscription resource. |
| Individual DCCF Data Subscription | /data-subscriptions/{subscriptionId} | PUT | Modifies an existing DCCF Data Subscription resource. |
| DELETE | Deletes an Individual DCCF Data Subscription identified by {subscriptionId}. |

\* \* \* \* Next change \* \* \* \*

5.1.3.6 Void



















\* \* \* \* Next change \* \* \* \*

5.1.3.7 Void











































\* \* \* \* Next change \* \* \* \*

5.1.4 Custom Operations without associated resources

5.1.4.1 Overview

The structure of the custom operation URIs of the Ndccf\_DataManagement service is shown in Figure 5.1.4.1-1.

****

**Figure 5.1.4.1-1: Custom operation URI structure of the Ndccf\_DataManagement API**

Table 5.1.4.1-1 provides an overview of the custom operations and applicable HTTP methods.

**Table 5.1.4.1-1: Custom operations without associated resources**

|  |  |  |
| --- | --- | --- |
| **Custom operation URI** | **Mapped HTTP method** | **Description** |
| {apiRoot}/ndccf-datamanagement/<apiVersion>/transfer-data-sub | POST | Request the DCCF to transfer a subscription for data collection from the NF Service Consumer to the NF Service Producer. |

5.1.4.2 Operation: transfer-data-sub

5.1.4.2.1 Description

The operation is used by the NF service consumer to request the DCCF to transfer a data subscription from the NF Service Consumer to the NF Service Producer.

5.1.4.2.2 Operation Definition

This operation shall support the request data structures shown in Table 5.1.4.2.2-1 and the response data structures and error codes specified in Tables 5.1.4.2.2-2.

**Table 5.1.4.2.2-1: Data structures supported by the POST Request Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Description** |
| NdccfDataSubscription | M | 1 | Information about data subscription that is requested to be transferred. |

**Table 5.1.4.2.2-2: Data structures supported by the POST Response Body on this resource**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Response**  **codes** | **Description** |
| Uri | M | 1 | 200 OK | Successful transfer of a data subscription from the NF Service Consumer to the NF Service Producer, with the response containing the Uri of the Individual DCCF Data Subscription resource that was created at the NF Service Producer. |
| NOTE: The mandatory HTTP error status code for the POST method listed in Table 5.1.7.1-1 of 3GPP TS 29.500 [4] also apply. | | | | |

\* \* \* \* Next change \* \* \* \*

5.1.6.1 General

This clause specifies the application data model supported by the Ndccf\_DataManagement API.

Table 5.1.6.1-1 specifies the data types defined for the Ndccf\_DataManagement service based interface protocol.

**Table 5.1.6.1-1: Ndccf\_DataManagement specific Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Clause defined** | **Description** | **Applicability** |
| AggregationLevel | 5.1.6.3.4 | Contains an aggregation level for processing instructions (e.g. per UE, per Area of Interest). |  |
| DataCollectionPurpose | 5.1.6.3.5 | Represents the purpose for data collection. |  |
| DccfEvent | 5.1.6.2.13 | Represents the event type exposed by DCCF |  |
| DeletionAlert | 5.1.6.2.16 | Contains information about data or analytics that are about to be deleted. | EnhDataMgmt |
| EventParamReport | 5.1.6.2.10 | Represents a summarized report for one event parameter. |  |
| FormattingInstruction | 5.1.6.2.6 | Contains data or analytics formatting Instructions. |  |
| NdccfAnalyticsSubscription | 5.1.6.2.2 | Represents an Individual DCCF Analytics Subscription resource. |  |
| NdccfAnalyticsSubscriptionNotification | 5.1.6.2.4 | Represents a notification that corresponds with an Individual DCCF Analytics Subscription resource. |  |
| NdccfDataSubscription | 5.1.6.2.3 | Represents an Individual DCCF Data Subscription resource. |  |
| NdccfDataSubscriptionNotification | 5.1.6.2.5 | Represents a notification that corresponds with an Individual DCCF Data Subscription resource. |  |
| NotifResponse | 5.1.6.2.17 | Contains information about the planned action upon receiving a notification. | EnhDataMgmt |
| NotifSummaryReport | 5.1.6.2.9 | Represents summarized notifications based on processing instructions. |  |
| ParameterProcessingInstruction | 5.1.6.2.8 | Contains an event parameter name and the respective event parameter values and sets of attributes to be used in summarized reports. |  |
| ProcessingInstruction | 5.1.6.2.7 | Contains instructions related to the processing (e.g. clubbing) of notifications. |  |
| ReportingOptions | 5.1.6.2.11 | Represents reporting options for notifications that are processed. |  |
| StorageHandlingInformation | 5.1.6.2.15 | Contains storage handling information for data or analytics. | EnhDataMgmt |
| SummarizationAttribute | 5.1.6.3.3 | Represents attribute in the summarized report. |  |
| TermCause | 5.1.6.3.6 | A cause for which the DCCF will collect no further data for this subscription. | TerminationCause |

Table 5.1.6.1-2 specifies data types re-used by the Ndccf\_DataManagement service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Ndccf\_DataManagement service based interface.

**Table 5.1.6.1-2: Ndccf\_DataManagement re-used Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Reference** | **Comments** | **Applicability** |
| AfEvent | 3GPP TS 29.517 [21] | Represents an AF Event id |  |
| AmfEventType | 3GPP TS 29.518 [19] | Represents an AMF Event id |  |
| DataSubscription | 3GPP TS 29.575 [25] | Represents a data subscription to one of various possible data sources. |  |
| DataNotification | 3GPP TS 29.575 [25] | Represents a data subscription notification of one of various possible data sources. |  |
| DateTime | 3GPP TS 29.571 [17] | Identifies the time. |  |
| DurationSec | 3GPP TS 29.571 [17] | Time in seconds. |  |
| EventNotifyDataType | 3GPP TS 29.515 [29] | Represents a GMLC Event id | LocEvents |
| EventType | 3GPP TS 29.503 [20] | Represents an UDM Event id |  |
| EventType | 3GPP TS 29.564 [30] | Represents a UPF Event id | UpEvents |
| FetchInstruction | 3GPP TS 29.576 [26] | The fetch instruction indicates whether the data or analytics can be fetched by the consumer. |  |
| NefEvent | 3GPP TS 29.591 [22] | Represents a NEF Event id |  |
| NetworkAreaInfo | 3GPP TS 29.554 [28] | Identifies a network area. |  |
| NfInstanceId | 3GPP TS 29.571 [17] | NF instance identifier. |  |
| NfSetId | 3GPP TS 29.571 [17] | NF set identifier. |  |
| NnwdafEventsSubscription | 3GPP TS 29.520 [15] | Represents a NWDAF analytics subscription. |  |
| NnwdafEventsSubscriptionNotification | 3GPP TS 29.520 [15] | Represents a NWDAF analytics subscription notification. |  |
| NumberAverage | 3GPP TS 29.520 [15] | Represents average and variance of a parameter value. |  |
| PendingNotificationCause | 3GPP TS 29.520 [15] | Represents the Pending Notification Cause for the stored unsent events. | EnhDataMgmt |
| RedirectResponse | 3GPP TS 29.571 [17] | Contains redirection related information. |  |
| SACEvent | 3GPP TS 29.536 [27] | Represents a NSAC Event id |  |
| SmfEvent | 3GPP TS 29.508 [18] | Represents a SMF Event id |  |
| Supi | 3GPP TS 29.571 [17] | Contains a SUPI. |  |
| SupportedFeatures | 3GPP TS 29.571 [17] | Used to negotiate the applicability of the optional features defined in table 5.1.8-1. |  |
| TimeWindow | 3GPP TS 29.122 [23] | Represents a time window. |  |
| Uinteger | 3GPP TS 29.571 [17] | Unsigned Integer. |  |
| Uri | 3GPP TS 29.571 [17] | URI. |  |

\* \* \* \* Next change \* \* \* \*

5.1.6.2.18 Void



\* \* \* \* Next change \* \* \* \*

A.2 Ndccf\_DataManagement API

openapi: 3.0.0

info:

version: 1.1.0-alpha.6

title: Ndccf\_DataManagement

description: |

DCCF Data Management Service.

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externalDocs:

description: 3GPP TS 29.574 V18.5.0; 5G System; Data Collection Coordination Services; Stage 3.

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.574/'

#

servers:

- url: '{apiRoot}/ndccf-datamanagement/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501.

#

security:

- oAuth2ClientCredentials:

- ndccf-datamanagement

- {}

#

paths:

/analytics-subscriptions:

post:

summary: Creates a new Individual DCCF Analytics Subscription resource.

operationId: CreateDCCFAnalyticsSubscription

tags:

- DCCF Analytics Subscriptions (Collection)

requestBody:

description: Contains the information for the creation the resource.

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscription'

required: true

responses:

'201':

description: Create a new Individual DCCF Analytics Subscription resource.

headers:

Location:

description: >

Contains the URI of the newly created resource, according to the structure

{apiRoot}/ndccf-datamanagement/<apiVersion>/analytics-subscriptions/{subscriptionId}

required: true

schema:

type: string

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscription'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

callbacks:

dccfAnalyticsNotification:

'{$request.body#/anaNotifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscriptionNotification'

responses:

'200':

description: The notification is acknowledged and a planned action is provided.

content:

application/json:

schema:

$ref: '#/components/schemas/NotifResponse'

'204':

description: The receipt of the notification is acknowledged.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

callbacks:

Fetch:

'{request.body#/fetchInstruct/fetchUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

type: array

items:

type: string

minItems: 1

description: Fetch correlation identifiers.

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscriptionNotification'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/analytics-subscriptions/{subscriptionId}:

delete:

summary: Deletes an existing Individual DCCF Data Subscription.

operationId: DeleteDCCFAnalyticsSubscription

tags:

- Individual DCCF Analytics Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

String identifying an analytics subscription to the Ndccf\_DataManagement Service.

required: true

schema:

type: string

responses:

'204':

description: >

No Content. The Individual DCCF Analytics Subscription resource matching the

subscriptionId was deleted.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

put:

summary: Updates an existing Individual DCCF Analytics Subscription resource.

operationId: UpdateDCCFAnalyticsSubscription

tags:

- Individual DCCF Analytics Subscription (Document)

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscription'

parameters:

- name: subscriptionId

in: path

description: >

String identifying an analytics subscription to the Ndccf\_DataManagement Service.

required: true

schema:

type: string

responses:

'200':

description: >

The Individual DCCF Analytics Subscription resource was modified successfully and a

representation of that resource is returned.

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscription'

'204':

description: >

The Individual DCCF Analytics Subscription resource was modified successfully.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/data-subscriptions:

post:

summary: Creates a new Individual DCCF Data Subscription resource.

operationId: CreateDCCFDataSubscription

tags:

- DCCF Data Subscriptions (Collection)

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscription'

required: true

responses:

'201':

description: Creates a new Individual DCCF Data Subscription resource.

headers:

Location:

description: >

Contains the URI of the newly created resource, according to the structure

{apiRoot}/ndccf-datamanagement/<apiVersion>/data-subscriptions/{subscriptionId}

required: true

schema:

type: string

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscription'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

callbacks:

dccfDataNotification:

'{$request.body#/dataNotifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscriptionNotification'

responses:

'200':

description: The notification is acknowledged and a planned action is provided.

content:

application/json:

schema:

$ref: '#/components/schemas/NotifResponse'

'204':

description: The receipt of the notification is acknowledged.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

callbacks:

Fetch:

'{request.body#/fetchInstruct/fetchUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

type: array

items:

type: string

minItems: 1

description: Fetch correlation identifiers.

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfAnalyticsSubscriptionNotification'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/data-subscriptions/{subscriptionId}:

delete:

summary: Deletes an existing Individual DCCF Data Subscription resource.

operationId: DeleteDCCFDataSubscription

tags:

- Individual DCCF Data Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: String identifying a data subscription to the Ndccf\_DataManagement Service.

required: true

schema:

type: string

responses:

'204':

description: >

No Content. The Individual DCCF Data Subscription resource matching the subscriptionId

was deleted.

'200':

description: >

The Individual DCCF Data Subscription resource matching the subscriptionId was deleted

and including the stored unsent data events in the response.

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscriptionNotification'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

put:

summary: Updates an existing Individual DCCF Data Subscription resource.

operationId: UpdateDCCFDataSubscription

tags:

- Individual DCCF Data Subscription (Document)

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscription'

parameters:

- name: subscriptionId

in: path

description: >

String identifying a data subscription to the Ndccf\_DataManagement Service.

required: true

schema:

type: string

responses:

'200':

description: >

The Individual DCCF Data Subscription resource was modified successfully and a

representation of that resource is returned.

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscription'

'204':

description: >

The Individual DCCF Data Subscription resource was modified successfully.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/transfer-data-sub:

post:

summary: Transfers a Data Management subscription.

operationId: DataManagementTransfer

tags:

- DCCF Data Management Transfer (Custom Operation)

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/NdccfDataSubscription'

required: true

responses:

'200':

description: Indicates a successful DCCF Data Management transfer.

content:

application/json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

#

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

ndccf-datamanagement: Access to the ndccf-datamanagement API

#

schemas:

#

NdccfAnalyticsSubscription:

description: Represents an Individual DCCF Analytics Subscription.

type: object

required:

- anaSub

- anaNotifUri

- anaNotifCorrId

properties:

anaSub:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NnwdafEventsSubscription'

anaNotifUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

anaNotifCorrId:

type: string

description: Notification correlation identifier.

notifEndpoints:

type: array

items:

$ref: '#/components/schemas/NotifyEndpoint'

minItems: 1

description: The information of notification endpoints.

formatInstruct:

$ref: '#/components/schemas/FormattingInstruction'

procInstructs:

type: array

items:

$ref: '#/components/schemas/ProcessingInstruction'

minItems: 1

description: Processing instructions to be used for sending event notifications.

targetNfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

targetNfSetId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

adrfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

ardfSetId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

storeInd:

type: boolean

description: >

The indication for analytics storage. This attribute shall be provided and set to "true"

if the consumer requests to store the analytics in an ADRF but both the "adrfId" and

"adrfSetId" attributes are not provided. The default value is "false".

storeHandl:

$ref: '#/components/schemas/StorageHandlingInformation'

suppFeat:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

timePeriod:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

dataCollectPurposes:

type: array

items:

$ref: '#/components/schemas/DataCollectionPurpose'

minItems: 1

description: >

The purposes of data collection. This attribute may only be provided if user consent is

required depending on local policy and regulations and the consumer has not

checked user consent.

checkedConsentInd:

type: boolean

description: Indication that the NF service consumer has already checked the user consent.

immReport:

$ref: '#/components/schemas/NdccfAnalyticsSubscriptionNotification'

#

NdccfDataSubscription:

description: Represents an Individual DCCF Data Subscription.

type: object

required:

- dataNotifUri

- dataNotifCorrId

- dataSub

properties:

dataSub:

$ref: 'TS29575\_Nadrf\_DataManagement.yaml#/components/schemas/DataSubscription'

dataNotifUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

dataNotifCorrId:

type: string

description: Notification correlation identifier.

notifEndpoints:

type: array

items:

$ref: '#/components/schemas/NotifyEndpoint'

minItems: 1

description: The information of notification endpoints.

formatInstruct:

$ref: '#/components/schemas/FormattingInstruction'

procInstructs:

type: array

items:

$ref: '#/components/schemas/ProcessingInstruction'

minItems: 1

description: Processing instructions to be used for sending event notifications.

targetNfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

targetNfSetId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

adrfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

ardfSetId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

storeInd:

type: boolean

description: >

The indication for analytics storage. This attribute shall be provided and set to "true"

if the consumer requests to store the analytics in an ADRF but both the "adrfId" and

"adrfSetId" attributes are not provided. The default value is "false".

storeHandl:

$ref: '#/components/schemas/StorageHandlingInformation'

timePeriod:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

suppFeat:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

dataCollectPurposes:

type: array

items:

$ref: '#/components/schemas/DataCollectionPurpose'

minItems: 1

description: >

The purposes of data collection. This attribute may only be provided if user consent

is required depending on local policy and regulations and the consumer has not

checked user consent.

checkedConsentInd:

type: boolean

description: Indication that the NF service consumer has already checked the user consent.

immReport:

$ref: '#/components/schemas/NdccfDataSubscriptionNotification'

#

NdccfAnalyticsSubscriptionNotification:

description: Represents a notification for a DCCF analytics subscription.

type: object

required:

- anaNotifCorrId

- timeStamp

oneOf:

- required: [anaNotifications]

- required: [anaReports]

- required: [fetchInstruct]

properties:

anaNotifCorrId:

type: string

description: Notification correlation identifier.

anaNotifications:

type: array

items:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NnwdafEventsSubscriptionNotification'

minItems: 1

description: List of analytics subscription notifications.

anaReports:

type: array

items:

$ref: '#/components/schemas/NotifSummaryReport'

minItems: 1

description: >

List of reports with summarized data from multiple analytics notifications that the DCCF

has received from NWDAF.

fetchInstruct:

$ref: 'TS29576\_Nmfaf\_3caDataManagement.yaml#/components/schemas/FetchInstruction'

terminationReq:

type: boolean

description: >

If provided and set to true, it indicates the termination of the data management

subscription that requested by the DCCF, i.e. no further notifications related to this

subscription will be provided, apart from sending final report (if available).

The default value is false.

delAlert:

$ref: '#/components/schemas/DeletionAlert'

termCause:

$ref: '#/components/schemas/TermCause'

pendDataNotifCause:

$ref: 'TS29520\_Nnwdaf\_DataManagement.yaml#/components/schemas/PendingNotificationCause'

reUserConsentPurs:

type: array

items:

$ref: '#/components/schemas/DataCollectionPurpose'

minItems: 1

description: The purposes of data collection for which the user consent is revoked.

timeStamp:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

#

NdccfDataSubscriptionNotification:

description: Represents a notification for a DCCF data subscription.

type: object

required:

- dataNotifCorrId

- timeStamp

oneOf:

- required: [dataNotif]

- required: [dataReports]

- required: [fetchInstruct]

- required: [delAlert]

- required: [newSubscriptionUri]

properties:

dataNotifCorrId:

type: string

description: Notification correlation identifier.

newSubscriptionUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

dataNotif:

$ref: 'TS29575\_Nadrf\_DataManagement.yaml#/components/schemas/DataNotification'

dataReports:

type: array

items:

$ref: '#/components/schemas/NotifSummaryReport'

minItems: 1

description: >

List of reports with summarized data from multiple notifications received from data

producer.

delAlert:

$ref: '#/components/schemas/DeletionAlert'

fetchInstruct:

$ref: 'TS29576\_Nmfaf\_3caDataManagement.yaml#/components/schemas/FetchInstruction'

terminationReq:

type: boolean

description: >

If provided and set to true, it indicates the termination of the data management

subscription that requested by the DCCF, i.e. no further notifications related to this

subscription will be provided, apart from sending final report (if available).

The default value is false.

timeStamp:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

#

FormattingInstruction:

description: Contains data or analytics formatting instructions.

type: object

properties:

consTrigNotif:

type: boolean

description: >

Indicates that notifications shall be buffered until the NF service consumer requests

their delivery.

reportingOptions:

$ref: '#/components/schemas/ReportingOptions'

#

ReportingOptions:

description: Represents reporting options for processed notifications.

type: object

oneOf:

- required: [notifyWindow]

- required: [notifyPeriod]

- required: [notifyPeriodInc]

- required: [depEventSubId]

properties:

notifyWindow:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

notifyPeriod:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

notifyPeriodInc:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

depEventSubId:

type: string

description: >

Notifications for the present subscription are sent only upon occurrence of events of the

subscription with identifier that matches this attribute.

minClubbedNotif:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

maxClubbedNotif:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

#

ProcessingInstruction:

description: Contains instructions related to the processing of notifications.

type: object

required:

- eventId

- procInterval

properties:

eventId:

$ref: '#/components/schemas/DccfEvent'

procInterval:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

paramProcInstructs:

type: array

items:

$ref: '#/components/schemas/ParameterProcessingInstruction'

minItems: 1

description: >

List of event parameter names, and for each event parameter name, respective event

parameter values and sets of the attributes to be used in the summarized reports.

NotifyEndpoint:

description: The information of notification endpoint.

type: object

required:

- notifUri

properties:

notifUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

notifCorrId:

type: string

description: Notification correlation identifier.

#

DccfEvent:

description: >

Identifies the (event exposure or analytics) event that the processing instructions

shall apply to. Contains all event IDs related to DCCF.

type: object

oneOf:

- required: [nwdafEvent]

- required: [smfEvent]

- required: [amfEvent]

- required: [nefEvent]

- required: [afEvent]

- required: [sacEvent]

- required: [nrfEvent]

- required: [udmEvent]

- required: [gmlcEvent]

- required: [upfEvent]

properties:

nwdafEvent:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NwdafEvent'

smfEvent:

$ref: 'TS29508\_Nsmf\_EventExposure.yaml#/components/schemas/SmfEvent'

amfEvent:

$ref: 'TS29518\_Namf\_EventExposure.yaml#/components/schemas/AmfEventType'

nefEvent:

$ref: 'TS29591\_Nnef\_EventExposure.yaml#/components/schemas/NefEvent'

udmEvent:

$ref: 'TS29503\_Nudm\_EE.yaml#/components/schemas/EventType'

afEvent:

$ref: 'TS29517\_Naf\_EventExposure.yaml#/components/schemas/AfEvent'

sacEvent:

$ref: 'TS29536\_Nnsacf\_SliceEventExposure.yaml#/components/schemas/SACEvent'

nrfEvent:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/NotificationEventType'

gmlcEvent:

$ref: 'TS29515\_Ngmlc\_Location.yaml#/components/schemas/EventNotifyDataType'

upfEvent:

$ref: 'TS29564\_Nupf\_EventExposure.yaml#/components/schemas/EventType'

#

ParameterProcessingInstruction:

description: >

Contains an event parameter name and the respective event parameter values and sets of

attributes to be used in summarized reports.

type: object

required:

- name

- values

- sumAttrs

properties:

name:

type: string

description: >

A JSON pointer value that references an attribute within the notification object to which

the processing instruction is applied.

values:

type: array

items: {}

minItems: 1

description: A list of values for the attribute identified by the name attribute.

sumAttrs:

type: array

items:

$ref: '#/components/schemas/SummarizationAttribute'

minItems: 1

description: Attributes requested to be used in the summarized reports.

aggrLevel:

$ref: '#/components/schemas/AggregationLevel'

supis:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

minItems: 1

description: Indicates the UEs for which processed reports are requested.

temporalAggrLevel:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

areas:

type: array

items:

$ref: 'TS29554\_Npcf\_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'

minItems: 1

description: Indicates the Areas of Interest for which processed reports are requested.

#

NotifSummaryReport:

description: Represents summarized notifications based on processing instructions.

type: object

required:

- eventId

- procInterval

- eventReports

properties:

eventId:

$ref: '#/components/schemas/DccfEvent'

procInterval:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

eventReports:

type: array

items:

$ref: '#/components/schemas/EventParamReport'

minItems: 1

description: List of event parameter reports.

#

EventParamReport:

description: Represents a summarized report for one event parameter.

type: object

required:

- name

- values

properties:

name:

type: string

description: The name of the reported parameter.

values:

type: array

items: {}

minItems: 1

description: The list of values of the reported parameter.

supi:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

area:

$ref: 'TS29554\_Npcf\_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'

spacing:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NumberAverage'

duration:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NumberAverage'

avgAndVar:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NumberAverage'

mostFreqVal: {}

leastFreqVal: {}

count:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

minValue:

type: string

description: The minimum value of the parameter.

maxValue:

type: string

description: The maximum value of the parameter.

#

StorageHandlingInformation:

description: Contains storage handling information about data or analytics.

type: object

properties:

lifetime:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

delNotifInd:

type: boolean

description: Indicates if deletion alerts are requested.

#

DeletionAlert:

description: Contains information about data or analytics that are about to be deleted.

type: object

properties:

alertStorTransId:

type: string

description: >

Storage transaction identifier that can be used to retrieve data or analytics.

required:

- alertStorTransId

#

NotifResponse:

description: >

Contains information about planned actions related to data or analytics

that are about to be deleted.

type: object

properties:

retrievalInd:

type: boolean

description: >

Indicates if the NF service consumer has determined to retrieve data

or analytics that are about to be deleted.

required:

- retrievalInd

#

SummarizationAttribute:

anyOf:

- type: string

enum:

- SPACING

- DURATION

- OCCURRENCES

- AVG\_VAR

- FREQ\_VAL

- MIN\_MAX

- type: string

description: >

This string provides forward-compatibility with future extensions to the enumeration but

is not used to encode content defined in the present version of this API.

description: |

Represents the attribute in the summarized report.

Possible values are:

- SPACING: Average and variance of the time interval separating two consecutive occurrences

of the same event and parameter value, or periodicity for periodic reporting.

- DURATION: Average and variance of the time for which the parameter value applies.

- OCCURRENCES: Number of countable occurrences for the parameter.

- AVG\_VAR: Average and variance of the parameter.

- FREQ\_VAL: Most and least frequent values.

- MIN\_MAX: Maximum and minimum parameter values.

#

AggregationLevel:

anyOf:

- type: string

enum:

- UE

- AOI

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: |

Represents the aggregation level for processing instructions.

Possible values are:

- UE: Indicates that the summarized reports shall be provided per UE.

- AOI: Indicates that the summarized reports shall be provided per Area of Interest.

#

DataCollectionPurpose:

anyOf:

- type: string

enum:

- ANALYTICS\_GENERATION

- MODEL\_TRAINING

- type: string

description: >

This string provides forward-compatibility with future extensions to the enumeration but

is not used to encode content defined in the present version of this API.

description: |

Represents the purpose for data collection.

Possible values are:

- ANALYTICS\_GENERATION: The data is collected for generating the analytics.

- MODEL\_TRAINING: The data is collected for ML model training.

#

TermCause:

anyOf:

- type: string

enum:

- USER\_CONSENT\_REVOKED

- DCCF\_OVERLOAD

- OTHER

- OUT\_OF\_SERVING\_AREA

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: |

Represents the cause for the subscription termination request by DCCF for data collection.

Possible values are:

- USER\_CONSENT\_REVOKED: The user consent has been revoked.

- DCCF\_OVERLOAD: The DCCF is overloaded.

- OTHER: Indicates that the termination is due to other reason.

- OUT\_OF\_SERVING\_AREA: Indicates that that the UE(s) moved outside of the DCCF serving area.

\* \* \* \* End of changes \* \* \* \*