**3GPP TSG-CT3 Meeting #128 *C3-232082r1***

**, Slovakia, 22nd May 2023 - 26th May 2023**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.575** | **CR** | **0054** | **rev** | **-** | **Current version:** | **18.1.0** |  |
|  |
| *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** |

|  |
| --- |
|  |
| ***Title:***  | Using DataSetTag in ADRF subscriptions |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | eNA\_Ph3 |  | ***Date:*** | 2023-05-14 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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 canbe 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:*** | 23.288 clauses 6.2B.2, 10.2.3, 10.2.4, and 10.2.6 require that the NF service consumer be able to handle ADRF subscriptions or the data collected by them based on a DataSetTag. |
|  |  |
| ***Summary of change:*** | Added the DataSetTag to the (inputs and/or outputs of the) Nadrf\_DataManagement\_StorageSubscriptionRequest, Nadrf\_DataManagement\_StorageSubscriptionRemoval, and Nadrf\_DataManagement\_RetrievalSubscribe services. |
|  |  |
| ***Consequences if not approved:*** | Not fulfilled stage 2 requirements. |
|  |  |
| ***Clauses affected:*** | 4.2.2.3.2, 4.2.2.4.2, 4.2.2.6.2, 5.1.6.2.3, 5.1.6.2.4, 5.1.6.2.6, 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 feature in the OpenAPI file of the Nadrf\_DataManagement API. |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* First change \* \* \* \*

4.2.2.3.2 Requesting subscription and storage of data or analytics

Figure 4.2.2.3.2-1 shows a scenario where the NF service consumer sends a request to the ADRF to subscribe for data or analytics to be stored in the ADRF.

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**Figure 4.2.2.3.2-1: NF service consumer requesting that the ADRF subscribes to and subsequently stores data or analytics**

The NF service consumer shall invoke the Nadrf\_DataManagement\_StorageSubscriptionRequest service operation to request the ADRF to subscribe to data or analytics. The NF service consumer shall send an HTTP POST request with "{apiRoot}/nadrf-datamanagement/<apiVersion>/request-storage-sub" as URI, as shown in figure 4.2.2.3.2-1, step 1. The NadrfDataStoreSubscription data structure provided in the request body shall include:

- one of the following subscription attributes:

- analytics subscription information within the "anaSub" attribute;

- data subscription information within the "dataSub" attribute;

- one of the following target identifiers:

- DCCF or NWDAF instance identifier within the "targetNfId" attribute;

- DCCF or NWDAF NF set identifier within the "targetNfSetId" attribute;

and may include:

- formatting instructions within the "formatInstruct" attribute;

- processing instructions within the "procInstruct" attribute or the "multiProcInstructs" attribute if the "MultiProcessingInstruction" feature is supported.

NOTE: The parameters provided by the NF service consumer, including Formatting and Processing Instructions (if provided) are used by the ADRF when subscribing to a DCCF or NWDAF for Data or Analytics to be stored.

- a data set tag to be associated with this subscription and with the data or analytics collected based on this subscription within the "dataSetTag" attribute, if the "EnhDataMgmt" feature is supported.

Upon the reception of an HTTP POST request with "{apiRoot}/nadrf-datamanagement/<apiVersion>/request-storage-sub" as URI and NadrfDataStoreSubscription data structure as request body, the ADRF shall assign a transaction reference identifier to this request and, if the request is successfully processed and accepted, the ADRF shall respond with "200 OK" as shown in figure 4.2.2.3.2-1 step 2, with the message body containing an NadrfDataStoreSubscriptionRef data structure, which shall include the assigned transaction reference identifier as "transRefId" attribute.

NOTE: If the data and/or analytics is already stored or being stored in the ADRF, the ADRF will still assign a new transaction reference identifier if the ADRF intends to not really store the data again in the memory again based on the implementation.

If an error occurs when processing the HTTP POST request, the ADRF shall send an HTTP error response as specified in clause 5.1.7.

In the case of a successful response, the ADRF may subsequently create a data or analytics subscription (according to inputs that had been received in the NadrfDataStoreSubscription data structure; this is not performed if the ADRF determines that the data is already being stored based on an existing subscription) with a DCCF as described in 3GPP TS 29.574 [23] or with an NWDAF as described in 3GPP TS 29.520 [15], and create a mapping between the previously assigned and returned transaction reference identifier and the subscription that is used to serve the transaction.

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

4.2.2.4.2 Requesting removal of subscription of data or analytics

Figure 4.2.2.4.2-1 shows a scenario where the NF service consumer sends a request to the ADRF to unsubscribe for storage of data or analytics.

****

**Figure 4.2.2.4.2-1: NF service consumer requesting the removal of a subscription to storage of data or analytics**

The NF service consumer shall invoke the Nadrf\_DataManagement\_StorageSubscriptionRemoval service operation to request the ADRF to remove a subscription to data or analytics that are stored in the ADRF. The NF service consumer shall send an HTTP POST request with "{apiRoot}/nadrf-datamanagement/<apiVersion>/request-storage-sub-removal" as URI, as shown in figure 4.2.2.4.2-1, step 1. The POST request body shall contain an NadrfDataStoreSubscriptionRef data structure, which shall include a transaction reference identifier as "transRefId" attribute or, if the "EnhDataMgmt" feature is supported, a data set identifier as "dataSetId" attribute.

Upon the reception of an HTTP POST request with "{apiRoot}/nadrf-datamanagement/<apiVersion>/request-storage-sub-removal" as URI, if the ADRF successfully processed and accepted the received HTTP POST request, the ADRF shall respond with HTTP "204 No Content" status. Subsequently, the ADRF shall remove the (DCCF or NWDAF) subscription that had been created and mapped to the received transaction reference identifier or associated to the received data set identifier as described in clause 4.2.2.3, unless this subscription is mapped to further transaction reference identifiers (of transactions that are still active) or associated with further data set identifiers.

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

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

4.2.2.6.2 Requesting retrieval and subscription of data or analytics

Figure 4.2.2.6.2-1 shows a scenario where the NF service consumer sends a request to the ADRF to retrieve and subscribe to data or analytics.

****

**Figure 4.2.2.6.2-1: NF service consumer requesting to retrieve and subscribe to data or analytics**

The NF service consumer shall invoke the Nadrf\_DataManagement\_RetrievalSubscribe service operation to retrieve and subscribe to data or analytics. The NF service consumer shall send an HTTP POST request with "{apiRoot}/nadrf-datamanagement/<apiVersion>/data-retrieval-subscriptions" as Resource URI representing the "ADRF Data Retrieval Subscriptions" resource, as shown in figure 4.2.2.6.2-1, step 1, to create an "Individual ADRF Data Retrieval Subscription" according to the information in the message body. The NadrfDataRetrievalSubscription data structure provided in the request body shall include:

- notification correlation identfier within the "notifCorrId" attribute;

- one of the following:

- analytics subscription information within the "anaSub" attribute;

- data subscription information within the "dataSub" attribute;

- data set identifier within the "dataSetId" attribute, if the "EnhDataMgmt" feature is supported;

- a notification target address within the "notificationURI" attribute;

- a time window for the data retrieval and subscription within the "timePeriod" attribute;

and may include:

- a Consumer triggered Notification indication within the "consTrigNotif" attribute.

Upon the reception of an HTTP POST request with "{apiRoot}/nadrf-datamanagement/<apiVersion>/data-retrieval-subscriptions" as Resource URI and NadrfDataRetrievalSubscription data structure as request body, the ADRF shall:

- create a new subscription;

- assign a subscriptionId;

- store the subscription.

If the ADRF created an "Individual ADRF Data Retrieval Subscription" resource, the ADRF shall respond with "201 Created" with the message body containing a representation of the created subscription, as shown in figure 4.2.2.6.2-1, step 2. The ADRF shall include a Location HTTP header field. The Location header field shall contain the URI of the created record i.e. "{apiRoot}/nadrf-datamanagement/<apiVersion>/data-retrieval-subscriptions/{subscriptionId}".

If an error occurs when processing the HTTP POST request, the ADRF shall send an HTTP error response as specified in clause 5.1.7.

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

5.1.6.2.3 Type: NadrfDataStoreSubscription

**Table 5.1.6.2.3-1: Definition of type NadrfDataStoreSubscription**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| anaSub | NnwdafEventsSubscription | C | 0..1 | Subscribed analytics events. (NOTE 1) |  |
| dataSub | DataSubscription | C | 0..1 | Represents requested Events subscription.(NOTE 1) |  |
| targetNfId | NfInstanceId | C | 0..1 | DCCF or NWDAF NF instance identifier to which the ADRF shall create the requested subscription. (NOTE 2) |  |
| targetNfSetId | NfSetId | C | 0..1 | DCCF or NWDAF NF set identifier to which the ADRF shall create the requested subscription. (NOTE 2) |  |
| formatInstruct | FormattingInstruction | O | 0..1 | Formatting instructions to be used for sending event notifications. |  |
| procInstruct | ProcessingInstruction | O | 0..1 | Processing instructions to be used for sending event notifications. (NOTE 3) |  |
| multiProcInstructs | array(ProcessingInstruction) | O | 1..N | Processing instructions to be used for sending event notifications. (NOTE 3) | MultiProcessingInstruction |
| dataSetTag | DataSetTag | O | 0..1 | Data set tag of the stored data or analytics. | EnhDataMgmt |
| suppFeat | SupportedFeatures | C | 0..1 | This IE represents a list of Supported features as described in clause 5.1.8.It shall be present if at least one feature defined in clause 5.1.8 is supported. |  |
| NOTE 1: Exactly one of these attributes shall be provided.NOTE 2: One of "targetNfId" and "targetNfSetId" shall be provided.NOTE 3: The "multiProcInstructs" attribute shall be used instead of the "procInstruct" attribute when the "MultiProcessingInstruction" feature is supported. |

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

5.1.6.2.4 Type: NadrfDataRetrievalSubscription

**Table 5.1.6.2.4-1: Definition of type NadrfDataRetrievalSubscription**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| anaSub | NnwdafEventsSubscription | C | 0..1 | Subscribed analytics events. (NOTE 1) |  |
| dataSub | DataSubscription | C | 0..1 | Represents requested Events subscription.(NOTE 1) |  |
| dataSetId | string | C | 0..1 | Data set identifier of stored data or analytics records. (NOTE 1) | EnhDataMgmt |
| notificationURI | Uri | M | 1 | Notification target address.  |  |
| timePeriod | TimeWindow | M | 1 | Represents a start time and a stop time during which the requested data is collected and/or will be collected at the data source. |  |
| notifCorrId | string | M | 1 | Notification correlation identifier provided by the NF service consumer to be used later by the ADRF in the notifications that correspond with this subscription. The value of this attribute shall be unique per subscription for a given NF service consumer. |  |
| consTrigNotif | boolean | O | 0..1 | If provided and set to "true", it indicates that notifications shall be buffered (sending only fetch instructions to the NF service consumer) until the NF service consumer requests their delivery using Nadrf\_DataManagement Service.The default value is "false". |  |
| suppFeat | SupportedFeatures | C | 0..1 | This IE represents a list of Supported features as described in clause 5.1.8.It shall be present if at least one feature defined in clause 5.1.8 is supported. |  |
| NOTE 1: Exactly one of these attributes shall be provided. |

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

5.1.6.2.6 Type: NadrfDataStoreSubscriptionRef

**Table 5.1.6.2.6-1: Definition of type NadrfDataStoreSubscriptionRef**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| transRefId | string | C | 0..1 | Transaction reference identifier. (NOTE) |  |
| dataSetId | string | C | 0..1 | Data set identifier associated with a storage subscription. (NOTE) | EnhDataMgmt |
| suppFeat | SupportedFeatures | C | 0..1 | This IE represents a list of Supported features as described in clause 5.1.8.It shall be present in the POST response if the NF service consumer includes the "suppFeat" attribute in the POST request. |  |
| NOTE: One of the "transRefId" and "dataSetId" attributes shall be provided.  |

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

A.2 Nadrf\_DataManagement API

openapi: 3.0.0

info:

 version: 1.1.0-alpha.2

 title: Nadrf\_DataManagement

 description: |

 ADRF Data Management Service.

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externalDocs:

 description: 3GPP TS 29.575 V18.1.0; 5G System; Analytics Data Repository Services; Stage 3.

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.575/'

#

servers:

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

 variables:

 apiRoot:

 default: https://example.com

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

#

security:

 - oAuth2ClientCredentials:

 - nadrf-datamanagement

 - {}

#

paths:

 /data-store-records:

 post:

 summary: Creates a new Individual Data Store Record resource.

 operationId: CreateADRFDataStoreRecord

 tags:

 - ADRF Data Store Records (Collection)

 requestBody:

 content:

 application/json:

 schema:

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

 required: true

 description: ADRF data store record to be stored.

 responses:

 '201':

 description: Successful creation of new Individual ADRF Data Store Record resource.

 headers:

 Location:

 description: >

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

 {apiRoot}/nadrf-datamanagement/<apiVersion>/data-store-records/{storeTransId}

 required: true

 schema:

 type: string

 content:

 application/json:

 schema:

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

 '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'

 get:

 summary: Retrieves existing Individual ADRF Data Store Records.

 operationId: GetAdrfDataStoreRecords

 tags:

 - ADRF Data Store Records (Collection)

 parameters:

 - name: store-trans-id

 description: A storage transaction identifier of a data store record in ADRF.

 in: query

 required: false

 schema:

 type: string

 - name: fetch-correlation-ids

 description: Fetch correlation identifiers received as part of fetch instruction.

 in: query

 required: false

 style: form

 explode: false

 schema:

 type: array

 items:

 type: string

 minItems: 1

 responses:

 '200':

 description: Data store records are returned.

 content:

 application/json:

 schema:

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

 '204':

 description: No matching ADRF data were found.

 '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'

 '406':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/406'

 '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-store-records/{storeTransId}:

 delete:

 summary: Delete an existing Individual ADRF Data Store Record.

 operationId: DeleteADRFDataStoreRecord

 tags:

 - Individual ADRF Data Store Record (Document)

 parameters:

 - name: storeTransId

 in: path

 description: String identifying a Data Store Record in ADRF.

 required: true

 schema:

 type: string

 responses:

 '204':

 description: >

 No Content. The Individual ADRF Data Store Record resource matching the

 storeTransId 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'

 /data-retrieval-subscriptions:

 post:

 summary: Creates a new Individual ADRF Data Retrieval Subscription resource.

 operationId: CreateADRFDataRetrievalSubscription

 tags:

 - ADRF Data Retrieval Subscriptions (Collection)

 requestBody:

 content:

 application/json:

 schema:

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

 required: true

 description: Individual ADRF Data Retrieval Subscription resource to be created.

 responses:

 '201':

 description: Created a new Individual ADRF Data Retrieval Subscription resource.

 headers:

 Location:

 description: >

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

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

 required: true

 schema:

 type: string

 content:

 application/json:

 schema:

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

 '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:

 adrfDataRetrievalNotification:

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

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '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'

 /data-retrieval-subscriptions/{subscriptionId}:

 delete:

 summary: Delete an existing Individual ADRF Data Retrieval Subscription resource.

 operationId: DeleteADRFDataRetrievalSubscription

 tags:

 - Individual ADRF Data Retrieval Subscription (Document)

 parameters:

 - name: subscriptionId

 in: path

 description: >

 String identifying a data retrieval subscription to the Nadrf\_DataManagement

 Service.

 required: true

 schema:

 type: string

 responses:

 '204':

 description: >

 No Content. The Individual ADRF Data Retrieval 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'

 /request-storage-sub:

 post:

 summary: Triggers the creation of a new ADRF Storage Subscription.

 operationId: CreateADRFStorageSubscription

 tags:

 - ADRF Storage Subscriptions

 requestBody:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '200':

 description: >

 Successful response with reference used to identify the subscription at the ADRF.

 content:

 application/json:

 schema:

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

 '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'

 /request-storage-sub-removal:

 post:

 summary: Triggers the removal of ADRF storage subscription.

 operationId: DeleteADRFStorageSubscription

 tags:

 - ADRF Storage Subscriptions

 requestBody:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '204':

 description: >

 No Content. The ADRF Storage Subscription matching the provided reference was deleted.

 '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'

 /remove-stored-data-analytics:

 post:

 summary: Remove ADRF data based on data or analytics specification.

 operationId: DeleteADRFData

 tags:

 - ADRF Stored Data

 requestBody:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '204':

 description: No Content. The ADRF data matching the provided specification is deleted.

 '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:

 nadrf-datamanagement: Access to the nadrf-datamanagement API

#

 schemas:

#

 NadrfDataStoreRecord:

 description: Represents an Individual ADRF Data Store Record.

 type: object

 oneOf:

 - allOf:

 - required: [anaSub]

 - required: [anaNotifications]

 - allOf:

 - required: [dataSub]

 - required: [dataNotif]

 properties:

 dataNotif:

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

 anaNotifications:

 type: array

 items:

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

 minItems: 1

 description: List of analytics subscription notifications.

 anaSub:

 type: array

 items:

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

 minItems: 1

 description: >

 Represents the subscription information of the corresponding analytics notification.

 dataSub:

 type: array

 items:

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

 minItems: 1

 description: >

 Represents the subscription information of the corresponding data notification.

 suppFeat:

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

#

 NadrfDataStoreSubscription:

 description: >

 Contains information to be used by the ADRF to create a Data or Analytics subscription.

 type: object

 allOf:

 - oneOf:

 - required: [anaSub]

 - required: [dataSub]

 - oneOf:

 - required: [targetNfId]

 - required: [targetNfSetId]

 properties:

 anaSub:

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

 dataSub:

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

 targetNfId:

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

 targetNfSetId:

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

 formatInstruct:

 $ref: 'TS29574\_Ndccf\_DataManagement.yaml#/components/schemas/FormattingInstruction'

 procInstruct:

 $ref: 'TS29574\_Ndccf\_DataManagement.yaml#/components/schemas/ProcessingInstruction'

 multiProcInstructs:

 type: array

 items:

 $ref: 'TS29574\_Ndccf\_DataManagement.yaml#/components/schemas/ProcessingInstruction'

 minItems: 1

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

 dataSetTag:

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

 suppFeat:

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

#

 NadrfDataRetrievalSubscription:

 description: Represents an Individual ADRF Data Retrieval Subscription.

 type: object

 required:

 - notifCorrId

 - notificationURI

 - timePeriod

 oneOf:

 - required: [anaSub]

 - required: [dataSub]

 - required: [dataSetId]

 properties:

 anaSub:

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

 dataSub:

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

 dataSetId:

 type: string

 description: data set identifier of the data or analytics that are subscribed.

 notificationURI:

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

 timePeriod:

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

 notifCorrId:

 type: string

 description: Notification correlation identifier.

 consTrigNotif:

 type: boolean

 description: >

 It indicates that notifications shall be buffered (sending only fetch instructions

 to the NF service consumer) until the NF service consumer requests their delivery

 using Nadrf\_DataManagement Service.

 suppFeat:

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

#

 NadrfDataRetrievalNotification:

 description: >

 Represents a notification that corresponds with an Individual ADRF Data

 Retrieval Subscription.

 type: object

 required:

 - notifCorrId

 - timeStamp

 oneOf:

 - required: [anaNotifications]

 - required: [dataNotif]

 - required: [fetchInstruct]

 properties:

 notifCorrId:

 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.

 dataNotif:

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

 fetchInstruct:

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

 terminationReq:

 type: boolean

 description: >

 It indicates the termination of the data management subscription that requested by the

 ADRF.

 timeStamp:

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

#

 NadrfDataStoreSubscriptionRef:

 description: Contains a reference to a request for a Data or Analytics subscription.

 type: object

 oneOf:

 - required: [transRefId]

 - required: [dataSetId]

 properties:

 transRefId:

 type: string

 description: Transaction reference identifier.

 dataSetId:

 type: string

 description: data set identifier of data or analytics.

#

 NadrfStoredDataSpec:

 description: Contains information about Data or Analytics specification.

 type: object

 required:

 - timePeriod

 oneOf:

 - required: [dataSpec]

 - required: [anaSpec]

 properties:

 dataSpec:

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

 anaSpec:

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

 timePeriod:

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

#

 DataSubscription:

 description: Contains a data specification.

 type: object

 oneOf:

 - required: [amfDataSub]

 - required: [smfDataSub]

 - required: [udmDataSub]

 - required: [nefDataSub]

 - required: [afDataSub]

 - required: [nrfDataSub]

 - required: [nsacfDataSub]

 properties:

 amfDataSub:

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

 smfDataSub:

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

 udmDataSub:

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

 afDataSub:

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

 nefDataSub:

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

 nrfDataSub:

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

 nsacfDataSub:

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

#

 DataNotification:

 description: Represents a Data Subscription Notification.

 type: object

 oneOf:

 - required: [amfEventNotifs]

 - required: [smfEventNotifs]

 - required: [udmEventNotifs]

 - required: [nefEventNotifs]

 - required: [afEventNotifs]

 - required: [nrfEventNotifs]

 - required: [nsacfEventNotifs]

 properties:

 amfEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of AMF events.

 smfEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of SMF events.

 udmEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of UDM events.

 nefEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of NEF events.

 afEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of AF events.

 nrfEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of NRF events.

 nsacfEventNotifs:

 type: array

 items:

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

 minItems: 1

 description: List of notifications of NSACF events.

 timeStamp:

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

#

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