**3GPP TSG-CT3 Meeting #118-e *C3-215180***

**Online, , 11th Oct 2021 - 15th Oct 2021**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.520** | **CR** | **0334** | **rev** | **-** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Analytics subscription transfer operation resources | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | C3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph2 | | | | |  | ***Date:*** | | | 2021-09-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | TS 23.288 clause 6.1B has specified how to perform transfer of analytics subscriptions, with the respective functionality added via a new service operation (Nnwdaf\_AnalyticsSubscription\_Transfer, see TS 23.288 clause 7.2.5). This needs to be implemented by extending the Nnwdaf\_EventsSubscription API accordingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Implemented the required resources to enable analytics subscriptions transfer. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Stage 2 requirements not fulfilled. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1.3.1, 5.1.3.Y (new subclause), 5.1.3.Z (new subclause) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 has no impact on any OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

#### 5.1.3.1 Resource Structure



Figure 5.1.3.1-1: Resource URI structure of the Nnwdaf\_EventsSubscription 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 |
| NWDAF Events Subscriptions | /subscriptions | POST | Creates a new Individual NWDAF Event Subscription resource. |
| Individual NWDAF Event Subscription | /subscriptions/{subscriptionId} | DELETE | Deletes an Individual NWDAF Event Subscription identified by subresource {subscriptionId}. |
| PUT | Modifies an existing Individual Event Subscription subresource. |
| NWDAF Event Subscription Transfers | /transfers | POST | Provides information about the requested analytics subscription transfer(s), potentially creating a new Individual NWDAF Event Subscription Transfer resource. |
| Individual NWDAF Event Subscription Transfer | /transfers/{transferId} | DELETE | Deletes an Individual NWDAF Event Subscription Transfer resource identified by subresource {transferId}. |
| PUT | Modifies an existing Individual NWDAF Event Subscription Transfer resource. |

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

#### 5.1.3.Y Resource: NWDAF Event Subscription Transfers

##### 5.1.3.Y.1 Description

The NWDAF Event Subscription Transfers resource represents all requests to transfer subscription(s) of the Nnwdaf\_EventsSubscription Service at a given NWDAF. The resource allows an NF service consumer to provide information about analytics subscriptions that are requested to be:

- prepared for transfer, leading to the creation of a new Individual NWDAF Event Subscription Transfer resource, which can be later modified, removed, or requested to be transferred.

- transferred, leading to the execution of the necessary steps for transferring the analytics subscription.

##### 5.1.3.Y.2 Resource definition

Resource URI: **{apiRoot}/nnwdaf-eventssubscription/v1/transfers**

This resource shall support the resource URI variables defined in table 5.1.3.Y.2-1.

Table 5.1.3.Y.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See subclause 5.1.1 |

##### 5.1.3.Y.3 Resource Standard Methods

###### 5.1.3.Y.3.1 POST

This method shall support the URI query parameters specified in table 5.1.3.Y.3.1-1.

Table 5.1.3.Y.3.1-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.1.3.Y.3.1-2 and the response data structures and response codes specified in table 5.1.3.Y.3.1-3.

Table 5.1.3.Y.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| AnalyticsSubscriptionsTransfer | M | 1 | Information about analytics subscription(s) that are requested to be transferred or prepared for transfer. |

Table 5.1.3.Y.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| AnalyticsSubscriptionsTransfer | M | 1 | 201 Created | The creation of an Individual NWDAF Event Subscription resource is confirmed and a representation of that resource is returned. |
| n/a |  |  | 204 No Content | The receipt of the information about analytics subscription(s) that are requested to be transferred and the ability to handle this information (e.g. execute the steps required to transfer an analytics subscription directly) is confirmed. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [6] also apply. | | | | |

Table 5.1.3.Y.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnwdaf-eventssubscription/v1/transfers/{transferId}. |

##### 5.1.3.Y.4 Resource Custom Operations

None in this release of the specification.

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

#### 5.1.3.Z Resource: Individual NWDAF Event Subscription Transfer

##### 5.1.3.Z.1 Description

The Individual NWDAF Event Subscription Transfer resource represents a single request to transfer subscription(s) of the Nnwdaf\_EventsSubscription Service at a given NWDAF.

##### 5.1.3.Z.2 Resource definition

Resource URI: {apiRoot}/nnwdaf-eventssubscription/v1/transfers/{transferId}

This resource shall support the resource URI variables defined in table 5.1.3.Z.2-1.

Table 5.1.3.Z.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See subclause 5.1.1 |
| transferId | string | Identifies a request to transfer subscription(s) of the Nnwdaf\_EventsSubscription Service |

##### 5.1.3.Z.3 Resource Standard Methods

###### 5.1.3.Z.3.1 DELETE

This method shall support the URI query parameters specified in table 5.1.3.Z.3.1-1.

Table 5.1.3.Z.3.1-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.1.3.Z.3.1-2 and the response data structures and response codes specified in table 5.1.3.Z.3.1-3.

Table 5.1.3.Z.3.1-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.1.3.Z.3.1-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Successful case: The Individual NWDAF Event Subscription Transfer resource matching the transferId was deleted. |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection, during Individual NWDAF Event Subscription Transfer deletion. The response shall include a Location header field containing an alternative URI of the resource located in an alternative NWDAF (service) instance.  Applicable if the feature "ES3XX" is supported. |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection, during Individual NWDAF Event Subscription Transfer deletion. The response shall include a Location header field containing an alternative URI of the resource located in an alternative NWDAF (service) instance.  Applicable if the feature "ES3XX" is supported. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [6] also apply. | | | | |

Table 5.1.3.Z.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative NWDAF (service) instance. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target NF (service) instance towards which the request is redirected. |

Table 5.1.3.Z.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative NWDAF (service) instance. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target NF (service) instance towards which the request is redirected. |

###### 5.1.3.Z.3.2 PUT

This method shall support the URI query parameters specified in table 5.1.3.Z.3.2-1.

Table 5.1.3.Z.3.2-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.1.3.Z.3.2-2 and the response data structures and response codes specified in table 5.1.3.Z.3.2-3.

Table 5.1.3.Z.3.2-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| AnalyticsSubscriptionsTransfer | M | 1 | Parameters to replace in an Individual NWDAF Event Subscription Transfer resource. |

Table 5.1.3.Z.3.2-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| AnalyticsSubscriptionsTransfer | M | 1 | 200 OK | The Individual NWDAF Event Subscription Transfer resource was modified successfully and a representation of the resource is returned. |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection, during Individual NWDAF Event Subscription Transfer modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative NWDAF (service) instance.  Applicable if the feature "ES3XX" is supported. |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection, during Individual NWDAF Event Subscription Transfer modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative NWDAF (service) instance.  Applicable if the feature "ES3XX" is supported. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [6] also apply. | | | | |

Table 5.1.3.Z.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative NWDAF (service) instance. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target NF (service) instance towards which the request is redirected. |

Table 5.1.3.Z.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative NWDAF (service) instance. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target NF (service) instance towards which the request is redirected. |

##### 5.1.3.Z.4 Resource Custom Operations

None in this release of the specification.

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