**3GPP TSG- Meeting #**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *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:***  |  |
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| ***Source to WG:*** |  |
| ***Source to TSG:*** | C3 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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-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. |
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| ***Summary of change:*** | Added service operation descriptions for Nnwdaf\_EventsSubscription\_Transfer. |
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| ***Consequences if not approved:*** | Stage 2 requirements not fulfilled. |
|  |  |
| ***Clauses affected:*** | 4.2.2.X (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 \* \* \* \*

#### 4.2.2.X Nnwdaf\_EventsSubscription\_Transfer service operation

##### 4.2.2.X.1 General

The Nnwdaf\_EventsSubscription\_Transfer service operation is used by an NWDAF to request the transfer of subscription(s) for analytics events.

##### 4.2.2.X.2 Creation of request for analytics subscription transfer

Figure 4.2.2.X.2-1 shows a scenario where the NF Service Consumer (e.g. NWDAF) sends a request to the NWDAF to request the transfer of analytics subscription(s) from the NF Service Consumer to the NF Service Producer (see also 3GPP TS 23.288 [17]).



Figure 4.2.2.X.2-1: NF service consumer requests an analytics subscription transfer

The NF service consumer shall invoke the Nnwdaf\_EventsSubscription\_Transfer service operation to request the transfer of analytics subscription(s). The NF service consumer shall send an HTTP POST request with "{apiRoot}/nnwdaf-eventssubscription/v1/transfers" as Resource URI representing the "NWDAF Event Subscription Transfers", as shown in figure 4.2.2.X.2-1, step 1, to create a request for an "Individual NWDAF Event Subscription Transfer" according to the information in the message body. The AnalyticsSubscriptionsTransfer data structure provided in the request body shall include:

- information about the subscription(s) transfer request as "subsTransInfos" attribute, which, for each subscription that is requested to be transferred, shall include:

a) the type of the transfer request (i.e. if it is a request for transfer preparation or transfer execution) in the "transReqType" attribute;

b) information about the analytics subscription in the "nwdafEvSub" attribute, its contents being as defined for the NnwdafEventsSubscription data structure in subclause 4.2.2.2.2;

c) the NF instance identifer of the consumer of the analytics subscription in the "consumerId" attribute;

and may include:

a) analytics context identifier information about the context that is available at the NF service consumer in the "contextId" attribute;

b) NF instance identifer(s) of active data source(s) the NF service consumer is currently using for the analytics of this analytics subscription in the "sourceNfIds" attribute;

c) NF set identifer(s) of active data source(s) the NF service consumer is currently using for the analytics of this analytics subscription in the "sourceSetIds" attribute;

d) information identifying the ML model(s) that the NF service consumer is currently using for the analytics in the "modelInfo" attribute;

e) NF instance identifer(s) of the ML model provider NWDAF(s) from which the NF service consumer currently subscribes to the ML model information used for the analytics in the "modelProvIds" attribute;

Upon the reception of an HTTP POST request with: "{apiRoot}/nnwdaf-eventssubscription/v1/transfers" as Resource URI and AnalyticsSubscriptionsTransfer data structure as request body, in the successful case the NWDAF shall:

- if the "transReqType" attribute has the value PREPARE, perform the steps required for the preparation of an analytics subscription transfer, create a new Individual NWDAF Event Subscription Transfer resource and send an HTTP "201 Created" response with the URI for the created resource in the "Location" header field, as shown in figure 4.2.2.X.2-1, step 2a;

- if the "transReqType" attribute has the value TRANSFER, perform the steps required for the execution of an analytics subscription transfer, and send an HTTP "204 No Content" response, as shown in figure 4.2.2.X.2-1, step 2b.

Editor’s Note: References to 29.552 with regard to the steps required for the preparation and the execution of an analytics subscription transfer will be added as soon as 29.552 has been updated accordingly.

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

If the feature "ES3XX" is supported, and the NF service consumer determines the received HTTP POST request needs to be redirected, the NF service consumer shall send an HTTP redirect response as specified in subclause 6.10.9 of 3GPP TS 29.500 [6].

##### 4.2.2.X.3 Update a request for analytics subscription transfer

Figure 4.2.2.X.3-1 shows a scenario where the NF Service Consumer (e.g. NWDAF) sends a request to the NWDAF to update a request for the transfer of analytics subscription(s) from the NF Service Consumer to the NF Service Producer (see also 3GPP TS 23.288 [17]).



Figure 4.2.2.X.3-1: NF service consumer updates a request for an analytics subscription transfer

The NF service consumer shall invoke the Nnwdaf\_EventsSubscription\_Transfer service operation to update a request for the transfer of analytics subscription(s). The NF service consumer shall send an HTTP PUT request with "{apiRoot}/nnwdaf-eventssubscription/v1/transfers/{transferId}" as Resource URI representing the "Individual NWDAF Event Subscription Transfer", as shown in figure 4.2.2.X.3-1, step 1, to update the "Individual NWDAF Event Subscription Transfer" resource identified by the {transferId}. The AnalyticsSubscriptionsTransfer data structure provided in the request body shall include the same contents as described in subclause 4.2.2.X.2.

Upon the reception of an HTTP PUT request with: "{apiRoot}/nnwdaf-eventssubscription/v1/transfers/{transferId}" as Resource URI and AnalyticsSubscriptionsTransfer data structure as request body, the NWDAF shall:

- if the "transReqType" attribute has the value PREPARE, perform the steps required for the preparation of an analytics subscription transfer, update the Individual NWDAF Event Subscription Transfer resource identified by "transferId", and send an HTTP "204 No Content" response, as shown in figure 4.2.2.X.3-1, step 2;

- if the "transReqType" attribute has the value TRANSFER, perform the steps required for the execution of an analytics subscription transfer, remove the Individual NWDAF Event Subscription Transfer resource identified by "transferId", and send an HTTP "204 No Content" response, as shown in figure 4.2.2.X.3-1, step 2.

Editor’s Note: References to 29.552 with regard to the steps required for the preparation and the execution of an analytics subscription transfer, and possibly also enhancement of the referencing text, will be added as soon as 29.552 has been updated accordingly.

If errors occur when processing the HTTP PUT request, the NWDAF shall send an HTTP error response as specified in subclause 5.1.7.

If the feature "ES3XX" is supported, and the NWDAF determines the received HTTP PUT request needs to be redirected, the NWDAF shall send an HTTP redirect response as specified in subclause 6.10.9 of 3GPP TS 29.500 [6].

##### 4.2.2.X.4 Cancel a request for analytics subscription transfer

Figure 4.2.2.X.4-1 shows a scenario where the NF Service Consumer (e.g. NWDAF) sends a request to the NWDAF to cancel a request for the transfer of analytics subscription(s) from the NF Service Consumer to the NF Service Producer (see also 3GPP TS 23.288 [17]).



Figure 4.2.2.X.4-1: NF service consumer cancels a request for an analytics subscription transfer

The NF service consumer shall invoke the Nnwdaf\_EventsSubscription\_Transfer service operation to cancel a request for the transfer of analytics subscription(s). The NF service consumer shall send an HTTP DELETE request with "{apiRoot}/nnwdaf-eventssubscription/v1/transfers/{transferId}" as Resource URI representing the "Individual NWDAF Event Subscription Transfer", as shown in figure 4.2.2.X.4-1, step 1, to cancel the "Individual NWDAF Event Subscription Transfer" resource identified by the {transferId}.

Upon the reception of an HTTP DELETE request with: "{apiRoot}/nnwdaf-eventssubscription/v1/transfers/{transferId}" as Resource URI, if the NWDAF successfully processed and accepted the received HTTP DELETE request, the NWDAF shall:

- remove the corresponding Individual NWDAF Event Subscription Transfer resource;

- respond with HTTP "204 No Content" status, as shown in figure 4.2.2.X.4-1, step 2.

Editor’s Note: References to 29.552 with regard to the steps required upon cancelling an analytics subscription transfer, and possibly also enhancement of the referencing text, will be added as soon as 29.552 has been updated accordingly.

If errors occur when processing the HTTP DELETE request, the NWDAF shall send an HTTP error response as specified in subclause 5.1.7.

If the feature "ES3XX" is supported, and the NWDAF determines the received HTTP DELETE request needs to be redirected, the NWDAF shall send an HTTP redirect response as specified in subclause 6.10.9 of 3GPP TS 29.500 [6].

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