**3GPP TSG CT WG3 Meeting #134 *C3-242175r1***

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

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.520** | **CR** | **0881** | **rev** | **1** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Completion of analytics events for Nnwdaf\_MLModelProvision service | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph3 | | | | |  | ***Date:*** | | | 2024-04-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The types of analytics events listed in 4.5.1.1 is incomplete, and "Abnormal behaviour" is listed twice.  "multModelInd" attribute instead of "multModelsInd" attribute is referred in Table 5.4.6.2.13-1. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Remove the list of the types of analytics events, and refer to clause 4.2.1.1 instead.  "multModelInd" attribute is replaced with "multModelsInd". | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incomplete and incorrect specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.5.1.1, 5.4.6.2.13 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR does not have any impact in the OpenAPI specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

#### 4.5.1.1 Overview

The Nnwdaf\_MLModelProvision service as defined in 3GPP TS 23.501 [2] and 3GPP TS 23.288 [17], is provided by the Network Data Analytics Function (NWDAF) containing Model Training Logical Function (MTLF).

This service:

- allows the NF service consumers to subscribe to and unsubscribe from different ML model analytics events;

- allows MTLF-based ML Model Accuracy monitoring procedure between the AnLF and MTLF. and

- notifies the NF service consumers with a corresponding subscription about ML model information.

The types of analytics events supported by this serivce are the same as defined in clause 4.2.1.1.

NOTE: ML model provisioning is limited to a single vendor environment in this release of current specification.

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

##### 5.4.6.2.13 Type ModelProvisionParamsExt

Table 5.4.6.2.13-1: Definition of type ModelProvisionParamsExt

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| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| modelInterInfo | string | O | 0..1 | Represents the ML Model Interoperability Information. This is vendor-specific information and is agreed between vendors, if necessary for sharing purposes.  The format of value is out of 3GPP. |  |
| reqRepRatio | Uinteger | O | 0..1 | Minimum percentage of UEs whose data is used for training an ML model when the target of ML model reporting is a group of UEs.  Minimum = 0. Maximum = 100. |  |
| inferInpDataInfos | array(InputDataInfo) | O | 1..N | The metrics of input data that are expected to be used by NWDAF containing AnLF during inference. |  |
| multModelsInd | boolean | O | 0..1 | If provided and set to "true", it indicates that the NF service consumer supports receiving multiple ML models. If omitted or set to "false" the NF service consumer does not support multiple ML models. The default value is false. |  |
| numModels | Uinteger | O | 0..1 | Maximum number of ML models that the consumer supports to receive for a specific analytics ID. It may only be provided if the "multModelsInd" attribute is provided and set to "true". |  |
| accuLevels | array(Accuracy) | O | 1..N | Provided accuracy levels of interest for ML models. |  |

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