**3GPP TSG-CT WG4 Meeting #130C4-253411**

**Gothenburg, Sweden, August 25 – 29, 2025 (revision of C4-253332)**

**Source: Lenovo**

**Title: Pseudo-CR on ProblemDetails in error responses**

**Spec: 3GPP TS 29.369 V0.2.0**

**Agenda item: 19.70**

**Document for: Agreement**

**1. Introduction**

The support of ProblemDetails in case of error responses is missing.

**2. Reason for Change**

ProblemDetails is added in clause A.2.

**3. Conclusions**

Accordingly, this PCR proposes to update the impacted clauses.

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.369v0.2.0.

\*\*\* First Change \*\*\*

#### 6.1.6.1 General

This clause specifies the application data model supported by the API.

Table 6.1.6.1-1 specifies the data types defined for the Nadm\_DM service based interface protocol.

Table 6.1.6.1-1: Nadm\_DM specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| AiotDevProfileData | 6.1.6.2.2 | AIoT Device Profile Data |  |
| LastKnownAiotfInfo | 6.1.6.2.3 | Last Known AIoTF Information |  |
| IndividualAfAuthorizationData | 6.1.6.2.4 | Individual AF Authorization Data |  |
| AllowedTargetAiotDevice | 6.1.6.2.5 | Allowed Target AIoT Device |  |
| AfAuthorizationData | 6.1.6.2.6 | AF Authorization Data |  |
| LastKnownAiotfInfoInd | 6.1.6.3.2 | Last known AIOTF Information |  |
| AfId | 6.1.6.3.2 | AF ID |  |
| AllowedServiceOperation | 6.1.6.3.3 | Allowed Service Operation |  |

Table 6.1.6.1-2 specifies data types re-used by the Nadm\_DM 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 Nadm\_DM service based interface.

Table 6.1.6.1-2: Nadm\_DM re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| SupportedFeatures | 3GPP TS 29.571 [17] | see 3GPP TS 29.500 [4] clause 6.6 | SupportedFeatures |
| AiotDevPermId | 3GPP TS 29.571 [17] | AIoT device permanent identifier |  |
|  |  |  |  |
| AiotArea | 3GPP TS 29.571 [17] | Contains the AIoT Area |  |
| ProblemDetails | 3GPP TS 29.571 [17] | Used in error responses to provide more detailed information about an error. |  |

\*\*\* Next Change \*\*\*

# A.2 Nadm\_DM API

openapi: 3.0.0

info:

 version: '1.0.0-alpha.2'

 title: 'Nadm\_DM'

 description: |

 Nadm Data Management Service.

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externalDocs:

 description: 3GPP TS 29.xxx Ambient IoT Data Management Services, version 0.2.0

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

servers:

 - url: '{apiRoot}/nadm-dm/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - oAuth2ClientCredentials:

 - nadm-dm

 - {}

paths:

 /aiot-device-profile-data/{aiotDevPermId}:

 get:

 summary: get AIoT Device Profile Data

 operationId: Get AIoT Device Profile Data

 tags:

 - AIoT Device Profile Data Retrieval

 parameters:

 - name: aiotDevPermId

 in: path

 description: AIoT Device Permanent ID

 required: true

 schema:

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

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 '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':

 description: Not Found

 content:

 application/problem+json:

 schema:

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

 '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:

 description: Unexpected error

 patch:

 summary: modify AIoT Device Profile Data

 operationId: Modify AIoT Device Profile Data

 tags:

 - AIoT Device Profile Data Update

 parameters:

 - name: aiotDevPermId

 in: path

 description: AIoT Device Permanent ID

 required: true

 schema:

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

 - name: supported-features

 in: query

 description: Features required to be supported by the target NF

 schema:

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

 requestBody:

 content:

 application/merge-patch+json:

 schema:

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

 required: true

 responses:

 '204':

 description: Expected response to a valid request

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 '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':

 description: Not Found

 content:

 application/problem+json:

 schema:

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

 '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:

 description: Unexpected error

 /af-authorization-data:

 get:

 summary: get AF Authorization Data

 operationId: Get AF Authorization Data

 tags:

 - AF Authorization Data Retrieval

 parameters:

 - name: af-id

 in: query

 description: AF ID

 required: false

 schema:

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

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 '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':

 description: Not Found

 content:

 application/problem+json:

 schema:

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

 '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:

 description: Unexpected error

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 nadm-dm: Access to the Nadm\_DM API

 nadm-dm:aiot-device-profile-data:read: Access to read AIoT Device Profile Data

 nadm-dm:aiot-device-profile-data:modify: Access to update AIoT Device Profile Data

 nadm-dm:af-authorization-data:read: Access to read AF Authorization Data

 schemas:

#

# STRUCTURED TYPES

#

 AiotDevProfileData:

 description: Contains the AIoT Device Profile Data.

 type: object

 required:

 - aiotDevPermId

 - lastKnownAiotfInfo

 properties:

 aiotDevPermId:

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

 lastKnownAiotfInfo:

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

 LastKnownAiotfInfo:

 description: Contains the Last Known AIoTF Info.

 type: object

 required:

 - lastKnownAiotfInfoInd

 properties:

 lastKnownAiotfInfoInd:

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

 IndividualAfAuthorizationData:

 description: Contains the AF Authorization Data for an invidual AF.

 type: object

 required:

 - afId

 properties:

 afId:

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

 allowedAreas:

 type: array

 items:

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

 allowedServiceOperations:

 type: array

 items:

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

 allowedTargetAiotDevices:

 type: array

 items:

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

 AllowedTargetAiotDevice:

 description: Contains the permanent AIoT Device ID or the filtering information

 type: object

 properties:

 aiotDevPermId:

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

 filteringInfo:

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

 AfAuthorizationData:

 description: Contains the AF Authorization Data.

 type: object

 required:

 - afAuthData

 properties:

 afAuthData:

 type: object

 description: >

 'Map carrying the AF Authorization Data.

 The key of the map is the AF ID of the corresponding Authorization Data'

 additionalProperties:

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

 minProperties: 1

#

# SIMPLE TYPES

#

 LastKnownAiotfInfoInd:

 description: Indicates the Last Known AIoTF information indication

 type: boolean

 AfId:

 description: Indicates the identifier used to identify the AF.

 type: string

#

# ENUMS

#

 AllowedServiceOperation:

 description: The Allowed Service Operation.

 anyOf:

 - type: string

 enum:

 - INVENTORY

 - READ

 - WRITE

 - PERMANENT\_DISABLE

 - type: string

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