**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 \*\*\*