**3GPP TSG CT WG3 Meeting #142 *C3-253497***

**Goteborg, SE, 25th – 29th August, 2025 was C3-253315**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **1680** | **rev** | **1** | **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)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  | Complete the definition of the Nnef\_AIoT\_Inventory service operation |
|  |  |
| ***Source to WG:*** | Huawei, CEWiT, Lenovo, Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | AmbientIoT-CT |  | ***Date:*** | 2025-08-25 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | As per the latest stage 2 updates in TS 23.369 (v19.0.0):* The definition of the AIoT Service Operation Result Aggregation procedure in clauses 5.9, 6.2.2 and 7.4.2 of TS 23.369 is completed. This needs hence to be reflected in the stage 3 definition of the AIoT Inventory procedure with a new optional attribute to convey the time interval for results aggregation in the AIoT Inventory request body.

In addition:* An error handling case to cover the situation where the NEF is unable to select any AIOTF to fulfil the request is needed.
* Further corrections and alignments/enhancements of the AIoT Inventory related requirements.
 |
|  |  |
| ***Summary of change:*** | This CR proposes to:* Address the above-detailed stage 2 requirements and necessary updates/corrections.
 |
|  |  |
| ***Consequences if not approved:*** | * The above-detailed stage 2 requirements are not defined in stage 3.
 |
|  |  |
| ***Clauses affected:*** | 4.4.49.2, 5.45.3.1, 5.45.3.2.1, 5.45.3.2.2, 5.45.5.1, 5.45.5.2.2, 5.45.5.2.3, 5.45.5.2.7, 5.45.7.3, A.43 |
|  |  |
|  | **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 introduces backwards compatible new feature and corrections to the OpenAPI descriptions of the following APIs:* TS29522\_AIoT.yaml
 |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* Start of changes \* \* \* \*

#### 4.4.49.2 Procedures for AIoT Inventory Management

This procedure is used by an AF to request to perform an AIoT Inventory operation at the NEF (see also clause 6.2.2 of 3GPP TS 23.369 [81]).

In order to perform an AIoT Inventory operation, the AF shall send an HTTP POST request to the NEF targeting the URI of the corresponsing custom operation (i.e., "InventoryRequest"), with the request body including the InventoryReq data structure.

Upon reception of this HTTP POST request message, the NEF shall:

- check whether the AF is authorized perform this operation based on operator policies, local configuration information (e.g., SLA with the AF) and/or by interacting with the ADM as defined in clause 5.6 of 3GPP TS 23.369 [81];

- if the AF is not authorized, reject the request with an HTTP "403 Forbidden" status code with the response body including the ProblemDetails data structure containing the "cause" attribute set to the "AF\_NOT\_AUTHORIZED" application error; and

- if the AF is authorized:

- determine the Target AIoT Area information based on the received External Target AIoT Area information;

- follow the procedures defined in clause 6.2.2 of 3GPP TS 23.369 [81] by interacting with the selected AIOTF(s); and

- if the NEF fails to process the AIoT Inventory request, reject the request with an HTTP "500 Internal Server Error" status code with the response body including the ProblemDetails data structure containing the "cause" attribute set to the "UNSPECIFIED\_PROCESSING\_FAILURE" application error.

Upon successful response from the AIOTF(s) and successful processing of the request, the NEF shall return an HTTP "200 OK" status code to the AF, with the response body including AIoT Inventory related information within the InventoryResp data structure.

On failure or if the NEF receives an error code from the ADM and/or AIOTF(s), the NEF shall take proper error handling actions, as specified in clause 5.45.7, and respond to the AF with an appropriate error status code. If the NEF received within an error response a "ProblemDetails" data structure with a "cause" attribute indicating an application error, the NEF shall relay this error response to the AF with a corresponding application error, when applicable.

\* \* \* \* Next changes \* \* \* \*

#### 5.45.3.1 Overview

The structure of the custom operation URIs of the AIoT API is shown in Figure 5.45.3.1-1.



Figure 5.45.3.1-1: Custom operation URI structure of the AIoT API

Table 5.45.3.1-1 provides an overview of the custom operations and applicable HTTP methods defined for the AIoT API.

Table 5.45.3.1-1: Custom operations without associated resources

|  |  |  |  |
| --- | --- | --- | --- |
| Custom operation name | Custom operation URI | Mapped HTTP method | Description |
| InventoryRequest | /request-inv | POST | Enables to request to perform an AIoT Inventory operation. |
| CommandRequest | /request-cmd | POST | Enables to request to perform an AIoT command operation. |

The custom operations shall support the URI variables defined in table 5.45.3.1-2.

Table 5.45.3.1-2: URI variables for this custom operation

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 5.45.1. |

\* \* \* \* Next changes \* \* \* \*

##### 5.45.3.2.1 Description

The custom operation enables to request to perform an AIoT Inventory operation at the NEF.

\* \* \* \* Next changes \* \* \* \*

##### 5.45.3.2.2 Operation Definition

This operation shall support the request and response data structures and response codes specified in table 5.45.3.2.2-1 and table 5.45.3.2.2-2.

Table 5.45.3.2.2-1: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| InventoryReq | M | 1 | Contains the parameters to request to perform an AIoT Inventory operation. |

Table 5.45.3.2.2-2: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| InventoryResp | M | 1 | 200 OK | Successful case. The AIoT Inventory request is successfully received and processed, and AIoT Inventory related information is returned in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.The response shall include a Location header field containing an alternative target URI located in an alternative NEF.Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.The response shall include a Location header field containing an alternative target URI located in an alternative NEF.Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4] |
| ProblemDetails | O | 0..1 | 403 Forbidden | (NOTE 2) |
| NOTE 1: The mandatory HTTP error status codes for the HTTP POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply.NOTE 2: Failure cases are described in clause 5.45.7. |

Table 5.45.3.2.2-3: Headers supported by the 307 Response Code on this custom operation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI located in an alternative NEF. |

Table 5.45.3.2.2-4: Headers supported by the 308 Response Code on this custom operation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI located in an alternative NEF. |

\* \* \* \* Next changes \* \* \* \*

#### 5.45.5.1 General

This clause specifies the application data model supported by the AIoT API. Table 5.45.5.1-1 specifies the data types defined for the AIoT API.

Table 5.45.5.1-1: AIoT service specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| AIoTNotif | 5.45.5.2.6 | Represents the AIoT Operations Notification. |  |
| CommandReq | 5.45.5.2.4 | Represents the AIoT command request. |  |
| CommandResp | 5.45.5.2.5 | Represents the AIoT command response. |  |
| CommandType | 5.45.5.3.3 | Represents the type of AIoT command. |  |
| ExtAIoTArea | 5.45.5.2.7 | Represents the External AIoT Service Area. |  |
| InventoryReq | 5.45.5.2.2 | Represents the AIoT Inventory request. |  |
| InventoryResp | 5.45.5.2.3 | Represents the AIoT Inventory response. |  |

Table 5.45.5.1-2 specifies data types re-used by the AIoT API from other specifications, including a reference to their respective specifications, and when needed, a short description of their use within the AIoT API.

Table 5.45.5.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AiotAreaId | 3GPP TS 29.571 [8] | Represents the identifier or an AIoT Service Area. |  |
| AIoTDevices | 3GPP TS 29.5xx [yy] | Represents the AIoT device(s) related information. |  |
| AiotDevPermId | 3GPP TS 29.571 [8] | Represents the permanent identifier of the AIoT Device. |  |
| CivicAddress | 3GPP TS 29.572 [34] | Represents a civic address. |  |
| DurationSec | 3GPP TS 29.122 [4] | Represents a time duration in units of seconds. |  |
| GeographicArea | 3GPP TS 29.572 [34] | Represents a geographical area. |  |
| ProblemDetails | 3GPP TS 29.571 [8] | Represents error related information. |  |
| SupportedFeatures | 3GPP TS 29.571 [8] | Represents the list of supported feature(s) and is used to negotiate the applicability of the optional features. |  |
| Uinteger | 3GPP TS 29.571 [8] | Represents an unsigned integer. |  |
| Uri | 3GPP TS 29.122 [4] | Represents a URI. |  |

\* \* \* \* Next changes \* \* \* \*

##### 5.45.5.2.2 Type: InventoryReq

Table 5.45.5.2.2-1: Definition of type InventoryReq

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| afId | string | M | 1 | Contains the identifier of the AF that is sending the request. |  |
| targetArea | ExtAIoTArea | C | 0..1 | Contains the target AIoT Service Area within which the requested inventory operation shall apply.(NOTE) |  |
| targetDevices | AIoTDevices | C | 0..1 | Contains the target AIoT device(s) related information.(NOTE) |  |
| numDevices | Uinteger | O | 0..1 | Contains the approximative number of the targeted AIoT device(s). |  |
| timeInterval | DurationSec | O | 0..1 | Contains the time interval to be used for results aggregation. |  |
| notifUri | Uri | M | 1 | Contains the URI via which the AIoT Inventory operation related notifications shall be delivered. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Contains the list of supported features among the ones defined in clause 5.45.6.This attribute shall be present only when feature negotiation is required. |  |
| NOTE: At least one of these attributes shall be present. |

\* \* \* \* Next changes \* \* \* \*

##### 5.45.5.2.3 Type: InventoryResp

Table 5.45.5.2.3-1: Definition of type InventoryResp

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| afTransId | string | M | 1 | Contains the identifier of the AF transaction that is created for the inventory request. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Contains the list of supported features among the ones defined in clause 5.45.6.This attribute shall be present only when feature negotiation is required. |  |

\* \* \* \* Next changes \* \* \* \*

##### 5.45.5.2.7 Type: ExtAIoTArea

Table 5.45.5.2.7-1: Definition of type ExtAIoTArea

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| areaIds | array(AiotAreaId) | C | 1..N | Contains the target AIoT Service Area, expressed in the form of a list of AIoT Service Area ID(s).(NOTE) |  |
| geographicAreas | array(GeographicArea) | C | 1..N | Contains the target AIoT Service Area, expressed in the form of a set of geographical area(s).(NOTE) |  |
| civicAddresses | array(CivicAddress) | C | 1..N | Contains the target AIoT Service Area, expressed in the form of a set of civic address(es).(NOTE) |  |
| NOTE: These attributes are mutually exclusive and only one of them shall be present. |

\* \* \* \* Next changes \* \* \* \*

#### 5.45.7.3 Application Errors

The application errors defined for the AIoT API are listed in table 5.45.7.3-1.

Table 5.45.7.3-1: Application errors

|  |  |  |  |
| --- | --- | --- | --- |
| Application Error | HTTP status code | Description | Applicability |
| AF\_NOT\_AUTHORIZED | 403 Forbidden | The request for AIoT services is rejected because the AF is not authorized for the requested AIoT Services. |  |
| INVALID\_PROCESSING\_FAILURE | 500 Internal Server Error | The request for AIoT services is rejected because the NEF failed to process it. |  |

\* \* \* \* Next changes \* \* \* \*

# A.43 AIoT API

openapi: 3.0.0

info:

 title: 3gpp-aiot

 version: 1.0.0-alpha.1

 description: |

 API for UE Address service.

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externalDocs:

 description: 3GPP TS 29.522 V19.3.0; 5G System; Network Exposure Function Northbound APIs.

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.522/'

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/3gpp-aiot/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths:

 /request-inv:

 post:

 summary: Request to perform an AIoT Inventory operation.

 operationId: InventoryRequest

 tags:

 - AIoT Inventory Request (custom operation without associated resources)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The AIoT Inventory request is successfully received and processed, and

 AIoT Inventory related information is returned in the response body.

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 callbacks:

 AIoTOperationsNotif:

 '{$request.body#/notifUri}':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. The AIoT Operations Notification is successfully received and

 acknowledged.

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 /request-cmd:

 post:

 summary: Request to perform an AIoT command operation.

 operationId: CommandRequest

 tags:

 - AIoT Command Request (custom operation without associated resources)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The AIoT command request is successfully received and processed, and the requested

 AIoT command related information is returned in the response body.

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 callbacks:

 AIoTOperationsNotif:

 '{$request.body#/notifUri}':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. The AIoT Operations Notification is successfully received and

 acknowledged.

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{tokenUrl}'

 scopes: {}

 schemas:

#

# STRUCTURED DATA TYPES

#

 InventoryReq:

 description: Represents the AIoT Inventory request.

 type: object

 properties:

 afId:

 type: string

 targetArea:

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

 targetDevices:

 $ref: 'TS29abc\_Naiotf\_AIoT.yaml#/components/schemas/AIoTDevices'

 numDevices:

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

 timeInterval:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/DurationSec'

 notifUri:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/Uri'

 suppFeat:

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

 required:

 - afId

 - notifUri

 anyOf:

 - required: [targetArea]

 - required: [targetDevices]

 InventoryResp:

 description: Represents the AIoT Inventory response.

 type: object

 properties:

 afTransId:

 type: string

 suppFeat:

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

 required:

 - afTransId

 CommandReq:

 description: Represents the AIoT command request.

 type: object

 properties:

 afId:

 type: string

 commandType:

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

 targetArea:

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

 targetDevices:

 $ref: 'TS29abc\_Naiotf\_AIoT.yaml#/components/schemas/AIoTDevices'

 numDevices:

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

 msgSize:

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

 notifUri:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/Uri'

 suppFeat:

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

 required:

 - afId

 - commandType

 - notifUri

 anyOf:

 - required: [targetArea]

 - required: [targetDevices]

 CommandResp:

 description: Represents the AIoT command response.

 type: object

 properties:

 afTransId:

 type: string

 suppFeat:

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

 required:

 - afTransId

 AIoTNotif:

 description: Represents the AIoT Operations Notification.

 type: object

 properties:

 afTransId:

 type: string

 devices:

 type: array

 items:

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

 minItems: 1

 lastRepInd:

 type: boolean

 default: false

 description: >

 Contains the Last Report Indication, i.e., indicates whether this is the last reporting

 from the NF service consumer.

 true indicates that this is the last report.

 false indicates that this is not the last report.

 The default value is false when this attribute is omitted.

 suppFeat:

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

 required:

 - afTransId

 ExtAIoTArea:

 description: Represents the AIoT area.

 type: object

 properties:

 areaIds:

 type: array

 items:

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

 minItems: 1

 geographicAreas:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

 minItems: 1

 civicAddresses:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

 minItems: 1

 oneOf:

 - required: [areaIds]

 - required: [geographicAreas]

 - required: [civicAddresses]

#

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

 CommandType:

 anyOf:

 - type: string

 enum:

 - READ

 - WRITE

 - PERMANENT\_DISABLE

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration and

 is not used to encode content defined in the present version of this API.

 description: |

 Represents the type of AIoT command.

 Possible values are:

 - READ: Indicates that the AIoT command is Read (i.e., retrieve information).

 - WRITE: Indicates that the AIoT command is Write (i.e., provision information).

 - PERMANENT\_DISABLE: Indicates that the AIoT command is Permanent Disable (i.e., disable

 the capability to transmit information).

#

# Data types describing alternative data types or combinations of data types

#

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