**3GPP TSG CT WG3 Meeting #142 *C3-253473***

**Goteborg, SE, 25th – 29th August, 2025 was C3-253311**

**Source: Huawei,** **CEWiT, ZTE, CATT, Lenovo, Ericsson**

**Title: Pseudo-CR on completing the definition of the Naiotf\_AIoT\_Inventory service operation**

**Spec: 3GPP TS 29.569**

**Agenda item: 19.70 (AmbientIoT-CT)**

**Document for: Agreement**

**1. Introduction**

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 7.2.2 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 and a new application error (i.e., a new error case) to reflect the case where the provided time interval for results aggregation is not allowed by the AIOTF.

In addition:

- The definition of the "devices" of the AIoTDevices data type in clause 6.1.6.2.7 is mistakenly incorrect (defined as a single element) and misaligned with the OpenAPI description (in which it is correctly defined as an array) and the related stage 2 requirements defined in clauses 6.2.2 and 7.2.2 of TS 23.369 that clearly indicate that more than one AIoT Device ID can be provided.

- Additional error handling cases to cover the situations where the target(s) of the AIoT Inventory request (e.g., target AIoT device(s), filtering information) is/are not supported and/or not allowed and the the AIOTF fails to process the AIoT Inventory request (e.g., NG- RAN and optionally RAN Reader selection failure).

- Further corrections and alignments/enhancements of the AIoT Inventory related requirements.

**2. Reason for Change**

- Update the relevant clauses of the service description and API definition and the OpenAPI description for the AIoT Inventory functionality/procedure to align with the above-detailed stage 2 updates and necessary updates/corrections to apply.

**3. Conclusions**

N/A

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.569 V 1.0.0.

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

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[3] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[4] 3GPP TS 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".

[5] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".

[6] OpenAPI: "OpenAPI Specification Version 3.0.0", <https://spec.openapis.org/oas/v3.0.0>.

[7] 3GPP TR 21.900: "Technical Specification Group working methods".

[8] 3GPP TS 33.501: "Security architecture and procedures for 5G system".

[9] IETF RFC 6749: "The OAuth 2.0 Authorization Framework".

[10] 3GPP TS 29.510: "5G System; Network Function Repository Services; Stage 3".

[11] IETF RFC 9113: "HTTP/2".

[12] IETF RFC 8259: "The JavaScript Object Notation (JSON) Data Interchange Format".

[13] IETF RFC 9457: "Problem Details for HTTP APIs".

[14] 3GPP TS 23.369: "Architecture support for Ambient power-enabled Internet of Things; Stage 2".

[15] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

[16] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces; Stage 3".

[17] 3GPP TS 29.122: "T8 reference point for Northbound Application Programming Interfaces (APIs)".

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

##### 5.2.2.2.1 General

This service operation is used by an NF service consumer to request to perform an AIoT Inventory operation at the AIOTF.

The following procedures are supported by the "Naiotf\_AIoT\_Inventory" service operation:

- AIoT Inventory Request.

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

##### 5.2.2.2.2 AIoT Inventory Request

Figure 5.2.2.2.2-1 depicts a scenario where an NF service consumer requests to perform an AIoT Inventory operation to the AIOTF (see also clause 6.2.2 of 3GPP TS 23.369 [14]).



Figure 5.2.2.2.2-1: AIoT Inventory Request

1. In order to request to perform an AIoT Inventory operation, the NF service consumer shall send an HTTP POST request message to the AIOTF targeting the URI of the corresponding custom operation (i.e., "InventoryRequest"), with the request body containing the InventoryReq data structure.

2a. Upon reception of the Inventory request from the NF service consumer:

- the AIOTF may perform the AF authorization for AIoT Services procedure as defined in clauses 5.6 and 6.2.2 of 3GPP TS 23.369 [14]; and

- if the AF authorization for AIoT Services procedure is successful and upon successful processing of the request, the AIOTF shall respond to the NF service consumer with an HTTP "200 OK" status code to indicate that the AIoT Inventory request is successfully received and processed, with the response body containing AIoT Inventory related information within the InventoryResp data structure.

2b. On failure, the AIOTF shall take proper error handling actions, as specified in clause 6.1.7, and respond to the NF service consumer with an appropriate error status code. In particular:

- if AF authorization for AIoT Services procedure is not successful, the AIOTF shall 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;

- if the target(s) of the AIoT Inventory request (e.g., target AIoT device(s), filtering information) is/are not supported and/or not allowed, the AIOTF shall 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 "AIOT\_TARGETS\_ERROR" application error;

- if the provided time interval for results aggregation is not allowed (e.g., the provided time interval is shorter than a locally configured minimum interval at the AIOTF as defined in clause 5.9 of 3GPP TS 23.369 [14]), the AIOTF shall 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 "INVALID\_AGGR\_TIME\_INVERTAVAL" application error; and

- if the AIOTF fails to process the AIoT Inventory request, the AIOTF shall 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.

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

#### 6.1.4.1 Overview

The URI structure for Custom Operations without associated resources is shown in Figure 6.1.4.1-1.



Figure 6.1.4.1-1: Custom operation URI structure of the AIoT API

Table 6.1.4.1-1 provides an overview of the custom operations and applicable HTTP methods defined for the AIoT API.

Table 6.1.4.1-1: 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 6.1.4.1-2.

Table 6.1.4.1-2: URI variables for this custom operation

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 6.1.1. |

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

##### 6.1.4.2.1 Description

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

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

##### 6.1.4.2.2 Operation Definition

This operation shall support the response data structures and response codes specified in tables 6.1.4.2.2-1 and 6.1.4.2.2-2.

Table 6.1.4.2.2-1: 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 6.1.4.2.2-2: 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. |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection.(NOTE 2) |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection.(NOTE 2) |
| ProblemDetails | O | 0..1 | 403 Forbidden | (NOTE 3) |
| NOTE 1: The mandatory HTTP error status codes for the HTTP POST method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.NOTE 2: The RedirectResponse data structure may be provided by an SCP (cf. clause 6.10.9.1 of 3GPP TS 29.500 [4]).NOTE 3: Failure cases are described in clause 6.1.7. |

Table 6.1.4.2.2-3: 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 AIOTF (service) instance towards which the request is redirected.For the case where the request is redirected to the same target via a different SCP, refer to clause 6.10.9.1 of 3GPP TS 29.500 [4]. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Contains the identifier of the target AIOTF (service) instance towards which the request is redirected. |

Table 6.1.4.2.2-4: 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 AIOTF (service) instance towards which the request is redirected.For the case where the request is redirected to the same target via a different SCP, refer to clause 6.10.9.1 of 3GPP TS 29.500 [4]. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Contains the identifier of the target AIOTF (service) instance towards which the request is redirected. |

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

#### 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 Naiotf\_AIoT service-based interface protocol.

Table 6.1.6.1-1: Naiotf\_AIoT specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| AIoTNotif | 6.1.6.2.6 | Represents the AIoT Operations Notification. |  |
| CommandReq | 6.1.6.2.4 | Represents the AIoT command request. |  |
| CommandResp | 6.1.6.2.5 | Represents the AIoT command response. |  |
| InventoryReq | 6.1.6.2.2 | Represents the AIoT Inventory request. |  |
| InventoryResp | 6.1.6.2.3 | Represents the AIoT Inventory response. |  |
| AIoTDevices | 6.1.6.2.7 | Represents the AIoT device(s) related information. |  |

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

Table 6.1.6.1-2: Naiotf\_AIoT re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AiotArea | 3GPP TS 29.571 [16] | Represents the AIoT Service Area. |  |
| AiotDevPermId | 3GPP TS 29.571 [16] | Represents the permanent identifier of the AIoT Device. |  |
|  |  |  |  |
| AiotFilteringInformation | 3GPP TS 29.571 [16] | Represents the the filtering information used for identifying the target AIoT device(s). |  |
| CommandType | 3GPP TS 29.522 [15] | Represents the type of AIoT command. |  |
| DurationSec | 3GPP TS 29.571 [16] | Represents a time duration in units of seconds. |  |
| ProblemDetails | 3GPP TS 29.571 [16] | Represents error related information. |  |
| RedirectResponse | 3GPP TS 29.571 [16] | Contains redirection related information. |  |
| SupportedFeatures | 3GPP TS 29.571 [16] | Represents the list of supported feature(s) and used to negotiate the applicability of optional features. |  |
| Uinteger | 3GPP TS 29.571 [16] | Represents an unsigned integer. |  |
| Uri | 3GPP TS 29.571 [16] | Represents a URI. |  |

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

##### 6.1.6.2.2 Type: InventoryReq

Table 6.1.6.2.2-1: Definition of type InventoryReq

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| afId | string | M | 1 | Contains the identifier of the AF that triggered the request. |  |
| targetArea | AiotArea | 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 6.1.8.This attribute shall be present only when feature negotiation is required. |  |
| NOTE: At least one of these attributes shall be present. |

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

##### 6.1.6.2.3 Type: InventoryResp

Table 6.1.6.2.3-1: Definition of type InventoryResp

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| transId | string | M | 1 | Contains the identifier of the 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 6.1.8.This attribute shall be present only when feature negotiation is required. |  |

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

##### 6.1.6.2.7 Type: AIoTDevices

Table 6.1.6.2.7-1: Definition of type AIoTDevices

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| devices | array(AiotDevPermId) | C | 1..N | Contains the list of the permanent identifier(s) of the target AIoT device(s).(NOTE) |  |
| filteringInfo | AiotFilteringInformation | C | 0..1 | Contains the filtering information used for identifying the target AIoT device(s).(NOTE) |  |
| NOTE: These attributes are mutually exclusive and only one of them shall be present. |

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

#### 6.1.7.3 Application Errors

The application errors defined for the Naiotf\_AIoT service are listed in Table 6.1.7.3-1.

Table 6.1.7.3-1: 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. |  |
| AIOT\_TARGETS\_ERROR | 403 Forbidden | The request for AIoT services is rejected because the target(s) of the AIoT request (e.g., target AIoT device(s), filtering information) is/are not supported and/or not allowed. |  |
| INVALID\_AGGR\_TIME\_INVERTAVAL | 403 Forbidden | The AIoT Inventory request is rejected because the provided aggregation time interval is not allowed. |  |
| UNSPECIFIED\_PROCESSING\_FAILURE | 500 Internal Server Error | The request for AIoT services is rejected because the AIOTF failed to process it for an unspecified reason. |  |

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

# A.2 Naiotf\_AIoT API

openapi: 3.0.0

info:

 title: Naiotf\_AIoT Service API

 version: 1.0.0-alpha.3

 description: |

 API for\_AIoT Service.

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externalDocs:

 description: 3GPP TS 29.abc V1.0.0; Ambient IoT Function (AIOTF) Services.

 url: http://www.3gpp.org/ftp/Specs/archive/29\_series/29.abc/

servers:

 - url: '{apiRoot}/naiotf-aiot/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - naiotf-aiot

paths:

 /request-inv:

 post:

 summary: Request to perform an AIoT Inventory operation.

 operationId: InventoryRequest

 tags:

 - AIoT Inventory Request (custom operation without associated resources)

 security:

 - {}

 - oAuth2ClientCredentials:

 - naiotf-aiot

 - oAuth2ClientCredentials:

 - naiotf-aiot

 - naiotf-aiot:inventory

 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: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '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:

 $ref: 'TS29571\_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: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '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:

 $ref: 'TS29571\_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)

 security:

 - {}

 - oAuth2ClientCredentials:

 - naiotf-aiot

 - oAuth2ClientCredentials:

 - naiotf-aiot

 - naiotf-aiot:command

 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: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '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:

 $ref: 'TS29571\_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: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '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:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 naiotf-aiot: >

 Enables to access all the resources and custom operations of the Naiotf\_AIoT API.

 naiotf-aiot:inventory: >

 Enables to access only the InventoryRequest custom operation (Naiotf\_AIoT\_Inventory

 service operation) of the Naiotf\_AIoT API.

 naiotf-aiot:command: >

 Enables to access only the CommandRequest custom operation (Naiotf\_AIoT\_Command

 service operation) of the Naiotf\_AIoT API.

 schemas:

#

# STRUCTURED DATA TYPES

#

 InventoryReq:

 description: Represents the AIoT Inventory request.

 type: object

 properties:

 afId:

 type: string

 targetArea:

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

 targetDevices:

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

 numDevices:

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

 timeInterval:

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

 notifUri:

 $ref: 'TS29571\_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:

 transId:

 type: string

 suppFeat:

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

 required:

 - transId

 CommandReq:

 description: Represents the AIoT command request.

 type: object

 properties:

 afId:

 type: string

 commandType:

 $ref: 'TS29522\_AIoT.yaml#/components/schemas/CommandType'

 targetArea:

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

 targetDevices:

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

 numDevices:

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

 msgSize:

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

 notifUri:

 $ref: 'TS29571\_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:

 transId:

 type: string

 suppFeat:

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

 required:

 - transId

 AIoTNotif:

 description: Represents the AIoT Operations Notification.

 type: object

 properties:

 transId:

 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:

 - transId

 AIoTDevices:

 description: Represents the AIoT device(s) related information.

 type: object

 properties:

 devices:

 type: array

 items:

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

 minItems: 1

 filteringInfo:

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

 anyOf:

 - required: [devices]

 - required: [filteringInfo]

#

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

#

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

#

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