**3GPP TSG- Meeting # *C3-245241***

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| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.122** | **CR** | **0880** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  |
| *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)*.* |
|  |

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

|  |
| --- |
|  |
| ***Title:***  | MPS for Messaging Indication parameter provisioning via SCEF |
|  |  |
| ***Source to WG:*** | Nokia, Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | MPS4msg |  | ***Date:*** | 2024-10-07 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *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 agreed CR S2-2409065 it introduced the AS triggered MPS for Messaging Indication parameter provisioning for an individual UE via SCEF. |
|  |  |
| ***Summary of change:*** | This CR proposes to:- Define a new parameter for MPS for Messaging Indication in the NpConfiguration and NpConfigurationPatch data model with a newly introduced feature control and define to the Open API NpConfiguration API.- Update the procedures that SCEF can provide the parameter of MPS for Messaging Indication in the Procedures for Network Parameter Configuration. |
|  |  |
| ***Consequences if not approved:*** | Stage-2 requirement is not supported in stage-3. |
|  |  |
| ***Clauses affected:*** | 3.2, 4.4.12.1, 5.13.2.1.1, 5.13.2.1.2, 5.13.2.1.3, 5.13.4, 5.13.2.2 and subclases (new), A.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 provides backward compatible feature updates to the Open API NpConfiguration API. |
|  |  |
| ***This CR's revision history:*** |  |

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

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

AF Application Function

AI/ML Artificial Intelligence/Machine Learning

AS Application Server

ASP Application Service Provider

BAT Burst Arrival Time

BDT Background Data Transfer

CAPIF Common API Framework

CP Communication Pattern

DDN Downlink Data Notification

DNN Data Network Name

DL Downlink

eNB Evolved Node B

GMD Group Message Delivery

IMEI-TAC Type Allocation Code part of an IMEI

IWK-SCEF Interworking SCEF

JSON JavaScript Object Notation

LC Load Control

LCI Load Control Information

MIME Multipurpose Internet Mail Extensions

MPS Multimedia Priority Service

MT Mobile Terminated

MTC Machine Type Communications

MT-LR Mobile Terminated Location Request

NEF Network Exposure Function

NIDD Non-IP Data Delivery

NP Network Parameter

NSAC Network Slice Admission Control

OCI Overload Control Information

OLC OverLoad Control

PCRF Policy and Charging Rule Function

PDN Packet Data Network

PDV Packet Delay Variation

PFD Packet Flow Description

PFDF Packet Flow Description Function

RCAF RAN Congestion Awareness Function

REST Representational State Transfer

SACH Service Announcement Channel

SCEF Service Capability Exposure Function

SCS Services Capability Server

S-NSSAI Single Network Slice Selection Assistance Information

TAI Tracking Area Identity

TLTRI T8 Long Term Transaction Reference ID

TSC Time Sensitive Communication

TSCAI Time Sensitive Communication Assistance Information

WB Wide Band

YAML YAML Ain't Markup Language

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

#### 4.4.12.1 General

The procedures are used by an SCS/AS to request that the network consider setting the suggested network parameter values which can influence certain aspects of UE/network behaviour. The procedures are applicable for an individual UE or a group of UEs.

In order to create a new network parameter configuration to configure suggested network parameters, the SCS/AS shall send an HTTP POST request message to the SCEF to the resource "NP Configurations". The body of the HTTP request message shall include External Identifier or MSISDN or External Group Identifier, SCS/AS Identifier, and may include Maximum Latency, Maximum Response Time and Suggested Number of Downlink Packets, Group Reporting Guard Time and/or MPS for Messaging indication for an individual UE, wherein, the External Identifier or MSISDN indicates the configuration for an individual UE and the External Group Identifier indicates for a group of UEs. If the External Group Identifier is included, the SCS/AS shall provide the Notification Destination Address in the request.

NOTE: The Notification Delivery as described in clause 5.2.5 is not supported for individual UE configuration case.

In order to update an existing Network Parameter Configuration, the SCS/AS may send an HTTP PUT message to the resource "Individual NP Configuration" requesting the SCEF to replace all properties in the existing resource.

The SCS/AS may also use an HTTP PATCH message to request to change some properties in the existing resource.

Upon receipt of the HTTP POST, PUT or PATCH message, if the SCS/AS is authorized to perform the request, the SCEF shall check whether the Maximum Latency, Maximum Response Time and/or Suggested Number of Downlink Packets in the HTTP request body are within the range defined by operator policies, if one or more of these parameters are not within the range, the SCEF shall:

- either reject the request message by sending an HTTP response to the SCS/AS with a status code set to "403 Forbidden" , in which it may indicate the "PARAMETER\_OUT\_OF\_RANGE" application error in the "cause" attribute of the "ProblemDetails" data structure and it may also indicate which parameters are out of the range in the "invalidParams" attribute of the "ProblemDetails" structure in the response body; or

- modify the parameters which are not within the range by selecting different values which are in the range.

After validation, the SCEF shall perform the Network Parameter Configuration as described in clause 4.4.12.2 for an individual UE or in clause 4.4.12.3 for a group of UEs.

In order to delete an existing Network Parameter Configuration at the SCEF, the SCS/AS shall send an HTTP DELETE message to the corresponding resource "Individual NP Configuration" at the SCEF. The SCEF shall determine the SCEF Reference ID for deletion and interact with the HSS via S6t as defined in 3GPP TS 29.336 [11]. Upon receipt of the response from the HSS, the SCEF shall delete active resource "Individual NP Configuration" addressed by the URI and send an HTTP response to the SCS/AS with a "204 No Content" status code.

\* \* \* \* 3rd Change \* \* \* \*

##### 5.13.2.1.1 Introduction

This clause defines data structures to be used in resource representations.

Table 5.13.2.1.1-1 specifies data types re-used by the NetworkParameterConfiguration API from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the NetworkParameterConfiguration API.

Table 5.13.2.1.1-1: NetworkParameterConfiguration API re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| Dnn | 3GPP TS 29.571 [45] | Identifies a DNN. |
| IpAddr | 3GPP TS 29.571 [45] | UE IP Address. |
| MacAddr48 | 3GPP TS 29.571 [45] | MAC Address. |
| Snssai | 3GPP TS 29.571 [45] | Identifies an S-NSSAI. |
| SupportedFeatures | 3GPP TS 29.571 [45] | Used to negotiate the applicability of the optional features defined in table 5.13.4-1. |

Table 5.13.2.1.1-2 specifies the data types defined for the NpConfiguration API.

Table 5.13.2.1.1-2: NpConfiguration API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| ConfigurationNotification | 5.13.2.1.4 | Represents a configuration result notification. |  |
| NpConfiguration | 5.13.2.1.2 | Represents a network parameters configuration. |  |
| NpConfigurationPatch | 5.13.2.1.3 | Represents parameters used to request the modification of a network parameters configuration resource. |  |
| MPSforMsgInd | 5.13.2.2.3 | Represents a MPS for messaging indication for the priority treatment of messaging service for an individual UE. | MPS\_Msg\_Ind |

\* \* \* \* 4th Change \* \* \* \*

##### 5.13.2.1.2 Type: NpConfiguration

This type represents a configuration of network parameters. The same structure is used in the configuration request and response.

Table 5.13.2.1.2-1: Definition of type NpConfiguration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | Cardinality | Description | Applicability (NOTE 2) |
| self | Link | 0..1 | Link to the resource "Individual NP Configuration". This parameter shall be supplied by the SCEF in HTTP responses. |  |
| supportedFeatures | SupportedFeatures | 0..1 | Used to negotiate the supported optional features of the API as described in clause 5.2.7.This attribute shall be provided in the POST request and in the response of successful resource creation. |  |
| mtcProviderId | string | 0..1 | Identifies the MTC Service Provider and/or MTC Application. (NOTE 4) |  |
| dnn | Dnn | 0..1 | Identifies a DNN, a full DNN with both the Network Identifier and Operator Identifier, or a DNN with the Network Identifier only. | UEId\_retrievalMPS\_Msg\_Ind |
| externalId | ExternalId | 0..1 | Identifies a user as defined in Clause 4.6.2 of 3GPP TS 23.682 [2].The attribute may also be present in the NP configuration response message, if the "UEId\_retrieval" feature is supported and the corresponding request message includes the "ueIpAddr" attribute or the "ueMacAddr" attribute.(NOTE 1) |  |
| msisdn | Msisdn | 0..1 | Identifies the MS internal PSTN/ISDN number allocated for a UE.(NOTE 1) |  |
| externalGroupId | ExternalGroupId | 0..1 | Identifies a user group as defined in Clause 4.6.2 of 3GPP TS 23.682 [2].(NOTE 1) |  |
| maximumLatency | DurationSec | 0..1 | This parameter may be included to identify the maximum delay acceptable for downlink data transfers. |  |
| maximumResponseTime | DurationSec | 0..1 | This parameter may be included to identify the length of time for which the UE stays reachable to allow the SCS/AS to reliably deliver the required downlink data. |  |
| suggestedNumberOfDlPackets | integer | 0..1 | This parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable. |  |
| groupReportingGuardTime | DurationSec | 0..1 | Identifies the time for which the SCEF can aggregate the reports detected by the UEs in a group and report them together to the SCS/AS, as specified in clause 5.6.0 of 3GPP TS 23.682 [2]. |  |
| notificationDestination | Link | 0..1 | A URI indicating the notification destination where T8 notification requests shall be delivered. The attribute shall be provided if the attribute "externalGroupId" is provided. |  |
| requestTestNotification | boolean | 0..1 | Set to true by the SCS/AS to request the SCEF to send a test notification as defined in clause 5.2.5.3. Set to false or omitted otherwise.The attribute may only be provided if the attribute "externalGroupId" is provided. | Notification\_test\_event |
| websockNotifConfig | WebsockNotifConfig | 0..1 | Configuration parameters to set up notification delivery over Websocket protocol as defined in clause 5.2.5.4.The attribute may only be provided if the attribute "externalGroupId" is provided. | Notification\_websocket |
| validityTime | DateTime | 0..1 | Identifies when the network parameter expires and shall be deleted locally if it expires. The attribute is only applicable in 5G. (NOTE 3) | NpExpiry\_5G |
| snssai | Snssai | 0..1 | Indicate the S-NSSAI. | UEId\_retrievalMPS\_Msg\_Ind |
| ueIpAddr | IpAddr | 0..1 | UE IP address. | UEId\_retrieval |
| ueMacAddr | MacAddr48 | 0..1 | UE MAC address. | UEId\_retrieval |
| mpsforMsgInd | MPSforMsgInd | 0..1 | This parameter may be included to indicate whether to enable or disable the MPS treatment of messaging service for the individual UE, when one of the attribute "msisdn" or the attribute "externalId" is provided.The attribute may also be present in the NP configuration response message, if the HSS stores the MPS for Messaging parameter in the subscription data. | MPS\_Msg\_Ind |
| NOTE 1: Only one of the properties "externalId", "msisdn" or "externalGroupId" shall be included.NOTE 2: Properties marked with a feature as defined in clause 5.13.4 are applicable as described in clause 5.2.7. If no feature are indicated, the related property applies for all the features.NOTE 3: If this attribute is omitted, no expiry for network parameter configuration applies.NOTE 4: The SCEF should check received MTC provider identifier and then the SCEF may: - override it with local configured value and send it to HSS;- send it directly to the HSS; or- reject the network parameter configuration request. |

\* \* \* \* 5th Change \* \* \* \*

##### 5.13.2.1.3 Type: NpConfigurationPatch

This type represents a configuration of network parameters provided by the SCS/AS to the SCEF. The structure is used for HTTP PATCH request.

Table 5.13.2.1.3-1: Definition of type NpConfigurationPatch

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | Cardinality | Description | Applicability (NOTE) |
| maximumLatency | DurationSecRm | 0..1 | This parameter may be included to identify the maximum delay acceptable for downlink data transfers. |  |
| maximumResponseTime | DurationSecRm | 0..1 | This parameter may be included to identify the length of time for which the UE stays reachable to allow the SCS/AS to reliably deliver the required downlink data. |  |
| suggestedNumberOfDlPackets | integer | 0..1 | This parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable. |  |
| groupReportGuardTime | DurationSecRm | 0..1 | Identifies the time for which the SCEF can aggregate the reports detected by the UEs in a group and report them together to the SCS/AS, as specified in clause 5.6.0 of 3GPP TS 23.682 [2]. |  |
| validityTime | DateTimeRm | 0..1 | Identifies when the network parameter expires and shall be deleted locally if it expires. The attribute is only applicable in 5G. | NpExpiry\_5G |
| notificationDestination | Link | 0..1 | A URI indicating the notification destination where T8 notification requests shall be delivered. |  |
| mpsforMsgInd | MPSforMsgInd | 0..1 | This parameter may be included to indicate whether to enable or disable the MPS treatment of messaging service for the UE that was provided within the attribute "msisdn" or the attribute "externalId" in the NpConfiguration data type previously. | MPS\_MSG\_Ind |
| NOTE: Properties marked with a feature as defined in clause 5.13.4 are applicable as described in clause 5.2.7. If no feature are indicated, the related property applies for all the features. |

\* \* \* \* 6th Change \* \* \* \*

### 5.13.4 Used Features

The table below defines the features applicable to the NpConfiguration API. Those features are negotiated as described in clause 5.2.7.

Table 5.13.4-1: Features used by NpConfiguration API

|  |  |  |
| --- | --- | --- |
| Feature Number | Feature | Description |
| 1 | Notification\_websocket | The delivery of notifications over Websocket is supported according to clause 5.2.5.4. This feature requires that the Notification\_test\_event featute is also supported. |
| 2 | Notification\_test\_event | The testing of notification connection is supported according to clause 5.2.5.3. |
| 3 | NpExpiry\_5G | The network parameter expiry is supported. This feature may only be supported in 5G. |
| 4 | Enhanced\_param\_config | This feature supports the co-existence of multiple event configurations for target UE(s) if there are parameters affecting periodic RAU/TAU timer and/or Active Time. |
| 5 | UEId\_retrieval | This feature supports AF specific UE ID retrieval.The feature is not applicable to pre-5G (e.g. 4G). |
| 6 | MPS\_MSG\_Ind | This feature supports SCS/AS triggered MPS for Messaging Indication parameter provisioning for an individual UE. |
| Feature: A short name that can be used to refer to the bit and to the feature, e.g. "Notification".Description: A clear textual description of the feature. |

\* \* \* \* 7th Change \* \* \* \*

#### 5.13.2.2 Referenced simple data types and enumerations

##### 5.13.2.2.1 Introduction

This clause defines simple data types and enumerations that can be referenced from data structures defined in the previous clauses. In addition, data types and enumerations defined in clause 5.2.1 can be referenced.

##### 5.13.2.2.2 Simple data types

The simple data types defined in table 5.13.2.2.2-1 shall be supported.

Table 5.13.2.2.2-1: Simple data types

|  |  |
| --- | --- |
| Type name | Description |
|  |  |
|  |  |

##### 5.13.2.2.3 Enumeration: MPSforMsgInd

The enumeration "MPSforMsgInd" indicates the type of indication for a MPS request of the priority treatment of messaging service.

Table 5.13.2.2.3-1: Enumeration MPSforMsgInd

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability (NOTE) |
| DISABLE\_MPS\_FOR\_MSG | Disable MPS treatment for messaging service of the UE. |  |
| ENABLE\_MPS\_FOR\_MSG | Enable MPS treatment for messaging service of the UE. |  |
| NOTE: Properties marked with a feature as defined in clause 5.13.4 are applicable as described in clause 5.2.7. If no features are indicated, the related property applies for all the features. |

\* \* \* \* 8th Change \* \* \* \*

# A.13 NpConfiguration API

openapi: 3.0.0

info:

 title: 3gpp-network-parameter-configuration

 version: 1.3.0

 description: |

 API for network parameter configuration.

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 All rights reserved.

externalDocs:

 description: 3GPP TS 29.122 V18.6.0 T8 reference point for Northbound APIs

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/3gpp-network-parameter-configuration/v1'

 variables:

 apiRoot:

 default: https://example.com

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

paths:

 /{scsAsId}/configurations:

 get:

 summary: Read all of the active configurations for the SCS/AS.

 operationId: FetchAllNPConfigurations

 tags:

 - Np Configurations

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of the SCS/AS

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK (Successful get all of the active NpConfigurations for the SCS/AS)

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 description: Network Parameter configurations

 '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'

 '406':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/406'

 '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'

 post:

 summary: Creates a new configuration resource for network parameter configuration.

 operationId: CreateNPConfiguration

 tags:

 - Np Configurations

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of the SCS/AS

 required: true

 schema:

 type: string

 requestBody:

 description: new configuration creation

 required: true

 content:

 application/json:

 schema:

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

 callbacks:

 notificationDestination:

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

 post:

 requestBody: # contents of the callback message

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: No Content (successful notification)

 '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'

 responses:

 '201':

 description: Created (Successful creation of configuration)

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: 'Contains the URI of the newly created resource'

 required: true

 schema:

 type: string

 '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'

 /{scsAsId}/configurations/{configurationId}:

 get:

 summary: Read an active configuration for the SCS/AS and the configuration Id.

 operationId: FetchIndNPConfiguration

 tags:

 - Individual Np Configuration

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of the SCS/AS

 required: true

 schema:

 type: string

 - name: configurationId

 in: path

 description: Identifier of the configuration resource

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK (Successful get the active configuration)

 content:

 application/json:

 schema:

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

 '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'

 '406':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/406'

 '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'

 put:

 summary: Updates/replaces an existing configuration resource.

 operationId: UpdateIndNPConfiguration

 tags:

 - Individual Np Configuration

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of the SCS/AS

 required: true

 schema:

 type: string

 - name: configurationId

 in: path

 description: Identifier of the configuration resource

 required: true

 schema:

 type: string

 requestBody:

 description: Parameters to update/replace the existing configuration

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: OK (Successful update of the existing configuration)

 content:

 application/json:

 schema:

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

 '204':

 description: No Content (Successful update of the configuration)

 '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'

 patch:

 summary: Updates/replaces an existing configuration resource.

 operationId: ModifyIndNPConfiguration

 tags:

 - Individual Np Configuration

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of the SCS/AS

 required: true

 schema:

 type: string

 - name: configurationId

 in: path

 description: Identifier of the configuration resource

 required: true

 schema:

 type: string

 requestBody:

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: OK. The configuration was modified successfully.

 content:

 application/json:

 schema:

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

 '204':

 description: No Content. The configuration was modified successfully.

 '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'

 delete:

 summary: Deletes an already existing configuration.

 operationId: DeleteIndNPConfiguration

 tags:

 - Individual Np Configuration

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of the SCS/AS

 required: true

 schema:

 type: string

 - name: configurationId

 in: path

 description: Identifier of the configuration resource

 required: true

 schema:

 type: string

 responses:

 '204':

 description: No Content (Successful deletion of the existing configuration)

 '200':

 description: OK. (Successful deletion of the existing configuration)

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 description: The configuration was terminated successfully, the configuration failure information for group members shall be included if received.

 '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'

 '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:

 NpConfiguration:

 description: Represents a network parameters configuration.

 type: object

 properties:

 self:

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

 supportedFeatures:

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

 mtcProviderId:

 type: string

 description: Identifies the MTC Service Provider and/or MTC Application.

 dnn:

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

 externalId:

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

 msisdn:

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

 externalGroupId:

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

 maximumLatency:

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

 maximumResponseTime:

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

 suggestedNumberOfDlPackets:

 type: integer

 minimum: 0

 description: This parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable.

 groupReportingGuardTime:

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

 notificationDestination:

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

 requestTestNotification:

 type: boolean

 description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in clause 5.2.5.3. Set to false or omitted otherwise.

 websockNotifConfig:

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

 validityTime:

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

 snssai:

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

 ueIpAddr:

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

 ueMacAddr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 mpsforMsgInd:

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

 oneOf:

 - required: [externalId]

 - required: [msisdn]

 - required: [externalGroupId]

 NpConfigurationPatch:

 description: Represents parameters used to request the modification of a network parameters configuration resource.

 type: object

 properties:

 maximumLatency:

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

 maximumResponseTime:

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

 suggestedNumberOfDlPackets:

 type: integer

 minimum: 0

 description: This parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable.

 nullable: true

 groupReportGuardTime:

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

 validityTime:

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

 notificationDestination:

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

 mpsforMsgInd:

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

 ConfigurationNotification:

 description: Represents a configuration result notification.

 type: object

 properties:

 configuration:

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

 configResults:

 type: array

 items:

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

 minItems: 1

 description: The grouping configuration result notification provided by the SCEF.

 appliedParam:

 $ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/AppliedParameterConfiguration'

 required:

 - configuration

#

# ENUMERATIONS DATA TYPES

#

 MPSforMsgInd:

 description: >

 Indicates whether the MPS for Messaging for the priority treatment of messaging service

 is enabled or disabled.

 anyOf:

 - type: string

 enum:

 - DISABLE\_MPS\_FOR\_MSG

 - ENABLE\_MPS\_FOR\_MSG

 - 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.