**3GPP TSG-CT WG4 Meeting #98eC4-203327**

**E-Meeting, 02nd – 12th June 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.531** | **CR** | **0070** | **rev** | **1** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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:*** | Correction to usage of TAI | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Vertical\_LAN | | | | |  | ***Date:*** | | | 2020-05-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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 can be 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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In CT4 93 and CT4 97e Nid was added to definition of Tai in TS 29.571, which overloads the definition and creates a conflict with definitions in TS 23.008. Hence it is proposed to remove this from of the base data type from TS 29.571 and use it instead in APIs here as needed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Nid is added to the APIs using Tai. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Nid will be missing from the APIs that are using Tai. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.3.2.3.1, 6.2.6.2.3, 6.2.6.2.4, 6.2.6.2.8, A.2, A.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 a backward compatible correction in the openAPI specification file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Corrected query parameters and cardinality at a few instances. | | | | | | | | |

# \*\*\* First change \*\*\*

6.1.3.2.3.1 GET

This method retrieves the information related to the selected slice based on the input query parameters provided by the NF service consumer specified in table 6.1.3.2.3.1-1.

This method shall support input query parameters specified in table 6.1.3.2.3.1-1 and the response data structure and response codes specified in table 6.1.3.2.3.1-3.

**Table 6.1.3.2.3.1-1: URI query parameters supported by the GET method on this resource**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Data type** | **P** | **Cardinality** | **Description** |
| nf-type | NFType | M | 1 | This IE shall contain the NF type of the NF service consumer. |
| nf-id | NfInstanceId | M | 1 | This IE shall contain the NF identifier of the NF service consumer. |
| slice-info-request-for-registration | SliceInfoForRegistration | C | 0..1 | This IE shall be present when the network slice information is requested during the Registration procedure or during EPS to 5GS handover procedure using N26 interface towards an NSSF in the serving PLMN. |
| slice-info-request-for-pdu-session | SliceInfoForPDUSession | C | 0..1 | This IE shall be present when the network slice information is requested during the PDU session establishment procedure. |
| slice-info-request-for-ue-cu | SliceInfoForUEConfigurationUpdate | C | 0..1 | This IE shall be present when the network slice information is requested during UE configuration update procedure. |
| home-plmn-id | PlmnId | C | 0..1 | This IE shall be present in the request towards an NSSF in the serving PLMN if the subscriber is a roamer to the serving PLMN. When present, this IE shall contain the home PLMN Id of the UE. |
| tai | Tai | C | 0..1 | This IE shall be present in the request towards an NSSF in the serving PLMN. When present, this IE shall contain the TAI the UE is currently located. |
| tai-nid | Nid | C | 0..1 | In case of an SNPN, this IE shall contain the associated network identifier for the tai. |
| supported-features | SupportedFeatures | C | 0..1 | This IE shall be present if at least one optional feature defined in clause 6.1.8 is supported. |

# \*\*\* Next change \*\*\*

##### 6.2.6.2.3 Type: SupportedNssaiAvailabilityData

Table 6.2.6.2.3-1: Definition of type SupportedNssaiAvailabilityData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| tai | Tai | M | 1 | This IE shall contain the identifier of the Tracking Area |  |
| taiNid | Nid | C | 0..1 | In case of an SNPN, this IE shall contain the associated network identifier for the tai. |  |
| supportedSnssaiList | array(Snssai) | M | 1..N | This IE shall contain the S-NSSAI(s) supported by the AMF for the TA. |  |
| taiList | array(Tai) | O | 1..N | When present, this IE shall contain additional TAIs with the same list of supported S-NSSAIs. (NOTE) | ONSSAI |
| taiNids | array(Nid) | C | 1..N | In case of an SNPN, this IE shall contain the associated network identifier of each element in taiList, respectively. | ONSSAI |
| taiRangeList | array(TaiRange) | O | 1..N | When present, this IE shall contain range(s) of TAIs with the same list of supported S-NSSAIs. (NOTE) | ONSSAI |
| NOTE: The taiList IE shall not include the TAI contained in the tai IE. The taiRangeList IE may encompass the TAI contained in the tai IE. | | | | | |

##### 6.2.6.2.4 Type: AuthorizedNssaiAvailabilityData

Table 6.2.6.2.4-1: Definition of type AuthorizedNssaiAvailabilityData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| tai | Tai | M | 1 | This IE shall contain the identifier of the Tracking Area. |  |
| taiNid | Nid | C | 0..1 | In case of an SNPN, this IE shall contain the associated network identifier for the tai. |  |
| supportedSnssaiList | array(Snssai) | M | 1..N | This IE shall contain the S-NSSAI(s) supported by the AMF and 5G-AN and authorized by the NSSF for the TA. |  |
| restrictedSnssaiList | array(RestrictedSnssai) | O | 1..N | This IE may contain the restricted S-NSSAI(s) per PLMN for the TA. If the restricted S-NSSAI is not present, no restricted S-NSSAI is applicable to the TA. When present, this IE shall be included only by the NSSF. |  |
| taiList | array(Tai) | O | 1..N | When present, this IE shall contain additional TAIs with the same lists of supported and restricted S-NSSAIs. (NOTE) | ONSSAI |
| taiNids | array(Nid) | C | 1..N | In case of an SNPN, this IE shall contain the associated network identifier of each element in taiList, respectively. | ONSSAI |
| taiRangeList | array(TaiRange) | O | 1..N | When present, this IE shall contain range(s) of TAIs with the same lists of supported and restricted S-NSSAIs. (NOTE) | ONSSAI |
| NOTE: The taiList IE shall not include the TAI contained in the tai IE. The taiRangeList IE may encompass the TAI contained in the tai IE. | | | | | |

# \*\*\* Next change \*\*\*

6.2.6.2.8 Type: NssfEventSubscriptionCreateData

**Table 6.2.6.2.8-1: Definition of type NssfEventSubscriptionCreateData**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** |
| nfNssaiAvailabilityUri | Uri | M | 1 | Identifies the recipient of notifications sent by the NF service consumer (e.g. AMF) for this subscription |
| taiList | array(Tai) | M | 1..N | Identifies the TAIs supported by the NF service consumer (e.g. AMF). |
| taiNids | array(Nid) | C | 1..N | In case of an SNPN, this IE shall contain the associated network identifier of each element in taiList, respectively. |
| event | NssfEventType | M | 1 | Describes the event to be subscribed for this subscription. |
| expiry | DateTime | O | 0..1 | This IE may be included by the NF service consumer. When present, this IE shall represent the suggested time after which the subscription becomes invalid. |
| amfSetId | string | O | 0..1 | This IE may be included to identify a specific AMF Set for which this subscription applies.  When present, this IE shall be constructed from PLMN-ID (i.e. three decimal digits MCC and two or three decimal digits MNC), AMF Region Id (8 bit), and AMF Set Id (10 bit).  Pattern: '^[0-9]{3}-[0-9]{2-3}-[A-Fa-f0-9]{2}-[0-3][A-Fa-f0-9]{2}$' |

# \*\*\* Next change \*\*\*

A.2 Nnssf\_NSSelection API

openapi: 3.0.0

info:

version: '2.1.0.alpha-2'

title: 'NSSF NS Selection'

description: |

NSSF Network Slice Selection Service.

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security:

- {}

- oAuth2ClientCredentials:

- nnssf-nsselection

servers:

- url: '{apiRoot}/nnssf-nsselection/v2'

variables:

apiRoot:

default: https://example.com

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

externalDocs:

description: 3GPP TS 29.531 V16.2.0; 5G System; Network Slice Selection Services; Stage 3

url: http://www.3gpp.org/ftp/Specs/archive/29\_series/29.531/

paths:

/network-slice-information:

get:

summary: Retrieve the Network Slice Selection Information

tags:

- Network Slice Information (Document)

operationId: NSSelectionGet

parameters:

- name: nf-type

in: query

description: NF type of the NF service consumer

required: true

schema:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/NFType'

- name: nf-id

in: query

description: NF Instance ID of the NF service consumer

required: true

schema:

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

- name: slice-info-request-for-registration

in: query

description: Requested network slice information during Registration procedure

content:

application/json:

schema:

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

- name: slice-info-request-for-pdu-session

in: query

description: Requested network slice information during PDU session establishment procedure

content:

application/json:

schema:

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

- name: slice-info-request-for-ue-cu

in: query

description: Requested network slice information during UE confuguration update procedure

content:

application/json:

schema:

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

- name: home-plmn-id

in: query

description: PLMN ID of the HPLMN

content:

application/json:

schema:

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

- name: tai

in: query

description: TAI of the UE

content:

application/json:

schema:

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

- name: tai-nid

in: query

description: Network identifier associated with the TAI

content:

application/json:

schema:

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

- name: supported-features

in: query

description: Features required to be supported by the NFs in the target slice instance

schema:

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

responses:

'200':

description: OK (Successful Network Slice Selection)

content:

application/json:

schema:

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

'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'

'406':

$ref: 'TS29571\_CommonData.yaml#/components/responses/406'

'414':

$ref: 'TS29571\_CommonData.yaml#/components/responses/414'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nnssf-nsselection: Access to the Nnssf\_NSSelection API

schemas:

AuthorizedNetworkSliceInfo:

type: object

properties:

allowedNssaiList:

type: array

items:

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

minItems: 1

configuredNssai:

type: array

items:

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

minItems: 1

targetAmfSet:

type: string

pattern: '^[0-9]{3}-[0-9]{2-3}-[A-Fa-f0-9]{2}-[0-3][A-Fa-f0-9]{2}$'

candidateAmfList:

type: array

items:

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

minItems: 1

rejectedNssaiInPlmn:

type: array

items:

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

minItems: 1

rejectedNssaiInTa:

type: array

items:

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

minItems: 1

nsiInformation:

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

supportedFeatures:

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

nrfAmfSet:

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

nrfAmfSetNfMgtUri:

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

nrfAmfSetAccessTokenUri:

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

targetAmfServiceSet:

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

SubscribedSnssai:

type: object

required:

- subscribedSnssai

properties:

subscribedSnssai:

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

defaultIndication:

type: boolean

AllowedSnssai:

type: object

required:

- allowedSnssai

properties:

allowedSnssai:

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

nsiInformationList:

type: array

items:

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

minItems: 1

mappedHomeSnssai:

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

AllowedNssai:

type: object

required:

- allowedSnssaiList

- accessType

properties:

allowedSnssaiList:

type: array

items:

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

minItems: 1

accessType:

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

NsiInformation:

type: object

required:

- nrfId

properties:

nrfId:

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

nsiId:

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

nrfNfMgtUri:

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

nrfAccessTokenUri:

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

MappingOfSnssai:

type: object

required:

- servingSnssai

- homeSnssai

properties:

servingSnssai:

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

homeSnssai:

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

SliceInfoForRegistration:

type: object

properties:

subscribedNssai:

type: array

items:

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

minItems: 1

allowedNssaiCurrentAccess:

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

allowedNssaiOtherAccess:

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

sNssaiForMapping:

type: array

items:

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

minItems: 1

requestedNssai:

type: array

items:

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

minItems: 1

defaultConfiguredSnssaiInd:

type: boolean

mappingOfNssai:

type: array

items:

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

minItems: 1

requestMapping:

type: boolean

SliceInfoForPDUSession:

type: object

required:

- sNssai

- roamingIndication

properties:

sNssai:

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

roamingIndication:

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

homeSnssai:

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

SliceInfoForUEConfigurationUpdate:

type: object

properties:

subscribedNssai:

type: array

items:

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

minItems: 1

allowedNssaiCurrentAccess:

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

allowedNssaiOtherAccess:

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

defaultConfiguredSnssaiInd:

type: boolean

requestedNssai:

type: array

items:

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

minItems: 1

mappingOfNssai:

type: array

items:

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

minItems: 1

ConfiguredSnssai:

type: object

required:

- configuredSnssai

properties:

configuredSnssai:

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

mappedHomeSnssai:

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

RoamingIndication:

anyOf:

- type: string

enum:

- NON\_ROAMING

- LOCAL\_BREAKOUT

- HOME\_ROUTED\_ROAMING

- type: string

NsiId:

type: string

A.3 Nnssf\_NSSAIAvailability API

openapi: 3.0.0

info:

version: '1.1.0.alpha-2'

title: 'NSSF NSSAI Availability'

description: |

NSSF NSSAI Availability Service.

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security:

- {}

- oAuth2ClientCredentials:

- nnssf-nssaiavailability

servers:

- url: '{apiRoot}/nnssf-nssaiavailability/v1'

variables:

apiRoot:

default: https://example.com

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

externalDocs:

description: 3GPP TS 29.531 V16.2.0; 5G System; Network Slice Selection Services; Stage 3

url: http://www.3gpp.org/ftp/Specs/archive/29\_series/29.531/

paths:

/nssai-availability/{nfId}:

put:

summary: Updates/replaces the NSSF with the S-NSSAIs the NF service consumer (e.g AMF)supports per TA

tags:

- NF Instance ID (Document)

operationId: NSSAIAvailabilityPut

parameters:

- name: nfId

in: path

description: Identifier of the NF service consumer instance

required: true

schema:

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

- name: Content-Encoding

in: header

description: Content-Encoding, described in IETF RFC 7231

schema:

type: string

- name: Accept-Encoding

in: header

description: Accept-Encoding, described in IETF RFC 7231

schema:

type: string

requestBody:

description: Parameters to update/replace at the NSSF, the S-NSSAIs supported per TA

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of SNSSAI information per TA)

content:

application/json:

schema:

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

headers:

Accept-Encoding:

description: Accept-Encoding, described in IETF RFC 7694

schema:

type: string

Content-Encoding:

description: Content-Encoding, described in IETF RFC 7231

schema:

type: string

'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'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

patch:

summary: Updates an already existing S-NSSAIs per TA provided by the NF service consumer (e.g AMF)

tags:

- NF Instance ID (Document)

operationId: NSSAIAvailabilityPatch

parameters:

- name: nfId

in: path

description: Identifier of the NF service consumer instance

required: true

schema:

type: string

requestBody:

description: JSON Patch instructions to update at the NSSF, the S-NSSAIs supported per TA

required: true

content:

application/json-patch+json::

schema:

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

responses:

'200':

description: OK (Successful update of SNSSAI information per TA)

content:

application/json:

schema:

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

'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'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

delete:

summary: Deletes an already existing S-NSSAIs per TA provided by the NF service consumer (e.g AMF)

tags:

- NF Instance ID (Document)

operationId: NSSAIAvailabilityDelete

parameters:

- name: nfId

in: path

description: Identifier of the NF service consumer instance

required: true

schema:

type: string

responses:

'204':

description: No Content (Successful deletion of SNSSAI information per TA)

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'404':

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

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

/nssai-availability/subscriptions:

post:

summary: Creates subscriptions for notification about updates to NSSAI availability information

tags:

- Subscriptions (Collection)

operationId: NSSAIAvailabilityPost

requestBody:

description: Subscription for notification about updates to NSSAI availability information

required: true

content:

application/json:

schema:

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

callbacks:

nssaiAvailabilityNotification:

'{request.body#/nfNssaiAvailabilityUri}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'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'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

responses:

'201':

description: Created (Successful creation of subscription for notification)

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnssf-nssaiavailability/v1/nssai-availability/subscriptions/{subscriptionId}'

required: true

schema:

type: string

'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'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

/nssai-availability/subscriptions/{subscriptionId}:

delete:

summary: Deletes an already existing NSSAI availability notification subscription

tags:

- Subscription ID (Document)

operationId: NSSAIAvailabilityUnsubscribe

parameters:

- name: subscriptionId

in: path

description: Identifier of the subscription for notification

required: true

schema:

type: string

responses:

'204':

description: No Content (Successful deletion of subscription for NSSAI Availability notification)

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'404':

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

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

/nssai-availability:

options:

summary: Discover communication options supported by NSSF for NSSAI Availability

operationId: NSSAIAvailabilityOptions

tags:

- NSSAI Availability Store

responses:

'200':

description: OK

headers:

Accept-Encoding:

description: Accept-Encoding, described in IETF RFC 7694

schema:

type: string

'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'

'405':

$ref: 'TS29571\_CommonData.yaml#/components/responses/405'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'501':

$ref: 'TS29571\_CommonData.yaml#/components/responses/501'

'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:

nnssf-nssaiavailability: Access to the Nnssf\_NSSAIAvailability API

schemas:

NssaiAvailabilityInfo:

type: object

required:

- supportedNssaiAvailabilityData

properties:

supportedNssaiAvailabilityData:

type: array

items:

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

minItems: 1

supportedFeatures:

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

amfSetId:

type: string

pattern: '^[0-9]{3}-[0-9]{2-3}-[A-Fa-f0-9]{2}-[0-3][A-Fa-f0-9]{2}$'

SupportedNssaiAvailabilityData:

type: object

required:

- tai

- supportedSnssaiList

properties:

tai:

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

taiNid:

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

supportedSnssaiList:

type: array

items:

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

minItems: 1

taiList:

type: array

items:

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

minItems: 1

taiNids:

type: array

items:

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

minItems: 1

taiRangeList:

type: array

items:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/TaiRange'

minItems: 1

AuthorizedNssaiAvailabilityData:

type: object

required:

- tai

- supportedSnssaiList

properties:

tai:

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

taiNid:

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

supportedSnssaiList:

type: array

items:

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

minItems: 1

restrictedSnssaiList:

type: array

items:

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

minItems: 1

taiList:

type: array

items:

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

minItems: 1

taiNids:

type: array

items:

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

minItems: 1

taiRangeList:

type: array

items:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/TaiRange'

minItems: 1

RestrictedSnssai:

type: object

required:

- homePlmnId

- sNssaiList

properties:

homePlmnId:

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

sNssaiList:

type: array

items:

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

minItems: 1

homePlmnIdList:

type: array

items:

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

minItems: 1

AuthorizedNssaiAvailabilityInfo:

type: object

required:

- authorizedNssaiAvailabilityData

properties:

authorizedNssaiAvailabilityData:

type: array

items:

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

minItems: 1

supportedFeatures:

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

NssfEventSubscriptionCreateData:

type: object

required:

- nfNssaiAvailabilityUri

- taiList

- event

properties:

nfNssaiAvailabilityUri:

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

taiList:

type: array

items:

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

minItems: 1

taiNids:

type: array

items:

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

minItems: 1

event:

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

expiry:

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

amfSetId:

type: string

pattern: '^[0-9]{3}-[0-9]{2-3}-[A-Fa-f0-9]{2}-[0-3][A-Fa-f0-9]{2}$'

NssfEventSubscriptionCreatedData:

type: object

required:

- subscriptionId

properties:

subscriptionId:

type: string

expiry:

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

authorizedNssaiAvailabilityData:

type: array

items:

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

minItems: 1

NssfEventNotification:

type: object

required:

- subscriptionId

- authorizedNssaiAvailabilityData

properties:

subscriptionId:

type: string

authorizedNssaiAvailabilityData:

type: array

items:

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

minItems: 1

NssfEventType:

anyOf:

- type: string

enum:

- SNSSAI\_STATUS\_CHANGE\_REPORT

- type: string

PatchDocument:

type: array

items:

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

minItems: 1

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