**3GPP TSG-CT WG4 Meeting #109-eC4-222xyz**

**E-Meeting, 06th – 12th April 2022 (was C4-222149)**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **29.510** | **CR** | **0703** | **rev** | **1** | **Current version:** | **17.5.0** |  |
|  |
| *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:***  | Description Fields |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | SBIProtoc17 |  | ***Date:*** | 2022-03-14 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Description fields spanning multiple lines of text should be formatted using the YAML block ">" syntax, rather than having all text in a single line. |
|  |  |
| ***Summary of change:*** | Apply the right formatting to all description fields. |
|  |  |
| ***Consequences if not approved:*** | Misalignment with the documentation style conventions used in 3GPP. |
|  |  |
| ***Clauses affected:*** | A.2, A.3, A.4, A.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | This CR introduces backwards-compatible corrections, with impacts on the following APIs:- TS29510\_Nnrf\_NFManagement.yaml- TS29510\_Nnrf\_NFDiscovery.yaml- TS29510\_Nnrf\_AccessToken.yaml- TS29510\_Nnrf\_Bootstrapping.yaml |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* First Change \* \* \* \*

## A.2 Nnrf\_NFManagement API

openapi: 3.0.0

info:

 version: '1.2.0-alpha.6'

 title: 'NRF NFManagement Service'

 description: |

 NRF NFManagement Service.

 © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

externalDocs:

 description: 3GPP TS 29.510 V17.5.0; 5G System; Network Function Repository Services; Stage 3

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.510/'

servers:

 - url: '{apiRoot}/nnrf-nfm/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - nnrf-nfm

paths:

 /nf-instances:

 get:

 summary: Retrieves a collection of NF Instances

 operationId: GetNFInstances

 tags:

 - NF Instances (Store)

 security:

 - {}

 - oAuth2ClientCredentials:

 - nnrf-nfm

 - oAuth2ClientCredentials:

 - nnrf-nfm

 - nnrf-nfm:nf-instances:read

 parameters:

 - name: nf-type

 in: query

 description: Type of NF

 required: false

 schema:

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

 - name: limit

 in: query

 description: How many items to return at one time

 required: false

 schema:

 type: integer

 minimum: 1

 - name: page-number

 in: query

 description: Page number where the response shall start

 required: false

 schema:

 type: integer

 minimum: 1

 - name: page-size

 in: query

 description: Maximum number of items in each returned page

 schema:

 type: integer

 minimum: 1

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/3gppHal+json:

 schema:

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

 headers:

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '406':

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

 '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'

 '501':

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

 '503':

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

 default:

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

 options:

 summary: Discover communication options supported by NRF for NF Instances

 operationId: OptionsNFInstances

 tags:

 - NF Instances (Store)

 responses:

 '200':

 description: OK

 content:

 application/json:

 schema:

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

 headers:

 Accept-Encoding:

 description: Accept-Encoding, described in IETF RFC 7694

 schema:

 type: string

 '204':

 description: No Content

 headers:

 Accept-Encoding:

 description: Accept-Encoding, described in IETF RFC 7694

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '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'

 /nf-instances/{nfInstanceID}:

 get:

 summary: Read the profile of a given NF Instance

 operationId: GetNFInstance

 tags:

 - NF Instance ID (Document)

 parameters:

 - name: nfInstanceID

 in: path

 description: Unique ID of the NF Instance

 required: true

 schema:

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

 - name: requester-features

 in: query

 description: Features supported by the NF Service Consumer

 schema:

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

 responses:

 '200':

 description: Expected response to a valid request

 headers:

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 content:

 application/json:

 schema:

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

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '406':

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

 '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'

 '501':

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

 '503':

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

 default:

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

 put:

 summary: Register a new NF Instance

 operationId: RegisterNFInstance

 tags:

 - NF Instance ID (Document)

 parameters:

 - name: nfInstanceID

 in: path

 required: true

 description: Unique ID of the NF Instance to register

 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:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '200':

 description: OK (Profile Replacement)

 content:

 application/json:

 schema:

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

 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

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 '201':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the newly created resource, according to the structure:

 {apiRoot}/nnrf-nfm/v1/nf-instances/{nfInstanceId}

 required: true

 schema:

 type: string

 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

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '501':

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

 '503':

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

 default:

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

 patch:

 summary: Update NF Instance profile

 operationId: UpdateNFInstance

 tags:

 - NF Instance ID (Document)

 parameters:

 - name: nfInstanceID

 in: path

 required: true

 description: Unique ID of the NF Instance to update

 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

 - name: If-Match

 in: header

 description: Validator for conditional requests, as described in IETF RFC 7232, 3.2

 schema:

 type: string

 requestBody:

 content:

 application/json-patch+json:

 schema:

 type: array

 items:

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

 minItems: 1

 required: true

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 headers:

 Accept-Encoding:

 description: Accept-Encoding, described in IETF RFC 7694

 schema:

 type: string

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 Content-Encoding:

 description: Content-Encoding, described in IETF RFC 7231

 schema:

 type: string

 '204':

 description: Expected response with empty body

 headers:

 Accept-Encoding:

 description: Accept-Encoding, described in IETF RFC 7694

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '400':

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

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

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

 '409':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/409'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '412':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/412'

 '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'

 '501':

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

 '503':

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

 default:

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

 delete:

 summary: Deregisters a given NF Instance

 operationId: DeregisterNFInstance

 tags:

 - NF Instance ID (Document)

 parameters:

 - name: nfInstanceID

 in: path

 required: true

 description: Unique ID of the NF Instance to deregister

 schema:

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

 responses:

 '204':

 description: Expected response to a successful deregistration

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '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'

 /subscriptions:

 post:

 summary: Create a new subscription

 operationId: CreateSubscription

 tags:

 - Subscriptions (Collection)

 parameters:

 - 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:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '201':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the newly created resource, according to the structure:

 {apiRoot}/nnrf-nfm/v1/subscriptions/{subscriptionId}

 required: true

 schema:

 type: string

 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

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '501':

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

 '503':

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

 default:

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

 callbacks:

 onNFStatusEvent:

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

 post:

 parameters:

 - name: Content-Encoding

 in: header

 description: Content-Encoding, described in IETF RFC 7231

 schema:

 type: string

 requestBody:

 description: Notification Payload

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: Expected response to a successful callback processing

 headers:

 Accept-Encoding:

 description: Accept-Encoding, described in IETF RFC 7694

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 The URI pointing to the resource located on another NF service

 consumer instance

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 The URI pointing to the resource located on another NF service

 consumer instance

 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'

 '501':

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

 '503':

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

 default:

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

 /subscriptions/{subscriptionID}:

 patch:

 summary: Updates a subscription

 operationId: UpdateSubscription

 tags:

 - Subscription ID (Document)

 parameters:

 - name: subscriptionID

 in: path

 required: true

 description: Unique ID of the subscription to update

 schema:

 type: string

 pattern: '^([0-9]{5,6}-)?[^-]+$'

 - 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:

 content:

 application/json-patch+json:

 schema:

 type: array

 items:

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

 required: true

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 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

 '204':

 description: No Content

 headers:

 Accept-Encoding:

 description: Accept-Encoding, described in IETF RFC 7694

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '400':

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

 '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'

 '501':

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

 '503':

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

 default:

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

 delete:

 summary: Deletes a subscription

 operationId: RemoveSubscription

 tags:

 - Subscription ID (Document)

 parameters:

 - name: subscriptionID

 in: path

 required: true

 description: Unique ID of the subscription to remove

 schema:

 type: string

 pattern: '^([0-9]{5,6}-)?[^-]+$'

 responses:

 '204':

 description: Expected response to a successful subscription removal

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '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: '/oauth2/token'

 scopes:

 nnrf-nfm: Access to the Nnrf\_NFManagement API

 nnrf-nfm:nf-instances:read: Access to read the nf-instances resource

 schemas:

 NFProfile:

 description: Information of an NF Instance registered in the NRF

 type: object

 required:

 - nfInstanceId

 - nfType

 - nfStatus

 anyOf:

 - required: [ fqdn ]

 - required: [ ipv4Addresses ]

 - required: [ ipv6Addresses ]

 properties:

 nfInstanceId:

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

 nfInstanceName:

 type: string

 nfType:

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

 nfStatus:

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

 collocatedNfInstances:

 type: array

 items:

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

 minimum: 1

 heartBeatTimer:

 type: integer

 minimum: 1

 plmnList:

 type: array

 items:

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

 minItems: 1

 snpnList:

 type: array

 items:

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

 minItems: 1

 sNssais:

 type: array

 items:

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

 minItems: 1

 perPlmnSnssaiList:

 type: array

 items:

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

 minItems: 1

 nsiList:

 type: array

 items:

 type: string

 minItems: 1

 fqdn:

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

 interPlmnFqdn:

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

 ipv4Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 allowedPlmns:

 type: array

 items:

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

 minItems: 1

 allowedSnpns:

 type: array

 items:

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

 minItems: 1

 allowedNfTypes:

 type: array

 items:

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

 minItems: 1

 allowedNfDomains:

 type: array

 items:

 type: string

 minItems: 1

 allowedNssais:

 type: array

 items:

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

 minItems: 1

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 capacity:

 type: integer

 minimum: 0

 maximum: 65535

 load:

 type: integer

 minimum: 0

 maximum: 100

 loadTimeStamp:

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

 locality:

 type: string

 udrInfo:

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

 udrInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UdrInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 udmInfo:

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

 udmInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UdmInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 ausfInfo:

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

 ausfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of AusfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 amfInfo:

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

 amfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of AmfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 smfInfo:

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

 smfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of SmfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 upfInfo:

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

 upfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UpfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 pcfInfo:

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

 pcfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of PcfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 bsfInfo:

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

 bsfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of BsfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 chfInfo:

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

 chfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of ChfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 nefInfo:

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

 nrfInfo:

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

 udsfInfo:

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

 udsfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UdsfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 nwdafInfo:

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

 nwdafInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of NwdafInfo

 additionalProperties:

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

 minProperties: 1

 pcscfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of PcscfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 hssInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of HssInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 customInfo:

 type: object

 recoveryTime:

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

 nfServicePersistence:

 type: boolean

 default: false

 nfServices:

 deprecated: true

 type: array

 items:

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

 minItems: 1

 nfServiceList:

 description: >

 A map (list of key-value pairs) where serviceInstanceId serves as key of NFService

 type: object

 additionalProperties:

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

 minProperties: 1

 nfProfileChangesSupportInd:

 type: boolean

 default: false

 writeOnly: true

 nfProfileChangesInd:

 type: boolean

 default: false

 readOnly: true

 defaultNotificationSubscriptions:

 type: array

 items:

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

 lmfInfo:

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

 gmlcInfo:

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

 nfSetIdList:

 type: array

 items:

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

 minItems: 1

 servingScope:

 type: array

 items:

 type: string

 minItems: 1

 lcHSupportInd:

 type: boolean

 default: false

 olcHSupportInd:

 type: boolean

 default: false

 nfSetRecoveryTimeList:

 description: A map (list of key-value pairs) where NfSetId serves as key of DateTime

 type: object

 additionalProperties:

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

 minProperties: 1

 serviceSetRecoveryTimeList:

 description: >

 A map (list of key-value pairs) where NfServiceSetId serves as key of DateTime

 type: object

 additionalProperties:

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

 minProperties: 1

 scpDomains:

 type: array

 items:

 type: string

 minItems: 1

 scpInfo:

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

 seppInfo:

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

 vendorId:

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

 supportedVendorSpecificFeatures:

 description: >

 The key of the map is the IANA-assigned SMI Network Management Private Enterprise Codes

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 aanfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of AanfInfo

 additionalProperties:

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

 minProperties: 1

 5gDdnmfInfo:

 $ref: '#/components/schemas/5GDdnmfInfo'

 mfafInfo:

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

 easdfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of EasdfInfo

 additionalProperties:

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

 minProperties: 1

 dccfInfo:

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

 nsacfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of NsacfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 mbSmfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of MbSmfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 tsctsfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of TsctsInfo

 additionalProperties:

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

 minProperties: 1

 mbUpfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of MbUpfInfo

 additionalProperties:

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

 minProperties: 1

 trustAfInfo:

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

 nssaafInfo:

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

 hniList:

 type: array

 items:

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

 minItems: 1

 NFService:

 description: >

 Information of a given NF Service Instance; it is part of the NFProfile of an NF Instance

 type: object

 required:

 - serviceInstanceId

 - serviceName

 - versions

 - scheme

 - nfServiceStatus

 properties:

 serviceInstanceId:

 type: string

 serviceName:

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

 versions:

 type: array

 items:

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

 minItems: 1

 scheme:

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

 nfServiceStatus:

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

 fqdn:

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

 interPlmnFqdn:

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

 ipEndPoints:

 type: array

 items:

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

 minItems: 1

 apiPrefix:

 type: string

 defaultNotificationSubscriptions:

 type: array

 items:

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

 minItems: 1

 allowedPlmns:

 type: array

 items:

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

 minItems: 1

 allowedSnpns:

 type: array

 items:

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

 minItems: 1

 allowedNfTypes:

 type: array

 items:

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

 minItems: 1

 allowedNfDomains:

 type: array

 items:

 type: string

 minItems: 1

 allowedNssais:

 type: array

 items:

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

 minItems: 1

 allowedOperationsPerNfType:

 description: A map (list of key-value pairs) where NF Type serves as key

 type: object

 additionalProperties:

 type: array

 items:

 type: string

 minItems: 1

 minProperties: 1

 allowedOperationsPerNfInstance:

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 type: object

 additionalProperties:

 type: array

 items:

 type: string

 minItems: 1

 minProperties: 1

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 capacity:

 type: integer

 minimum: 0

 maximum: 65535

 load:

 type: integer

 minimum: 0

 maximum: 100

 loadTimeStamp:

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

 recoveryTime:

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

 supportedFeatures:

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

 nfServiceSetIdList:

 type: array

 items:

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

 minItems: 1

 sNssais:

 type: array

 items:

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

 minItems: 1

 perPlmnSnssaiList:

 type: array

 items:

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

 minItems: 1

 vendorId:

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

 supportedVendorSpecificFeatures:

 description: >

 A map (list of key-value pairs) where IANA-assigned SMI Network Management

 Private Enterprise Codes serves as key

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 oauth2Required:

 type: boolean

 perPlmnOauth2ReqList:

 $ref: '#/components/schemas/PlmnOauth2'

 NFType:

 description: NF types known to NRF

 anyOf:

 - type: string

 enum:

 - NRF

 - UDM

 - AMF

 - SMF

 - AUSF

 - NEF

 - PCF

 - SMSF

 - NSSF

 - UDR

 - LMF

 - GMLC

 - 5G\_EIR

 - SEPP

 - UPF

 - N3IWF

 - AF

 - UDSF

 - BSF

 - CHF

 - NWDAF

 - PCSCF

 - CBCF

 - HSS

 - UCMF

 - SOR\_AF

 - SPAF

 - MME

 - SCSAS

 - SCEF

 - SCP

 - NSSAAF

 - ICSCF

 - SCSCF

 - DRA

 - IMS\_AS

 - AANF

 - 5G\_DDNMF

 - NSACF

 - MFAF

 - EASDF

 - DCCF

 - MB-SMF

 - TSCTSF

 - ADRF

 - GBA\_BSF

 - CEF

 - MB-UPF

 - NSWOF

 - type: string

 Fqdn:

 description: Fully Qualified Domain Name

 type: string

 NefId:

 description: Identity of the NEF

 type: string

 IpEndPoint:

 description: >

 IP addressing information of a given NFService;

 it consists on, e.g. IP address, TCP port, transport protocol...

 type: object

 properties:

 ipv4Address:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 ipv6Address:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 transport:

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

 port:

 type: integer

 minimum: 0

 maximum: 65535

 SubscriptionData:

 description: >

 Information of a subscription to notifications to NRF events,

 included in subscription requests and responses

 type: object

 required:

 - nfStatusNotificationUri

 - subscriptionId

 properties:

 nfStatusNotificationUri:

 type: string

 reqNfInstanceId:

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

 subscrCond:

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

 subscriptionId:

 type: string

 pattern: '^([0-9]{5,6}-)?[^-]+$'

 readOnly: true

 validityTime:

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

 reqNotifEvents:

 type: array

 items:

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

 minItems: 1

 plmnId:

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

 nid:

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

 notifCondition:

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

 reqNfType:

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

 reqNfFqdn:

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

 reqSnssais:

 type: array

 items:

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

 minItems: 1

 reqPerPlmnSnssais:

 type: array

 items:

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

 minItems: 1

 reqPlmnList:

 type: array

 items:

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

 minItems: 1

 reqSnpnList:

 type: array

 items:

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

 minItems: 1

 servingScope:

 type: array

 items:

 type: string

 minItems: 1

 requesterFeatures:

 writeOnly: true

 allOf:

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

 nrfSupportedFeatures:

 readOnly: true

 allOf:

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

 hnrfUri:

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

 onboardingCapability:

 type: boolean

 default: false

 targetHni:

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

 SubscrCond:

 description: >

 Condition to determine the set of NFs to monitor under a certain subscription in NRF

 oneOf:

 - $ref: '#/components/schemas/NfInstanceIdCond'

 - $ref: '#/components/schemas/NfInstanceIdListCond'

 - $ref: '#/components/schemas/NfTypeCond'

 - $ref: '#/components/schemas/ServiceNameCond'

 - $ref: '#/components/schemas/ServiceNameListCond'

 - $ref: '#/components/schemas/AmfCond'

 - $ref: '#/components/schemas/GuamiListCond'

 - $ref: '#/components/schemas/NetworkSliceCond'

 - $ref: '#/components/schemas/NfGroupCond'

 - $ref: '#/components/schemas/NfGroupListCond'

 - $ref: '#/components/schemas/NfSetCond'

 - $ref: '#/components/schemas/NfServiceSetCond'

 - $ref: '#/components/schemas/UpfCond'

 - $ref: '#/components/schemas/ScpDomainCond'

 - $ref: '#/components/schemas/NwdafCond'

 - $ref: '#/components/schemas/NefCond'

 - $ref: '#/components/schemas/DccfCond'

 NfInstanceIdCond:

 description: Subscription to a given NF Instance Id

 type: object

 required:

 - nfInstanceId

 properties:

 nfInstanceId:

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

 NfInstanceIdListCond:

 description: Subscription to a list of NF Instances

 type: object

 required:

 - nfInstanceIdList

 properties:

 nfInstanceIdList:

 type: array

 items:

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

 minItems: 1

 NfTypeCond:

 description: Subscription to a set of NFs based on their NF Type

 type: object

 required:

 - nfType

 not:

 required: [ nfGroupId ]

 properties:

 nfType:

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

 ServiceNameCond:

 description: Subscription to a set of NFs based on their support for a given Service Name

 type: object

 required:

 - serviceName

 properties:

 serviceName:

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

 ServiceNameListCond:

 description: >

 Subscription to a set of NFs based on their support for a Service Name

 in the Servic Name list

 type: object

 required:

 - conditionType

 - serviceNameList

 properties:

 conditionType:

 type: string

 enum: [ SERVICE\_NAME\_LIST\_COND ]

 serviceNameList:

 type: array

 items:

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

 minItems: 1

 AmfCond:

 description: Subscription to a set of AMFs, based on AMF Set Id and/or AMF Region Id

 type: object

 anyOf:

 - required: [ amfSetId ]

 - required: [ amfRegionId ]

 properties:

 amfSetId:

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

 amfRegionId:

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

 GuamiListCond:

 description: Subscription to a set of AMFs, based on their GUAMIs

 type: object

 required:

 - guamiList

 properties:

 guamiList:

 type: array

 items:

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

 NetworkSliceCond:

 description: Subscription to a set of NFs, based on the slices (S-NSSAI and NSI) they support

 type: object

 required:

 - snssaiList

 properties:

 snssaiList:

 type: array

 items:

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

 nsiList:

 type: array

 items:

 type: string

 NfGroupCond:

 description: Subscription to a set of NFs based on their Group Id

 type: object

 required:

 - nfType

 - nfGroupId

 properties:

 nfType:

 type: string

 enum:

 - UDM

 - AUSF

 - UDR

 - PCF

 - CHF

 - HSS

 nfGroupId:

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

 NfGroupListCond:

 description: Subscription to a set of NFs based on their Group Ids

 type: object

 required:

 - conditionType

 - nfType

 - nfGroupIdList

 properties:

 conditionType:

 type: string

 enum: [ NF\_GROUP\_LIST\_COND ]

 nfType:

 type: string

 enum:

 - UDM

 - AUSF

 - UDR

 - PCF

 - CHF

 - HSS

 nfGroupIdList:

 type: array

 items:

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

 minItems: 1

 NotifCondition:

 description: >

 Condition (list of attributes in the NF Profile) to determine whether a notification

 must be sent by NRF

 type: object

 not:

 required: [ monitoredAttributes, unmonitoredAttributes ]

 properties:

 monitoredAttributes:

 type: array

 items:

 type: string

 minItems: 1

 unmonitoredAttributes:

 type: array

 items:

 type: string

 minItems: 1

 UdrInfo:

 description: Information of an UDR NF Instance

 type: object

 properties:

 groupId:

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

 supiRanges:

 type: array

 items:

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

 minItems: 1

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 externalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 supportedDataSets:

 type: array

 items:

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

 minItems: 1

 sharedDataIdRanges:

 type: array

 items:

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

 minItems: 1

 SharedDataIdRange:

 description: A range of SharedDataIds based on regular-expression matching

 type: object

 properties:

 pattern:

 type: string

 SupiRange:

 description: >

 A range of SUPIs (subscriber identities), either based on a numeric range,

 or based on regular-expression matching

 type: object

 properties:

 start:

 type: string

 pattern: '^[0-9]+$'

 end:

 type: string

 pattern: '^[0-9]+$'

 pattern:

 type: string

 IdentityRange:

 description: >

 A range of GPSIs (subscriber identities), either based on a numeric range,

 or based on regular-expression matching

 type: object

 properties:

 start:

 type: string

 pattern: '^[0-9]+$'

 end:

 type: string

 pattern: '^[0-9]+$'

 pattern:

 type: string

 InternalGroupIdRange:

 description: >

 A range of Group IDs (internal group identities), either based on a numeric range,

 or based on regular-expression matching

 type: object

 properties:

 start:

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

 end:

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

 pattern:

 type: string

 DataSetId:

 description: Types of data sets and subsets stored in UDR

 anyOf:

 - type: string

 enum:

 - SUBSCRIPTION

 - POLICY

 - EXPOSURE

 - APPLICATION

 - A\_PFD

 - A\_AFTI

 - A\_IPTV

 - A\_BDT

 - A\_SPD

 - A\_EASD

 - A\_AMI

 - A\_TSD

 - P\_UE

 - P\_SCD

 - P\_BDT

 - P\_PLMNUE

 - P NSSCD

 - type: string

 UdmInfo:

 description: Information of an UDM NF Instance

 type: object

 properties:

 groupId:

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

 supiRanges:

 type: array

 items:

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

 minItems: 1

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 externalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 routingIndicators:

 type: array

 items:

 type: string

 pattern: '^[0-9]{1,4}$'

 minItems: 1

 internalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 suciInfos:

 type: array

 items:

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

 minItems: 1

 AusfInfo:

 description: Information of an AUSF NF Instance

 type: object

 properties:

 groupId:

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

 supiRanges:

 type: array

 items:

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

 minItems: 1

 routingIndicators:

 type: array

 items:

 type: string

 pattern: '^[0-9]{1,4}$'

 minItems: 1

 suciInfos:

 type: array

 items:

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

 minItems: 1

 AmfInfo:

 description: Information of an AMF NF Instance

 type: object

 required:

 - amfSetId

 - amfRegionId

 - guamiList

 properties:

 amfSetId:

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

 amfRegionId:

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

 guamiList:

 type: array

 items:

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

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 backupInfoAmfFailure:

 type: array

 items:

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

 minItems: 1

 backupInfoAmfRemoval:

 type: array

 items:

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

 minItems: 1

 n2InterfaceAmfInfo:

 $ref: '#/components/schemas/N2InterfaceAmfInfo'

 amfOnboardingCapability:

 type: boolean

 default: false

 SmfInfo:

 description: Information of an SMF NF Instance

 type: object

 required:

 - sNssaiSmfInfoList

 properties:

 sNssaiSmfInfoList:

 type: array

 items:

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

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 pgwFqdn:

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

 pgwIpAddrList:

 type: array

 items:

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

 minItems: 1

 accessType:

 type: array

 items:

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

 minItems: 1

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 vsmfSupportInd:

 type: boolean

 default: false

 pgwFqdnList:

 type: array

 items:

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

 minItems: 1

 smfOnboardingCapability:

 type: boolean

 default: false

 SnssaiSmfInfoItem:

 description: Set of parameters supported by SMF for a given S-NSSAI

 type: object

 required:

 - sNssai

 - dnnSmfInfoList

 properties:

 sNssai:

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

 dnnSmfInfoList:

 type: array

 items:

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

 minItems: 1

 DnnSmfInfoItem:

 description: Set of parameters supported by SMF for a given DNN

 type: object

 required:

 - dnn

 properties:

 dnn:

 anyOf:

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

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

 dnaiList:

 type: array

 items:

 anyOf:

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

 - $ref: '#/components/schemas/WildcardDnai'

 minItems: 1

 UpfInfo:

 description: Information of an UPF NF Instance

 type: object

 required:

 - sNssaiUpfInfoList

 properties:

 sNssaiUpfInfoList:

 type: array

 items:

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

 minItems: 1

 smfServingArea:

 type: array

 items:

 type: string

 minItems: 1

 interfaceUpfInfoList:

 type: array

 items:

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

 minItems: 1

 iwkEpsInd:

 type: boolean

 default: false

 pduSessionTypes:

 type: array

 items:

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

 minItems: 1

 atsssCapability:

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

 ueIpAddrInd:

 type: boolean

 default: false

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 wAgfInfo:

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

 tngfInfo:

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

 twifInfo:

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

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 redundantGtpu:

 type: boolean

 default: false

 ipups:

 type: boolean

 default: false

 dataForwarding:

 type: boolean

 default: false

 supportedPfcpFeatures:

 type: string

 SnssaiUpfInfoItem:

 description: Set of parameters supported by UPF for a given S-NSSAI

 type: object

 required:

 - sNssai

 - dnnUpfInfoList

 properties:

 sNssai:

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

 dnnUpfInfoList:

 type: array

 items:

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

 minItems: 1

 redundantTransport:

 type: boolean

 default: false

 DnnUpfInfoItem:

 description: Set of parameters supported by UPF for a given DNN

 type: object

 required:

 - dnn

 properties:

 dnn:

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

 dnaiList:

 type: array

 items:

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

 minItems: 1

 pduSessionTypes:

 type: array

 items:

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

 minItems: 1

 ipv4AddressRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv4AddressRange'

 minItems: 1

 ipv6PrefixRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv6PrefixRange'

 minItems: 1

 dnaiNwInstanceList:

 description: >

 Map of network instance per DNAI for the DNN, where the key of the map is the DNAI.

 When present, the value of each entry of the map shall contain a N6 network instance

 that is configured for the DNAI indicated by the key.

 type: object

 additionalProperties:

 type: string

 minProperties: 1

 InterfaceUpfInfoItem:

 description: Information of a given IP interface of an UPF

 type: object

 required:

 - interfaceType

 properties:

 interfaceType:

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

 ipv4EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 endpointFqdn:

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

 networkInstance:

 type: string

 UPInterfaceType:

 description: Types of User-Plane interfaces of the UPF

 anyOf:

 - type: string

 enum:

 - N3

 - N6

 - N9

 - DATA\_FORWARDING

 - N3MB

 - N6MB

 - N19MB

 - NMB9

 - type: string

 WAgfInfo:

 description: Information of the W-AGF end-points

 type: object

 properties:

 ipv4EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 endpointFqdn:

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

 TngfInfo:

 description: Infomation of the TNGF endpoints

 type: object

 properties:

 ipv4EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 endpointFqdn:

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

 PcfInfo:

 description: Information of a PCF NF Instance

 type: object

 properties:

 groupId:

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

 dnnList:

 type: array

 items:

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

 minItems: 1

 supiRanges:

 type: array

 items:

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

 minItems: 1

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 rxDiamHost:

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

 rxDiamRealm:

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

 v2xSupportInd:

 type: boolean

 default: false

 proseSupportInd:

 type: boolean

 default: false

 proseCapability:

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

 v2xCapability:

 $ref: '#/components/schemas/V2xCapability'

 BsfInfo:

 description: Information of a BSF NF Instance

 type: object

 properties:

 dnnList:

 type: array

 items:

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

 minItems: 1

 ipDomainList:

 type: array

 items:

 type: string

 minItems: 1

 ipv4AddressRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv4AddressRange'

 minItems: 1

 ipv6PrefixRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv6PrefixRange'

 minItems: 1

 rxDiamHost:

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

 rxDiamRealm:

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

 groupId:

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

 supiRanges:

 type: array

 items:

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

 minItems: 1

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 ChfInfo:

 description: Information of a CHF NF Instance

 type: object

 not:

 required: [ primaryChfInstance, secondaryChfInstance ]

 properties:

 supiRangeList:

 type: array

 items:

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

 minItems: 1

 gpsiRangeList:

 type: array

 items:

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

 minItems: 1

 plmnRangeList:

 type: array

 items:

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

 minItems: 1

 groupId:

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

 primaryChfInstance:

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

 secondaryChfInstance:

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

 Ipv4AddressRange:

 description: Range of IPv4 addresses

 type: object

 properties:

 start:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 end:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 Ipv6PrefixRange:

 description: Range of IPv6 prefixes

 type: object

 properties:

 start:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 end:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 DefaultNotificationSubscription:

 description: >

 Data structure for specifying the notifications the NF service subscribes by default,

 along with callback URI

 type: object

 required:

 - notificationType

 - callbackUri

 properties:

 notificationType:

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

 callbackUri:

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

 n1MessageClass:

 $ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N1MessageClass'

 n2InformationClass:

 $ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InformationClass'

 versions:

 type: array

 items:

 type: string

 minItems: 1

 binding:

 type: string

 acceptedEncoding:

 type: string

 supportedFeatures:

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

 NfSetCond:

 description: Subscription to a set of NFs based on their Set Id

 type: object

 required:

 - nfSetId

 properties:

 nfSetId:

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

 NfServiceSetCond:

 description: Subscription to a set of NFs based on their Service Set Id

 type: object

 required:

 - nfServiceSetId

 properties:

 nfServiceSetId:

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

 nfSetId:

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

 UpfCond:

 description: >

 Subscription to a set of NF Instances (UPFs), able to serve a certain service area

 (i.e. SMF serving area or TAI list)

 type: object

 required:

 - conditionType

 properties:

 conditionType:

 type: string

 enum: [ UPF\_COND ]

 smfServingArea:

 type: array

 items:

 type: string

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 NwdafCond:

 description: >

 Subscription to a set of NF Instances (NWDAFs), identified by Analytics ID(s),

 S-NSSAI(s) or NWDAF Serving Area information, i.e. list of TAIs for which the NWDAF

 can provide analytics.

 type: object

 required:

 - conditionType

 properties:

 conditionType:

 type: string

 enum: [ NWDAF\_COND ]

 analyticsIds:

 type: array

 items:

 type: string

 minItems: 1

 snssaiList:

 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

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 servingNfTypeList:

 type: array

 items:

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

 minItems: 1

 servingNfSetIdList:

 type: array

 items:

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

 minItems: 1

 mlAnalyticsList:

 type: array

 items:

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

 minItems: 1

 NefCond:

 description: >

 Subscription to a set of NF Instances (NEFs), identified by Event ID(s) provided by AF,

 S-NSSAI(s), AF Instance ID, Application Identifier, External Identifier,

 External Group Identifier, or domain name.

 type: object

 required:

 - conditionType

 properties:

 conditionType:

 type: string

 enum: [ NEF\_COND ]

 afEvents:

 type: array

 items:

 $ref: 'TS29517\_Naf\_EventExposure.yaml#/components/schemas/AfEvent'

 minItems: 1

 snssaiList:

 type: array

 items:

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

 minItems: 1

 pfdData:

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

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 externalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 servedFqdnList:

 type: array

 items:

 type: string

 minItems: 1

 NotificationType:

 description: >

 Types of notifications used in Default Notification URIs in the NF Profile of an NF Instance

 anyOf:

 - type: string

 enum:

 - N1\_MESSAGES

 - N2\_INFORMATION

 - LOCATION\_NOTIFICATION

 - DATA\_REMOVAL\_NOTIFICATION

 - DATA\_CHANGE\_NOTIFICATION

 - LOCATION\_UPDATE\_NOTIFICATION

 - NSSAA\_REAUTH\_NOTIFICATION

 - NSSAA\_REVOC\_NOTIFICATION

 - MATCH\_INFO\_NOTIFICATION

 - DATA\_RESTORATION\_NOTIFICATION

 - type: string

 TransportProtocol:

 description: Types of transport protocol used in a given IP endpoint of an NF Service Instance

 anyOf:

 - type: string

 enum:

 - TCP

 - type: string

 NotificationEventType:

 description: Types of events sent in notifications from NRF to subscribed NF Instances

 anyOf:

 - type: string

 enum:

 - NF\_REGISTERED

 - NF\_DEREGISTERED

 - NF\_PROFILE\_CHANGED

 - type: string

 NotificationData:

 description: Data sent in notifications from NRF to subscribed NF Instances

 type: object

 required:

 - event

 - nfInstanceUri

 allOf:

 #

 # Condition: If 'event' takes value 'NF\_PROFILE\_CHANGED',

 # then either 'nfProfile' or 'profileChanges' (but not both) must be present

 #

 - anyOf:

 - not:

 properties:

 event:

 type: string

 enum:

 - NF\_PROFILE\_CHANGED

 - oneOf:

 - required: [ nfProfile ]

 - required: [ profileChanges ]

 #

 # Condition: If 'event' takes value 'NF\_REGISTERED',

 # then 'nfProfile' must be present

 #

 - anyOf:

 - not:

 properties:

 event:

 type: string

 enum:

 - NF\_REGISTERED

 - required: [ nfProfile ]

 properties:

 event:

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

 nfInstanceUri:

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

 nfProfile:

 allOf:

 - $ref: '#/components/schemas/NFProfile'

 - not:

 required: [ interPlmnFqdn ]

 - not:

 required: [ allowedPlmns ]

 - not:

 required: [ allowedSnpns ]

 - not:

 required: [ allowedNfTypes ]

 - not:

 required: [ allowedNfDomains ]

 - not:

 required: [ allowedNssais ]

 - properties:

 nfServices:

 type: array

 items:

 allOf:

 - $ref: '#/components/schemas/NFService'

 - not:

 required: [ interPlmnFqdn ]

 - not:

 required: [ allowedPlmns ]

 - not:

 required: [ allowedSnpns ]

 - not:

 required: [ allowedNfTypes ]

 - not:

 required: [ allowedNfDomains ]

 - not:

 required: [ allowedNssais ]

 profileChanges:

 type: array

 items:

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

 minItems: 1

 conditionEvent:

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

 subscriptionContext:

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

 NFStatus:

 description: Status of a given NF Instance stored in NRF

 anyOf:

 - type: string

 enum:

 - REGISTERED

 - SUSPENDED

 - UNDISCOVERABLE

 - type: string

 NFServiceVersion:

 description: Contains the version details of an NF service

 type: object

 required:

 - apiVersionInUri

 - apiFullVersion

 properties:

 apiVersionInUri:

 type: string

 apiFullVersion:

 type: string

 expiry:

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

 ServiceName:

 description: Service names known to NRF

 anyOf:

 - type: string

 enum:

 - nnrf-nfm

 - nnrf-disc

 - nnrf-oauth2

 - nudm-sdm

 - nudm-uecm

 - nudm-ueau

 - nudm-ee

 - nudm-pp

 - nudm-niddau

 - nudm-mt

 - nudm-ssau

 - namf-comm

 - namf-evts

 - namf-mt

 - namf-loc

 - namf-mbs-comm

 - namf-mbs-bc

 - nsmf-pdusession

 - nsmf-event-exposure

 - nsmf-nidd

 - nausf-auth

 - nausf-sorprotection

 - nausf-upuprotection

 - nnef-pfdmanagement

 - nnef-smcontext

 - nnef-eventexposure

 - nnef-eas-deployment-info

 - 3gpp-cp-parameter-provisioning

 - 3gpp-device-triggering

 - 3gpp-bdt

 - 3gpp-traffic-influence

 - 3gpp-chargeable-party

 - 3gpp-as-session-with-qos

 - 3gpp-msisdn-less-mo-sms

 - 3gpp-service-parameter

 - 3gpp-monitoring-event

 - 3gpp-nidd-configuration-trigger

 - 3gpp-nidd

 - 3gpp-analyticsexposure

 - 3gpp-racs-parameter-provisioning

 - 3gpp-ecr-control

 - 3gpp-applying-bdt-policy

 - 3gpp-mo-lcs-notify

 - 3gpp-time-sync

 - 3gpp-am-influence

 - 3gpp-am-policyauthorization

 - 3gpp-akma

 - 3gpp-eas-deployment

 - 3gpp-iptvconfiguration

 - 3gpp-mbs-tmgi

 - 3gpp-mbs-session

 - 3gpp-authentication

 - npcf-am-policy-control

 - npcf-smpolicycontrol

 - npcf-policyauthorization

 - npcf-bdtpolicycontrol

 - npcf-eventexposure

 - npcf-ue-policy-control

 - npcf-am-policyauthorization

 - nsmsf-sms

 - nnssf-nsselection

 - nnssf-nssaiavailability

 - nudr-dr

 - nudr-group-id-map

 - nlmf-loc

 - n5g-eir-eic

 - nbsf-management

 - nchf-spendinglimitcontrol

 - nchf-convergedcharging

 - nchf-offlineonlycharging

 - nnwdaf-eventssubscription

 - nnwdaf-analyticsinfo

 - nnwdaf-datamanagement

 - nnwdaf-mlmodelprovision

 - ngmlc-loc

 - nucmf-provisioning

 - nucmf-uecapabilitymanagement

 - nhss-sdm

 - nhss-uecm

 - nhss-ueau

 - nhss-ee

 - nhss-ims-sdm

 - nhss-ims-uecm

 - nhss-ims-ueau

 - nhss-gba-sdm

 - nhss-gba-ueau

 - nsepp-telescopic

 - nsoraf-sor

 - nspaf-secured-packet

 - nudsf-dr

 - nudsf-timer

 - nnssaaf-nssaa

 - nnssaaf-aiw

 - naanf-akma

 - n5gddnmf-discovery

 - nmfaf-3dadm

 - nmfaf-3cadm

 - neasdf-dnscontext

 - neasdf-baselinednspattern

 - ndccf-dm

 - ndccf-cm

 - nnsacf-nsac

 - nnsacf-slice-ee

 - nmbsmf-tmgi

 - nmbsmf-mbssession

 - nadrf-dm

 - nbsp-gba

 - ntsctsf-time-sync

 - ntsctsf-qos-tscai

 - type: string

 N2InterfaceAmfInfo:

 description: AMF N2 interface information

 type: object

 properties:

 ipv4EndpointAddress:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6EndpointAddress:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 amfName:

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

 NFServiceStatus:

 description: Status of a given NF Service Instance of an NF Instance stored in NRF

 anyOf:

 - type: string

 enum:

 - REGISTERED

 - SUSPENDED

 - UNDISCOVERABLE

 - type: string

 TaiRange:

 description: Range of TAIs (Tracking Area Identities)

 type: object

 required:

 - plmnId

 - tacRangeList

 properties:

 plmnId:

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

 tacRangeList:

 type: array

 items:

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

 minItems: 1

 nid:

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

 TacRange:

 description: Range of TACs (Tracking Area Codes)

 type: object

 properties:

 start:

 type: string

 pattern: '^([A-Fa-f0-9]{4}|[A-Fa-f0-9]{6})$'

 end:

 type: string

 pattern: '^([A-Fa-f0-9]{4}|[A-Fa-f0-9]{6})$'

 pattern:

 type: string

 PlmnRange:

 description: Range of PLMN IDs

 type: object

 properties:

 start:

 type: string

 pattern: '^[0-9]{3}[0-9]{2,3}$'

 end:

 type: string

 pattern: '^[0-9]{3}[0-9]{2,3}$'

 pattern:

 type: string

 NrfInfo:

 description: Information of an NRF NF Instance, used in hierarchical NRF deployments

 type: object

 properties:

 servedUdrInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UdrInfo'

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

 minProperties: 1

 servedUdrInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UdrInfo'

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

 minProperties: 1

 minProperties: 1

 servedUdmInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UdmInfo'

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

 minProperties: 1

 servedUdmInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UdmInfo'

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

 minProperties: 1

 minProperties: 1

 servedAusfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/AusfInfo'

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

 minProperties: 1

 servedAusfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/AusfInfo'

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

 minProperties: 1

 minProperties: 1

 servedAmfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/AmfInfo'

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

 minProperties: 1

 servedAmfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/AmfInfo'

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

 minProperties: 1

 minProperties: 1

 servedSmfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/SmfInfo'

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

 minProperties: 1

 servedSmfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/SmfInfo'

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

 minProperties: 1

 minProperties: 1

 servedUpfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UpfInfo'

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

 minProperties: 1

 servedUpfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UpfInfo'

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

 minProperties: 1

 minProperties: 1

 servedPcfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/PcfInfo'

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

 minProperties: 1

 servedPcfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/PcfInfo'

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

 minProperties: 1

 minProperties: 1

 servedBsfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/BsfInfo'

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

 minProperties: 1

 servedBsfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/BsfInfo'

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

 minProperties: 1

 minProperties: 1

 servedChfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/ChfInfo'

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

 minProperties: 1

 servedChfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/ChfInfo'

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

 minProperties: 1

 minProperties: 1

 servedNefInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/NefInfo'

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

 minProperties: 1

 servedNwdafInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/NwdafInfo'

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

 minProperties: 1

 servedNwdafInfoList:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

 type: object

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 minProperties: 1

 servedPcscfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/PcscfInfo'

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

 minProperties: 1

 minProperties: 1

 servedGmlcInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/GmlcInfo'

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

 minProperties: 1

 servedLmfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/LmfInfo'

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

 minProperties: 1

 servedNfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

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

 minProperties: 1

 servedHssInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/HssInfo'

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

 minProperties: 1

 minProperties: 1

 servedUdsfInfo:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UdsfInfo'

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

 minProperties: 1

 servedUdsfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/UdsfInfo'

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

 minProperties: 1

 minProperties: 1

 servedScpInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/ScpInfo'

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

 minProperties: 1

 servedSeppInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/SeppInfo'

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

 minProperties: 1

 servedAanfInfoList:

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/AanfInfo'

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

 minProperties: 1

 served5gDdnmfInfo:

 type: object

 additionalProperties:

 $ref: '#/components/schemas/5GDdnmfInfo'

 minProperties: 1

 servedMfafInfoList:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

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

 minProperties: 1

 servedEasdfInfoList:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

 type: object

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 servedDccfInfoList:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

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

 minProperties: 1

 servedMbSmfInfoList:

 description: A map (list of key-value pairs) where nfInstanceId serves as key

 type: object

 additionalProperties:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 type: object

 additionalProperties:

 anyOf:

 - $ref: '#/components/schemas/MbSmfInfo'

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

 minProperties: 1

 minProperties: 1

 servedTsctsfInfoList:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

 type: object

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 minProperties: 1

 servedMbUpfInfoList:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

 type: object

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 minProperties: 1

 servedTrustAfInfo:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

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

 minProperties: 1

 servedNssaafInfo:

 type: object

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 additionalProperties:

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

 minProperties: 1

 PlmnSnssai:

 description: List of network slices (S-NSSAIs) for a given PLMN ID

 type: object

 required:

 - plmnId

 - sNssaiList

 properties:

 plmnId:

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

 sNssaiList:

 type: array

 items:

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

 minItems: 1

 nid:

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

 NefInfo:

 description: Information of an NEF NF Instance

 type: object

 properties:

 nefId:

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

 pfdData:

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

 afEeData:

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

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 externalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 servedFqdnList:

 type: array

 items:

 type: string

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 dnaiList:

 type: array

 items:

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

 minItems: 1

 unTrustAfInfoList:

 type: array

 items:

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

 minItems: 1

 uasNfFunctionalityInd:

 type: boolean

 default: false

 PfdData:

 description: List of Application IDs and/or AF IDs managed by a given NEF Instance

 type: object

 properties:

 appIds:

 type: array

 items:

 type: string

 minItems: 1

 afIds:

 type: array

 items:

 type: string

 minItems: 1

 NwdafInfo:

 description: Information of a NWDAF NF Instance

 type: object

 properties:

 eventIds:

 type: array

 items:

 $ref: 'TS29520\_Nnwdaf\_AnalyticsInfo.yaml#/components/schemas/EventId'

 minItems: 1

 nwdafEvents:

 type: array

 items:

 $ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NwdafEvent'

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 nwdafCapability:

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

 analyticsDelay:

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

 servingNfSetIdList:

 type: array

 items:

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

 minItems: 1

 servingNfTypeList:

 type: array

 items:

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

 minItems: 1

 mlAnalyticsList:

 type: array

 items:

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

 minItems: 1

 LmfInfo:

 description: Information of an LMF NF Instance

 type: object

 properties:

 servingClientTypes:

 type: array

 items:

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

 minItems: 1

 lmfId:

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

 servingAccessTypes:

 type: array

 items:

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

 minItems: 1

 servingAnNodeTypes:

 type: array

 items:

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

 minItems: 1

 servingRatTypes:

 type: array

 items:

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

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 supportedGADShapes:

 type: array

 items:

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

 minItems: 1

 GmlcInfo:

 description: Information of a GMLC NF Instance

 type: object

 properties:

 servingClientTypes:

 type: array

 items:

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

 minItems: 1

 gmlcNumbers:

 type: array

 items:

 type: string

 pattern: '^[0-9]{5,15}$'

 minItems: 1

 AfEventExposureData:

 description: AF Event Exposure data managed by a given NEF Instance

 type: object

 required:

 - afEvents

 properties:

 afEvents:

 type: array

 items:

 $ref: 'TS29517\_Naf\_EventExposure.yaml#/components/schemas/AfEvent'

 minItems: 1

 afIds:

 type: array

 items:

 type: string

 minItems: 1

 appIds:

 type: array

 items:

 type: string

 minItems: 1

 PcscfInfo:

 description: Information of a P-CSCF NF Instance

 type: object

 properties:

 accessType:

 type: array

 items:

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

 minItems: 1

 dnnList:

 type: array

 items:

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

 minItems: 1

 gmFqdn:

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

 gmIpv4Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 gmIpv6Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 mwFqdn:

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

 mwIpv4Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 mwIpv6Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 servedIpv4AddressRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv4AddressRange'

 minItems: 1

 servedIpv6PrefixRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv6PrefixRange'

 minItems: 1

 NfInfo:

 description: Information of a generic NF Instance

 type: object

 properties:

 nfType:

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

 HssInfo:

 description: Information of an HSS NF Instance

 type: object

 properties:

 groupId:

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

 imsiRanges:

 type: array

 items:

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

 minItems: 1

 imsPrivateIdentityRanges:

 type: array

 items:

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

 minItems: 1

 imsPublicIdentityRanges:

 type: array

 items:

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

 minItems: 1

 msisdnRanges:

 type: array

 items:

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

 minItems: 1

 externalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 ImsiRange:

 description: >

 A range of IMSIs (subscriber identities), either based on a numeric range,

 or based on regular-expression matching

 type: object

 properties:

 start:

 type: string

 pattern: '^[0-9]+$'

 end:

 type: string

 pattern: '^[0-9]+$'

 pattern:

 type: string

 TwifInfo:

 description: Addressing information (IP addresses, FQDN) of the TWIF

 type: object

 properties:

 ipv4EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6EndpointAddresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 endpointFqdn:

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

 VendorId:

 description: Vendor ID of the NF Service instance (Private Enterprise Number assigned by IANA)

 type: string

 pattern: '^[0-9]{6}$'

 VendorSpecificFeature:

 description: Information about a vendor-specific feature

 type: object

 required:

 - featureName

 - featureVersion

 properties:

 featureName:

 type: string

 featureVersion:

 type: string

 AnNodeType:

 description: Access Network Node Type (gNB, ng-eNB...)

 anyOf:

 - type: string

 enum:

 - GNB

 - NG\_ENB

 - type: string

 UdsfInfo:

 description: Information related to UDSF

 type: object

 properties:

 groupId:

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

 supiRanges:

 type: array

 items:

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

 minItems: 1

 storageIdRanges:

 description: >

 A map (list of key-value pairs) where realmId serves as key and each value in the map

 is an array of IdentityRanges. Each IdentityRange is a range of storageIds.

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 ScpInfo:

 description: Information of an SCP Instance

 type: object

 properties:

 scpDomainInfoList:

 description: >

 A map (list of key-value pairs) where the key of the map shall be the string

 identifying an SCP domain

 type: object

 additionalProperties:

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

 minProperties: 1

 scpPrefix:

 type: string

 scpPorts:

 description: >

 Port numbers for HTTP and HTTPS. The key of the map shall be "http" or "https".

 type: object

 additionalProperties:

 type: integer

 minimum: 0

 maximum: 65535

 minProperties: 1

 addressDomains:

 type: array

 items:

 type: string

 minItems: 1

 ipv4Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6Prefixes:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 minItems: 1

 ipv4AddrRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv4AddressRange'

 minItems: 1

 ipv6PrefixRanges:

 type: array

 items:

 $ref: '#/components/schemas/Ipv6PrefixRange'

 minItems: 1

 servedNfSetIdList:

 type: array

 items:

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

 minItems: 1

 remotePlmnList:

 type: array

 items:

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

 minItems: 1

 ipReachability:

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

 scpCapabilities:

 type: array

 items:

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

 ScpDomainInfo:

 description: SCP Domain specific information

 type: object

 properties:

 scpFqdn:

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

 scpIpEndPoints:

 type: array

 items:

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

 minItems: 1

 scpPrefix:

 type: string

 scpPorts:

 description: >

 Port numbers for HTTP and HTTPS. The key of the map shall be "http" or "https".

 type: object

 additionalProperties:

 type: integer

 minimum: 0

 maximum: 65535

 minProperties: 1

 ScpDomainCond:

 description: >

 Subscription to a set of NF or SCP or SEPP instances belonging to certain SCP domains

 type: object

 required:

 - scpDomains

 properties:

 scpDomains:

 type: array

 items:

 type: string

 minItems: 1

 nfTypeList:

 type: array

 items:

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

 minItems: 1

 OptionsResponse:

 description: Communication options of the NRF sent in response payload of OPTIONS method

 type: object

 properties:

 supportedFeatures:

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

 ConditionEventType:

 description: >

 Indicates whether a notification is due to the NF Instance to start or stop

 being part of a condition for a subscription to a set of NFs

 anyOf:

 - type: string

 enum:

 - NF\_ADDED

 - NF\_REMOVED

 - type: string

 SuciInfo:

 description: SUCI information containing Routing Indicator and Home Network Public Key ID

 type: object

 properties:

 routingInds:

 type: array

 items:

 type: string

 pattern: '^[0-9]{1,4}$'

 minItems: 1

 hNwPubKeyIds:

 type: array

 items:

 type: integer

 minItems: 1

 SeppInfo:

 description: Information of a SEPP Instance

 type: object

 properties:

 seppPorts:

 description: >

 Port numbers for HTTP and HTTPS. The key of the map shall be "http" or "https".

 type: object

 additionalProperties:

 type: integer

 minimum: 0

 maximum: 65535

 minProperties: 1

 remotePlmnList:

 type: array

 items:

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

 minItems: 1

 IpReachability:

 description: Indicates the type(s) of IP addresses reachable via an SCP

 anyOf:

 - type: string

 enum:

 - IPV4

 - IPV6

 - IPV4V6

 - type: string

 UriList:

 description: >

 Represents a set of URIs following the 3GPP hypermedia format

 (containing a "\_links" attribute).

 type: object

 properties:

 \_links:

 type: object

 description: >

 List of the URI of NF instances. It has two members whose names are item and self.

 The item attribute contains an array of URIs.

 additionalProperties:

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

 minProperties: 1

 totalItemCount:

 type: integer

 AanfInfo:

 description: Represents the information relative to an AAnF NF Instance.

 type: object

 properties:

 routingIndicators:

 type: array

 items:

 type: string

 pattern: '^[0-9]{1,4}$'

 minItems: 1

 5GDdnmfInfo:

 description: Information of an 5G DDNMF NF Instance

 type: object

 required:

 - plmnId

 properties:

 plmnId:

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

 WildcardDnai:

 description: Wildcard DNAI

 type: string

 pattern: '^[\*]$'

 MfafInfo:

 description: Information of a MFAF NF Instance

 type: object

 properties:

 servingNfTypeList:

 type: array

 items:

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

 minItems: 1

 servingNfSetIdList:

 type: array

 items:

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

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 NwdafCapability:

 description: Indicates the capability supported by the NWDAF

 type: object

 properties:

 analyticsAggregation:

 type: boolean

 default: false

 analyticsMetadataProvisioning:

 type: boolean

 default: false

 EasdfInfo:

 description: Information of an EASDF NF Instance

 type: object

 properties:

 sNssaiEasdfInfoList:

 type: array

 items:

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

 minItems: 1

 easdfN6IpAddressList:

 type: array

 items:

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

 minItems: 1

 upfN6IpAddressList:

 type: array

 items:

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

 minItems: 1

 SnssaiEasdfInfoItem:

 description: Set of parameters supported by EASDF for a given S-NSSAI

 type: object

 required:

 - sNssai

 - dnnEasdfInfoList

 properties:

 sNssai:

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

 dnnEasdfInfoList:

 type: array

 items:

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

 minItems: 1

 DnnEasdfInfoItem:

 description: Set of parameters supported by EASDF for a given DNN

 type: object

 required:

 - dnn

 properties:

 dnn:

 anyOf:

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

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

 dnaiList:

 type: array

 items:

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

 minItems: 1

 DccfInfo:

 description: Information of a DCCF NF Instance

 type: object

 properties:

 servingNfTypeList:

 type: array

 items:

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

 minItems: 1

 servingNfSetIdList:

 type: array

 items:

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

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 ScpCapability:

 description: Indicates the capabilities supported by an SCP

 anyOf:

 - type: string

 enum:

 - INDIRECT\_COM\_WITH\_DELEG\_DISC

 - type: string

 NsacfInfo:

 description: Information of a NSACF NF Instance

 type: object

 required:

 - nsacfCapability

 properties:

 nsacfCapability:

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

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 NsacfCapability:

 description: >

 NSACF service capabilities (e.g. to monitor and control the number of registered UEs

 or established PDU sessions per network slice)

 type: object

 properties:

 supportUeSAC:

 description: |

 Indicates the service capability of the NSACF to monitor and control the number of

 registered UEs per network slice for the network slice that is subject to NSAC

 true: Supported

 false (default): Not Supported

 type: boolean

 default: false

 supportPduSAC:

 description: |

 Indicates the service capability of the NSACF to monitor and control the number of

 established PDU sessions per network slice for the network slice that is subject to NSAC

 true: Supported

 false (default): Not Supported

 type: boolean

 default: false

 DccfCond:

 description: >

 Subscription to a set of NF Instances (DCCFs), identified by NF types, NF Set Id(s)

 or DCCF Serving Area information, i.e. list of TAIs served by the DCCF

 type: object

 required:

 - conditionType

 properties:

 conditionType:

 type: string

 enum: [ DCCF\_COND ]

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 servingNfTypeList:

 type: array

 items:

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

 minItems: 1

 servingNfSetIdList:

 type: array

 items:

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

 minItems: 1

 MlAnalyticsInfo:

 description: ML Analytics Filter information supported by the Nnwdaf\_MLModelProvision service

 type: object

 properties:

 mlAnalyticsIds:

 type: array

 items:

 $ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NwdafEvent'

 minItems: 1

 snssaiList:

 type: array

 items:

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

 minItems: 1

 trackingAreaList:

 type: array

 items:

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

 minItems: 1

 MbSmfInfo:

 description: Information of an MB-SMF NF Instance

 type: object

 properties:

 sNssaiInfoList:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 tmgiRangeList:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 mbsSessionList:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 TmgiRange:

 description: Range of TMGIs

 type: object

 required:

 - mbsServiceIdStart

 - mbsServiceIdEnd

 - plmnId

 properties:

 mbsServiceIdStart:

 type: string

 pattern: '^[A-Fa-f0-9]{6}$'

 mbsServiceIdEnd:

 type: string

 pattern: '^[A-Fa-f0-9]{6}$'

 plmnId:

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

 nid:

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

 MbsSession:

 description: MBS Session currently served by an MB-SMF

 type: object

 required:

 - mbsSessionId

 properties:

 mbsSessionId:

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

 mbsAreaSessions:

 description: A map (list of key-value pairs) where the key identifies an areaSessionId

 additionalProperties:

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

 minProperties: 1

 SnssaiMbSmfInfoItem:

 description: Parameters supported by an MB-SMF for a given S-NSSAI

 type: object

 required:

 - sNssai

 - dnnInfoList

 properties:

 sNssai:

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

 dnnInfoList:

 type: array

 items:

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

 minItems: 1

 DnnMbSmfInfoItem:

 description: Parameters supported by an MB-SMF for a given DNN

 type: object

 required:

 - dnn

 properties:

 dnn:

 anyOf:

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

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

 MbsAreaSession:

 description: MBS Session in a specific MBS Service Area

 type: object

 required:

 - areaSessionId

 - mbsServiceArea

 properties:

 areaSessionId:

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

 mbsServiceArea:

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

 TsctsfInfo:

 description: Information of a TSCTSF NF Instance

 type: object

 properties:

 sNssaiInfoList:

 description: A map (list of key-value pairs) where a valid JSON string serves as key

 additionalProperties:

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

 minProperties: 1

 externalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 supiRanges:

 type: array

 items:

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

 minItems: 1

 gpsiRanges:

 type: array

 items:

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

 minItems: 1

 internalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 SnssaiTsctsfInfoItem:

 description: Set of parameters supported by TSCTSF for a given S-NSSAI

 type: object

 required:

 - sNssai

 - dnnInfoList

 properties:

 sNssai:

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

 dnnInfoList:

 type: array

 items:

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

 minItems: 1

 DnnTsctsfInfoItem:

 description: Parameters supported by an TSCTSF for a given DNN

 type: object

 required:

 - dnn

 properties:

 dnn:

 anyOf:

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

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

 MbUpfInfo:

 description: Information of an MB-UPF NF Instance

 type: object

 required:

 - sNssaiMbUpfInfoList

 properties:

 sNssaiMbUpfInfoList:

 type: array

 items:

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

 minItems: 1

 mbSmfServingArea:

 type: array

 items:

 type: string

 minItems: 1

 interfaceMbUpfInfoList:

 type: array

 items:

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

 minItems: 1

 taiList:

 type: array

 items:

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

 minItems: 1

 taiRangeList:

 type: array

 items:

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

 minItems: 1

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 supportedPfcpFeatures:

 type: string

 UnTrustAfInfo:

 description: Information of a untrusted AF Instance

 type: object

 required:

 - afId

 properties:

 afId:

 type: string

 sNssaiInfoList:

 type: array

 items:

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

 minItems: 1

 mappingInd:

 type: boolean

 default: false

 TrustAfInfo:

 description: Information of a trusted AF Instance

 type: object

 properties:

 sNssaiInfoList:

 type: array

 items:

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

 minItems: 1

 afEvents:

 type: array

 items:

 $ref: 'TS29517\_Naf\_EventExposure.yaml#/components/schemas/AfEvent'

 minItems: 1

 appIds:

 type: array

 items:

 type: string

 minItems: 1

 internalGroupId:

 type: array

 items:

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

 minItems: 1

 mappingInd:

 type: boolean

 default: false

 SnssaiInfoItem:

 description: >

 Parameters supported by an NF for a given S-NSSAI Set of parameters supported by NF

 for a given S-NSSAI

 type: object

 required:

 - sNssai

 - dnnInfoList

 properties:

 sNssai:

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

 dnnInfoList:

 type: array

 items:

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

 minItems: 1

 DnnInfoItem:

 description: Set of parameters supported by NF for a given DNN

 type: object

 required:

 - dnn

 properties:

 dnn:

 anyOf:

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

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

 CollocatedNfInstance:

 description: Information of an collocated NF Instance registered in the NRF

 type: object

 required:

 - nfInstanceId

 - nfType

 properties:

 nfInstanceId:

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

 nfType:

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

 CollocatedNfType:

 description: NF types for a collocated NF

 anyOf:

 - type: string

 enum:

 - UPF

 - SMF

 - MB-UPF

 - MB-SMF

 - type: string

 PlmnOauth2:

 description: Oauth2.0 required indication for a given PLMN ID

 type: object

 properties:

 oauth2RequiredPlmnIdList:

 type: array

 items:

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

 minItems: 1

 oauth2NotRequiredPlmnIdList:

 type: array

 items:

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

 minItems: 1

 V2xCapability:

 description: Indicate the supported V2X Capability by the PCF.

 type: object

 properties:

 lteV2x:

 type: boolean

 default: false

 nrV2x:

 type: boolean

 default: false

 NssaafInfo:

 description: Information of a NSSAAF Instance

 type: object

 properties:

 supiRanges:

 type: array

 items:

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

 minItems: 1

 internalGroupIdentifiersRanges:

 type: array

 items:

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

 minItems: 1

 ProSeCapability:

 description: Indicate the supported ProSe Capability by the PCF.

 type: object

 properties:

 proseDirectDiscovey:

 type: boolean

 default: false

 proseDirectCommunication:

 type: boolean

 default: false

 proseL2UetoNetworkRelay:

 type: boolean

 default: false

 proseL3UetoNetworkRelay:

 type: boolean

 default: false

 proseL2RemoteUe:

 type: boolean

 default: false

 proseL3RemoteUe:

 type: boolean

 default: false

 SubscriptionContext:

 description: >

 Context data related to a created subscription, to be included in notifications sent by NRF

 type: object

 required:

 - subscriptionId

 properties:

 subscriptionId:

 type: string

 subscrCond:

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

\* \* \* Next Change \* \* \* \*

## A.3 Nnrf\_NFDiscovery API

openapi: 3.0.0

info:

 version: '1.2.0-alpha.6'

 title: 'NRF NFDiscovery Service'

 description: |

 NRF NFDiscovery Service.

 © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

externalDocs:

 description: 3GPP TS 29.510 V17.5.0; 5G System; Network Function Repository Services; Stage 3

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.510/'

servers:

 - url: '{apiRoot}/nnrf-disc/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - nnrf-disc

paths:

 /nf-instances:

 get:

 summary: Search a collection of NF Instances

 operationId: SearchNFInstances

 tags:

 - NF Instances (Store)

 parameters:

 - name: Accept-Encoding

 in: header

 description: Accept-Encoding, described in IETF RFC 7231

 schema:

 type: string

 - name: target-nf-type

 in: query

 description: Type of the target NF

 required: true

 schema:

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

 - name: requester-nf-type

 in: query

 description: Type of the requester NF

 required: true

 schema:

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

 - name: preferred-collocated-nf-types

 in: query

 description: collocated NF types that candidate NFs should preferentially support

 schema:

 type: array

 items:

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

 minItems: 1

 style: form

 explode: false

 - name: requester-nf-instance-id

 in: query

 description: NfInstanceId of the requester NF

 schema:

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

 - name: service-names

 in: query

 description: Names of the services offered by the NF

 schema:

 type: array

 items:

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

 minItems: 1

 uniqueItems: true

 style: form

 explode: false

 - name: requester-nf-instance-fqdn

 in: query

 description: FQDN of the requester NF

 schema:

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

 - name: target-plmn-list

 in: query

 description: >

 Id of the PLMN of either the target NF, or in SNPN scenario the Credentials Holder

 in the PLMN

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: requester-plmn-list

 in: query

 description: Id of the PLMN where the NF issuing the Discovery request is located

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: target-nf-instance-id

 in: query

 description: Identity of the NF instance being discovered

 schema:

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

 - name: target-nf-fqdn

 in: query

 description: FQDN of the NF instance being discovered

 schema:

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

 - name: hnrf-uri

 in: query

 description: Uri of the home NRF

 schema:

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

 - name: snssais

 in: query

 description: Slice info of the target NF

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: requester-snssais

 in: query

 description: Slice info of the requester NF

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: plmn-specific-snssai-list

 in: query

 description: PLMN specific Slice info of the target NF

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: requester-plmn-specific-snssai-list

 in: query

 description: PLMN-specific slice info of the NF issuing the Discovery request

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: dnn

 in: query

 description: Dnn supported by the BSF, SMF or UPF

 schema:

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

 - name: nsi-list

 in: query

 description: NSI IDs that are served by the services being discovered

 schema:

 type: array

 items:

 type: string

 minItems: 1

 style: form

 explode: false

 - name: smf-serving-area

 in: query

 schema:

 type: string

 - name: mbsmf-serving-area

 in: query

 schema:

 type: string

 - name: tai

 in: query

 description: Tracking Area Identity

 content:

 application/json:

 schema:

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

 - name: amf-region-id

 in: query

 description: AMF Region Identity

 schema:

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

 - name: amf-set-id

 in: query

 description: AMF Set Identity

 schema:

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

 - name: guami

 in: query

 description: Guami used to search for an appropriate AMF

 content:

 application/json:

 schema:

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

 - name: supi

 in: query

 description: SUPI of the user

 schema:

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

 - name: ue-ipv4-address

 in: query

 description: IPv4 address of the UE

 schema:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 - name: ip-domain

 in: query

 description: IP domain of the UE, which supported by BSF

 schema:

 type: string

 - name: ue-ipv6-prefix

 in: query

 description: IPv6 prefix of the UE

 schema:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 - name: pgw-ind

 in: query

 description: Combined PGW-C and SMF or a standalone SMF

 schema:

 type: boolean

 - name: preferred-pgw-ind

 in: query

 description: Indicates combined PGW-C+SMF or standalone SMF are preferred

 schema:

 type: boolean

 - name: pgw

 in: query

 description: PGW FQDN of a combined PGW-C and SMF

 schema:

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

 - name: pgw-ip

 in: query

 description: PGW IP Address of a combined PGW-C and SMF

 content:

 application/json:

 schema:

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

 - name: gpsi

 in: query

 description: GPSI of the user

 schema:

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

 - name: external-group-identity

 in: query

 description: external group identifier of the user

 schema:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/ExtGroupId'

 - name: internal-group-identity

 in: query

 description: internal group identifier of the user

 schema:

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

 - name: pfd-data

 in: query

 description: PFD data

 content:

 application/json:

 schema:

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

 - name: data-set

 in: query

 description: data set supported by the NF

 schema:

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

 - name: routing-indicator

 in: query

 description: routing indicator in SUCI

 schema:

 type: string

 pattern: '^[0-9]{1,4}$'

 - name: group-id-list

 in: query

 description: Group IDs of the NFs being discovered

 schema:

 type: array

 items:

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

 minItems: 1

 style: form

 explode: false

 - name: dnai-list

 in: query

 description: Data network access identifiers of the NFs being discovered

 schema:

 type: array

 items:

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

 minItems: 1

 style: form

 explode: false

 - name: pdu-session-types

 in: query

 description: list of PDU Session Type required to be supported by the target NF

 schema:

 type: array

 items:

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

 minItems: 1

 style: form

 explode: false

 - name: event-id-list

 in: query

 description: >

 Analytics event(s) requested to be supported by the Nnwdaf\_AnalyticsInfo service

 schema:

 type: array

 items:

 $ref: 'TS29520\_Nnwdaf\_AnalyticsInfo.yaml#/components/schemas/EventId'

 minItems: 1

 style: form

 explode: false

 - name: nwdaf-event-list

 in: query

 description: >

 Analytics event(s) requested to be supported by the Nnwdaf\_EventsSubscription service.

 schema:

 type: array

 items:

 $ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NwdafEvent'

 minItems: 1

 style: form

 explode: false

 - name: supported-features

 in: query

 description: Features required to be supported by the target NF

 schema:

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

 - name: upf-iwk-eps-ind

 in: query

 description: UPF supporting interworking with EPS or not

 schema:

 type: boolean

 - name: chf-supported-plmn

 in: query

 description: PLMN ID supported by a CHF

 content:

 application/json:

 schema:

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

 - name: preferred-locality

 in: query

 description: preferred target NF location

 schema:

 type: string

 - name: access-type

 in: query

 description: AccessType supported by the target NF

 schema:

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

 - name: limit

 in: query

 description: Maximum number of NFProfiles to return in the response

 required: false

 schema:

 type: integer

 minimum: 1

 - name: required-features

 in: query

 description: Features required to be supported by the target NF

 schema:

 type: array

 items:

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

 minItems: 1

 style: form

 explode: false

 - name: complex-query

 in: query

 description: the complex query condition expression

 content:

 application/json:

 schema:

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

 - name: max-payload-size

 in: query

 description: Maximum payload size of the response expressed in kilo octets

 required: false

 schema:

 type: integer

 maximum: 2000

 default: 124

 - name: max-payload-size-ext

 in: query

 description: >

 Extended query for maximum payload size of the response expressed in kilo octets

 required: false

 schema:

 type: integer

 default: 124

 - name: atsss-capability

 in: query

 description: ATSSS Capability

 content:

 application/json:

 schema:

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

 - name: upf-ue-ip-addr-ind

 in: query

 description: UPF supporting allocating UE IP addresses/prefixes

 schema:

 type: boolean

 - name: client-type

 in: query

 description: Requested client type served by the NF

 content:

 application/json:

 schema:

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

 - name: lmf-id

 in: query

 description: LMF identification to be discovered

 content:

 application/json:

 schema:

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

 - name: an-node-type

 in: query

 description: Requested AN node type served by the NF

 content:

 application/json:

 schema:

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

 - name: rat-type

 in: query

 description: Requested RAT type served by the NF

 content:

 application/json:

 schema:

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

 - name: preferred-tai

 in: query

 description: preferred Tracking Area Identity

 content:

 application/json:

 schema:

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

 - name: preferred-nf-instances

 in: query

 description: preferred NF Instances

 schema:

 type: array

 items:

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

 minItems: 1

 style: form

 explode: false

 - name: If-None-Match

 in: header

 description: Validator for conditional requests, as described in IETF RFC 7232, 3.2

 schema:

 type: string

 - name: target-snpn

 in: query

 description: Target SNPN Identity, or the Credentials Holder in the SNPN

 content:

 application/json:

 schema:

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

 - name: requester-snpn-list

 in: query

 description: SNPN ID(s) of the NF instance issuing the Discovery request

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: af-ee-data

 in: query

 description: NEF exposured by the AF

 content:

 application/json:

 schema:

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

 - name: w-agf-info

 in: query

 description: UPF collocated with W-AGF

 content:

 application/json:

 schema:

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

 - name: tngf-info

 in: query

 description: UPF collocated with TNGF

 content:

 application/json:

 schema:

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

 - name: twif-info

 in: query

 description: UPF collocated with TWIF

 content:

 application/json:

 schema:

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

 - name: target-nf-set-id

 in: query

 description: Target NF Set ID

 schema:

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

 - name: target-nf-service-set-id

 in: query

 description: Target NF Service Set ID

 schema:

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

 - name: nef-id

 in: query

 description: NEF ID

 schema:

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

 - name: notification-type

 in: query

 description: Notification Type

 schema:

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

 - name: n1-msg-class

 in: query

 description: N1 Message Class

 schema:

 $ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N1MessageClass'

 - name: n2-info-class

 in: query

 description: N2 Information Class

 schema:

 $ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InformationClass'

 - name: serving-scope

 in: query

 description: areas that can be served by the target NF

 schema:

 type: array

 items:

 type: string

 minItems: 1

 style: form

 explode: false

 - name: imsi

 in: query

 description: IMSI of the requester UE to search for an appropriate NF (e.g. HSS)

 schema:

 type: string

 pattern: '^[0-9]{5,15}$'

 - name: ims-private-identity

 in: query

 description: IMPI of the requester UE to search for a target HSS

 schema:

 type: string

 - name: ims-public-identity

 in: query

 description: IMS Public Identity of the requester UE to search for a target HSS

 schema:

 type: string

 - name: msisdn

 in: query

 description: MSISDN of the requester UE to search for a target HSS

 schema:

 type: string

 - name: preferred-api-versions

 in: query

 description: Preferred API version of the services to be discovered

 content:

 application/json:

 schema:

 description: A map (list of key-value pairs) where ServiceName serves as key

 type: object

 additionalProperties:

 type: string

 minProperties: 1

 - name: v2x-support-ind

 in: query

 description: PCF supports V2X

 schema:

 type: boolean

 - name: redundant-gtpu

 in: query

 description: UPF supports redundant gtp-u to be discovered

 schema:

 type: boolean

 - name: redundant-transport

 in: query

 description: UPF supports redundant transport path to be discovered

 schema:

 type: boolean

 - name: ipups

 in: query

 description: UPF which is configured for IPUPS functionality to be discovered

 schema:

 type: boolean

 - name: scp-domain-list

 in: query

 description: SCP domains the target SCP or SEPP belongs to

 schema:

 type: array

 items:

 type: string

 minItems: 1

 style: form

 explode: false

 - name: address-domain

 in: query

 description: Address domain reachable through the SCP

 schema:

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

 - name: ipv4-addr

 in: query

 description: IPv4 address reachable through the SCP

 schema:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 - name: ipv6-prefix

 in: query

 description: IPv6 prefix reachable through the SCP

 schema:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 - name: served-nf-set-id

 in: query

 description: NF Set ID served by the SCP

 schema:

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

 - name: remote-plmn-id

 in: query

 description: Id of the PLMN reachable through the SCP or SEPP

 content:

 application/json:

 schema:

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

 - name: data-forwarding

 in: query

 description: UPF Instance(s) configured for data forwarding are requested

 schema:

 type: boolean

 - name: preferred-full-plmn

 in: query

 description: NF Instance(s) serving the full PLMN are preferred

 schema:

 type: boolean

 - name: requester-features

 in: query

 description: >

 Features supported by the NF Service Consumer that is invoking

 the Nnrf\_NFDiscovery service

 schema:

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

 - name: realm-id

 in: query

 description: realm-id to search for an appropriate UDSF

 schema:

 type: string

 - name: storage-id

 in: query

 description: storage-id to search for an appropriate UDSF

 schema:

 type: string

 - name: vsmf-support-ind

 in: query

 description: V-SMF capability supported by the target NF instance(s)

 schema:

 type: boolean

 - name: nrf-disc-uri

 in: query

 description: Uri of the NRF holding the NF profile of a target NF Instance

 schema:

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

 - name: preferred-vendor-specific-features

 in: query

 description: Preferred vendor specific features of the services to be discovered

 content:

 application/json:

 schema:

 description: A map (list of key-value pairs) where ServiceName serves as key

 type: object

 additionalProperties:

 description: >

 A map (list of key-value pairs) where IANA-assigned SMI Network Management

 Private Enterprise Codes serves as key

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 minProperties: 1

 - name: preferred-vendor-specific-nf-features

 in: query

 description: Preferred vendor specific features of the network function to be discovered

 content:

 application/json:

 schema:

 description: >

 A map (list of key-value pairs) where IANA-assigned SMI Network Management Private

 Enterprise Codes serves as key

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 - name: required-pfcp-features

 in: query

 description: PFCP features required to be supported by the target UPF

 schema:

 type: string

 - name: home-pub-key-id

 in: query

 description: >

 Indicates the Home Network Public Key ID which shall be able to be served

 by the NF instance

 schema:

 type: integer

 - name: prose-support-ind

 in: query

 description: PCF supports ProSe Capability

 schema:

 type: boolean

 - name: analytics-aggregation-ind

 in: query

 description: analytics aggregation is supported by NWDAF or not

 schema:

 type: boolean

 - name: serving-nf-set-id

 in: query

 description: NF Set Id served by target NF

 schema:

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

 - name: serving-nf-type

 in: query

 description: NF type served by the target NF

 schema:

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

 - name: ml-analytics-id-list

 in: query

 description: Analytics Id(s) of Nnwdaf\_MLModelProvision service

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/NwdafEvent'

 minItems: 1

 - name: analytics-metadata-prov-ind

 in: query

 description: analytics matadata provisioning is supported by NWDAF or not

 schema:

 type: boolean

 - name: nsacf-capability

 in: query

 description: the service capability supported by the target NSACF

 schema:

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

 - name: mbs-session-id-list

 in: query

 description: List of MBS Session ID(s)

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: area-session-id

 in: query

 description: Area Session ID

 schema:

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

 - name: gmlc-number

 in: query

 description: The GMLC Number supported by the GMLC

 schema:

 type: string

 pattern: '^[0-9]{5,15}$'

 - name: upf-n6-ip

 in: query

 description: N6 IP address of PSA UPF supported by the EASDF

 content:

 application/json:

 schema:

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

 - name: tai-list

 in: query

 description: Tracking Area Identifiers of the NFs being discovered

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 1

 - name: preferences-precedence

 in: query

 description: >

 Indicates the precedence of the preference query parameters (from higher to lower)

 content:

 application/json:

 schema:

 type: array

 items:

 type: string

 minItems: 2

 - name: support-onboarding-capability

 in: query

 description: Indicating the support for onboarding.

 schema:

 type: boolean

 default: false

 - name: uas-nf-functionality-ind

 in: query

 description: UAS NF functionality is supported by NEF or not

 schema:

 type: boolean

 - name: v2x-capability

 in: query

 description: indicates the V2X capability that the target PCF needs to support.

 content:

 application/json:

 schema:

 $ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/V2xCapability'

 - name: prose-capability

 in: query

 description: indicates the ProSe capability that the target PCF needs to support.

 content:

 application/json:

 schema:

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

 - name: shared-data-id

 in: query

 description: Identifier of shared data stored in the NF being discovered

 schema:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SharedDataId'

 - name: target-hni

 in: query

 description: Home Network Identifier query.

 schema:

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

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 links:

 search:

 operationId: RetrieveStoredSearch

 parameters:

 searchId: $response.body#/searchId

 description: >

 The 'searchId' parameter returned in the response can be used as the

 'searchId' parameter in the GET request to '/searches/{searchId}'

 completeSearch:

 operationId: RetrieveCompleteSearch

 parameters:

 searchId: $response.body#/searchId

 description: >

 The 'searchId' parameter returned in the response can be used as the

 'searchId' parameter in the GET request to '/searches/{searchId}/complete'

 headers:

 Cache-Control:

 description: Cache-Control containing max-age, described in IETF RFC 7234, 5.2

 schema:

 type: string

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 Content-Encoding:

 description: Content-Encoding, described in IETF RFC 7231

 schema:

 type: string

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '406':

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

 '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'

 '501':

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

 '503':

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

 default:

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

 /searches/{searchId}:

 get:

 operationId: RetrieveStoredSearch

 tags:

 - Stored Search (Document)

 parameters:

 - $ref: '#/components/parameters/searchId'

 - name: Accept-Encoding

 in: header

 description: Accept-Encoding, described in IETF RFC 7231

 schema:

 type: string

 responses:

 '200':

 $ref: '#/components/responses/200'

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 /searches/{searchId}/complete:

 get:

 operationId: RetrieveCompleteSearch

 tags:

 - Complete Stored Search (Document)

 parameters:

 - $ref: '#/components/parameters/searchId'

 - name: Accept-Encoding

 in: header

 description: Accept-Encoding, described in IETF RFC 7231

 schema:

 type: string

 responses:

 '200':

 $ref: '#/components/responses/200'

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 /scp-domain-routing-info:

 get:

 operationId: SCPDomainRoutingInfoGet

 tags:

 - SCP Domain Routing Information (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - nnrf-disc

 - oAuth2ClientCredentials:

 - nnrf-disc

 - nnrf-disc:scp-domain:read

 parameters:

 - name: local

 in: query

 description: Indication of local SCP Domain Routing Information

 required: false

 schema:

 type: boolean

 default: false

 - name: Accept-Encoding

 in: header

 description: Accept-Encoding, described in IETF RFC 7231

 schema:

 type: string

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 headers:

 Content-Encoding:

 description: Content-Encoding, described in IETF RFC 7231

 schema:

 type: string

 '307':

 description: Temporary Redirect

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 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'

 '406':

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

 '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'

 '501':

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

 '503':

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

 default:

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

 /scp-domain-routing-info-subs:

 post:

 summary: Create a new subscription

 operationId: ScpDomainRoutingInfoSubscribe

 tags:

 - SCP Domain Routing Information Subscriptions (Collection)

 security:

 - {}

 - oAuth2ClientCredentials:

 - nnrf-disc

 - oAuth2ClientCredentials:

 - nnrf-disc

 - nnrf-disc:scp-domain-subs:write

 parameters:

 - 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:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '201':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the newly created resource, according to the structure:

 {apiRoot}/nnrf-disc/v1/scp-domain-routing-info-subs/{subscriptionID}

 required: true

 schema:

 type: string

 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'

 '501':

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

 '503':

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

 default:

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

 callbacks:

 onScpDomainRoutingInformationChange:

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

 post:

 parameters:

 - name: Content-Encoding

 in: header

 description: Content-Encoding, described in IETF RFC 7231

 schema:

 type: string

 requestBody:

 description: Notification Payload

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: Expected response to a successful callback processing

 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'

 '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'

 '501':

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

 '503':

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

 default:

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

 /scp-domain-routing-info-subs/{subscriptionID}:

 delete:

 summary: Deletes a subscription

 operationId: ScpDomainRoutingInfoUnsubscribe

 tags:

 - Individual SCP Domain Routing Information Subscription (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - nnrf-disc

 - oAuth2ClientCredentials:

 - nnrf-disc

 - nnrf-disc:scp-domain-subs-id:write

 parameters:

 - name: subscriptionID

 in: path

 required: true

 description: Unique ID of the subscription to remove

 schema:

 type: string

 responses:

 '204':

 description: Expected response to a successful subscription removal

 '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'

 '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: '/oauth2/token'

 scopes:

 nnrf-disc: Access to the Nnrf\_NFDiscovery API

 nnrf-disc:scp-domain:read: Access to read the scp-domain-routing-info resource

 nnrf-disc:scp-domain-subs:write: Access to create/delete a scp-domain subscription resource

 parameters:

 searchId:

 name: searchId

 in: path

 description: Id of a stored search

 required: true

 schema:

 type: string

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

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

 headers:

 Cache-Control:

 description: Cache-Control containing max-age, described in IETF RFC 7234, 5.2

 schema:

 type: string

 ETag:

 description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

 schema:

 type: string

 Content-Encoding:

 description: Content-Encoding, described in IETF RFC 7231

 schema:

 type: string

 schemas:

 SearchResult:

 description: Contains the list of NF Profiles returned in a Discovery response

 type: object

 required:

 - nfInstances

 properties:

 validityPeriod:

 type: integer

 nfInstances:

 type: array

 items:

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

 searchId:

 type: string

 numNfInstComplete:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 preferredSearch:

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

 nrfSupportedFeatures:

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

 nfInstanceList:

 description: List of matching NF instances. The key of the map is the NF instance ID.

 type: object

 additionalProperties:

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

 minProperties: 1

 alteredPriorityInd:

 type: boolean

 StoredSearchResult:

 description: >

 Contains a complete search result (i.e. a number of discovered NF Instances),

 stored by NRF as a consequence of a prior search result

 type: object

 required:

 - nfInstances

 properties:

 nfInstances:

 type: array

 items:

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

 NFProfile:

 description: Information of an NF Instance discovered by the NRF

 type: object

 required:

 - nfInstanceId

 - nfType

 - nfStatus

 properties:

 nfInstanceId:

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

 nfInstanceName:

 type: string

 nfType:

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

 nfStatus:

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

 collocatedNfInstances:

 type: array

 items:

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

 minimum: 1

 plmnList:

 type: array

 items:

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

 minItems: 1

 sNssais:

 type: array

 items:

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

 minItems: 1

 perPlmnSnssaiList:

 type: array

 items:

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

 minItems: 1

 nsiList:

 type: array

 items:

 type: string

 minItems: 1

 fqdn:

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

 interPlmnFqdn:

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

 ipv4Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 minItems: 1

 ipv6Addresses:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 minItems: 1

 capacity:

 type: integer

 minimum: 0

 maximum: 65535

 load:

 type: integer

 minimum: 0

 maximum: 100

 loadTimeStamp:

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

 locality:

 type: string

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 udrInfo:

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

 udrInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UdrInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 udmInfo:

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

 udmInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UdmInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 ausfInfo:

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

 ausfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of AusfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 amfInfo:

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

 amfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of AmfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 smfInfo:

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

 smfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of SmfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 upfInfo:

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

 upfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UpfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 pcfInfo:

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

 pcfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of PcfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 bsfInfo:

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

 bsfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of BsfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 chfInfo:

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

 chfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of ChfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 udsfInfo:

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

 udsfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of UdsfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 nwdafInfo:

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

 nwdafInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of NwdafInfo

 additionalProperties:

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

 minProperties: 1

 nefInfo:

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

 pcscfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of PcscfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 hssInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of HssInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 customInfo:

 type: object

 recoveryTime:

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

 nfServicePersistence:

 type: boolean

 default: false

 nfServices:

 deprecated: true

 type: array

 items:

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

 minItems: 1

 nfServiceList:

 description: >

 A map (list of key-value pairs) where serviceInstanceId serves as key of NFService

 type: object

 additionalProperties:

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

 minProperties: 1

 defaultNotificationSubscriptions:

 type: array

 items:

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

 lmfInfo:

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

 gmlcInfo:

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

 snpnList:

 type: array

 items:

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

 minItems: 1

 nfSetIdList:

 type: array

 items:

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

 minItems: 1

 servingScope:

 type: array

 items:

 type: string

 minItems: 1

 lcHSupportInd:

 type: boolean

 default: false

 olcHSupportInd:

 type: boolean

 default: false

 nfSetRecoveryTimeList:

 description: A map (list of key-value pairs) where NfSetId serves as key of DateTime

 type: object

 additionalProperties:

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

 minProperties: 1

 serviceSetRecoveryTimeList:

 description: >

 A map (list of key-value pairs) where NfServiceSetId serves as key of DateTime

 type: object

 additionalProperties:

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

 minProperties: 1

 scpDomains:

 type: array

 items:

 type: string

 minItems: 1

 scpInfo:

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

 seppInfo:

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

 vendorId:

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

 supportedVendorSpecificFeatures:

 description: >

 The key of the map is the IANA-assigned SMI Network Management Private Enterprise Codes

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 aanfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of AanfInfo

 additionalProperties:

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

 minProperties: 1

 mfafInfo:

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

 easdfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key

 additionalProperties:

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

 minProperties: 1

 dccfInfo:

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

 nsacfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of NsacfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 mbSmfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of MbSmfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 tsctsfInfoList:

 type: object

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of TsctsfInfo

 additionalProperties:

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

 minProperties: 1

 mbUpfInfoList:

 description: >

 A map (list of key-value pairs) where a (unique) valid JSON string

 serves as key of MbUpfInfo

 type: object

 additionalProperties:

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

 minProperties: 1

 trustAfInfo:

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

 nssaafInfo:

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

 hniList:

 type: array

 items:

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

 minItems: 1

 NFService:

 description: >

 Information of a given NF Service Instance; it is part of the NFProfile

 of an NF Instance discovered by the NRF

 type: object

 required:

 - serviceInstanceId

 - serviceName

 - versions

 - scheme

 - nfServiceStatus

 properties:

 serviceInstanceId:

 type: string

 serviceName:

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

 versions:

 type: array

 items:

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

 minItems: 1

 scheme:

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

 nfServiceStatus:

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

 fqdn:

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

 interPlmnFqdn:

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

 ipEndPoints:

 type: array

 items:

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

 minItems: 1

 apiPrefix:

 type: string

 defaultNotificationSubscriptions:

 type: array

 items:

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

 minItems: 1

 capacity:

 type: integer

 minimum: 0

 maximum: 65535

 load:

 type: integer

 minimum: 0

 maximum: 100

 loadTimeStamp:

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

 priority:

 type: integer

 minimum: 0

 maximum: 65535

 recoveryTime:

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

 supportedFeatures:

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

 nfServiceSetIdList:

 type: array

 items:

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

 minItems: 1

 sNssais:

 type: array

 items:

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

 minItems: 1

 perPlmnSnssaiList:

 type: array

 items:

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

 minItems: 1

 vendorId:

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

 supportedVendorSpecificFeatures:

 description: >

 The key of the map is the IANA-assigned SMI Network Management Private Enterprise Codes

 type: object

 additionalProperties:

 type: array

 items:

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

 minItems: 1

 minProperties: 1

 oauth2Required:

 type: boolean

 allowedOperationsPerNfType:

 description: A map (list of key-value pairs) where NF Type serves as key

 type: object

 additionalProperties:

 type: array

 items:

 type: string

 minItems: 1

 minProperties: 1

 allowedOperationsPerNfInstance:

 description: A map (list of key-value pairs) where NF Instance Id serves as key

 type: object

 additionalProperties:

 type: array

 items:

 type: string

 minItems: 1

 minProperties: 1

 PreferredSearch:

 description: >

 Contains information on whether the returned NFProfiles match the preferred query parameters

 type: object

 properties:

 preferredTaiMatchInd:

 type: boolean

 default: false

 preferredFullPlmnMatchInd:

 type: boolean

 default: false

 preferredApiVersionsMatchInd:

 type: boolean

 otherApiVersionsInd:

 type: boolean

 preferredLocalityMatchInd:

 type: boolean

 default: false

 otherLocalityInd:

 type: boolean

 default: false

 preferredVendorSpecificFeaturesInd:

 type: boolean

 default: false

 preferredCollocatedNfTypeInd:

 type: boolean

 default: false

 preferredPgwMatchInd:

 type: boolean

 NfInstanceInfo:

 description: Contains information on an NF profile matching a discovery request

 type: object

 properties:

 nrfDiscApiUri:

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

 preferredSearch:

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

 nrfAlteredPriorities:

 description: >

 The key of the map is the JSON Pointer of the priority IE in the NFProfile data type

 that is altered by the NRF

 type: object

 additionalProperties:

 type: integer

 minimum: 0

 maximum: 65535

 minProperties: 1

 ScpDomainRoutingInformation:

 description: SCP Domain Routing Information

 type: object

 required:

 - scpDomainList

 properties:

 scpDomainList:

 description: |

 This IE shall contain a map of SCP domain interconnection information, where

 the key of the map is a SCP domain. The value of each entry shall be the

 interconnectivity information of the the SCP domain indicated by the key.

 An empty map indicates that there is no SCP domain currently registered in

 the NRF.

 type: object

 additionalProperties:

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

 ScpDomainConnectivity:

 description: SCP Domain Connectivity Information

 type: object

 required:

 - connectedScpDomainList

 properties:

 connectedScpDomainList:

 type: array

 items:

 type: string

 ScpDomainRoutingInfoSubscription:

 description: SCP Domain Routing Information Subscription

 type: object

 required:

 - callbackUri

 properties:

 callbackUri:

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

 validityTime:

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

 reqInstanceId:

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

 localInd:

 type: boolean

 default: false

 ScpDomainRoutingInfoNotification:

 description: SCP Domain Routing Information Notification

 type: object

 required:

 - routingInfo

 properties:

 routingInfo:

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

 localInd:

 type: boolean

 default: false

\* \* \* Next Change \* \* \* \*

## A.4 Nnrf\_AccessToken API (NRF OAuth2 Authorization)

openapi: 3.0.0

info:

 version: '1.2.0-alpha.4'

 title: 'NRF OAuth2'

 description: |

 NRF OAuth2 Authorization.

 © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

externalDocs:

 description: 3GPP TS 29.510 V17.5.0; 5G System; Network Function Repository Services; Stage 3

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.510/'

paths:

 /oauth2/token:

 post:

 summary: Access Token Request

 operationId: AccessTokenRequest

 tags:

 - Access Token Request

 parameters:

 - 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:

 content:

 application/x-www-form-urlencoded:

 schema:

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

 encoding:

 requesterPlmn:

 contentType: application/json

 requesterPlmnList:

 contentType: application/json

 requesterSnssaiList:

 contentType: application/json

 requesterSnpnList:

 contentType: application/json

 targetPlmn:

 contentType: application/json

 targetSnssaiList:

 contentType: application/json

 targetNsiList:

 style: form

 explode: true

 required: true

 responses:

 '200':

 description: Successful Access Token Request

 content:

 application/json:

 schema:

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

 headers:

 Cache-Control:

 $ref: '#/components/headers/cache-control'

 Pragma:

 $ref: '#/components/headers/pragma'

 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

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '400':

 description: Error in the Access Token Request

 content:

 application/json:

 schema:

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

 application/problem+json: # error originated by an SCP or SEPP

 schema:

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

 headers:

 Cache-Control:

 $ref: '#/components/headers/cache-control'

 Pragma:

 $ref: '#/components/headers/pragma'

 '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'

 '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:

 headers:

 cache-control:

 required: true

 schema:

 type: string

 enum:

 - no-store

 pragma:

 required: true

 schema:

 type: string

 enum:

 - no-cache

 schemas:

 AccessTokenReq:

 description: Contains information related to the access token request

 type: object

 required:

 - grant\_type

 - nfInstanceId

 - scope

 properties:

 grant\_type:

 type: string

 enum:

 - client\_credentials

 nfInstanceId:

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

 nfType:

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

 targetNfType:

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

 scope:

 type: string

 pattern: '^([a-zA-Z0-9\_:-]+)( [a-zA-Z0-9\_:-]+)\*$'

 targetNfInstanceId:

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

 requesterPlmn:

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

 requesterPlmnList:

 type: array

 items:

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

 minItems: 2

 requesterSnssaiList:

 type: array

 items:

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

 minItems: 1

 requesterFqdn:

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

 requesterSnpnList:

 type: array

 items:

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

 minItems: 1

 targetPlmn:

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

 targetSnssaiList:

 type: array

 items:

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

 minItems: 1

 targetNsiList:

 type: array

 items:

 type: string

 minItems: 1

 targetNfSetId:

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

 targetNfServiceSetId:

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

 hnrfAccessTokenUri:

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

 sourceNfInstanceId:

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

 AccessTokenRsp:

 description: Contains information related to the access token response

 type: object

 required:

 - access\_token

 - token\_type

 properties:

 access\_token:

 type: string

 description: >

 JWS Compact Serialized representation of JWS signed JSON object (AccessTokenClaims)

 token\_type:

 type: string

 enum:

 - Bearer

 expires\_in:

 type: integer

 scope:

 type: string

 pattern: '^([a-zA-Z0-9\_:-]+)( [a-zA-Z0-9\_:-]+)\*$'

 AccessTokenClaims:

 description: The claims data structure for the access token

 type: object

 required:

 - iss

 - sub

 - aud

 - scope

 - exp

 properties:

 iss:

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

 sub:

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

 aud:

 anyOf:

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

 - type: array

 items:

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

 minItems: 1

 scope:

 type: string

 pattern: '^([a-zA-Z0-9\_:-]+)( [a-zA-Z0-9\_:-]+)\*$'

 exp:

 type: integer

 consumerPlmnId:

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

 producerPlmnId:

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

 producerSnssaiList:

 type: array

 items:

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

 minItems: 1

 producerNsiList:

 type: array

 items:

 type: string

 minItems: 1

 producerNfSetId:

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

 sourceNfInstanceId:

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

 AccessTokenErr:

 description: Error returned in the access token response message

 type: object

 required:

 - error

 properties:

 error:

 type: string

 enum:

 - invalid\_request

 - invalid\_client

 - invalid\_grant

 - unauthorized\_client

 - unsupported\_grant\_type

 - invalid\_scope

 error\_description:

 type: string

 error\_uri:

 type: string

\* \* \* Next Change \* \* \* \*

## A.5 Nnrf\_Bootstrapping API

openapi: 3.0.0

info:

 version: '1.1.0-alpha.4'

 title: 'NRF Bootstrapping'

 description: |

 NRF Bootstrapping.

 © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

externalDocs:

 description: 3GPP TS 29.510 V17.5.0; 5G System; Network Function Repository Services; Stage 3

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.510/'

paths:

 /bootstrapping:

 get:

 summary: Bootstrapping Info Request

 operationId: BootstrappingInfoRequest

 tags:

 - Bootstrapping Request

 responses:

 '200':

 description: Successful Bootstrapping Request

 content:

 application/3gppHal+json:

 schema:

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

 '307':

 description: Temporary Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: The URI pointing to the resource located on the redirect target NRF

 required: true

 schema:

 type: string

 '400':

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

 '500':

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

 default:

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

components:

 schemas:

 BootstrappingInfo:

 description: Information returned by NRF in the bootstrapping response message

 type: object

 required:

 - \_links

 properties:

 status:

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

 \_links:

 type: object

 description: >

 Map of link objects where the keys are the link relations defined in

 3GPP TS 29.510 clause 6.4.6.3.3

 additionalProperties:

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

 minProperties: 1

 nrfFeatures:

 type: object

 description: >

 Map of features supported by the NRF, where the keys are the NRF services

 as defined in 3GPP TS 29.510 clause 6.1.6.3.11

 additionalProperties:

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

 minProperties: 1

 oauth2Required:

 type: object

 description: >

 Map indicating whether the NRF requires Oauth2-based authorization for accessing

 its services. The key of the map shall be the name of an NRF service,

 e.g. "nnrf-nfm" or "nnrf-disc"

 additionalProperties:

 type: boolean

 minProperties: 1

 nrfSetId:

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

 nrfInstanceId:

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

 Status:

 description: Overal status of the NRF

 anyOf:

 - type: string

 enum:

 - OPERATIVE

 - NON\_OPERATIVE

 - type: string

\* \* \* End of Changes \* \* \* \*