**3GPP TSG-CT WG3 Meeting #125 *C3-225308***

**Toulouse, France, 14th - 18th, November, 2022**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.521** | **CR** | **0170** | **rev** | **-** | **Current version:** | **17.6.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
|  |

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

|  |
| --- |
|  |
| ***Title:***  | Correction to service description clauses to support the PCF for a MBS Session binding |
|  |  |
| ***Source to WG:*** | Huawei, Ericsson, ZTE |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | 5MBS |  | ***Date:*** | 2022-11-18 |
|  |  |  |  |  |
| ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | The CR C3-224714 is not implemented correctly. Moreover, it is also possible to provide an empty resource as part of the GET operation, then HTTP “204 No Content” is introduced. Title and figure for the Update procedure in MBS is wrong. |
|  |  |
| ***Summary of change:*** | Add the missed procedure defined in C3-224714. Response of Nbsf\_Management\_Discovery indicates 200 OK and 204 No Content. |
|  |  |
| ***Consequences if not approved:*** | The NF service consumer can’t find the correct PCF |
|  |  |
| ***Clauses affected:*** | 4.2.3.1, 4.2.3.x (new), 4.2.4.1, 4.2.4.x (new), 4.2.5.4, A.2 |
|  |  |
|  | **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 backward compatible correction in the OpenAPI file. |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* Start of Changes \* \* \* \*

#### 4.2.3.1 General

This service operation allows the NF service consumer to delete existing PCF for a PDU session binding information for a UE at the BSF. It is executed by deleting the corresponding "Individual PCF for a PDU Session Binding" resource. The operation is invoked by issuing an HTTP DELETE request targeting the resource URI representing the specific PCF for a PDU session binding information that is to be deleted.

This service operation also allows the NF service consumer to delete existing PCF for a UE binding information for a UE at the BSF. It is executed by deleting the corresponding "Individual PCF for a UE Binding" resource. The operation is invoked by issuing an HTTP DELETE request targeting the resource URI representing the specific PCF for a UE binding information that is to be deleted.

This service operation also allows the NF service consumer to delete existing PCF for an MBS Session binding information for an MBS Session at the BSF. It is executed by deleting the corresponding "Individual PCF for an MBS Session Binding" resource. The operation is invoked by issuing an HTTP DELETE request targeting the resource URI representing the specific PCF for an MBS Session binding information that is to be deleted.

The following procedures using the Nbsf\_Management\_Deregistration service operation are supported:

- Deregister an individual PCF for a PDU Session binding information.

- Deregister an individual PCF for a UE binding information.

- Deregister an individual PCF for an MBS Session binding information.

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

#### 4.2.3.x Deregister an individual PCF for an MBS Session binding information



Figure 4.2.3.x-1: PCF for an MBS Session Binding information Deregistration procedure

1. The NF service consumer shall invoke the Nbsf\_Management\_Deregister service operation to deregister an existing PCF for an MBS Session Binding at the BSF. The NF service consumer shall send for this purpose an HTTP DELETE request targeting the URI of the concerned "Individual PCF for an MBS Session Binding" resource, i.e. "{apiRoot}/nbsf-management/<apiVersion>/pcf-mbs-bindings/{bindingId}".

2. Upon success, the BSF shall delete the concerned "Individual PCF for an MBS Session Binding" resource and respond to the NF service consumer with an HTTP "204 No Content" status code.

If errors occur when processing the HTTP DELETE request, the BSF shall apply the error handling procedures specified in subclause 5.7.

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

#### 4.2.4.1 General

This service operation allows the service consumer to use the HTTP GET method to obtain the address information of the selected PCF.

- Retrieve the PCF binding information for a PDU session.

- Retrieve the PCF binding information for a UE.

- Retrieve the PCF binding information for an MBS Session.

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

#### 4.2.4.x Retrieve the PCF binding information for an MBS Session



Figure 4.2.4.x-1: PCF for an MBS Session Binding Retrieval procedure

1. The NF service consumer (e.g. NEF, MBSF, AF) shall invoke the Nbsf\_Management\_Discovery service operation to obtain from the BSF the addressing information of the selected PCF for an MBS Session. The NF service consumer shall send for this purpose an HTTP GET request targeting the "PCF for an MBS Session Bindings" resource URI, i.e. "{apiRoot}/nbsf-management/<apiVersion>/pcf-mbs-bindings", which shall include the following query parameters:

- the identifier of the MBS Session to which the requested MBS Session binding is related, within the "mbs-session-id" query parameter;

and may include the following query parameters:

- the list of supported features, within the "sup-feat" query parameter.

2. Upon the reception of an HTTP GET request with: "{apiRoot}/nbsf-management/<apiVersion>/pcf-mbs-bindings" as Resource URI, the BSF shall search the corresponding binding information. If the HTTP GET request from the NF service consumer is accepted and a corresponding "Individual PCF for an MBS Session Binding" resource matching the provided query parameters exists, the BSF shall respond with an HTTP "200 OK" response, as shown in figure 4.2.4.x-1, step 2, containing the corresponding "PcfMbsBinding" data structure(s), as provided by the PCF during the Nbsf\_Management\_Register Service Operation, in the response body containing PCF addressing information, and if available, the related PCF Set Id and PCF instance Id. If there is no PCF binding information for a UE matching the query parameters, the BSF shall respond with an HTTP "200 OK" response with an empty array (i.e. "[ ]" in JSON).

NOTE: If the NF service consumer (such as the AF, NEF or MBSF) is not able to reach the received PCF address(es), the NF service consumer can use the PCF Set Id and the PCF instance Id as specified in 3GPP TS 29.513 [5] clause 8.6.

If the "PCF for an MBS Session Bindings" resource does not exist, the BSF shall respond with "404 Not Found" HTTP error code. If an invalid combination of query parameters (i.e. a combination without MBS Session Id) is contained in the request URI, the BSF shall respond with an HTTP "400 Bad Request" error code containing "MANDATORY\_QUERY\_PARAM\_MISSING" as application error within the ProblemDetails IE. If more than one Individual PCF for an MBS Session Binding resources are found, the BSF shall respond with an HTTP "400 Bad Request" error code containing "MULTIPLE\_BINDING\_INFO\_FOUND" as application error within the ProblemDetails IE.

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

#### 4.2.5.4 Update an existing PCF for an MBS Session binding information



Figure 4.2.5.4-1: NF service consumer update an existing PCF for an MBS Session binding information

1. The NF service consumer (e.g. PCF handling the MBS Session) shall invoke the Nbsf\_Management\_Update service operation to request the modification of an existing PCF for an MBS Session binding information for an MBS Session at the the BSF. The NF service consumer shall send for this purpose an HTTP PATCH request targeting the URI of the concerned "Individual PCF for an MBS Session Binding" resource, i.e. "{apiRoot}/nbsf-management/<apiVersion>/pcf-mbs-bindings/{bindingId}", with the request body containing the PcfMbsBindingPatch data structure including the requested modifications.

2. Upon successful modification of the PCF for an MBS Session binding, the BSF shall respond with either:

- an HTTP "200 OK" status code with the response body containing a representation of the updated "Individual PCF for an MBS Session Binding" resource wihin the PcfMbsBinding data structure; or

- an HTTP "204 No Content" status code.

 If errors occur when processing the HTTP PATCH request, the BSF shall apply the error handling procedures specified in subclause 5.7.

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

##### 5.3.9.3.2 GET

This method shall support the URI query parameters specified in table 5.3.9.3.2-1.

Table 5.3.9.3.2-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| mbs-session-id | MbsSessionId | M | 1 | Contains the identifier of the MBS Session to which the requested MBS Session binding is related. |
| supp-feat | SupportedFeatures | O | 0..1 | Contains the list of features supported by the NF service consumer and used to filter irrelevant responses related to unsupported features. |

This method shall support the request data structures specified in table 5.3.9.3.2-2 and the response data structures and response codes specified in table 5.3.9.3.2-3.

Table 5.3.9.3.2-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.3.9.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| array(PcfMbsBinding) | M | 0..N | 200 OK | Successful case. The "Individual PCF for an MBS Session Binding" resource(s) matching the provided query parameter(s) are returned. |
| NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [6] shall also apply. |

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

# A.2 Nbsf\_Management API

openapi: 3.0.0

info:

 version: 1.3.0

 title: Nbsf\_Management

 description: |

 Binding Support Management Service API.

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

 All rights reserved.

externalDocs:

 description: 3GPP TS 29.521 V17.6.0; 5G System; Binding Support Management Service.

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.521/'

servers:

 - url: '{apiRoot}/nbsf-management/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - nbsf-management

paths:

 /pcfBindings:

 post:

 summary: Create a new Individual PCF for a PDU Session binding information

 operationId: CreatePCFBinding

 tags:

 - PCF Bindings (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: The creation of an individual PCF for a PDU Session binding.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 {apiRoot}/nbsf-management/<apiVersion>/pcfBindings/{bindingId}

 required: true

 schema:

 type: string

 '400':

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

 '401':

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

 '403':

 description: >

 The existing PCF binding information stored in the BSF for the indicated combination is

 returned.

 content:

 application/problem+json:

 schema:

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 get:

 summary: Read PCF for a PDU Session Bindings information

 operationId: GetPCFBindings

 tags:

 - PCF Bindings (Collection)

 parameters:

 - name: ipv4Addr

 in: query

 description: The IPv4 Address of the served UE.

 required: false

 schema:

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

 - name: ipv6Prefix

 in: query

 description: >

 The IPv6 Address of the served UE. The NF service consumer shall append '/128' to the

 IPv6 address in the attribute value. E.g. '2001:db8:85a3::8a2e:370:7334/128'.

 required: false

 schema:

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

 - name: macAddr48

 in: query

 description: The MAC Address of the served UE.

 required: false

 schema:

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

 - name: dnn

 in: query

 description: DNN.

 required: false

 schema:

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

 - name: supi

 in: query

 description: Subscription Permanent Identifier.

 required: false

 schema:

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

 - name: gpsi

 in: query

 description: Generic Public Subscription Identifier

 required: false

 schema:

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

 - name: snssai

 in: query

 description: The identification of slice.

 required: false

 content:

 application/json:

 schema:

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

 - name: ipDomain

 in: query

 description: The IPv4 address domain identifier.

 required: false

 schema:

 type: string

 - name: supp-feat

 in: query

 description: To filter irrelevant responses related to unsupported features.

 schema:

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

 responses:

 '200':

 description: >

 The individual PCF for a PDU Session binding session binding information resource

 matching the query parameter(s) is returned.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 There is no PCF for a PDU Session binding information matching the query parameter(s).

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '406':

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

 '414':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /pcfBindings/{bindingId}:

 delete:

 summary: Delete an existing Individual PCF for a PDU Session Binding information

 operationId: DeleteIndPCFBinding

 tags:

 - Individual PCF Binding (Document)

 parameters:

 - name: bindingId

 in: path

 description: Represents the individual PCF for a PDU Session Binding.

 required: true

 schema:

 type: string

 responses:

 '204':

 description: >

 No Content. The Individual PCF for a PDU Session Binding information resource is

 deleted.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

 patch:

 summary: Update an existing Individual PCF for a PDU Session Binding information

 operationId: UpdateIndPCFBinding

 tags:

 - Individual PCF for a PDU Session Binding (Document)

 parameters:

 - name: bindingId

 in: path

 description: Represents the individual PCF for a PDU Session Binding.

 required: true

 schema:

 type: string

 requestBody:

 description: Parameters to update the existing PCF for a PDU Session binding.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: OK (Successful update of the PCF for a PDU Session binding).

 content:

 application/json:

 schema:

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

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /subscriptions:

 post:

 operationId: CreateIndividualSubcription

 summary: Create an individual subscription for event notifications from the BSF

 tags:

 - Subscriptions (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: Created.

 headers:

 Location:

 description: >

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

 {apiRoot}/nsmf-management/<apiVersion>/subscriptions/{subId}

 required: true

 schema:

 type: string

 content:

 application/json:

 schema:

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 callbacks:

 myNotification:

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

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: No Content. Notification was successful.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /subscriptions/{subId}:

 put:

 operationId: ReplaceIndividualSubcription

 summary: Replace an individual subscription for event notifications from the BSF

 tags:

 - IndividualSubscription (Document)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 parameters:

 - name: subId

 in: path

 description: Subscription correlation ID

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK. Resource was successfully modified and representation is returned.

 content:

 application/json:

 schema:

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

 '204':

 description: No Content. Resource was successfully modified.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 delete:

 operationId: DeleteIndividualSubcription

 summary: Delete an individual subscription for event notifications from the BSF

 tags:

 - IndividualSubscription (Document)

 parameters:

 - name: subId

 in: path

 description: Subscription correlation ID

 required: true

 schema:

 type: string

 responses:

 '204':

 description: No Content. Resource was successfully deleted.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /pcf-ue-bindings:

 post:

 summary: Create a new Individual PCF for a UE binding information

 operationId: CreatePCFforUEBinding

 tags:

 - PCF for a UE Bindings (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: The creation of an individual PCF for a UE binding.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 {apiRoot}/nbsf-management/<apiVersion>/pcf-ue-bindings/{bindingId}

 required: true

 schema:

 type: string

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 get:

 summary: Read PCF for a UE Bindings information

 operationId: GetPCFForUeBindings

 tags:

 - PCF for a UE Bindings (Collection)

 parameters:

 - name: supi

 in: query

 description: Subscription Permanent Identifier.

 required: false

 schema:

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

 - name: gpsi

 in: query

 description: Generic Public Subscription Identifier

 required: false

 schema:

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

 - name: supp-feat

 in: query

 description: To filter irrelevant responses related to unsupported features.

 schema:

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

 responses:

 '200':

 description: >

 The individual PCF for a UE binding session binding information resource matching the

 query parameter(s) is returned.

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '406':

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

 '414':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /pcf-ue-bindings/{bindingId}:

 delete:

 summary: Delete an existing Individual PCF for a UE Binding information

 operationId: DeleteIndPCFforUEBinding

 tags:

 - Individual PCF for a UE Binding (Document)

 parameters:

 - name: bindingId

 in: path

 description: Represents the individual PCF for a UE Binding.

 required: true

 schema:

 type: string

 responses:

 '204':

 description: >

 No Content. The Individual PCF for a UE binding information resource is deleted.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

 patch:

 summary: Update an existing Individual PCF for a UE Binding information

 operationId: UpdateIndPCFforUEBinding

 tags:

 - Individual PCF for a UE Binding (Document)

 parameters:

 - name: bindingId

 in: path

 description: Represents the individual PCF for a UE Binding.

 required: true

 schema:

 type: string

 requestBody:

 description: Parameters to update the existing PCF for a UE binding.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: OK. Successful update of the PCF for a PDU Session binding.

 content:

 application/json:

 schema:

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

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /pcf-mbs-bindings:

 post:

 summary: Create a new Individual PCF for an MBS Session binding.

 operationId: CreatePCFMbsBinding

 tags:

 - PCF for an MBS Session Bindings (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. A new Individual PCF for an MBS Session Binding resource is created

 and the corresponding URI is returned in an HTTP Location header.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 {apiRoot}/nbsf-management/v1/pcf-mbs-bindings/{bindingId}

 required: true

 schema:

 type: string

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 get:

 summary: Retrieve an existing PCF for an MBS Session binding.

 operationId: GetPCFMbsBinding

 tags:

 - PCF for an MBS Session Bindings (Collection)

 parameters:

 - name: mbs-session-id

 in: query

 description: >

 Contains the identifier of the MBS Session to which the requested MBS Session

 binding is related.

 required: true

 content:

 application/json:

 schema:

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

 - name: supp-feat

 in: query

 description: >

 Contains the list of features supported by the NF service consumer and used to

 filter irrelevant responses related to unsupported features.

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The Individual PCF for an MBS Session Binding resource(s) matching the provided

 query parameter(s) are returned.

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '406':

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

 '414':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

 /pcf-mbs-bindings/{bindingId}:

 parameters:

 - name: bindingId

 in: path

 description: >

 Represents the identifier of the Individual PCF for an MBS Session Binding resource.

 required: true

 schema:

 type: string

 patch:

 summary: Request the modification of an existing Individual PCF for an MBS Session Binding resource.

 operationId: ModifyIndPCFMbsBinding

 tags:

 - Individual PCF for an MBS Session Binding (Document)

 requestBody:

 description: Parameters to request the modification of the PCF for an MBS Session Binding.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The Individual PCF for an MBS Session Binding resource is successfully modified and

 a representation of the updated resource is returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The Individual PCF for an MBS Session Binding resource is successfully

 modified and no content is returned in the response body.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '411':

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

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

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

 '500':

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

 '503':

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

 default:

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

 delete:

 summary: Request the deletion of an existing Individual PCF for an MBS Session Binding.

 operationId: DeleteIndPCFMbsBinding

 tags:

 - Individual PCF for an MBS Session Binding (Document)

 responses:

 '204':

 description: >

 No Content. The Individual PCF for an MBS Session Binding resource is successfully

 Deleted.

 '307':

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

 '308':

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

 '400':

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

 '401':

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

 '403':

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

 '404':

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

 '429':

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

 '500':

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

 '503':

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

 default:

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

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 nbsf-management: Access to the Nbsf\_Management API

 schemas:

 PcfBinding:

 description: Identifies an Individual PCF for a PDU Session binding.

 type: object

 properties:

 supi:

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

 gpsi:

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

 ipv4Addr:

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

 ipv6Prefix:

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

 addIpv6Prefixes:

 type: array

 items:

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

 minItems: 1

 description: The additional IPv6 Address Prefixes of the served UE.

 ipDomain:

 type: string

 macAddr48:

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

 addMacAddrs:

 type: array

 items:

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

 minItems: 1

 description: The additional MAC Addresses of the served UE.

 dnn:

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

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_PolicyAuthorization service

 pcfDiamHost:

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

 pcfDiamRealm:

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

 pcfSmFqdn:

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

 pcfSmIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_SMPolicyControl service.

 snssai:

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

 suppFeat:

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

 pcfId:

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

 pcfSetId:

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

 recoveryTime:

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

 paraCom:

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

 bindLevel:

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

 ipv4FrameRouteList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4AddrMask'

 minItems: 1

 ipv6FrameRouteList:

 type: array

 items:

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

 minItems: 1

 required:

 - dnn

 - snssai

 PcfBindingPatch:

 description: Identifies an Individual PCF binding used in an HTTP Patch method.

 type: object

 properties:

 ipv4Addr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4AddrRm'

 ipDomain:

 type: string

 nullable: true

 ipv6Prefix:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6PrefixRm'

 addIpv6Prefixes:

 type: array

 items:

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

 minItems: 1

 description: The additional IPv6 Address Prefixes of the served UE.

 nullable: true

 macAddr48:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48Rm'

 addMacAddrs:

 type: array

 items:

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

 minItems: 1

 description: The additional MAC Addresses of the served UE.

 nullable: true

 pcfId:

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

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_PolicyAuthorization service.

 pcfDiamHost:

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

 pcfDiamRealm:

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

 ParameterCombination:

 description: >

 Represents the combination used by the BSF to check whether there is an existing PCF binding

 information.

 type: object

 properties:

 supi:

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

 dnn:

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

 snssai:

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

 ExtProblemDetails:

 description: >

 Contains the FQDN or IP endpoints of the existing PCF and the cause value if there is an

 existing PCF binding information for the indicated combination.

 allOf:

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

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

 BindingResp:

 description: Contains the binding information for a PCF for a PDU Session.

 type: object

 properties:

 pcfSmFqdn:

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

 pcfSmIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_SMPolicyControl service.

 BsfSubscription:

 description: Contains the event subscription data.

 type: object

 properties:

 events:

 type: array

 items:

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

 minItems: 1

 description: Contain te subscribed events.

 notifUri:

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

 notifCorreId:

 type: string

 description: Notification Correlation ID assigned by the NF service consumer.

 supi:

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

 gpsi:

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

 snssaiDnnPairs:

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

 suppFeat:

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

 required:

 - events

 - notifUri

 - notifCorreId

 - supi

 BsfNotification:

 description: Contains the event notifications.

 type: object

 properties:

 notifCorreId:

 type: string

 description: Notification Correlation ID assigned by the NF service consumer.

 pcfId:

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

 pcfSetId:

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

 bindLevel:

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

 eventNotifs:

 type: array

 items:

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

 minItems: 1

 description: Notifications about Individual Events.

 required:

 - notifCorreId

 - eventNotifs

 BsfEventNotification:

 description: Contains an event notification.

 type: object

 properties:

 event:

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

 pcfForUeInfo:

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

 pcfForPduSessInfos:

 type: array

 items:

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

 minItems: 1

 description: The information of the PCF for a PDU session.

 matchSnssaiDnns:

 type: array

 items:

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

 minItems: 1

 description: Matching S-NSSAI and DNN pairs.

 required:

 - event

 PcfForUeInfo:

 description: Contains the information of the PCF for a UE.

 type: object

 properties:

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_AmPolicyAuthorization service.

 pcfId:

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

 pcfSetId:

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

 bindLevel:

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

 PcfForPduSessionInfo:

 description: Contains the informaiton of the PCF for a PDU session.

 type: object

 properties:

 dnn:

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

 snssai:

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

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_AmPolicyAuthorization service.

 ipv4Addr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4AddrRm'

 ipDomain:

 type: string

 ipv6Prefixes:

 type: array

 items:

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

 minItems: 1

 description: The IPv6 Address Prefixes of the served UE.

 macAddrs:

 type: array

 items:

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

 minItems: 1

 description: The MAC Addresses of the served UE.

 pcfId:

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

 pcfSetId:

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

 bindLevel:

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

 required:

 - snssai

 - dnn

 PcfForUeBinding:

 description: Identifies an Individual PCF for a UE binding.

 type: object

 properties:

 supi:

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

 gpsi:

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

 pcfForUeFqdn:

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

 pcfForUeIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_AmPolicyAuthorization service.

 pcfId:

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

 pcfSetId:

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

 bindLevel:

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

 suppFeat:

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

 required:

 - supi

 anyOf:

 - required: [pcfForUeFqdn]

 - required: [pcfForUeIpEndPoints]

 PcfForUeBindingPatch:

 description: Identifies the updates of an Individual PCF for a UE binding.

 type: object

 properties:

 pcfForUeFqdn:

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

 pcfForUeIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_AmPolicyAuthorization service.

 pcfId:

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

 SnssaiDnnPair:

 description: Contains a S-NSSAI and DNN combination.

 type: object

 required:

 - snssai

 - dnn

 properties:

 dnn:

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

 snssai:

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

 PcfMbsBinding:

 description: Represents an Individual PCF for an MBS Session binding.

 type: object

 properties:

 mbsSessionId:

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

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 pcfId:

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

 pcfSetId:

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

 bindLevel:

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

 recoveryTime:

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

 suppFeat:

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

 required:

 - mbsSessionId

 PcfMbsBindingPatch:

 description: >

 Represents the requested modification to an Individual PCF for an MBS Session binding.

 type: object

 properties:

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 pcfId:

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

 BindingLevel:

 anyOf:

 - type: string

 enum:

 - NF\_SET

 - NF\_INSTANCE

 - type: string

 description: >

 This string provides forward-compatibility with future

 extensions to the enumeration but is not used to encode

 content defined in the present version of this API.

 description: |

 Possible values are:

 - "NF\_SET"

 - "NF\_INSTANCE"

 BsfEvent:

 description: Represents an event to be notified by the BSF.

 anyOf:

 - type: string

 enum:

 - PCF\_PDU\_SESSION\_BINDING\_REGISTRATION

 - PCF\_PDU\_SESSION\_BINDING\_DEREGISTRATION

 - PCF\_UE\_BINDING\_REGISTRATION

 - PCF\_UE\_BINDING\_DEREGISTRATION

 - SNSSAI\_DNN\_BINDING\_REGISTRATION

 - SNSSAI\_DNN\_BINDING\_DEREGISTRATION

 - type: string

 BsfSubscriptionResp:

 description: >

 It represents a response to a modification or creation request of an Individual Binding

 Subscription resource. It may contain the notification of the already met events.

 anyOf:

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

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

\* \* \* \* End of change \* \* \* \*