**3GPP TSG-CT3 Meeting #114e C3-211552**

**E-Meeting, 24th February – 05th March 2021**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **29.554** | **CR** | **0066** | **rev** | **-** | **Current version:** | **16.5.0** |  |
|  |
| *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)*.* |
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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **x** |

|  |
| --- |
|  |
| ***Title:***  | Update of OpenAPI version and TS version in externalDocs field |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | TEI16 |  | ***Date:*** | 2021-03-01 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories 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:*** | CR modifying Npcf\_BDTPolicyControl API has been agreed and the version number of the corresponding OpenAPI file thus needs to be incremented following the rules in TS 29.501, subclause 4.3.1.The following agreed CR updates the Npcf\_BDTPolicyControl API for the present release:- TS 29.554 CR #0064 is a backward compatible correction in Rel-16.As the present release is frozen, only the patch field needs to be updated.Since a new TS version will be provided with changes to the OpenAPI specification file, the TS version number included in the "description" field of the "externalDocs" object also needs to be updated. |
|  |  |
| ***Summary of change:*** | The Npcf\_BDTPolicyControl Service API version incremented from value "1.1.1" to value "1.1.2".The TS version number in the "description" field of the "externalDocs" object is changed to "16.6.0". |
|  |  |
| ***Consequences if not approved:*** | Incorrect API version number and incorrect TS version number in the "description" field of the "externalDocs" object. |
|  |  |
| ***Clauses affected:*** | 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's revision history:*** |  |

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

# A.2 Npcf\_BDTPolicyControl API

openapi: 3.0.0

info:

 title: Npcf\_BDTPolicyControl Service API

 version: 1.1.2

 description: |

 PCF BDT Policy Control Service.

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#

externalDocs:

 description: 3GPP TS 29.554 V16.6.0; 5G System; Background Data Transfer Policy Control Service.

 url: 'http://www.3gpp.org/ftp/Specs/archive/29\_series/29.554/'

#

servers:

 - url: '{apiRoot}/npcf-bdtpolicycontrol/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - npcf-bdtpolicycontrol

paths:

 /bdtpolicies:

 post:

 summary: Create a new Individual BDT policy

 operationId: CreateBDTPolicy

 tags:

 - BDT policies (Collection)

 requestBody:

 description: Contains information for the creation of a new Individual BDT policy resource.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: Background data transfer policies offered to an ASP.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: 'Contains the URI of the created individual BDT policy resource, according to the structure: {apiRoot}/npcf-bdtpolicycontrol/v1/bdtpolicies/{bdtPolicyId}'

 required: true

 schema:

 type: string

#

# Error scenarios POST

#

 '303':

 description: See Other. The result of the POST request would be equivalent to the existing Individual BDT policy resource.

 headers:

 Location:

 description: 'Contains the URI of the existing individual BDT policy resource.'

 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'

#

# End error scenarios POST

#

 callbacks:

 BdtNotification:

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

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: No Content, a reception of the BDT notification was successful.

 '307':

 description: Temporary Redirect

 content:

 application/problem+json:

 schema:

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

 headers:

 Location:

 required: true

 description: 'A URI pointing to the endpoint of an alternative NF consumer (service) instance towards which the notification should be redirected.'

 schema:

 type: string

 3gpp-Sbi-Target-Nf-Id:

 description: 'Identifier of the target NF (service) instance ID towards which the notification request is redirected'

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/problem+json:

 schema:

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

 headers:

 Location:

 required: true

 description: 'A URI pointing to the endpoint of an alternative NF consumer (service) instance towards which the notification should be redirected.'

 schema:

 type: string

 3gpp-Sbi-Target-Nf-Id:

 description: 'Identifier of the target NF (service) instance ID towards which the notification request is redirected'

 schema:

 type: string

 '400':

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

 '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'

#

 /bdtpolicies/{bdtPolicyId}:

 get:

 summary: Read an Individual BDT policy

 operationId: GetBDTPolicy

 tags:

 - Individual BDT policy (Document)

 parameters:

 - name: bdtPolicyId

 description: String identifying the individual BDT policy resource in the PCF.

 in: path

 required: true

 schema:

 type: string

 responses:

 '200':

 description: Background data transfer policies offered to and selected by an ASP.

 content:

 application/json:

 schema:

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

#

# Error scenarios GET

#

 '307':

 description: Temporary Redirect

 content:

 application/problem+json:

 schema:

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

 headers:

 Location:

 description: 'An alternative URI of the resource located on an alternative PCF (service) instance.'

 required: true

 schema:

 type: string

 3gpp-Sbi-Target-Nf-Id:

 description: 'Identifier of the target NF (service) instance ID towards which the request is redirected'

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/problem+json:

 schema:

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

 headers:

 Location:

 description: 'An alternative URI of the resource located on an alternative PCF (service) instance.'

 required: true

 schema:

 type: string

 3gpp-Sbi-Target-Nf-Id:

 description: 'Identifier of the target NF (service) instance ID towards which the request is redirected'

 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'

 '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'

#

# End error scenarios GET

#

 patch:

 summary: Update an Individual BDT policy

 operationId: UpdateBDTPolicy

 tags:

 - Individual BDT policy (Document)

 parameters:

 - name: bdtPolicyId

 description: String identifying the individual BDT policy resource in the PCF.

 in: path

 required: true

 schema:

 type: string

 requestBody:

 description: Contains modification instruction to be performed on the BdtPolicy data structure to select a transfer policy and in addition, may indicate whether the BDT warning notification is enabled or disabled.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: The Individual BDT Policy resource is modified and a representation of that resource is returned.

 content:

 application/json:

 schema:

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

 '204':

 description: The Individual BDT Policy resource is modified.

#

# Error scenarios PATCH

#

 '307':

 description: Temporary Redirect

 content:

 application/problem+json:

 schema:

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

 headers:

 Location:

 description: 'An alternative URI of the resource located on an alternative PCF (service) instance.'

 required: true

 schema:

 type: string

 3gpp-Sbi-Target-Nf-Id:

 description: 'Identifier of the target NF (service) instance ID towards which the request is redirected'

 schema:

 type: string

 '308':

 description: Permanent Redirect

 content:

 application/problem+json:

 schema:

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

 headers:

 Location:

 description: 'An alternative URI of the resource located on an alternative PCF (service) instance.'

 required: true

 schema:

 type: string

 3gpp-Sbi-Target-Nf-Id:

 description: 'Identifier of the target NF (service) instance ID towards which the request is redirected'

 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'

#

# End error scenarios PATCH

#

#

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 npcf-bdtpolicycontrol: Access to the Npcf\_BDTPolicyControl API

 schemas:

#

# Structured data types

#

 BdtPolicy:

 description: Represents an Individual BDT policy resource.

 type: object

 properties:

 bdtPolData:

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

 bdtReqData:

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

#

 BdtReqData:

 description: Contains service requirements for creation a new Individual BDT policy resource.

 type: object

 required:

 - aspId

 - desTimeInt

 - numOfUes

 - volPerUe

 properties:

 aspId:

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

 desTimeInt:

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

 dnn:

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

 interGroupId:

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

 notifUri:

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

 nwAreaInfo:

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

 numOfUes:

 description: Indicates a number of UEs.

 type: integer

 volPerUe:

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

 snssai:

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

 suppFeat:

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

 trafficDes:

 $ref: 'TS29122\_ResourceManagementOfBdt.yaml#/components/schemas/TrafficDescriptor'

 warnNotifReq:

 description: Indicates whether the BDT warning notification is enabled or disabled.

 type: boolean

 default: false

#

 BdtPolicyData:

 description: Describes the authorization data of an Individual BDT policy resource.

 type: object

 required:

 - bdtRefId

 - transfPolicies

 properties:

 bdtRefId:

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

 transfPolicies:

 description: Contains transfer policies.

 type: array

 items:

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

 minItems: 1

 selTransPolicyId:

 description: Contains an identity of the selected transfer policy.

 type: integer

 suppFeat:

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

#

 BdtPolicyDataPatch:

 description: A JSON Merge Patch body schema containing modification instruction to be performed on the BdtPolicy data structure to select a transfer policy and in addition, may indicate whether the BDT warning notification is enabled or disabled. Adds selTransPolicyId to BdtPolicyData data structure and modifies warnNotifReq from BdtReqData data structure.

 type: object

 required:

 - selTransPolicyId

 properties:

 selTransPolicyId:

 description: Contains an identity (i.e. transPolicyId value) of the selected transfer policy. If the BdtNotification\_5G feature is supported value 0 indicates that no transfer policy is selected.

 type: integer

 warnNotifReq:

 description: Indicates whether the BDT warning notification is enabled or disabled.

 type: boolean

#

 TransferPolicy:

 description: Describes a transfer policy.

 type: object

 required:

 - ratingGroup

 - recTimeInt

 - transPolicyId

 properties:

 maxBitRateDl:

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

 maxBitRateUl:

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

 ratingGroup:

 description: Indicates a rating group for the recommended time window.

 type: integer

 recTimeInt:

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

 transPolicyId:

 description: Contains an identity of a transfer policy.

 type: integer

 NetworkAreaInfo:

 description: Describes a network area information in which the NF service consumer requests the number of UEs.

 type: object

 properties:

 ecgis:

 description: Contains a list of E-UTRA cell identities.

 type: array

 items:

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

 minItems: 1

 ncgis:

 description: Contains a list of NR cell identities.

 type: array

 items:

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

 minItems: 1

 gRanNodeIds:

 description: Contains a list of NG RAN nodes.

 type: array

 items:

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

 minItems: 1

 tais:

 description: Contains a list of tracking area identities.

 type: array

 items:

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

 minItems: 1

#

 Notification:

 description: Describes a BDT notification.

 type: object

 required:

 - bdtRefId

 properties:

 bdtRefId:

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

 candPolicies:

 description: Contains a list of the candidate transfer policies from which the AF may select a new transfer policy due to a network performance is below the criteria set by the operator.

 type: array

 items:

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

 minItems: 1

 nwAreaInfo:

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

 timeWindow:

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

#

# Simple data types

#

 AspId:

 description: Contains an identity of an application service provider.

 type: string

#

#

\*\*\* End of Changes \*\*\*