**3GPP TSG-CT WG3 Meeting #118e C3-215429**

**E-Meeting, 11th – 15th October 2021 (Revision of C3-215139)**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **29.122** | **CR** | **0499** | **rev** | **1** | **Current version:** | **17.3.0** |  |
|  |
| *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:***  | Updates GET Query in ChargeableParty API |
|  |  |
| ***Source to WG:*** | Ericsson, Huawei |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | NBI17 |  | ***Date:*** | 2021-09-27 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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:*** | GET method to retrieve active session subscription only defines GETALL which is risky of heavy signalling load impacts, When the AF only needs to retrieve specific UE(s)’ AF session subscription data, then the requested UE(s)’ subscription retrieval need to be effectively supported for the requested part of subscription data retrieval from NEF to AF, needn’t retrievel all the subscription data. |
|  |  |
| ***Summary of change:*** | Adding UE IP address and/or UE MAC address query in GET method to effectively retrieve the requested UE(s)’ active AF session(s)’ subscription data. |
|  |  |
| ***Consequences if not approved:*** | Current GETALL with only one choice to retrive all subscription data from NEF to AF is risks of heavy signalling load impacts to both NEF and AF, especially when AF only request specific of small scope of subscriptio data. Also introduce high signalling load risk when the operator’s NEF serving AF with large amount of subscriptions. |
|  |  |
| ***Clauses affected:*** | 5.5.2.1.1, 5.5.3.2.3.1, 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 backward compatible feature into the OpenAPI file applicable to ChargeableParty API. |
|  |  |
| ***This CR's revision history:*** |  |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 5.5.2.1.1 Introduction

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

Table 5.5.2.1.1-1 specifies data types re-used by the ChargeableParty API from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the ChargeableParty API.

Table 5.5.2.1.1-1: ChargeableParty API re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| Dnn | 3GPP TS 29.571 [45] | Identifies a DNN. |
| EthFlowDescription | 3GPP TS 29.514 [52] | Defines a packet filter for an Ethernet flow.(NOTE) |
| IpAddr | 3GPP TS 29.571 [45] | UE IP Address. |
| MacAddr48 | 3GPP TS 29.571 [45] | MAC Address. |
| ServAuthInfo | 3GPP TS 29.514 [52] | The authorization result of a request bound to a transfer policy. |
| Snssai | 3GPP TS 29.571 [45] | Identifies the S-NSSAI. |
| SupportedFeatures | 3GPP TS 29.571 [45] | Used to negotiate the applicability of the optional features defined in table 5.5.4-1. |
| NOTE: In order to support a set of MAC addresses with a specific range in the traffic filter, feature MacAddressRange\_5G as specified in clause 5.5.4 shall be supported. |

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

###### 5.5.3.2.3.1 GET

The GET method allows to read all active chargeable party transactions for a given SCS/AS. The SCS/AS shall initiate the HTTP GET request message and the SCEF shall respond to the message.

This method shall support the URI query parameters, request and response data structures, and response codes, as specified in the table 5.5.3.2.3.1-1 and table 5.5.3.2.3.1-2.

Table 5.5.3.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | Cardinality | Remarks | Applicability |
| ip-addrs | array(IpAddr) | 0..N | The IP address(es) of the requested UE(s). | enNB |
| ip-domain | string | 0..1 | The IPv4 address domain of the requested UE(s).The attribute may only be provided if the IPv4 address is included in the ip-addrs query parameter. | enNB |
| mac-addrs | array(MacAddr48) | 0..N | The MAC address(es) of the requested UE(s). | enNB |

Table 5.5.3.2.3.1-2: Data structures supported by the GET request/response by the resource

|  |  |  |  |
| --- | --- | --- | --- |
| Request body | Data type | Cardinality | Remarks |
| none |  |  |
| Response body | Data type | Cardinality | Responsecodes | Remarks |
| array(ChargeableParty) | 0..N | 200 OK | The chargeable party transactions information for the SCS/AS in the request URI are returned. |
| none |  | 307 Temporary Redirect | Temporary redirection, during transaction retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative SCEF.Redirection handling is described in subclause 5.2.10. |
| none |  | 308 Permanent Redirect | Permanent redirection, during transaction retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative SCEF.Redirection handling is described in subclause 5.2.10. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 also apply. |

Table 5.5.3.2.3.1-3: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative SCEF. |

Table 5.5.3.2.3.1-4: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative SCEF. |

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

## A.5 ChargeableParty API

openapi: 3.0.0

info:

 title: 3gpp-chargeable-party

 version: 1.2.0-alpha.4

 description: |

 API for Chargeable Party management.

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externalDocs:

 description: 3GPP TS 29.122 V17.3.0 T8 reference point for Northbound APIs

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

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/3gpp-chargeable-party/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths:

 /{scsAsId}/transactions:

 get:

 summary: Read all chargeable party transaction resources for a given SCS/AS

 tags:

 - Chargeable Party Transaction Operation

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of SCS/AS

 required: true

 schema:

 type: string

 - name: ip-addrs

 in: query

 description: The IP address(es) of the requested UE(s).

 required: false

 schema:

 type: array

 items:

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

 minItems: 1

 - name: ip-domain

 in: query

 description: The IPv4 address domain of the requested UE(s). The attribute may only be provided if the IPv4 address is included in the ip-addrs query parameter.

 required: false

 schema:

 type: string

 - name: mac-addrs

 in: query

 description: The MAC address(es) of the requested UE(s).

 required: false

 schema:

 type: array

 items:

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

 minItems: 1

 responses:

 '200':

 description: OK (successful query of Chargeable Party resource)

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 description: individual BDT policy subscription.

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '406':

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

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

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

 post:

 summary: Create a new chargeable party transaction resource

 tags:

 - Chargeable Party Transaction Operation

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of SCS/AS

 required: true

 schema:

 type: string

 requestBody:

 description: representation of the Chargeable Party resource to be Created in the SCEF

 required: true

 content:

 application/json:

 schema:

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

 callbacks:

 eventNotification:

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

 post:

 requestBody: # contents of the callback message

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: No Content (The successful acknowledgement of the notification)

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

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

 responses:

 '201':

 description: successful creation of a chargeable party resource

 content:

 application/json:

 schema:

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

 headers:

 Location:

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

 required: true

 schema:

 type: string

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

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

 /{scsAsId}/transactions/{transactionId}:

 get:

 summary: read a chargeable party resource for a given SCS/AS and a transaction Id

 tags:

 - Individual chargeable party resource Operation

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of SCS/AS

 required: true

 schema:

 type: string

 - name: transactionId

 in: path

 description: Identifier of transaction

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK (successful query of a chargeable party resource)

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '406':

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

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

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

 patch:

 summary: Updates a existing chargeable party resource for a given SCS/AS and transaction Id.

 tags:

 - Individual chargeable party resource Operation

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of SCS/AS

 required: true

 schema:

 type: string

 - name: transactionId

 in: path

 description: Identifier of transaction

 required: true

 schema:

 type: string

 requestBody:

 description: representation of the chargeable party resource to be udpated in the SCEF

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: successful update of a chargeable party resource

 content:

 application/json:

 schema:

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

 '204':

 description: No Content

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

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

 delete:

 summary: deletes a chargeable party resource for a given SCS/AS and a transcation Id.

 tags:

 - Individual chargeable party resource Operation

 parameters:

 - name: scsAsId

 in: path

 description: Identifier of SCS/AS

 required: true

 schema:

 type: string

 - name: transactionId

 in: path

 description: Identifier of transaction

 required: true

 schema:

 type: string

 responses:

 '204':

 description: successful deletion of an resouce of chargeable party

 '200':

 description: OK (Successful deletion of the existing subscription)

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

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

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{tokenUrl}'

 scopes: {}

 schemas:

 ChargeableParty:

 description: Represents the configuration of a chargeable party.

 type: object

 properties:

 self:

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

 supportedFeatures:

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

 dnn:

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

 snssai:

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

 notificationDestination:

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

 requestTestNotification:

 type: boolean

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

 websockNotifConfig:

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

 exterAppId:

 type: string

 description: Identifies the external Application Identifier.

 ipv4Addr:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

 ipDomain:

 type: string

 ipv6Addr :

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

 macAddr:

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

 flowInfo:

 type: array

 items:

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

 minItems: 1

 description: Describes the application flows.

 ethFlowInfo:

 type: array

 items:

 $ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

 minItems: 1

 description: Identifies Ethernet packet flows.

 sponsorInformation:

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

 sponsoringEnabled:

 type: boolean

 description: Indicates sponsoring status.

 referenceId:

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

 servAuthInfo:

 $ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/ServAuthInfo'

 usageThreshold:

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

 events:

 type: array

 items:

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

 minItems: 1

 description: Event list to which the SCS/AS may subscribe.

 required:

 - notificationDestination

 - sponsorInformation

 - sponsoringEnabled

 ChargeablePartyPatch:

 description: Represents a modification request of a chargeable party resource.

 type: object

 properties:

 flowInfo:

 type: array

 items:

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

 minItems: 1

 description: Describes the IP flows.

 exterAppId:

 type: string

 description: Identifies the external Application Identifier.

 ethFlowInfo:

 type: array

 items:

 $ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

 minItems: 1

 description: Identifies Ethernet packet flows.

 sponsoringEnabled:

 type: boolean

 description: Indicates sponsoring status.

 referenceId:

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

 usageThreshold:

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

 notificationDestination:

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

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