**TSG-CT WG3 Meeting #116-e *C3-213392***

**E-Meeting, 19th – 28th May 2021 (Revision of C3-213xyz)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.122** | **CR** | **0449** | **rev** | **-** | **Current version:** | **16.9.0** |  |
|  | | | | | | | | |
| *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** |

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|  | | | | | | | | | | |
| ***Title:*** | Corrections on PATCH operation for ChargeableParty API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NAPS-CT | | | | |  | ***Date:*** | | | 2021-05-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **A** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | For ChargeableParty API, the SCS/AS uses the HTTP PATCH to partial update a a chargeable party transaction resource, as the OpenAPI states, however, clauses 4.4.4 and 5.5.3.1 specify it’s only for activate/deactive the sponsoring, which is incorrect. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Correct the description for PATCH in clauses 4.4.4 and 5.5.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect statement of HTTP PATCH, and misalignment with the OpenAPI file. | | | | | | | | |
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| ***Clauses affected:*** | | 4.4.4; 5.5.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 does not impact OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

### 4.4.4 Procedures for changing the chargeable party at session set up or during the session

This procedure is used by an SCS/AS to either request to sponsor the traffic from the beginning or to request becoming the chargeable party at a later point in time via the T8 interface.

When setting up the connection between the AS and the UE via the SCEF, the SCS/AS shall send an HTTP POST request to the SCEF, targeting the "Chargeable Party Transactions" resource, to become the chargeable party for the session to be set up. The body of the HTTP POST message shall include the SCS/AS Identifier, UE IP address, IP Flow description, Sponsor ID, ASP ID, Sponsoring Status, notification destination URI identifying the recipient of notifications within the "notificationDestination" attribute and may include the time period and/or traffic volume used for sponsoring. The SCS/AS may also request to activate a previously selected policy of background data transfer by including the associated Reference ID in the body of the HTTP POST message.

After receiving the HTTP POST request, if the authorization performed by the SCEF is successful, the SCEF shall act as an AF and interact with the PCRF via the Rx interface, as defined in 3GPP TS 29.214 [10] or 3GPP TS 29.201 [13], to trigger a PCRF initiated IP-CAN Session Modification. The SCEF may map the SCS/AS Identifier to AF Application Identifier and may request to be notified about the traffic plane status. If the time period and/or traffic volume are received from the AF, the SCEF should subscribe with the PCRF to the USAGE\_REPORT event.

NOTE 1: In this release of current specification, the SCS/AS Identifier can only be mapped to one AF Application Identifier based on operator policy and/or local configuration in the SCEF.

After receiving a successful response from the PCRF, the SCEF shall create a new "Individual Chargeable Party Transaction" resource, which represents the chargeable party transaction, addressed by a URI that contains the SCS/AS identity and an SCEF-created transaction identifier, and shall respond to the SCS/AS with a 201 Created status code, including a Location header field containing the URI of the created resource. The SCS/AS shall use the URI received in the Location header in subsequent requests to the SCEF to refer to this chargeable party transaction. If the SCEF receives a response with an error code from the PCRF, the SCEF shall not create a resource and respond to the SCS/AS with a corresponding failure code as described in subclause 5.2.6.

In order to update the sponsoring status of an established AS session, the SCS/AS shall send an HTTP PATCH message to the SCEF targeting the associated "Individual Chargeable Party Transaction" resource requesting to partial update a a chargeable party transaction resource (e.g. change the Sponsoring Status). When receiving the HTTP PATCH message, the SCEF shall make the change and interact with the PCRF to modify the Rx session as defined in 3GPP TS 29.214 [10] or 3GPP TS 29.201 [13]. After receiving a response with successful result code from the PCRF, the SCEF shall send an HTTP response to the SCS/AS with a 200 OK status code and the result in the body of the HTTP response. The accumulated usage received from the PCRF shall be included if the SCS/AS requested to disable the sponsoring. If the SCEF receives a response with an error code from the PCRF, the SCEF shall not update the resource and respond to the SCS/AS with a corresponding failure code as described in subclause 5.2.6.

If the SCEF receives a traffic plane notification (e.g. the usage threshold is reached or transmission resource lost) or gets informed that the Rx session is terminated (e.g. due to the release of PDN connection), the SCEF shall send an HTTP POST message including the notified event (e.g. session terminated) and the accumulated usage to the SCS/AS identified by the notification destination URI received during session set up. The SCS/AS shall respond with an HTTP response to confirm the received notification.

NOTE 2: The SCS/AS can assume a successful resource allocation upon receipt of the POST/PATCH response until the FAILED\_RESOURCES\_ALLOCATION event is received.

In order to remove an established AS session, the SCS/AS shall send an HTTP DELETE message to the SCEF targeting the associated "Individual Chargeable Party Transaction" resource. After receiving the HTTP DELETE message, the SCEF shall remove all properties of the resource and interact with the PCRF to terminate the Rx session (as defined in 3GPP TS 29.214 [10] or 3GPP TS 29.201 [13]). After receiving the response from the PCRF, the SCEF shall send an HTTP response to the SCS/AS with a corresponding status code and the accumulated usage (if received from the PCRF).

\*\*\* Nextt Change \*\*\*

#### 5.5.3.1 General

All resource URIs of this API should have the following root:

**{apiRoot}/3gpp-chargeable-party/v1/**

"apiRoot" is set as described in subclause 5.2.4. All resource URIs in the subclauses below are defined relative to the above root URI.

The following resources and HTTP methods are supported for this API:

Table 5.5.3.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method | Meaning |
| Chargeable Party Transactions | /{scsAsId}/transactions | GET | Read all chargeable party transaction resources for a given SCS/AS |
| POST | Create a new chargeable party transaction resource |
| Individual Chargeable Party Transaction | /{scsAsId}/transactions/{transactionId} | GET | Read a chargeable party transaction resource |
| PATCH | Partial update a chargeable party transaction resource. |
| DELETE | Delete an existing chargeable party transaction resource |

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