**3GPP TSG SA WG5 Meeting #155 *S5-243027***

Jeju, South Korea, 27 - 31 May 2024

|  |
| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **32.240** | **CR** | **0493** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  |
| *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:***  | Rel-18 CR 32.240 Update the B2B charging |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI18, B2B\_CH |  | ***Date:*** | 2024-05-30 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-18 |
|  | *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 o. | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | After investigation on the B2B charging annex G, a few errors or missing information are identified based on the Rel-18 progress:1. The NSSAA charging in TS 28.204 are not used for the business charging. They should be removed from the examples. 2. In the ProSe charging, the charging information could be per business subscriber directly, i.e. AF.3. Two different reference points for the interaction between two CHFs were introduced in Release 18, i.e. N108 and N107. It is better to clarify this difference in this Annex.4. The common IE on tenant identifier were introduced in Release 18. It is better to have a reference in this Annex. |
|  |  |
| ***Summary of change:*** | 1. Remove the example of SMS charging and NSSAA charging. 2. Rephrase the last sentence in the example of ProSe charging. 3. Add the reference points N107 and N108 that differentiate the two inter CHF architectures.4. Add reference to the common IE on tenant identifier.5. Minor fix: change the description for 5G LAN charging. Add the reference to NSACF charging specification TS 28.203. |
|  |  |
| ***Consequences if not approved:*** | The references for B2B charging architectures and principles is not accurate and incomplete. |
|  |  |
| ***Clauses affected:*** | G.2.2, G.2.3, G.2.4, G.3.2 |
|  |  |
|  | **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:*** | Revision of S5-242727 |
|  |  |
| ***This CR's revision history:*** |  |

|  |
| --- |
| **First change** |

## G.2.2 B2B charging architecture and references with B-CHF only

In the B2B charging architecture with B-CHF only interaction, the charging information collected by the NF (CTF) is per business or per consumer but used for business charging purpose. When B-CHF or C-CHF may be applicable, is specified in the middle tier charging TSs.

The B-CHF performs charging functionalities for the business.

The related NF(s) and the corresponding references for B2B charging with B-CHF only, but not limited to:

- Network exposure domain charging: NEF charging per API invocation/notification, as specified in TS 32.254 [14].

- Edge charging: CEF based charging and EAS deployment charging, as specified in TS 32.257 [17].

- Short message charging: SMSF charging for IoT, as specified in TS 32.274 [34], in this case the charging information is collected per consumer but is applicable to business context.

- Prose charging: ProSe Function or DDNMF for prose discovery and prose communication charging, as specified in TS 32.277 [37], in this case the charging information is collected per consumer but is applicable to business context.

- 5G LAN charging: NEF charging/CEF based charging for 5G VN group management, as specified in TS 32.254 [14].

- NPN charging: SMF and AMF charging for the inter-provider charging of NPN, as specified in TS 32.255 [15] and TS 32.256 [16], in this case the charging information is collected per consumer but is applicable to business context.

- Network slice charging: NSPA, NSM and NSACF charging per S-NSSAI for network slice, specified in TS 28.201 [70], TS 28.202 [71] and TS 28.203 [72].

- TSN charging: TSN AF charging for TSN Bridge management and configuration, NEF and TSCTSF charging for the enabler of TSC and TS, specified in TS 32.282 [42].

|  |
| --- |
| **Next change** |

## G.2.3 B2B charging architecture and references with B-CHF via C-CHF

In the B2B charging architecture where the NF (CTF) have direct C-CHF interaction and where the C-CHF interact with the B-CHF using N108 reference point, the charging information collected by the NF (CTF) is per consumer.

The C-CHF performs charging functionalities for the consumer.

The B-CHF performs charging functionalities for the business.

The related NF(s) and the corresponding references for the B2B charging with business CHF via consumer CHF include, but not limited to:

- Network slice charging: inter CHF interaction to support converged charging for tenant and UEs belonging to the tenant at same time, as specified in Figure 4.3-1 of TS 32.255 [15].

- TSN charging: inter CHF interaction to support converged charging for TSC traffic belonging to the same TSN bridge, as specified in Figure 4.3-1 of TS 32.255 [15].

## G.2.4 B2B charging architecture and references with B-CHF and C-CHF

In the B2B charging architecture where the NF (CTF) have direct B-CHF interaction and where the B-CHF interact with the C-CHF using N107 reference point, the charging information collected by the NF (CTF) is per consumer and used for both B2C and B2B charging.

The related NF(s) and the corresponding references for the B2B charging with B-CHF, where the B-CHF interacts with the C-CHF include, but not limited to:

- 5G data connectivity charging in local breakout roaming scenario, as specified in Figure 4.2.6a of TS 32.255 [15];

- 5G connection and mobility charging, in local breakout roaming scenario, as specified in Figure 4.2.2.3 of TS 32.256 [16];

|  |
| --- |
| **Next change** |

## G.3.2 B2B charging information utilisation

In the B-CHF only interaction, the NF (CTF) collect and report the charging information per business subscriber to B-CHF.

In the B-CHF via C-CHF interaction, the NF (CTF) collect and report the charging information to C-CHF. C-CHF report the charging information per business subscriber to B-CHF.

In the C-CHF via B-CHF interaction, the NF (CTF) collect and report the charging information to B-CHF. B-CHF report the charging information to C-CHF.

The identification for the business subscriber is specified in the respective middle tier TS, e.g.

- Tenant Identifier in TS 28.201 [70], TS 32.282 [42].

- EAS Provider Identifier in TS 32.257 [17].

A common IE "Tenant Identifier" defined in TS 32.290 [57] can also be used to identify the business subscriber.

|  |
| --- |
| **End of change** |