**3GPP TSG-SA5 Meeting #146Bis-e *S5-231120***

Electronic meeting, 16 - 19 January 2023

**Source: Ericsson**

**Title: Correcting solution #1.10 in clause 7.1**

**Document for: Approval**

**Agenda Item: 7.5.3**

# 1 Decision/action requested

**Include the proposed changes in TR 28.827.**

# 2 References

[1] 3GPP TR 28.827: "Study on 5G charging for additional roaming scenarios and actors"

# 3 Rationale

Changing the heading of the solution to also include that it is for QBC and adding an example where both FBC and QBC setts the same trigger.

# 4 Detailed proposal

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| **First change** |

#### 7.1.4.10 Solution #1.10: Separate QBC and FBC PDU session level triggers

##### 7.1.4.10.1 General

A possible solution for key issue #1f covering requirements REQ-CH\_VMNO-01, and REQ-CH\_VMNO -02, about the PDU Session level setting for QBC triggers.

The QBC triggers and FBC triggers have separate PDU session level triggers i.e., there will be QBC specific PDU session triggers and FBC specific PDU session triggers.

##### 7.1.4.10.2 Reference architecture

The reference architecture would be the same as in solution #1.3 clause 7.1.4.3.2.

##### 7.1.4.10.3 Message flows

For home routed scenario, the message flow is same with the PDU session establishment message flow in clause 5.2.2.12.2 of TS 32.255 [4]. In step 11ch-d of Figure 5.2.2.12.2.1 in TS 32.255 [4], the H-CHF acknowledges by sending Charging Data Response to the H-SMF and optionally includes a "Roaming Charging Profile". The "Roaming Charging Profile" may include both QoS flow and PDU session level triggers (e.g., both QoS change and user location change) for QBC, for FBC both rating group and PDU session level triggers may be included in the trigger elements of Charging Data Response.

For local breakout scenario, the message flow is same with the PDU session establishment message flow in clause 5.2.2.18.2 of TS 32.255 [4]. In step 9ch-d2 of Figure 5.2.2.18.2-1 in TS 32.255 [4], the H-CHF acknowledges by sending Charging Data Response to the V-SMF and optionally includes a "Roaming Charging Profile". The "Roaming Charging Profile" may include both QoS flow and PDU session level triggers (e.g., both QoS change and user location change) for QBC, for FBC both rating group and PDU session level triggers may be included in the trigger element of Charging Data Response.

This means that the values and status of PDU session level triggers may be different for QBC and FBC. For example, a PDU Session level "Expiry of data time limit per PDU session" for FBC is set to 600 seconds while it for QBC is set to 900 seconds, this means that after 10 minutes all the rating groups shall be reported but no QoS flows, then after another 5 minutes all QoS flows shall be reported but no rating groups. In essence this means that the FBC and QBC will be handled separately, only sharing the initial and termination requests. While updates can in some cases coincide, it would be difficult to sort out the reason for and order of the trigger and would therefore preferably always be separate.

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| **End of changes** |