**3GPP TSG-SA5 Meeting #146Bis-e *S5-231122***

Electronic meeting, 16 - 19 January 2023

**Source: Ericsson**

**Title: Adding solution in clause 7.1 for PDU session triggers**

**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

Adding a solution on QBC and FBC common PDU session level triggers in clause 7.1 for key issue #1e covering requirements REQ-CH\_VMNO-07.

# 4 Detailed proposal

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| **First change** |

#### 7.1.4.x Solution #1.y: QBC and FBC common PDU session level triggers

##### 7.1.4.x.1 General

A possible solution for key issue #1f covering requirements REQ-CH\_VMNO-07 about the PDU session level setting for QBC triggers.

The QBC triggers and FBC triggers share PDU session level triggers i.e., there will be one set of PDU session triggers common to both QBC and FBC. The roaming charging profile is in essence controlled by the H-CHF i.e., what the H-CHF setts is what will be used both in the V-SMF and in, if applicable, H-SMF. For FBC it is also the H-CHF that sets the triggers, this means that it’s the H-CHF that controls both the QBC and FBC triggers and can synchronise the PDU session level triggers. To be able to have the same QBC triggers for both home and visited MNO the QBC triggers settings will overwrite any setting on FBC.

##### 7.1.4.x.2 Reference architecture

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

##### 7.1.4.x.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 element of Charging Data Response. For FBC the PDU session level triggers may be replaced by the QBC PDU session level triggers.

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. For FBC the PDU session level triggers may be replaced by the QBC PDU session level triggers.

This means that the values and status of PDU session level triggers will be the same for both 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, then the 900 seconds value will be used for all the rating groups and QoS flows.

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| **End of changes** |