**3GPP TSG-SA5 Meeting #145-e *S5-225191***

**e-meeting, 15 - 24 August 2022**

**Source: China Mobile**

**Title: Rel-18 pCR 28.828 Adding solution on number of PDU sessions for SNPN**

**Document for: Approval**

**Agenda Item: 7.5.4**

# 1 Decision/action requested

***The group is asked to discuss and agree on the proposal.***

# 2 References

[1] 3GPP TR 28.828: "Charging management; Study on charging aspects for enhanced support of non-public networks".

# 3 Rationale

This pCR proposes to add solution on number of PDU sessions for SNPN to TR 28.828 [1].

# 4 Detailed proposal

The following changes are proposed to be incorporated into TR 28.828.

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| **First change** |

#### 5.2.4.3 Solution #3: Converged charging for number of PDU sessions

##### 5.2.4.3.1 General

This solution #3 , charges vertical industry customer when "Number of PDU sessions" threshold for the Network Identifier is reached or "maximum number of PDU sessions" for the Network Identifier is reached, which addresses the Key Issue #2a, Key Issue #2b and Key Issue #2c.

##### 5.2.4.3.2 Architecture description

A new NF NPNACF (Non-Public Network Admission Control Function) is introduced to the solution. The converged charging architecture for NPNACF (CTF) based solution as depicted in figure 5.2.4.2.2-1 is proposed for converged charging for number of PDU sessions per Network Identifier.

Editor’s Note: The addition of the concept of NPNACF is FFS.

##### 5.2.4.3.3 Procedures description

The figure 5.2.4.3.3-1 describes the high-level charging procedure for NPNACF (CTF) based converged charging.



Figure 5.2.4.3.3-1: NPNACF (CTF) based converged charging-IEC

0ch. CHF obtains the "maximum number of PDU sessions" per Network Identifier.

1. The NPNACF is configured per Network Identifier, with "maximum number of PDU sessions" and a set of "Number of PDU sessions" intermediate thresholds (downwards and upwards triggers) under the "maximum number of PDU sessions".

2. PDU session establishment procedure per TS 32.255 [x] clause 5.2.2.2.2 step 1~9.

3. The SMF sends NumOfPDUsUpdate\_Request to NPNACF. The NPNACF checks availability and updates Number of PDU sessions per Network Identifier.

3ch-a: For a Network Identifier one "Number of PDU sessions" threshold is reached or "maximum number of PDU sessions" is reached.

3ch-b: The NPNACF sends Charging Data Request to CHF for reporting number of PDU sessions for the Network Identifier.

3ch-c. Account and rating control based on number of PDU sessions for the Network Identifier.

3ch-d. CHF provides response to NPNACF by sending Charging Data Response.

4. The NPNACF sends NumOfPDUsUpdate\_Response to SMF.

Editor's note: The procedures of Number of PDU sessions per Network Identifier availability check and update in step 3 and step 4 are FFS.

5. PDU session establishment procedure per TS 32.255 [x] clause 5.2.2.2.2 step 10~14.

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| **End of changes** |