**3GPP TSG-SA5 Meeting #157 *S5-245892***

Hyderabad, India, 14 - 18 October 2024

**Source: Huawei**

**Title: New charging solution for API invoker management**

**Document for: Approval**

**Agenda Item: 7.5.2**

# 1 Decision/action requested

***This is a pCR to add the corresponding solutions about API management charging in TR 28.849.***

# 2 References

[1] 3GPP TR 28.849: "Study on charging aspects of Common API Framework for Northbound APIs (CAPIF) phase 2".

# 3 Rationale

This pCR proposes to introduce the solution of API management charging.

# 4 Detailed proposal

Propose to incorporate the following change into the TR 28.849 [1].

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| **First change** |

### 6.1.5 Possible Solutions

#### 6.1.5.y Solution #1.y: API invoker management by via CAPIF

##### 6.1.5.y.1 General description

This solution #1.y which relying on CHF/5G Converged Charging System for CAPIF Converged Charging, addresses the Key Issue #1.2.

##### 6.1.5.y.2 Architecture description

The architecture is the same with the Figure 6.1.5.x.2-1 for CAPIF Core Function (CCF) Charging.

##### 6.1.5.y.3 Procedures description

The Figure 6.1.5.y.3-1 describes the high-level charging procedure for CCF Converged charging for API invoker management over CAPIF-1 or CAPIF-1e, based on Figure 8.1.3-1 and 8.2.3-1 about the procedure for onboarding and offboarding API invoker in the TS 23.222 [2]. The event-based charging, i.e. IEC, PEC and ECUR specified in 3GPP TS 32.290 [4] are supported.



Figure 6.1.5.y.3-1: Event Charging Procedure for API invoker management to the CAPIF (PEC as example)

1. The CAPIF supports management of API invoker with CAPIF\_API\_invoker\_management API, including onboard/offboard API invoker, as defined in TS 23.222 [2] clause 10.5. The API invoker triggers onboard/offboard API invoker request to the CAPIF core function over CAPIF-1 or CAPIF-1e.

2. CAPIF core function performs API invoker management procedure which includes onboarding approval (enrollment of the API invoker to be a recognized as user of the CAPIF) and cancelling the API invoker enrolment from CAPIF.

3. The CAPIF provides the successful onboarding/offboarding API invoker management response.

3ch-a. CAPIF core function generates charging data related to the API invoker management and sends the request for the CHF to store related charging data for CDR generation purpose.

3ch-b. CHF stores received information and creates a CDR related to the API invokers.

3ch-c. CHF informs the CAPIF core function on the result of the request.

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| **End of change** |