**3GPP TSG-CT3 Meeting #127e C3-231199**

**E-meeting, 17th – 21st April 2023**

**Source: Huawei**

**Title: Discussion on the need for a TS skeleton for TSs documenting NBI APIs**

**Document for: Discussion & Agreement**

**Agenda Item: 18.2**

**Work Item / Release: NBI18 / Rel-18**

# 1. Introduction

There is currently no dedicated TS skeleton (template) for technical specifications documenting Northbound and Application Layer APIs (NBI APIs). The existing TS skeleton for TSs documenting SBI (Service Based Interface) APIs (i.e. 5GC APIs) is the only similar template that can be used to start the definition of a new NBI TS. However and even if NBI APIs are also service-based, the SBI TS skeleton is tailored for 5GC APIs and needs several adaptations to be able to suit the specificities of NBI APIs and the related framework, especially for application layer APIs. This may be time consuming and innefficient to a relatively high extent. This document aims hence at discussing the need to define a new dedicated TS skeleton for NBI APIs.

# 2. Discussion

As indicated above, using the SBI TS skeleton as a starting point for defining new NBI TSs is not efficient and requires various adaptations. Hereinafter a summary of the main ones (non-exhaustive):

- The TS defining the API design, principles and guidelines aspects that are common for all NBI APIs is TS 29.122, not TS 29.501, which only applies for SBI APIs (i.e. 5GC APIs). Therefore, most of descriptions, placeholders and guideline text in the SBI TS skeleton are not adapted for NBI APIs.

- The TS title is often not the same:

- If we put aside the NEF case, the entities exposing the APIs defined in the TSs documenting NBI APIs are not network functions (NFs), but rather network entities (e.g. SCEF, EES, ECS, UAE Server, VAE Server, etc.). For Application Layer APIs, these entities belon to the corresponding application layer framework (e.g. EDGEAPP, UASAPP, V2XAPP, etc.).

- Several NBI TSs thus do not use the "5G System" indication.

- The list of references is also not the same (e.g. TS 29.500 is not relevant for NBI APIs, TS 29.122 should be listed instead).

- The security requirements are also not the same (e.g. OAuth2 based mechanism is not defined in the same way for NBI APIs, e.g. the NRF is not used as the authorization server, and the CAPIF framework is generally used for this purpose).

With the ongoing and expected introduction of more NBI APIs (especially application layer APIs) in Rel-18 and the following releases, it is becoming more critical to have a TS skeleton dedicated for NBI APIs in order to allow the following improvements:

- The NBI TSs have a similar outline and can reference the same template.

- When starting the definition of a new NBI TS, the new TS rapporteur can easily use the NBI TS skeleton without having to carry out the above mentioned time-consuming adaptations.

- The NBI TS skeleton can continue to evolve to better suit the specific needs of NBI APIs. This can be performed in a independent way of the SBI TS skeleton that is more suited for 5GC APIs.

Therefore, it is proposed to adopt the way forward proposed in the next section below.

# 3. Proposal

In order to enhance and facilitate the definition of NBI APIs, it is proposed to define a new TS skeleton (template) dedicated for TSs defining NBI APIs:

- The new TS skeleton can be stored in the same location as the existing SBI TS skeleton, i.e:

<https://www.3gpp.org/ftp/information/All_Templates>

- The definition and reference to this location can be provided via a new informative Annex in TS 29.122 (in a similar way to the SBI TS skeleton that is defined in Annex A of TS 29.501, as TS 29.122 plays the same role as TS 29.501 for NBI APIs).

Huawai proposes hence to agree the corresponding changes to the NBI18 WID in C3-231077 and the proposed NBI TS skeleton in C3-231200.