**3GPP TSG-CT3 Meeting #132eC3-240048**

**e-meeting, 22nd** **– 24th November 2023**

**Source: Nokia, Nokia Shanghai Bell**

**Title: Pseudo-CR on defining the service description clauses of the NSCE**\_**NSAllocation API**

**Spec: 3GPP TS 29.435 V 0.1.1**

**Agenda item: 18.49 (NSCALE)**

**Document for: Agreement**

**1. Introduction**

As specified in clause 9.14 of TS 23.435, the NSCE\_NSAllocation\_Request Service API was defined in order to support the functionality of Network slice allocation in a NSaaS framework by the NSCE server based on the VAL server provided Network slice service profile.

The stage 3 definition of this API in this specification needs hence to be started.

**2. Reason for Change**

Update the definition of the service description clauses of the new NSCE\_NSAllocation\_Request Service API in the new TS 29.435.

**3. Conclusions**

N/A

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.435 V 0.1.1.

\* \* \* \* Start of changes \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 29.122: "T8 reference point for Northbound Application Programming Interfaces (APIs)".

[3] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".

[4] OpenAPI: "OpenAPI Specification Version 3.0.0", <https://spec.openapis.org/oas/v3.0.0>.

[5] 3GPP TR 21.900: "Technical Specification Group working methods".

[6] 3GPP TS 23.222: "Common API Framework for 3GPP Northbound APIs; Stage 2".

[7] 3GPP TS 29.222: "Common API Framework for 3GPP Northbound APIs; Stage 3".

[8] 3GPP TS 33.122: "Security aspects of Common API Framework (CAPIF) for 3GPP northbound APIs".

[9] IETF RFC 6749: "The OAuth 2.0 Authorization Framework".

[10] IETF RFC 9113: "HTTP/2".

[11] IETF RFC 8259: "The JavaScript Object Notation (JSON) Data Interchange Format".

[12] IETF RFC 9457: "Problem Details for HTTP APIs".

[13] 3GPP TS 23.434: "Service Enabler Architecture Layer for Verticals (SEAL); Functional architecture and information flows".

[14] 3GPP TS 23.435: "Procedures for Network Slice Capability Exposure for Application Layer Enablement Service".

[15] 3GPP TS 29.549: "Service Enabler Architecture Layer for Verticals (SEAL); Application Programming Interface (API) specification".

[16] 3GPP TS 29.513: "5G System; Policy and Charging Control signalling flows and QoS parameter mapping; Stage 3".

\* \* \* \* Next changes \* \* \* \*

## 5.19 Network Slice Allocation

### 5.19.1 NSCE\_NSAllocation API

#### 5.19.1.1 Service Description

##### 5.19.1.1.1 Overview

As specified in 3GPP TS 23.435 [14], the NSCE\_NSAllocation service exposed by the Network Slice Capability Enablement (NSCE) server enables a service consumer (e.g. VAL server) to communicate with the NSCE server the Network slice service profile requirements over the NSCE-S reference point, which is used for Network slice allocation by the NSCE server in the NSaaS model.

#### 5.19.1.2 Service Operations

##### 5.19.1.2.1 Introduction

The service operation defined for NSCE\_NSAllocation API is shown in the table 5.19.1.2.1-1.

Table 5.19.1.2.1-1: Operations of the NSCE\_NSAllocation\_Request API

|  |  |  |
| --- | --- | --- |
| Service operation name | Description | Initiated by |
| NSAllocation\_Request | This service operation is used by a service consumer to request for network slice allocation. | e.g., VAL server |

##### 5.19.1.2.2 NSAllocation\_Request

###### 5.19.1.2.2.1 General

This service operation is used by a service consumer (e.g., VAL server) to request network slice allocation from the NSCE server.

###### 5.19.1.2.2.2 VAL server requesting network slice allocation using NSAllocation\_Request service operation

Figure 5.19.1.2.2.2-1 depicts a scenario where a a service consumer (e.g. VAL Server) sends a request to the NSCE Server to request the network slice allocation (as defined in clause 9.18 of 3GPP°TS°23.435°[14]).



Figure 5.19.1.2.2.2-1: Procedure to request Network slice allocation

1. In order to request the network slice allocation, the service consumer (e.g. VAL Server) shall send an HTTP POST request (i.e. custom operation "Request") to the NSCE server, with the request body containing the NwSliceAllocReq data structure as specified in clause 6.18.4.2.

2a. The NSCE server may take the role of AF and provides URSP guidance for the VAL UEs as specified in clause 5.5.8 of 3GPP TS 29.513 [16]. Upon success, the NSCE Server shall respond with an HTTP "200 OK" status code with the response body containing NwSliceAllocResp data structure which shall include the network slice diagnostics report as specified in clause 6.18.4.2.

2b. On failure, the appropriate HTTP status code indicating the error shall be returned and appropriate additional error information should be returned in the HTTP POST response body, as specified in clause 6.18.7.

\* \* \* \* End of changes \* \* \* \*