**3GPP TSG- Meeting #C3-240048**

**e-meeting, 22nd** **–**

**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 28.531: "Management and orchestration; Provisioning".

[17] 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

To request network slice allocation, the VAL server shall send an HTTP POST request message (i.e. custom operation "Request") to the NSCE server, with the request body containing the Network slice requirements encoded within NwSliceAllocReq data structure as specified in clause 6.18.1.3.2.

Upon reception of the HTTP POST request message as described above, the NSCE server shall:

1. Process the request and based on VAL service identifier or Network slice requirements if an already allocated Network slice that satisfies the requirements does not exist then request the Network slice provisioning management service provider for Network slice allocation as specified in 3GPP TS 28.531 [16];

2. Upon successful Network slice allocation, 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 [17];

3. Send an HTTP "200 OK" status code to the VAL server with the response body containing the NwSliceAllocResp data structure which shall include the network slice allocation information as specified in clause 6.18.1.3.2.

4. On Network slice allocation failure, an appropriate HTTP status code indicating the error shall be returned as specified in clause 6.18.1.6.

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