**3GPP TSG-SA5 Meeting #143-e *S5-223261rev1***

e-meeting, 9 - 17 May 2022

**Source: Huawei**

**Title: Add key issue of network slice service assurance**

**Document for: Approval**

**Agenda Item: 6.5.4.1**

# Decision/action requested

This tdoc is for approval.

# 2 Rational

This document is to add use case for service assurance regarding network slice instance and network slice subnet instance.

This document is to a couple of key issues of service assurance regarding network slice instance and network slice subnet instance.

# 3 Proposed changes

The start of the change

## 5.y Intent driven management for network slice service assurance

## 5.y.1 Use case of Intent driven management to express expectation of network slice service assurance

#### 5.y.1.1 Introduction

To satisfy the requirement of network operator for network slice instance service assurance with certain characteristics, the intent driven MnS producer receive the intent expectation of network slice service assurance and provide the management capabilities to support network slice service assurance.

#### 5.y.1.2 Pre-condition

CSP provides the intent driven management service to CSC to create a communication service.

Network operator is capable to provide network slice instance service assurance in management system to invoke the proper intent driven MnS.

#### 5.y.1.3 Description

In order to enable a group of end users to connect to communication service provided by a 3GPP network, a MnS Consumer expresses its intent for a communication service assurance with proper network characteristics to network operator.

The operator provides the expectation of intent of network slice instance service assurance with a set of network characteristics. The intent driven management service producer is capable to translate the intent of a network slice instance service assurance to relevant requirements e.g., keep QoS performance in specific time duration. Regarding the intent MnS request received, the intent driven-management service provider may decide management capabilities to meet the requirements of assurance a network slice instance service quality, for example monitoring particular performance, use closed control loop for assurance target(s). The intent driven management service producer is also capable to provide the report of intent fulfilment of a network slice instance service assurance addressing the capability QoS requirement of the intent.

#### 5.y.1.4 Post-condition

The communication service assurance expectation expressed by intent for a specified group of end users is fulfilled.

#### 5.y.1.5 Requirements

**REQ-Intent\_Assure\_Slice-CON-1:** The intent driven MnS shall have capability enabling MnS consumer to express intent containing an expectation for communication service assurance.

**REQ-Intent\_Assure\_Slice-CON-2:** The intent driven MnS shall have capability enabling MnS consumer to express intent containing an expectation for network slice service assurance.

## 5.y.2 Use case of Intent driven management to express expectation of network slice subnet service assurance

#### 5.y.2.1 Introduction

To satisfy the requirement of network operator for network slice subnet instance service assurance with certain characteristics, the intent driven MnS producer receive the intent expectation of slice subnet instance service assurance and provide the management capabilities to support network slice subnet service assurance.

#### 5.y.2.2 Pre-condition

NOP provides the intent driven management service to create a network slice subnet instance.

Network operator is capable to provide network slice subnet instance service assurance in management system to invoke the proper intent driven MnS.

#### 5.y.2.3 Description

In order to enable a group of end users to connect to communication service provided by a 3GPP network, a MnS Consumer expresses its intent for a communication service assurance with proper network characteristics to network operator.

The network operator provides the expectation of intent of network slice subnet instance service assurance with a set of network characteristics. The intent driven management service producer is capable to translate the intent of a network slice subnet instance service assurance to relevant requirements e.g., keep QoS performance in network slice subnet. Regarding the intent MnS request received, the intent driven-management service provider may decide management capabilities to meet the requirements of assurance a network subnet slice instance service quality, for example monitoring particular performance measurement, use closed control loop for assurance target(s) of the network slice subnet instance. The intent driven management service producer is also capable to report of intent fulfilment of a network slice subnet instance service assurance addressing the capability QoS requirement of the intent.

#### 5.y.2.4 Post-condition

The communication service assurance expectation expressed by intent for a specified group of end users is fulfilled.

#### 5.y.2.5 Requirements

**REQ-Intent\_Assure\_Slice-CON-3:** The intent driven MnS shall have capability enabling MnS consumer to express intent containing an expectation for network slice subnet service assurance.

Second change

## A.2 Key issues of network slice service assurance

Regarding the use case of service assurance in scenario of network slice instance and network slice subnet instance assurance as described in clause 5 in this document, the intent driven management should take follow key issues into account:

* What and how intent driven management expresses the requirements of assurance of network slice instance and network slice subnet instance, based on the input attributes of service profile and slice profile.
* What and how intent driven management reports the fulfilment of assurance requirements of network slice (subnet) instance.

The end of the change