**3GPP TSG-SA5 Meeting #143-e *S5-223259rev1***

e-meeting, 9 - 17 May 2022

**Source: Huawei**

**Title: Add use case of network slice allocation**

**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 of network slice allocation based on intent-driven management for network slicing.

# 3 Proposed changes

The start of the change

# 5 Use cases and potential requirements

## 5.x Intent driven management for Network slice life cycle management

## 5.x.1 Use case of Intent driven management to deliver a network slice instance

#### 5.x.1.1 Introduction

To satisfy the requirement of network operator for allocation of a network slice instance with certain characteristics, the 3GPP management system requests creation of new or using existing network slice instance.

#### 5.x.1.2 Pre-condition

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

Network operator is capable to provide the life cycle management of network slice instance in management system to invoke the proper intent driven MnS or existing MnSs.

#### 5.x.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 to order a communication service to network operator.

The operator provides the expectation of intent of creating a network slice instance with a set of network characteristics. The intent driven management service producer is capable to translate the intent of creating a network slice instance to the network operator’s intent to relevant requirements of creating a network slice instance. Regarding the intent MnS request received, the intent driven-management service provider may decide management capabilities to meet the requirements of creating a network slice instance, for example allocating a network slice instance. The intent driven management service producer is also capable to provide the management capabilities to support the provisioning of a network slice instance addressing the capability of network slice instance, QoS requirement and other requirement derived from the expression of the intent.

#### 5.x.1.4 Post-condition

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

#### 5.x.1.5 Requirements

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

**REQ-Intent\_Deploy\_Slice-CON-2:** The intent driven MnS shall have capability enabling MnS consumer to express intent containing an expectation for delivering a network slice instance.

## 5.x.2 Use case of Intent driven management to deliver a network slice instance subnet

#### 5.x.2.1 Introduction

To satisfy the requirement of network operator for allocation of a network slice instance subnet with certain characteristics, the 3GPP management system requests creation of new or using existing network slice subnet instance. The examples of network slice subnet instance are CN slice subnet instance or RAN slice subnet instance.

#### 5.x.2.2 Pre-condition

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

Network operator is capable to provide the life cycle management of network slice subnet instance in management system to invoke the proper intent driven MnS or existing MnSs.

#### 5.x.2.3 Description

In order to create the network slice subnet provided by a 3GPP network, a MnS Consumer expresses its intent to create network slice subnet instance.

The operator provides the expectation of intent to deliver a network slice subnet instance with a set of network characteristics. The intent driven management service producer is capable to translate the intent of creating a network slice subnet instance with relevant requirements of creating a network slice subnet instance. Regarding the intent MnS request received, the intent driven-management service provider may decide management capabilities to meet the requirements of creating a network slice subnet instance, for example allocating a network slice subnet instance. The intent driven management service producer should be capable to provide the management capability to support the provisioning of a network slice subnet instance addressing the capability of network slice subnet instance, QoS requirement and other requirement derived from the expression of the intent.

#### 5.x.2.4 Post-condition

The network slice subnet instance creation operation expressed by intent for a specified group of end users is fulfilled.

#### 5.x.2.5 Requirements

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

The end of changes