**3GPP TSG-SA5 Meeting #144-eS5-224108**

**e-meeting, 27 June – 1 July 2022**

**Source: Huawei**

**Title: Add use case for NF creation as cloud native VNF**

**Document for: Approval**

**Agenda Item: 6.8.5.1**

# 1 Decision/action requested

***For approval***

# 2 References

[1] 3GPP TR 28.834 V0.1.0 Study on Management of Cloud Native Virtualized Network Functions

# 3 Rationale

TS 28.526 describes the VNF instantiation procedure based on release 3 ETSI NFV IFA specifications (e.g. IFA013 and IFA011), which do not support cloud native VNF lifecycle management. This contribution adds a new use case to describe the issue in the current SA5 spec when creation of NF as a cloud-native VNF.

# 4 Detailed proposal

In 1st change, it is proposed to add related references in clause 2 of TR 28.834 V0.1.0 [1].

In 2nd change, it is proposed to add a new use case (Use cases# X: NF creation as a cloud native VNF) in new clause 5.x of TR 28.834 V0.1.0 [1], which includes description and requirements.

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| **1st change** |

# 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".

[x] 3GPP TS 28.531: "Management and orchestration; Provisioning".

[y] 3GPP TS 28.526: "Telecommunication management; Life Cycle Management (LCM) for mobile networks that include virtualized network functions".

[z] ETSI GS NFV-IFA013 V3.1.2 (2018-08) "Network Function Virtualization (NFV); Management and Orchestration; Os-Ma-nfvo Reference Point - Interface and Information Model Specification".

[xx] ETSI GS NFV-IFA013 V4.3.1 (2022-06) "Network Function Virtualization (NFV); Management and Orchestration; Os-Ma-nfvo Reference Point - Interface and Information Model Specification".

[yy] ETSI GS NFV-IFA011 V4.3.1 (2022-06) "Network Function Virtualization (NFV); Management and Orchestration; VNF Descriptor and Packaging Specification".

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| **2nd change** |

## 5.X Use cases# X: NF creation as a cloud native VNF

### 5.X.1 Description

TS 28.531 [x] describes the procedure of NF instance creation with interaction with ETSI NFV MANO, when a NF instance to be created contains virtualized part, the NFMS\_P (Network Function Management Service Provider) invokes VNF lifecycle management with requirements for VNF instance as descried in clause 4.2.2.2 in TS 28.526 [y].

Clause 4.2.2.2 in TS 28.526 [y] describes the VNF instantiation as part of NS update initiated through Os-Ma-nfvo interface based on release 3 ETSI NFV IFA013 [z], which does not support cloud native VNF lifecycle management.

The Cloud-Native VNFs and Container Infrastructure management feature is supported in release 4 specifications of ETSI NFV

The major enhancement in release 4 specification of ETSI NFV-IFA013 [xx] to support cloud native VNF lifecycle management is the following:

1, it supports to use VNFD (and VNF package) which based on release 4 specification of ETSI NFV-IFA011 [yy] that supports modeling of VNF based on OS contains.

2, it supports managing container cluster network which will be used for establishing connection with VNF.

3, after a cloud native VNF has been created, the virtualized resouces which related to containers can be queried by OSS (i.e. 3GPP management system).

. In order to support lifecycle management of cloud native VNF, 3GPP management system shall use the release 4 specifications as defined by ETSI NFV to interact with ETSI NFV MANO (e.g., ETSI GS NFV-IFA013 V4.3.1 [xx]).

### 5.X.2 Requirements

REQ-NF-Creation-1: The 3GPP management system shall have a capability to interact with ETSI NFV MANO for NF creation as a cloud native VNF.

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| **End of changes** |