**3GPP TSG-SA3 Meeting #101-e *S3-203135***

**e-meeting, 9 -20 Novenber 2020** Revision of S3-20xxxx

**Source: China Mobile**

**Title: Adding test case into clause 5.2.5.5.8.5.1**

**Document for: Approval**

**Agenda Item: 5.2**

# 1 Decision/action requested

***This contribution adds test case into clause 5.2.5.5.8.5. and deletes EN*** ***about threat analysis and the scenario.***

# 2 References

[X] 3GPP TR 33.117: "Catalogue of general security assurance requirements"

# 3 Rationale

The requirement for separation of inter-VNF and intra-VNF traffic was proposed, but there is no related test case. This contribution adds the related test case into clause 5.2.5.5.8.5.1.

In addition, this contribution proposes to delete the EN about threat analysis and the scenario for the following reasons:

1. The purpose of hardening is to reduce the attack surface and security vulnerability of the network product and to ensure that security functions of the network product cannot be bypassed, there is no threat analysis to be needed.

2. The intra-VNF traffic is the traffic between the VNFCIs of the VNF. If there is no separation of inter-VNF and intra-VNF traffic, the security threat of the inter-VNF traffic could impact the intra-VNF traffic,e.g. an attacker can attacks all of the VNFCIs through a malicious VNF attacks a VNFCI of the VNF.

This contribution also proposes to add the description related to threat analysis for the requirement of Separation of inter-VNF and intra-VNF traffic.

# 4 Detailed proposal

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of the change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

5.2.5.5.8.5.1 Separation of inter-VNF and intra-VNF traffic

*Requirement Name*: inter-VNF and intra-VNF Traffic Separation

*Requirement Description*:

The network used for the communication between the VNFCIs of a VNF and the network used for the communication between VNFs shall be separated to prevent the security threats from the different networks affect each other.

*Threat Reference: TBD*

*Test case*:

**Test Name:** TC\_TRAFFIC\_SEPARATION\_INTER-VNF\_INTRA-VNF

**Purpose:**

To test whether the traffics between inter-VNF traffic and intra-VNF traffic are separated.

**Procedure and execution steps:**

**Pre-Condition:**

1. There has a VNF instance on the test environment. This VNF instance has more than one VNFCI (VNF component Instance). The network between VNFCIs means intra-VNF network which is private network provided by vendor.

2. The document which describes how to separate the inter-VNF traffic with the intra-VNF traffic has been provided by the vendor. For example, the different network segments are described in the document.

3. Another VNF instance (or a simulated VNF instance) is on the test environment and can communicate with the tested VNF instance.

**Execution Steps**

**Execute the following steps:**

1. The tester checks whether the inter-VNF traffic and intra-VNF traffic are separated according the document by the vendor. For example, the tester checks whether the different network segments used by inter-VNF traffic and intra-VNF traffic respectively.

2. The tester checks whether a VNFCI refuses inter-VNF traffic on all intra-VNF interfaces. For example, the tester can send ping to all intra-VNF interfaces through an inter-VNF interface.

3. The tester checks whether a VNFCI refuses intra-VNF traffic on all inter-VNF interfaces. For example, the tester can send ping to all inter-VNF interfaces through an intra-VNF interface.

**Expected Results:**

In the step 1, the inter-VNF traffic and intra-VNF traffic are separated according the document by the vendor. In the step 2 and step 3, the VNFCI refuses traffic.

**Expected format of evidence:**

A PASS or FAIL.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of the change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*