**3GPP TSG-SA3 Meeting #108e-AdHoc *S3-222545r3***

**e-meeting, 10 - 14 October 2022** merger of 2545, 2546, 2830, 2650, 2745, 2899

**Source: Huawei, HiSilicon, Nokia, ZTE, Lenovo, Xiaomi**

**Title: Update to key issue 1**

**Document for: Approval**

**Agenda Item: 5.12**

# 1 Decision/action requested

***Approve the new KI proposal to eNS3 TR33.886***

# 2 References

[1]

# 3 Rationale

The contribution proposes to update key issue 1 with security threats and requirments. Specifically, this key issue addresses security issues related to the downlink only, i.e. the link from the network side (UDM) to the UE. As to the uplink, it will be addressed in a separate key issue.

# 4 Detailed proposal

pCR

\*\*\* BEGINNING OF CHANGES \*\*\*

## 4.1 Key Issue #1: providing VPLMN slice information to roaming UE

### 4.1.1 Key issue details

The following requirement for a 5G network is specified in TS 22.261[2] in order to support a roaming UE activating network slice services

*For a roaming UE activating a service/application requiring a network slice not offered by the serving network but available in the area from other network(s), the HPLMN shall be able to provide the UE with prioritization information of the VPLMNs with which the UE may register for the network slice*

A related key issue is also being studied in TR 23.700-41 [3] for possible procedure changes to automatic PLMN selection for a roaming UE requiring a network slice not offered by the serving network but available in the area from other network(s). It is expected that the corresponding security procedure will be affected (e.g. Steering of Roaming in TS33.501 [4]) in order to support the HPLMN to provide a roaming UE the VPLMN slice information.

In this key issue, the following aspects will be studied:

- Would security procedures be impacted? If so which security procedures are impacted in support of HPLMN proving a roaming UE with information about prioritization information of the VPLMNs with which the UE may register for the network slice?

- How to secure the procedures impacted.

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Editor's note: other aspects may be added in this key issue to align with the outcome of SA2 TR 23.400-41[3]

### 4.1.2 Security threats

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If VPLMN network slice information sent by HPLMN to a roaming UE are not protected in integrity, they may be tampered by the VPLMN. The VPLMN network slice information received by the UE will not correspond to the choice of HPLMN.

### 4.1.3 Potential security requirements

The 5G system shall secure procedures (integrity protection) for the HPLMN to provide a roaming UE with information about slice availability and network prioritization.

\*\*\* END OF CHANGES \*\*\*