3GPP TSG SA WG 3 Meeting SA3#102e TDoc draft\_S3-210406-r10

Electronic meeting, Online, 18 - 29 January 2021

**Title:** LS on Feedback on Key Issue #4 "UE onboarding and remote provisioning"

**Release:** Rel-17

**Work Item:** Study on enhanced security support for Non-Public Networks (FS\_eNPN\_SEC)

**Source:** **Ericsson, to be SA3**

**To: SA2**

**Cc:** **CT1, CT3, CT4**

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**Send any reply LS to: 3GPP Liaisons Coordinator, mailto:3GPPLiaison@etsi.org**

**Attachments:** None

# 1 Overall description

SA3 is aware of that the conclusions in TR 23.700-07 on Key Issue #4 "UE onboarding and remote provisioning" depend on feedback from SA3. To enable SA2 to progress their normative work, SA3 would like to give the following feedback, based on the current status of SA3's TR 33.857.

1)

Editor's note: In order to support UE onboarding using Default UE credentials and O-SNPN as the Onboarding Network (ON) the distribution of security functions when primary authentication is used should be decided by SA WG3, e.g. whether and how to support the primary authentication based on default credential in case DCS is deployed or not.

SA3 feedback: SA3 confirms that, for the support of UE onboarding, keying material for the protection of NAS and AS needs to be generated as part of an authentication procedure based on existing primary authentication procedures. The AUSF is involved in such primary authentication procedure, however SA3 has not concluded yet whether the DCS is involved in the primary authentication procedure. SA3 will provide further feedback as study progresses.

2)

Editor's note: DCS is potentially introduced to authenticate a UE with default UE credentials or provide means to another entity to do it. There are two potential mechanisms for DCS to authenticate the UE. 1) DCS interacts with O-SNPN and Network Function in SO-SNPN (Subscription Owner SNPN) is not involved in the authentication procedure. As a result, the SO-SNPN is not directly involved with the authentication procedure but gets informed of its result and then performs remote provisioning. 2) DCS interacts with SO-SNPN and Network Function in SO-SNPN (Subscription Owner SNPN) is involved in the authentication procedure. As a result, the SO-SNPN is directly involved and aware of the result of authentication procedure and performs remote provisioning. SA WG3 needs to evaluate the two above mechanisms from security perspective and provide feedback.

SA3 feedback: SA3 will provide feedback when SA3's study has progressed further.

3)

Editor's note: It is up to SA3, whether DCS can interact with PS after the primary authentication for provisioning.

SA3 feedback: SA3 will provide feedback when SA3's study has progressed further.

4)

Editor's note: The decision on whether primary authentication is required during initial access to the O-SNPN is dependent on SA WG3 feedback; until this feedback is received, it is assumed that such authentication is required.

SA3 feedback: As indicated in answer 1, a primary authentication procedure is required during initial access to the O-SNPN.

5)

Editor's note: SA WG3 should provide feedback on whether the UEs permanent identifier (SUPI or SUCI) may be used for finding the DCS identity or address/domain that can authenticate the UE, as well their security properties.

SA3 feedback: It can be assumed that the identifier contained in the default credentials is a NAI, i.e. it has the same format as a SUPI of type NSI. The realm will always be in cleartext, regardless of whether SUCI or SUPI is sent. . Hence the SUPI/SUCI (using Rel-15/16 terminology) can be used to find the DCS.

6)

Editor's note: SA WG3 feedback will need to be taken into account for including of the CP based provisioning.

Editor's note: SA WG3 to determine whether and how Control Plane based provisioning using UE Parameters Update (UPU) procedure and User Plane provisioning can support devices without UICC i.e. how to secure the provisioned credentials between the PS and an endpoint in ME.

Editor's note: SA WG3 feedback for the suitability of the procedure will need to be taken into account.

Editor's note: whether an extra security layer for protection of credentials between PS and UE is needed should be decided by SA WG3.

Editor's note: The vertical may verify the UE before PNI-NPN credential is provisioned to UE, and how this is done should be decided by SA WG3.

Editor's note: for PNI-NPN credentials remote provisioning, whether the 3GPP operator could decide to update the UE Subscription Data (e.g., S-NSSAI, DNN, CAG information) in the UDM/UDR used to access to the PNI-NPN based on the input from the vertical which may be outside 3GPP operator domain should be decided by SA WG3.

SA3 feedback: SA3 will provide feedback when SA3's study has progressed further.

# 2 Actions

**To SA2**

**ACTION:** SA3 asks SA2 to take the feedback into account.

# 3 Dates of next TSG SA WG 3 meetings

SA3#102e-Bis 1 - 5 March 2021 Electronic meeting

SA3#103e 17 - 28 May 2021 Electronic meeting