**3GPP TSG-SA3 Meeting #121 S3-XXXXXX**

**Gothenburg, Sweden, 7 - 11 April 2025**

**Source: Nokia**

**Title: Pseudo-CR on 3GPP Cryptographic Inventory for SEPP-PRINS and SEPP-TLS**

**Document for: Approval**

**Agenda item: 5.20**

**Spec: 3GPP TR 33.9XX**

**Version: 0.0.0**

**Work Item: FS\_CryptoInv**

**Comments**

This document presents an inventory of services that that make use of the SEPP-PRINS and SEPP-TLS protocol in response to the work item Study on 3GPP Cryptographic Inventory.

\* \* \* First Change \* \* \* \*

### 4.4.X SEPP-PRINS

SEPP-PRINS is used in the 5G system for N32 Interconnect Security. In scenarios where Inter-PLMN Network eXchange providers act as intermediaries between SEPPs (5.9.3.2 of TS 33.501), PRINS is employed instead of direct TLS connections.

PRINS allows IPX providers to modify specific Information Elements within signaling messages as agreed upon by the involved Mobile Network Operator. Each modification is signed with a certificate, enabling the receiving MNO to verify both the authenticity of the change and the identity of the entity that made it.

If PRINS is the selected security method for N32-f interface, one of the following additional transport protection methods shall be applied between SEPP and Roaming Intermediary for confidentiality and integrity protection:

- NDS/IP as specified in TS 33.210 [3] and TS 33.310 [5], or

- TLS VPN with mutual authentication following the profile given in clause 6.2 of TS 33.210 [3] and clause clause 6.1.3a of TS 33.310 [5].

### 4.4.X SEPP-TLS

When are no Roaming Intermediaries between the SEPPs which communicate directly without intermediaries, they utilize mutually authenticated TLS connections. This approach ensures that all signaling messages exchanged are encrypted end-to-end, providing a high degree of security. SEPP TLS certificates used to establish the N32-c and N32-f connections. For SEPP-TLS, each trust anchor consists of a list of trusted root certificates and a list of corresponding PLMN-IDs.

\* \* \* End of Changes \* \* \* \*