**3GPP TSG-SA3 Meeting #105-e *drat\_S3-213871-r1***

**e-meeting, 8 – 19 November 2021**

**Title: Reply LS on Layer-3 UE-to-Network Relay authentication and authorization**

**Response to: Reply LS (S3‑213871/S2-2107976) on Layer-3 UE-to-Network Relay authentication and authorization**

**Release: Rel-17**

**Work Item: FS\_5G\_ProSe\_Sec**

**Source: SA3**

**To: SA2**

**Cc:**

**Contact person: Soo Bum Lee**

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

**Attachments:** none

# 1 Overall description

SA3 would like to thank SA2 for the reply LS on Layer-3 UE-to-Network Relay authentication and authorization. SA3 discussed the reply LS and provides the following answers to SA2 questions:

Q1: Is the user plane solution (using a PKMF) to be documented only in SA3 specifications as in LTE ProSe design so that it does not require any change to the system architecture in TS 23.304? Does SA3 expect any support for the inter-PKMF interfaces, and would that need any SA2 documentation, or would it also be documented in SA3 specifications only?

* While no work is expected in SA2 for the user-plane solution, SA3 suggests SA2 to capture the new reference points introduced in 5G ProSe (i.e., between UE and PKMF and between PKMFs) in the SA2 specification.

Q2: SA2 has discussed control plane security solution but can't progress this part of the work without SA3 guidance. Can SA3 provide a consolidated control plane solution (based on primary authentication), or a list of expected system impacts for SA2 to incorporate the corresponding enhancements to TS 23.304?

* The followings are the list of the agreed (high-level) procedures.
  + Remote UE’s primary authentication via the Relay UE’s NAS connection. In other words, the Relay UE’s AMF should support the primary authentication of the Remote UE over the existing NAS connection with the Relay UE.
  + PC5 key derivation based on the Remote UE’s KAUSF. This requires the Relay UE’s AMF interacts with the Remote UE’s AUSF to fetch the PC5 key.
* SA3 will keep SA2 informed on the progress on the control plane solution.

# 2 Actions

**To SA2**

**ACTION:** 3GPP TSG SA WG3 would like SA2 to take the above feedback into account.

# 3 Dates of next TSG SA WG3 meetings

SA3#106 07 – 11 February 2022 TBD

SA3#106-bis 04 – 08 April 2022 TBD