**3GPP TSG-SA3 Meeting #116 *S3-242501-r1***

Jeju, South Korea, 20th - 24th May 2024

**Source: Huawei, HiSilicon**

**Title: New solution to address KI#1**

**Document for: approval**

**Agenda Item: 5.10**

# 1 Decision/action requested

***Propose to capture this solution in TR*** ***33.700-32.***

# 2 References

NA

# 3 Rationale

Propose a new solution to address KI#1. This solution proposes to carry the user ID in Registration Request message, and AUSF\UDM will be reused for user authentication.

# 4 Detailed proposal

\*\*\*\*\*Start of Change \*\*\*\*\*

\*\*\*\*\* Start of the 2nd change\*\*\*\*\*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TR 23.700-32: "Study on User Identities and Authentication Architecture"

[X] 3GPP TS 23.502: "Procedures for the 5G System (5GS)"

[Y] 3GPP TS 33.501: "Security architecture and procedures for 5G System"

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[x] <doctype> <#>[ ([up to and including]{yyyy[-mm]|V<a[.b[.c]]>}[onwards])]: "<Title>".

\*\*\*\*\* End of the 2nd change\*\*\*\*\*

## 5.X Solution #X: Human User authentication of through NAS procedure

### 5.X.1 Introduction

This solution addresses key issue #1: "Authentication and Authorization of Human User ID". The solution focuses on the authentication procedure.

### 5.X.2 Details

The user ID is sent by the UE in the Registration Request message. When the AMF receives the Registration Request message, the AMF first perfroms the regstriation procedure for the UE. The user authentication procedure will run after the Primary authentication.



Figure X-1: User Authentication Procedure for human user

1. The UE that the user is using may or may not have registered to the 5GC.

2. A user logs onto the UE.

3. The UE sends the Registration Request message to the AMF. If the UE registered to the 5GC before, then the 5G-GUTI is included, otherwise, the SUCI is included. Additionally, the user ID will be carried in the Registration Request message.

4. The AMF continutes the Registration Procedure for the UE. If the UE registration fails, the AMF will terminate the procedure the same way as in TS 23.502[X]. If the UE registration compeltes, the UE runs the user authentication procedure.

5. After completing the UE registration procedure, the AMF starts to run user authentication procedure.

6-10. Comparing to primary authentication procedure define in TS 33.501[Y], only EAP method is used for user authentication. AUSF and UDM are reused for user authentication procedure.

Editor’s note: It is ffs to clarify the EAP methond compared with primary authentication.

Editor’s note: It is ffs to clarify the credential used for user authentication.11. The AMF sends the Registration Accept message to the UE. The Registration Accept message further contains the authentication result of the user authentication.

12. If EAP-Success is received, the UE will allow the user to use the UE. Otherwise, the UE will drop the user.Editor’s note: It is ffs whether the UE needs to authorize the user based on the result of the UE authentication.

### 5.X.3 Evaluation

TBD\*\*\*\*\*The End\*\*\*\*\*