**3GPP TSG-SA3 Meeting #108e-AdHoc *S3-222922-r4***

**e-meeting, 10 - 14 October 2022**

**Source: Ericsson, Lenovo**

**Title: New solution for delegated Home Network controlled primary authentication**

**Document for: Approval**

**Agenda Item: 5.7**

# 1 Decision/action requested

***It is proposed to approve the proposed solution for inclusion to the TR 33.741.***

# 2 References

[1] 3GPP TR 33.741: "Study of home network triggered primary authentication".

# 3 Rationale

A Home Network controlled primary authentication can be considered as one form of a Home Network triggered authentication. Home Network control could mean that the Home Network could delegate its primary authentication policy to the Serving Network and the SN could apply it based on e.g., specific time or event information.

This document proposes a solution for a delegated HN controlled primary authentication.

# 4 Detailed proposal

It is proposed to make the following changes to the TR 33.741 [1].

## \*\*\* BEGIN CHANGES \*\*\*

## 5.Y Solution #Y: Delegated Home Network controlled primary authentication

### 5.Y.1 Introduction

The solution proposes that the Home Network delegates the enforcement of its Home Network (HN) primary authentication policy to the Serving Network (SN). The SN initiates primary authentication upon time intervals and/or events described in the HN primary authentication policy such as timer events or receptions of specific messages.

Editor' Note: Whether the HN primary authentication policy is static or run-time policy is FFS.

A HN primary authentication policy is a group of configuration options for authentication decisions. These may be per-UE or PLMN-wide, and could indicate for example when a UE should be authenticated, the use case for re-authentication, etc. The exact design of the HN primary authentication policy is left to normative work.

### 5.Y.2 Solution details

The basic concept of this solution is that the HN delegates the enforcement of its HN primary authentication policy to the SN.

The SN can be made aware of the HN primary authentication policy as part of the SLA agreements with each roaming partner. Such a sharing of HN primary authentication policies is in the scope of GSMA. However, when HPLMN provides the HN policy to the service network, then how the serving network will take into account such a HN policy is within the remits of 3GPP.

This document outlines the needed functionality on the home and serving network to support such a delegated primary authentication.

Alternatively, this solution proposes that the HN provides the HN primary authentication policy to the SN via an online method using SBA interactions. Some examples of how the HN authentication policy could be then provided to the SN include:

a) In the response to the authentication request to the AMF (Nausf\_UEAU\_Authenticate Response).

b) In the response to the AMF registration in UDM (Nudm\_UECM\_Registration Response).

c) As Subscription Data provided to the AMF during registration (Nudm\_SDM\_Get Response).

Depending on the method used, the HN primary authentication policy potentially applies either at HPLMN level or on a per UE basis (i.e. different UEs of the HPLMN potentially use different HN authentication policies).

The AMF potentially takes into account the local authentication policy and the provided HN primary authentication policy and decides when to initiate primary authentication and when to potentially contact the UE.

Editor's Note: How a (timer) policy interworks with other scenarios that cause UE reauthenticated.

### 5.Y.3 Evaluation

TBD

## \*\*\* END CHANGES \*\*\*