**3GPP TSG-SA3 Meeting #117 *S3-24XXXX***

**Maastricht, Netherlands, 19 – 23 August 2024**

**Source: Google**

**Title: Evaluation for solution #1**

**Document for: Approval**

**Agenda Item: 5.6**

# 1 Decision/action requested

***Approve the pCR to TR 33.701***

# 2 References

[1] 3GPP TR 33.701 V0.3.0 Study on mitigations against bidding down attacks (Release 19)

#  3 Rationale

This contribution proposes a solution evaluation for solution#1 in TR 33.701.

# 4 Detailed proposal

\*\*\* Start of 1st Change \*\*\*

## 5.5 Solution #1: Securely notification to UE when the GERAN/UTRAN networks are decommissioned

### 5.5.1 Introduction

This solution addresses the security requirement in key issue#1 on secure notification to UE when the GERAN or UTRAN networks are decommissioned.

### 5.5.2 Details

The UE performs the registration procedure when it is connecting to the LTE or 5G network. During this procedure, the network indicates to the UE about the information on whether GERAN or UTRAN is decommissioned in a secure message, i.e., Registration Accept.

The current Registration Accept message content is referring to Clause 8.2.7 in TS 24.501[6]. With the new indication, the new Registration Accept message is as below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **IEI** | **Information Element** | **Type/Reference** | **Presence** | **Format** | **Length** |
|  | Extended protocol discriminator | Extended protocol discriminator9.2 | M | V | 1 |
|  | Security header type | Security header type9.3 | M | V | 1/2 |
|  | Spare half octet | Spare half octet9.5 | M | V | 1/2 |
|  | Registration accept message identity | Message type9.7 | M | V | 1 |
|  | 5GS registration result | 5GS registration result9.11.3.6 | M | LV | 2 |
| 77 | 5G-GUTI | 5GS mobile identity9.11.3.4 | O | TLV-E | 14 |
| …… |
| 13 | List of PLMNs to be used in disaster condition | List of PLMNs to be used in disaster condition9.11.3.83 | O | TLV | 2-n |
| TBD | List of decommissioned RAT | List of decommissioned RAT | O | TLV | 2-n |

This service is supposed to be provided for all the UEs when operators enable it. The UE ensures that no connection is established with decommissioned RATs.

Editor’s Note: How UE ensures this is FFS.

### 5.5.3 Evaluation

This solution applies to both LTE and 5G networks. The network uses a Registration Accept message to send the list of decommissioned RATs to the UE during a general UE Registration Procedure. Hence, the solution has an impact only on UE and the AMF (MME in LTE).

This solution clarifies that the UE establishes a secure connection with the network using active RATs not on the decommissioned list.

Legacy devices are out of scope of this solution.

This solution is concise and meets the objective of key issue #1 with clarity.

Note that solution #3, solution #5 and solution #7 for Key Issue #1 are very similar to solution #1.

\*\*\* End of 1st Change \*\*\*