**3GPP TSG-SA3 Meeting #104-e *S3-212583***

**e-meeting, 16 - 27 August 2021** Revision of S3-20xxxx

**Source: Huawei, HiSilicon**

**Title: UAA procedure at registration (5G)**

**Document for: Approval**

**Agenda Item: 4.20 ID\_UAS**

# 1 Decision/action requested

***Approve the proposed pCR as normative text***

# 2 References

[1]

# 3 Rationale

This contribution proposes the UAA procedure based on the agreed principle in the study. It is in-line with SA2’s procedure as well.

# 4 Detailed proposal

pCR

\*\*\* BEGINNING OF CHANGES (all text new) \*\*\*

### X.x.2 UAA procedures

#### X.x.2.1 UAA Procedure at Registration

The UAA procedure at registration is triggered by an AMF with the details described below. The below description considers only the security related parameters (for full details of the flows see TS 23.256 [aa]). For an AMF initiated re-authentication, the procedure starts from the step 2.

1. The AMF decides to trigger the UAA procedure. UUAA shall only be triggered if the UE has provided a CAA-Level UAV ID and has a valid Aerial UE subscription. AMF may skip UUAA if the UE has completed UUAA succussfully before.

2. The AMF sends a message Nnef\_Auth\_Req to the UAS NF including the GPSI and the CAA-Level UAV ID.

3. The UAS NF sends an Authentication Request to the USS. The Authentication Request includes the GPSI and the CAA-Level UAV ID.

4. The USS and the UE exchange multiple Authentication messages:

4a. The USS replies to UAS NF with the Authentication Response message. It shall include a transparent container composed of an authentication message.

4b. The UAS NF sends the transparent container received in 4a to the AMF with .

4c. The AMF forwards the transparent container to the UE over NAS MM transport messages.

4d. The UE responses the AMF with a Authenticaiton message embedded in a transparent container over a NAS MM transport message.

4e. The AMF sends a message Nnef\_Auth\_Req to the UAS NF including the GPSI and the CAA-Level UAV ID, and the transparent container including the Authentication message provided by the UE.

4f. The UAS NF sends an Authentication Request to the USS. The Authentication Request includes the GPSI, the CAA-Level UAV ID and the transparent container.

NOTE: Multiple round-trip messages (4a to 4f) may be as required by the authentication method used by USS.

5. The USS sends the UAS NF an Authentication Response message. The Authentication Response shall include the the UAA result (success/failure), and a transparent container composed of Authorization Payload for the UAV if provided by the USS.

NOTE: The contents of the Authorisation Payload is not in the scope of 3GPP.

NOTE 2: The Authorisation Payload can be used to carry UAS security information between the USS and UAV. The content of UAS security information (e.g. key material to help establish security between UAV and USS) is not in 3GPP scope.

6. The UAS NF sends the AMF an Authentication Response message including the UAA result (success/failure) and the transparent container received in step 5.

7. The AMF sends the UAA result (success/failure) and transparent container received in step 5 to the UE.

The message(s) used in step 7 and and any further actions the AMF takes are given in TS 23.256 [aa].



Figure 5.2.2.2-1: UUAA Procedure at Registration

\*\*\* END OF CHANGES \*\*\*