3GPP TSG SA WG 3 Meeting SA3#103e S3-21xyzar2

Electronic meeting, Online, 17 - 28 May 2021

**Title: [draft]** Reply LS on Storage of KAUSF

**Response to:** LS S3-211375/ C1-211518 on Reply LS on Storage of KAUSF from CT1

**Source:** SA3

**To:** CT1

**Cc:** CT4

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

**Attachments:** draft\_S3-212104-rx

# 1 Overall description

SA3 thanks CT1 for their reply LS on Storage of KAUSF (S3-211375/C1-211518).

Based on the answer for CT1(S3-211375/C1-211518), SA3 has discussed the attached Rel-17 CR to TS 33.501, which mandating the AMF to initiate a security mode control (SMC) procedure as soon as possible after a successful primary authentication and key agreement procedure to take the new partial native 5G NAS security context into use. Mandating the AMF to initiate a SMC procedure as soon as possible after a successful primary authentication is applicable only when using **5G AKA based authentication** and not for **EAP based authentication**.

SA3 have a preference to address the potential KAUSF de-synchronization issue from Release 16 as agreed for Release 17 (only after identifying that the primary (re)authentication is successful in the network side, the UE shall store the KAUSF, SOR counter and UE parameter update counter). Therefore, SA3 requests CT1 to re-consider the possibility in mandating the SMC procedure as soon as possible after a successful **5G AKA authentication procedure** from Release 16.

Also, SA3 would like to request CT1, to provide their feedback on the following solution to address the potential KAUSF de-synchronization issue, specifically when UE receives multiple authentication requests simultaneously. SA3 assumes that CT1 will specify further details (stage-3 aspects) of the following solution.

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| If UE receives more than one authentication requests via different access types simultaneously (e.g. initial registration after UE powers on, UE initiate the service request procedures simultaneously via both NAS connections), the UE should process the authentication challenges in sequence. The UE should respond to the second authentication challenge after completion of the first authentication procedure. In case if the first authentication procedure is 5G-AKA, then after sending the Authentication Response message to the network the UE should respond to the second authentication challenge.In case if the first authentication procedure is EAP-AKA', then after receiving EAP Success/Failure from the network the UE should respond to the second authentication challenge. |

# 2 Actions

**To CT1**

**ACTION:** SA3 kindly requests CT1,

1. to take the attached SA3 CR into account when specifying the stage-3 aspects.

2. to re-consider the feasibility of mandating the AMF to initiate a SMC procedure as soon as possible after a successful 5G AKA authentication in Release 16 and provide their decision to SA3.

3. to review and provide their feedback on the solution to address the potential KAUSF de-synchronization issue, specifically when UE receives multiple authentication requests simultaneously.

SA3 kindly requests CT1 to take the above information into account.

# 3 Dates of next TSG SA WG 3 meetings

Please see the SA3 link from the 3GPP calendar page at <https://portal.3gpp.org/Home.aspx?tbid=386&SubTB=386#/>