**3GPP TSG-SA3 Meeting #105-e *draft\_S3-214195-r2***

e-meeting, 8 - 19 November 2021

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.501** | **CR** | **1237** | **rev** | **1** | **Current version:** | **16.8.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **x** |

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|  |
| ***Title:***  | N32 for interconnect security |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** | 5G\_eSBA |  | ***Date:*** | 2021-11-19 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | An LS on using N32 for interconnect security (S3-213814) was received from CT4. While the methods are to be specified in CT4 specifictions, it became clear that 33.501 is missing to mention that the inter-PLMN security as for roaming applies also for interconnect scenarios.  |
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| ***Summary of change:*** | Add interconnect, i.e. that a SEPP enforces inter-PLMN security on the N32 interface that include roaming and interconnect. |
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| ***Consequences if not approved:*** | Interconnect in Inter-PLMN communication is not addressed in security standard. |
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| ***Clauses affected:*** | 4.2.0 (new) |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | S3-214195 |

##

## \*\*\*\*\*\* START OF CHANGES

### 4.2 Security at the perimeter of the 5G Core network

### 4.2.0 General

The security specified in this document applies to roaming and interconnect.

### 4.2.1 Security Edge Protection Proxy (SEPP)

The 5G System architecture introduces a Security Edge Protection Proxy (SEPP) as an entity sitting at the perimeter of the PLMN for protecting control plane messages.

The SEPP enforces inter-PLMN security on the N32 interface.

### 4.2.2 Inter-PLMN UP Security (IPUPS)

The 5G System architecture introduces Inter-PLMN UP Security (IPUPS) at the perimeter of the PLMN for protecting user plane messages.

The IPUPS is a functionality of the UPF that enforces GTP-U security on the N9 interface between UPFs of the visited and home PLMNs.

NOTE: IPUPS can be activated with other functionality in a UPF or activated in a UPF that is dedicated to be used for IPUPS functionality (see also TS 23.501 [2], clause 5.8.2.14).

## 4.3 Security entities in the 5G Core network

The 5G System architecture introduces the following security entities in the 5G Core network:

AUSF: AUthentication Server Function;

ARPF: Authentication credential Repository and Processing Function;

SIDF: Subscription Identifier De-concealing Function;

SEAF: SEcurity Anchor Function.

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