**3GPP TSG-SA3 Meeting #103-e *draft\_S3-211869-r1***

**e-meeting, 17 - 28 May 2021, Online**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.926** | **CR** | **Draft CR** | **rev** |  | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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:*** | Security threat on malformat GTP-U messages | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SCAS\_5G\_IPUPS | | | | |  | ***Date:*** | | | 2021-04-25 |
|  |  | | | |  | |  | | |  |
| *Category:* | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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 can be 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | It has been specified in TS 33.501 clause 5.9.3.4 that "The IPUPS shall discard malformed GTP-U messages." This contribution proposes to add the threats of malformed messages. | | | | | | | | |
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| ***Summary of change:*** | | Add the threat of malformed GTP-U messages | | | | | | | | |
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| ***Consequences if not approved:*** | | Incomplete threat profile for IPUPS. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | K.2.X (New) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\*\*\*\*\*\*\*\*\*\* Start of Change 1 (All texts below are new) \*\*\*\*\*\*\*\*\*

## L.2.X Threats related to malformed GTP-U messages

- Threat name: Threats of malformed GTP-U messages.

- Threat Category: Denial of service.

- Threat Description: Malicious sender may send malformed GTP-U messages to a victim UPF with IPUPUS functionality. If the malformed GTP-U messages are not filtered, they may consume the processing resource of the victim UPF with IPUPS functionality, and even cause the victim UPF functionality to crash, causing denial of service attack.

- Threatened Asset: Sufficient Processing Capacity.

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