**3GPP TSG-SA3 Meeting #103 *draft\_S3-211868-r1***

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

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.513** | **CR** | **Draft CR** | **rev** |  | **Current version:** | **16.2.0** |  |
|  |
| *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 changeaffects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | New test case on malformatted GTP-U messages |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** | SCAS\_5G\_IPUPS |  | ***Date:*** | 2021-04-23 |
|  |  |  |  |  |
| ***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 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:*** | 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 a test case for the requirement.  |
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| ***Summary of change:*** | Add a new test case on how IPUPS handles malformatted GTP-U messages. |
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| ***Consequences if not approved:*** | Incomplete specification |
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| ***Clauses affected:*** | 4.2.2.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) \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 4.2.2.X Protection against malformatted GTP-U messages

*Requirement Name:* Protection against malformatted GTP-U messages

*Requirement Reference: TS 33.501[X], clause 5.9.3.4*

*Requirement Description:*

" The IPUPS shall discard malformed GTP-U messages. "

as specified in TS 33.501[X], clause 5.9.3.4.

*Threat Reference:* TR 33.926 [7], Clause L.2.X

**TEST CASE:**

NOTE Z: This test case is only applicable to UPF supporting IPUPS.

**Test Name:** TC\_IPUPS\_MALFORMATTED\_MESSAGES

**Purpose:**

Verify that malformatted messages are discarded by UPF.

**Pre-Conditions:**

Test environment is set up with a sender UPF, and a NG-RAN, which may be simulated.

The sender UPF, the NG-RAN, and the UPF under test are configured to have an active GTP-U session.

Fuzzing tools supporting GTP-U protocol is available.

**Execution Steps:**

The execution steps follow those in clause 4.4.4 of TS 33.117 [3], except that the protocol the fuzzing tool is excuted against is GTP-U and the interface is N9 .

**Expected Results:**

The UPF under test does not crash.

**Expected format of evidence:**

Evidence suitable for the interface, e.g., evidence can be presented in the form of screenshot/screen-capture.

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