**3GPP TSG-SA3 Meeting #98e *draft\_S3-200389-r3***

**e-meeting, 2 – 6 March 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.501** | **CR** | **0771** | **rev** | **-** | **Current version:** | **16.1.0** |  |
|  | | | | | | | | |
| *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 | **x** | ME | **x** | Radio Access Network | **x** | Core Network | **x** |

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| ***Title:*** | UP integrity enforcement for gPTP messages | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Interdigital | | | | | | | | | |
| ***Source to TSG:*** | S3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Vertical\_LAN\_SEC | | | | |  | ***Date:*** | | | 6.3.2020 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | C |  | | | | | ***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 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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | To avoid modifications of gPTP messages (control messages in TSN network, that are sent in the user plane via 5GS), it was decided to set UP integrity protection to “required”. gPTP messages are received by TSN AF, therefore it should be clarified that the determination of the UP security policy by SMF regarding gPTP may also be based on information received from TSN AF. In line with SA2 specification. | | | | | | | | |
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| ***Summary of change:*** | | Text clarifications in first paragraph.  Clarifying that determination by SMF regarding gPTP may also be based on information received from TSN AF. | | | | | | | | |
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| ***Consequences if not approved:*** | | Limiting SMF decision and not being aligned with SA2 clause on TSC assistance information received from TSN AF. | | | | | | | | |
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| ***Clauses affected:*** | | L.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 CHANGES

## L.3 Protection of user plane data in TSC including gPTP control messages

After the 5GS TSC-enabled UE is authenticated and data connection is set up, any data received from a TSC bridge or another 5GS TSC-enabled UE shall be transported between DS-TT (in the UE), and NW-TT (in the UPF) in a protected way using the mechanisms for UP security as described in clause 6.6.

The UP security enforcement information for UP confidentiality protection may be set to "required" depending on whether application layer protection is applied. This avoids redundant double protection.

The UP security enforcement information for UP integrity protection shall be set to "required" for data transferred from gNB to a 5GS TSC-enabled UE. This is also applicable to the gPTP messages sent in the user plane.

The determination of UP security enforcement information may be based on information received from TSN AF.

NOTE 1: Further details of TSN AF providing this information are left for implementation.

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