**3GPP TSG-CT WG1 Meeting #136eC1-224216**

**E-meeting, 12-20 May 2022**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.502** | **CR** | **0202** | **rev** | **1** | **Current version:** | **17.5.0** |  |
|  |
| *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 | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:***  | Addition of condition for deleting SA procedure |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2022-05-04 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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:*** | Security association deletion procedure is triggered by N3IWF, TGWF or by the UE. N3IWF and TGWF does it when there is an N1 signalling connection release. But there are situations where the UE can rejected by the NW with cause values ( e.g #11, #7 etc) and UE starts the timer T3540 in non-3GPP access. If the NW does not release the connection, then according to 24.501, upon the expiry of T3540, UE does a local release of the N1 signalling NAS connection. In such cases also there is no need to keep the security association and it should be deleted.  |
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| ***Summary of change:*** | Added condition that the SA deletion procedure is triggered by the UE when there is a local release of N1 signalling NAS connection. |
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| ***Consequences if not approved:*** | Security association is not deleted and kept unnecessariy. |
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| ***Clauses affected:*** | 7.4.1 |
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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:*** |  |

\* \* \* First Change \* \* \* \*

### 7.4.1 General

The purpose of the IKE SA deletion procedure via untrusted non-3GPP access and trusted non-3GPP access is to close the IKE SA between the UE and the N3IWFfor untrusted non-3GPP access and the TNGF for trusted non-3GPP access. In addition, deleting the IKE SA implicitly closes any remaining signalling IPsec child SAs and user plane IPsec child SAs associated with IKE SA.

This procedure shall be initiated either by the N3IWF, TNGF or by the UE.

The N3IWF for untrusted non-3GPP access and the TNGF for trusted non-3GPP access initiate this procedure in the following cases:

a) N1 NAS signalling connection release;

b) N3IWF-initiated and TNGF-initiated IKE SA rekeying procedure failure;

c) N3IWF-initiated and TNGF-intiated IKE SA rekeying procedure completion

d) upon receipt of an INITIAL\_CONTACT notification as specified in IETF RFC 7296 [6]; and

e) upon detecting an error in a response packet as specified in IETF RFC 7296 [6].

The UE initiates this procedure in the following cases:

a) UE-initiated IKE SA rekeying procedure failure;

b) UE-initiated IKE SA rekeying procedure completion;

c) upon receipt of an INITIAL\_CONTACT notification as specified in IETF RFC 7296 [6]; and

d) upon detecting an error in a response packet as specified in IETF RFC 7296 [6].

NOTE: UE can also initiate the IKE SA deletion procedure, based on implementation, in abnormal scenarios e.g. a local release of N1 NAS signalling connection upon expiry of T3540 and UE fails to receive INFORMATIONAL request for IKE SA deletion from the network.

\* \* \* next Change \* \* \* \*

\* \* \* next Change \* \* \* \*

\* \* \* next Change \* \* \* \*

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