**3GPP TSG-CT WG4 Meeting #99eC4-204xxx**

**E-Meeting, 18nd – 28th August 2020**

|  |
| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **29.573** | **CR** | **0044** | **rev** | **1** | **Current version:** | **16.3.0** |  |
|  |
| *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)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  | Error handling of mismatch of polices at SEPP |
|  |  |
| ***Source to WG:*** | NTT DOCOMO |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | TEI15 |  | ***Date:*** | 2020-08-11 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | According to TS 33.501 v16.3.0 clause 13.2.3.6, it is specifed as follows, and appropriate error message needs to be specifed for N32 handshake procedure (N32-c):

|  |
| --- |
| When a SEPP receives a data-type encryption or modification policy on N32-c as specified in clause 13.2.2.2, it shall compare it to the one that has been manually configured for this specific roaming partner and IPX provider. If a mismatch occurs for one of the two policies, the SEPP shall perform one of the following actions, according to operator policy: - Send the error message <TBD> to the peer SEPP.Editor's Note: The error message type needs to be specified by CT4. |

Clause 5.2.3.4 of TS 29.573 also mentions that an appriopriate error message will be defined in 6.1.4.3.2

|  |
| --- |
| 5.2.3.4 Parameter Exchange Procedure for Security Information list Exchange…2b. On failure, the responding SEPP shall respond to the initiating SEPP with an appropriate 4xx/5xx status code as specified in clause 6.1.4.3. |

However, the error handling that corresponds to mismatch of requested policy the configuration for N32 handshake procedure is is not available in current CT4 specifications, i.e. TS 29.573 and TS 29.500.It is proposed to use HTTP response code “409 Conflict”, and to add a new Problem Detail cause “REQUESTED\_PARAM\_MISMATCH” to be included in the error response. |
|  |  |
| ***Summary of change:*** | Add the error handling for SEPP receiving a data-type encryption or modification policy which does not match with the one that has been manually configured for the specific roaming partner and IPX provider. |
|  |  |
| ***Consequences if not approved:*** | Lack of necessary feature specified in TS 33.501. |
|  |  |
| ***Clauses affected:*** | 6.1.4.3.2, 6.1.6.3 |
|  |  |
|  | **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 does not introduce changes to any OpenAPI specification file. |
|  |  |
| ***This CR's revision history:*** |  |

First change

#### 6.1.4.3 Operation: Parameter Exchange

##### 6.1.4.3.1 Description

This custom operation is used between the SEPPs to exchange the parameters for the N32-f connection. The HTTP method POST shall be used on the following URI:

URI: {apiRoot}/n32c-handshake/v1/exchange-params

This operation shall support the resource URI variables defined in table 6.1.4.3.1-1.

Table 6.1.4.3.1-1: Resource URI variables for this Operation

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 6.1.1. |

##### 6.1.4.3.2 Operation Definition

This operation shall support the request data structures and response codes specified in tables 6.1.4.3.2-1 and 6.1.4.3.2-2.

Table 6.1.4.3.2-1: Data structures supported by the POST Request Body

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SecParamExchReqData | M | 1 | The IE shall contain the parameters requested by the requesting SEPP. |

Table 6.1.4.3.2-2: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| SecParamExchRspData | M | 1 | 200 OK | This represents the successful processing of the requested parameters. The SEPP shall provide the selected parameters (i.e selected cipher suite and/or selected protection policy) depending on what was requested by the requesting SEPP and what is supported by the responding SEPP, or the SEPP shall provide the security information lists of the connected IPXs. |
| ProblemDetails | O | 0..1 | 409 Conflict | The "cause" attribute may be used to indicate one of the following application errors:- REQUESTED\_PARAM\_MISMATCH |
| NOTE: The mandatory HTTP error status codes for the POST method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] other than those specified in the table above also apply, with a ProblemDetails data type (see clause 5.2.7 of 3GPP TS 29.500 [4]). |

Next change

### 6.1.6 Error Handling

#### 6.1.6.1 General

HTTP error handling shall be supported as specified in clause 5.2.4 of 3GPP TS 29.500 [4].

#### 6.1.6.2 Protocol Errors

Protocol Error Handling shall be supported as specified in clause 5.2.7.2 of 3GPP TS 29.500 [4].

#### 6.1.6.3 Application Errors

The common application errors defined in the Table 5.2.7.2-1 in 3GPP TS 29.500 [4] may also be used for the N32-c Handshake service. The following application errors listed in Table 6.1.6.3-1 are specific for the N32-c Handshake service.

Table 6.1.6.3-1: Application errors

|  |  |  |
| --- | --- | --- |
| **Application Error** | **HTTP status code** | **Description** |
| REQUESTED\_PARAM\_MISMATCH | 409 Conflict | This represents a parameter mismatch has been detected by the receiving SEPP, i.e. received data-type encryption or modification policy conflict with the one manually configured for the specific roaming partner and IPX provider |

End of change