**3GPP TSG-CT3 Meeting #134 *C3-242133***

**Changsha, Hunan Province, China, 15th Apr 2024 - 19th Apr 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **1228** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | EAS-DNAI consistency check | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Ericsson, Samsung | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGE\_Ph2 | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | |  |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Based on 23.548 CR#0189 (S2-2403357) agreed in Q1, 23.548 clause 6.2.3.4.2 requires that upon EAS Deployment, "if there is an existing EAS address information for a DNAI configured via OAM, NEF also ensures that any EAS IP address range Information per DNAI in EAS Deployment Information does not contradict with the existing information". | | | | | | | | |
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| ***Summary of change:*** | | Added the above consistency check of the NEF to the procedure of EAS Deployment Information provisioning, and a respective application error for the case of conflict. | | | | | | | | |
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| ***Consequences if not approved:*** | | Not fulfilled stage 2 requirements. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.4.28.2, 4.4.28.3, 5.21.5, 5.21.6.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 impact any OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

4.4.28.2 Creation of a new Individual EAS Deployment information resource

In order to create a new Individual EAS Deployment information resource for a given AF, the AF shall initiate an HTTP POST request to the NEF for the "EAS Deployment Information" resource. The HTTP POST request message body shall include the EasDeployInfo data structure that shall include:

- FQDN(s) of an application deployed in the Local part of the DN via an "fqdnPatternList" attribute;

and may include:

- an AF service identifier as the "afServiceId" attribute;

- an DNN as "dnn" attribute;

- an S-NSSAI as "snssai" attribute;

- an external Group Identifier as "exterGroupId" attribute;

- identification of an application as "appId" attribute;

- list of DNS server identifier and/or IP address(s) of the EAS in the local DN for each DNAI as "dnaiInfos" attribute; and

- the identifier of the AF that is responsible for the EAS associated with this EAS deployment information as "targetAfId" attribute, if the "EasRelocationEnh" feature is supported.

NOTE 1: The AF responsible for the EAS (indicated by the "targetAfId" attribute) can be different from the AF that creates the EAS Deployment information (indicated by the "afId" attribute in the URI of the resource).

NOTE 2: When the "targetAfId" attribute is provided, then all DNAI(s) correspond to the same EHE provider. The "targetAfId" attribute can be used in case of AF(s) involving different EHE providers, and the source EHE is unaware of other/target EHE specific deployment details.

Upon receipt of the corresponding HTTP POST message, if the AF is authorized by the NEF to provide the EAS Deployment Information, the NEF shall interact with the UDM by using Nudm\_SubscriberDataManagement service as defined in 3GPP TS 29.503 [17] to translate the external group identifier into the corresponding internal group identifier and the NEF may derive DNN and S-NSSAI from the AF Service Identifier if not received explicitly. Then the NEF shall interact with the UDR to create the associated EAS Deployment information by using the Nudr\_DataRepository service as defined in 3GPP TS 29.504 [20]. If the "EasDnaiConsistency" feature is supported and there are existing EAS-DNAI mappings configured via OAM in the UDR (see 3GPP TS 29.519 [23] clause 6.2.23), the NEF also ensures that the EAS Deployment Information received from the AF is not in conflict with the OAM-configured information. In case of conflict the NEF shall reject the request message by sending an HTTP response to the AF with a status code set to 403 Forbidden and may include the "CONFLICT\_CONFIG\_DATA" error in the "cause" attribute of the "ProblemDetails" structure. If the request is accepted by the UDR and the UDR informs the NEF with a successful response, the NEF shall create a new "Individual EAS Deployment Information" resource. Then the NEF shall send a HTTP "201 Created" response with the EasDeployInfo data structure including the contents of the created EAS Deployment Information resource in theresponse body and a Location header field containing the URI of the created individual EAS Deployment Information resource. If the NEF receives an error responsefrom the UDR, the NEF shall not create the resource and shall respond to the AF with a proper error status code. If the NEF received within an error response a "ProblemDetails" data structure with a "cause" attribute indicating an application error, the NEF shall relay this error response to the AF with a corresponding application error, when applicable.

\* \* \* \* Next change \* \* \* \*

4.4.28.3 Modification of an existing individual EAS Deployment Information resource

In order to modify an existing individual EAS Deployment Information resource, the AF shall initiate an HTTP PUT request to the "Individual EAS Deployment Information" resource. The request body shall include the EasDeployInfo data structure. The "afServiceId" value shall remain unchanged from the previous value, if available in the HTTP PUT message.

Upon receipt of the corresponding HTTP PUT request message, if the AF is authorized by the NEF to modify the existing individual EAS Deployment Information resource, the NEF shall interact with the UDR by invoking the Nudr\_DataRepository service as described in 3GPP TS 29.504 [20] to modify the EAS Deployment Information in the UDR. If the "EasDnaiConsistency" feature is supported and there are existing EAS-DNAI mappings configured via OAM in the UDR (see 3GPP TS 29.519 [23] clause 6.2.23), the NEF also ensures that the EAS Deployment Information received from the AF is not in conflict with the OAM-configured information. In case of conflict the NEF shall reject the request message by sending an HTTP response to the AF with a status code set to 403 Forbidden and may include the "CONFLICT\_CONFIG\_DATA" error in the "cause" attribute of the "ProblemDetails" structure.

If the modification request is accepted by the UDR and the UDR informs the NEF with a successful response, the NEF shall update the existing individual EAS Deployment Information resource. Then the NEF shall send a HTTP response including "200 OK" status code with EasDeployInfo data structure or "204 No Content" status code.

If the NEF receives an error responsefrom the UDR, the NEF shall not update the "Individual EAS Deployment Information" resource and shall respond a proper error status code to the AF. If the NEF received within an error response a "ProblemDetails" data structure with a "cause" attribute indicating an application error, the NEF shall relay this error response to the AF with a corresponding application error, when applicable.

\* \* \* \* Next change \* \* \* \*

5.21.5 Used Features

The table below defines the features applicable to the EASDeployment API. Those features are negotiated as described in clause 5.2.7 of 3GPP TS 29.122 [4].

**Table 5.21.5-1: Features used by EASDeployment API**

|  |  |  |
| --- | --- | --- |
| **Feature number** | **Feature Name** | **Description** |
| 1 | EasRelocationEnh | This feature indicates enhanced support of EAS relocation procedures via additional information about the AFs that are responsible for certain EAS. |
| 2 | EasDnaiConsistency | This feature indicates support of consistency checking between AF-provisioned and operator-configured data related to EAS Deployment. |

\* \* \* \* Next change \* \* \* \*

5.21.6.3 Application Errors

The application errors defined for EASDeployment API are listed in table 5.21.6.3-1.

**Table 5.21.6.3-1: Application errors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Application Error** | **HTTP status code** | **Description** | **Applicability** |
| CONFLICT\_CONFIG\_DATA | 403 Forbidden | The provided EAS Deployment Information is in conflict with the OAM-configured information. | EasDnaiConsistency |

\* \* \* \* End of changes \* \* \* \*