**3GPP TSG-CT WG3 Meeting #136 C3-244524**

**Maastricht, NL, 19 - 23 August, 2024 (Revision of C3-244346xxxx)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **1353** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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:*** | Corrections to the ECSAddress OpenAPI | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGE\_Ph2 | | | | |  | ***Date:*** | | | 2024-06-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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:*** | | Data type ECSAddrDeleteCriteria in main body contains the "suppFeat" attribute in the main body is not aligned with the ECSAddrDeleteCriteria data type defined in ECSAddress API OpenAPI file, and the supported feature should be introduced in deletion, hence needs to remove the "suppFeat" attribute in the ECSAddrDeleteCriteria data type in main body.  In table 5.36.2.1-1: Resources and methods overview, the "ECS Address Configuration Information Sets" and "individual ECS Address Configuration Information Set" resources have defined, while the corresponding procedure descriptions and naming are not matched, hence the correct resource naming needs to be corrected in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | In clause 5.36.5.3.3, removed the "suppFeat" attribute.  In other clauses affected, added the missing Sets/Set for the ECS Address configuration Information resources in procedures and API definitions to align with the defined resources naming. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The "suppFeat" attribute in the ECSAddrDeleteCriteria data type in the main body definition is wrongly included not matching the OpenAPI file and will cause implementation problem. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.4.40.2, 4.4.40.3, 4.4.40.4, 5.36.2.1, 5.36.2.2, 5.36.2.3, 5.36.2.2.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 the OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

#### 4.4.40.2 Creation of new ECS Address Configuration Information

In order to create a new Individual ECS Address Configuration Information Set resource for a given AF, the AF shall initiate an HTTP POST request to the V-NEF for the "ECS Address Configuration Information Sets" resource. The HTTP POST request message body shall include the EcsAddressInfo data structure that shall include:

- the ECS Server Address information within the "ecsServerAddr" attribute;

and may include:

- the spatial validity condition within the "spatialValidityCond" attribute;

- the DNN within the "dnn" attribute;

- the S-NSSAI within the "snssai" attribute.

NOTE 1: The V-NEF can derive HPLMN DNN and S-NSSAI information from the AF identifier, if the "dnn" and "snssai" attributes are not included in the EcsAddressInfo data structure.

NOTE 2: The provided information applies to any UE.

Upon receipt of the corresponding HTTP POST message, the V-NEF authorizes the request and if the AF was authorized by the V-NEF to provide the ECS Address Configuration Information, the V-NEF may interact with the V-UDR to create the associated ECS Address Roaming Information by using the Nudr\_DataRepository service as defined in 3GPP TS 29.519 [23]. If the request is accepted by the V-UDR and the V-UDR informs the V-NEF with a successful response or if no interaction with the UDR takes place and the V-NEF successfully handles the information locally, the V-NEF shall create a new "Individual ECS Address Configuration Information" resource and send an HTTP "201 Created" response with the EcsAddressInfo data structure including the contents of the created "ECS Address Configuration Information Set" resource in the response body and a Location header field containing the URI of the created "Individual ECS Address Configuration Information Set" resource. If the V-NEF receives an error response from the V-UDR, the V-NEF shall not create the resource and shall respond to the AF with a proper error status code. If the V-NEF received within an error response a "ProblemDetails" data structure with a "cause" attribute indicating an application error, the V-NEF shall relay this error response to the AF with a corresponding application error, if applicable.

\*\*\* 2nd Change \*\*\*

#### 4.4.40.3 Modification of existing ECS Address Configuration Information

In order to modify an existing "Individual ECS Address Configuration Information Set" resource, the AF shall initiate an HTTP PUT request to the "Individual ECS Address Configuration Information Set" resource. The request body shall include the EcsAddressInfo data structure, which shall include the same contents as described in clause 4.4.30.2.

Upon receipt of the corresponding HTTP PUT request message,the V-NEF authorizes the request and if the AF was authorized by the V-NEF to provide the ECS Address Configuration Information, the V-NEF may interact with the V-UDR to update the associated ECS Address Roaming Data by using the Nudr\_DataRepository service as defined in 3GPP TS 29.519 [23]. If the request is accepted by the V-UDR and the V-UDR informs the V-NEF with a successful response or if no interaction with the UDR takes place and the V-NEF successfully handles the information locally, the V-NEF shall update the "Individual ECS Address Configuration Information Set" resource and send an HTTP "200 OK" response with the EcsAddressInfo data structure including the contents of the created ECS Address Configuration Information resource in the response body or an HTTP "204 No Content" response. If the V-NEF receives an error response from the V-UDR, the V-NEF shall not update the resource and shall respond to the AF with a proper error status code. If the V-NEF received within an error response a "ProblemDetails" data structure with a "cause" attribute indicating an application error, the V-NEF shall relay this error response to the AF with a corresponding application error, if applicable.

\*\*\* 3rd Change \*\*\*

#### 4.4.40.4 Deletion of existing Individual ECS Address Configuration Information Set

In order to delete an existing ECS Address Configuration Information Set resource, the AF shall send an HTTP DELETE request message to the V-NEF targetting the URI of this "Individual ECS Address Configuration Information Set" resource. The V-NEF may interact with the V-UDR by invoking the Nudr\_DataRepository service as described in 3GPP TS 29.519 [23] to delete the ECS Address Roaming Data in the application data of the V-UDR.

After receiving a successful response from the V-UDR or after successful local handling, the V-NEF shall delete the "Individual ECS Address Configuration Information Set" resource and shall respond to the AF with an HTTP "204 No Content" response message.

If the V-NEF receives an error response from the V-UDR, the V-NEF shall take proper error handling actions and shall respond to the AF with a proper error status code. If the V-NEF received within an error response a "ProblemDetails" data structure with a "cause" attribute indicating an application error, the V-NEF shall relay this error response to the AF with a corresponding application error, when applicable.

\*\*\* 4th Change \*\*\*

#### 5.36.2.1 Overview

This clause describes the structure for the Resource URIs as shown in figure 5.36.2.1-1 and the resources and HTTP methods used for the ECSAddress API.



Figure 5.36.2.1-1: Resource URI structure of the northbound ECSAddress API

Table 5.36.2.1-1 provides an overview of the resources and HTTP methods applicable for the northbound ECSAddress API.

Table 5.36.2.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| **Resource name** | **Resource URI** | **HTTP method** | **Description** |
| ECS Address Configuration Information Sets | /{afId}/configurations | GET | Retrieve all the active ECS Address Configuration Information Sets. |
| POST | Create a new ECS Address Configuration Information Set. |
| Individual ECS Address Configuration Information Set | /{afId}/configurations/{configId} | GET | Retrieve an existing "Individual ECS Address Configuration Information Set" resource. |
| PUT | Update an existing "Individual ECS Address Configuration Information Set" resource. |
| PATCH | Modify an existing "Individual ECS Address Configuration Information Set" resource. |
| DELETE | Delete an existing "Individual ECS Address Configuration Information Set" resource. |

\*\*\* 5th Change \*\*\*

#### 5.36.2.2 Resource: ECS Address Configuration Information Sets

\*\*\* 6th Change \*\*\*

#### 5.36.2.3 Resource: Individual ECS Address Configuration Information Set

\*\*\* 7th Change \*\*\*

###### 5.36.2.2.3.2 GET

The HTTP GET method allows to retrieve all the active ECS Address Configuration Information Sets at the NEF for a given AF.

This method shall support the URI query parameters specified in table 5.36.2.2.3.2-1.

Table 5.36.2.2.3.2-1: URI query parameters supported by the GETmethod on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Data type** | **P** | **Cardinality** | **Description** |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.36.2.2.3.2-2, the response data structures and response codes specified in table 5.36.2.2.3.2-3, and the location headers specified in table 5.36.2.2.3.2-4 and table 5.36.2.2.3.2-5.

Table 5.36.2.2.3.2-2: Data structures supported by the GETRequest Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Description** |
| n/a |  |  |  |

Table 5.36.2.2.3.2-3: Data structures supported by theGET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Response codes** | **Description** |
| array(EcsAddrInfo) | M | 0..N | 200 OK | Successful case. All the active "Individual ECS Address Configuration Information Set" resource(s) are returned.  If there are no active "Individual ECS Address Configuration Information Set" resources at the NEF, an empty array is returned. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 5.36.2.2.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Data type** | **P** | **Cardinality** | **Description** |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

Table 5.36.2.2.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Data type** | **P** | **Cardinality** | **Description** |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

\*\*\* End of Changes \*\*\*