**3GPP TSG-CT WG3 Meeting #134 *C3-242275***

**Changsha, China, 15 - 19 April, 2024 *(Revision of C3-242xxx)***

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.591** | **CR** | **0178** | **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)*.* |
|  |

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

|  |
| --- |
|  |
| ***Title:***  | Removal of the Editor’s note about ECS Address Configuration Information |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | EDGE\_Ph2 |  | ***Date:*** | 2024-03-30 |
|  |  |  |  |  |
| ***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 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | Following EN exists in clause 5.4.6.2.3:*Editor's note: The data type of "ecsAddrCfgInfo" attribute is FFS.*In TS 23.502, clause 4.15.6.3d, SA2 indicates that:*The SMF is not expected to understand the internal structure of ECS Address Configuration Information.*The SMF only needs to transfer the ECS Address Configuration information (provided by AF) to the UE and does not need to know the details of the encoding. It is proposed to use EcsAddrInfo defined in TS 29.522 as the data type for the "ecsAddrCfgInfo" attribute and add a NOTE to indicate that the SMF no need to know the internal structure. In addition, the ecsAddrCfgInfo attribute should be single, since according to the Stage 2 requirement and the definition in TS 29.522, all the kinds of configuration information will be included in a single data structure. |
|  |  |
| ***Summary of change:*** | Remove the EN in clause 5.4.6.2.3 and update the data type in both Table and OpenAPI file. |
|  |  |
| ***Consequences if not approved:*** | Editor’s Notes remain in the specification. |
|  |  |
| ***Clauses affected:*** | 4.5.2.4.2, 5.4.6.1, 5.4.6.2.3, A.5 |
|  |  |
|  | **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 introduces backward compatible corrections to the Nnef\_ECSAddress API. |
|  |  |
| ***This CR's revision history:*** |  |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 4.5.2.4.2 Notification of changes of ECS Address Configuration Information

Figure 4.5.2.4.2-1 illustrates the notification about ECS Address Configuration Information.



Figure 4.5.2.4.2-1: Notification about ECS Address Configuration Information

If the NEF observes ECS Address Configuration Information that an NF service consumer has subscribed, the NEF shall send an HTTP POST request as shown in step 1 of figure 4.5.2.4.2-1, with the "{notifUri}" as request URI containing the value previously provided by the NF service consumer within the corresponding subscription, and the EcsAddrCfgInfoNotification data structure as request body.

The EcsAddrCfgInfoNotification data structure shall include:

- the notification correlation identifier in the "notifCorrId" attribute;

- the ECS Address Configuration Information within the "ecsAddrCfgInfo" attribute.

NOTE: In this release of the specification, the NF service consumer (e.g., SMF) does not need to understand the internal structure of ECS Address Configuration Information.

Upon successful reception of an HTTP POST request with "{notifUri}" as request URI and EcsAddrCfgInfoNotification data structure as request body, the NF service consumer shall send an HTTP "204 No Content" response, as shown in step 2 of figure 4.5.2.4.2-1.

\*\*\* Next Change \*\*\*

5.4.6.1 General

This clause specifies the application data model supported by the API.

Table 5.4.6.1-1 specifies the data types defined for the Nnef\_ECSAddress service based interface protocol.

**Table 5.4.6.1-1: Nnef\_ECSAddress specific Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Section defined** | **Description** | **Applicability** |
| EcsAddrCfgInfoNotification | 5.4.6.2.3 | Contains ECS Address Configuration Information for notification. |  |
| EcsAddrCfgInfoSub | 5.4.6.2.2 | Contains ECS Address Configuration Information subscription data. |  |

Table 5.4.6.1-2 specifies data types re-used by the Nnef\_ECSAddress service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nnef\_ECSAddress service based interface.

**Table 5.4.6.1-2: Nnef\_ECSAddress re-used Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Reference** | **Comments** | **Applicability** |
| Dnn | 3GPP TS 29.571 [16] | Identifies the DNN. |  |
| EcsAddrInfo | 3GPP TS 29.522 [15] | Contains ECS Address Configuration Information. |  |
| GroupId | 3GPP TS 29.571 [16] | Identifies a group of UEs. |  |
| Snssai | 3GPP TS 29.571 [16] | Identifies a Single Network Slice Selection Assistance Information. |  |
| SupportedFeatures | 3GPP TS 29.571 [16] | Indicates the features supported. |  |
| Uri | 3GPP TS 29.571 [16] | Contains a URI. |  |

\*\*\* Next Change \*\*\*

##### 5.4.6.2.3 Type: EcsAddrCfgInfoNotification

Table 5.4.6.2.3-1: Definition of type EcsAddrCfgInfoNotification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| notifCorrId | string | M | 1 | Notification correlation identifier. |  |
| ecsAddrCfgInfo | array(EcsAddrInfo) | M | 1..N | Contains the ECS Address Configuration Information. |  |

\*\*\* Next Change \*\*\*

# A.5 Nnef\_ECSAddress API

openapi: 3.0.0

info:

 title: Nnef\_ECSAddressConfigurationInformation

 version: 1.0.0-alpha.2

 description: |

 NEF ECS Address Service.

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externalDocs:

 description: >

 3GPP TS 29.591 V18.3.0; 5G System; Network Exposure Function Southbound Services; Stage 3.

 url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.591/

servers:

 - url: '{apiRoot}/nnef-ecs-addr-cfg-info/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501

security:

 - {}

 - oAuth2ClientCredentials:

 - nnef-ecs-addr-cfg-info

paths:

 /subscriptions:

 post:

 summary: subscribe to notifications

 operationId: CreateIndividualSubcription

 tags:

 - Subscriptions (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EcsAddrCfgInfoSub'

 responses:

 '201':

 description: Success

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EcsAddrCfgInfoSub'

 headers:

 Location:

 description: >

 Contains the URI of the newly created resource, according to the structure

 {apiRoot}/nnef-ecs-addr-cfg-info/<apiVersion>/subscriptions/{subscriptionId}

 required: true

 schema:

 type: string

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 callbacks:

 myNotification:

 '{$request.body#/notifUri}':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EcsAddrCfgInfoNotification'

 responses:

 '204':

 description: No Content, Notification was succesfull

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 /subscriptions/{subscriptionId}:

 get:

 summary: retrieve subscription

 operationId: GetIndividualSubcription

 tags:

 - IndividualSubscription (Document)

 parameters:

 - name: subscriptionId

 in: path

 description: Subscription ID

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK. Resource representation is returned

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EcsAddrCfgInfoSub'

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '406':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/406'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 put:

 summary: update subscription

 operationId: ReplaceIndividualSubcription

 tags:

 - IndividualSubscription (Document)

 requestBody:

 required: true

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EcsAddrCfgInfoSub'

 parameters:

 - name: subscriptionId

 in: path

 description: Subscription ID

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK. Resource was succesfully modified and representation is returned

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EcsAddrCfgInfoSub'

 '204':

 description: No Content. Resource was succesfully modified

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 delete:

 summary: unsubscribe from notifications

 operationId: DeleteIndividualSubcription

 tags:

 - IndividualSubscription (Document)

 parameters:

 - name: subscriptionId

 in: path

 description: Subscription ID

 required: true

 schema:

 type: string

 responses:

 '204':

 description: No Content. Resource was succesfully deleted

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 nnef-ecs-addr-cfg-info: Access to the Nnef\_ECSAddress API

 schemas:

 EcsAddrCfgInfoSub:

 description: Represents an Individual ECS Address Configuration Information subscription data.

 type: object

 properties:

 notifUri:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 notifCorrId:

 type: string

 description: Notification correlation identifier.

 dnns:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'

 minItems: 1

 description: Each element identifies a DNN.

 snssais:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

 minItems: 1

 description: Each element identifies a slice.

 internalGroupId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/GroupId'

 immRepInd:

 type: boolean

 description: >

 Indication of immediate reporting. If included, when it is set to true it indicates

 immediate reporting of the subscribed events, if available. Otherwise, reporting will

 occur when the event is met.

 immReports:

 type: array

 items:

 $ref: '#/components/schemas/EcsAddrCfgInfoNotification'

 minItems: 1

 description: Immediate report with ECS Address Configuration Information that

 match this subscription.

 supportedFeatures:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

 required:

 - notifUri

 - notifCorrId

 EcsAddrCfgInfoNotification:

 description: Represents notifications for ECS Address Configuration Information data.

 type: object

 properties:

 notifCorrId:

 type: string

 description: Notification correlation identifier.

 ecsAddrCfgInfo:

 type: array

 items:

 $ref: 'TS29522\_ECSAddress.yaml#/components/schemas/EcsAddrInfo'

 minItems: 1

 description: Contains the ECS Address Configuration Information.

 required:

 - notifCorrId

 - ecsAddrCfgInfo

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