**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 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:*** | | 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 \*\*\*