**3GPP TSG-CT WG4 Meeting #102-eC4-211xyz**

**E-Meeting, 24th Feb – 5th Mar 2021 (was C4-211290)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.510** | **CR** | **0457** | **rev** | **1** | **Current version:** | **16.6.0** |  |
|  | | | | | | | | |
| *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:*** | Essential correction to Subscription Condition data types | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SBIProtoc16 | | | | |  | ***Date:*** | | | 2021-02-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The definition of type "SubscrCond" (the condition that defines a subscription to a set of NF Instances to be monitored by NRF) requires to define a list of mutually exclusive data types.  The current definition of UpfCond, NwdafCond and NefCond does not satisfy such constraint because they don't define any required attribute, so a JSON object instance such as { "foo": "bar" } matches equally the definition of those 3 data types.  The consequence is that the evaluation of the schema of SubscrCond will always fail, even for the existing data types used in SubscrCond, making the API (the NFStatusSubscribe operation) useless. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Correct the definition of UpfCond, NwdafCond and NefCond by specifying a required attribute "conditionType", set to a different fixed string value for each data type definition, which acts as discriminator between the different types, and makes all types as mutually exclusive. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The NFStatusSubscribe service operation cannot be used. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.2.60, 6.1.6.2.69, 6.1.6.2.70, A.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 introduces backwards compatible corrections, with impacts on the following APIs:  - TS29510\_Nnrf\_NFManagement.yaml | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* For Information \* \* \* \*

##### 6.1.6.2.35 Type: SubscrCond

Table 6.1.6.2.35-1: Definition of type SubscrCond as a list of mutually exclusive alternatives

|  |  |  |
| --- | --- | --- |
| Data type | Cardinality | Description |
| ... |  |  |
| ... |  |  |
| UpfCond | 1 | Subscription to a set of NF Instances (UPFs), able to serve a certain service area (i.e. SMF serving area or TAI list). |
| NwdafCond | 1 | Subscription to a set of NF Instances (NWDAFs), identified by Analytics ID(s). |
| NefCond | 1 | Subscription to a set of NF Instances (NEFs), identified by Event ID(s) provided by AF. |

\* \* \* First Change \* \* \* \*

##### 6.1.6.2.60 Type: UpfCond

Table 6.1.6.2.60-1: Definition of type UpfCond

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| conditionType | string | M | 1 | This attribute serves as discriminator, to make all data types defined in Table 6.1.6.2.35-1 mutually exclusive.  In this data type, it shall take the value "UPF\_COND". |
| smfServingArea | array(string) | C | 1..N | SMF service area(s) of the UPF whose status is requested to be monitored.  This IE shall be present if the monitored granularity is SMF service area(s). |
| taiList | array(Tai) | C | 1..N | TAI(s) of the UPF whose status is requested to be monitored.  This IE shall be present if the monitored granularity is TAI list. |

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

##### 6.1.6.2.69 Type: NwdafCond

Table 6.1.6.2.69-1: Definition of type NwdafCond

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| conditionType | string | M | 1 | This attribute serves as discriminator, to make all data types defined in Table 6.1.6.2.35-1 mutually exclusive.  In this data type, it shall take the value "NWDAF\_COND". |
| analyticsIds | array(string) | O | 1..N | Analytics Id(s) provided by consumers of NWDAF. |

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

##### 6.1.6.2.70 Type: NefCond

Table 6.1.6.2.70-1: Definition of type NefCond

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| conditionType | string | M | 1 | This attribute serves as discriminator, to make all data types defined in Table 6.1.6.2.35-1 mutually exclusive.  In this data type, it shall take the value "NEF\_COND". |
| eventIds | array(EventId) | O | 1..N | EventId(s) supported by the Nnwdaf\_AnalyticsInfo service which is/are provided by AFs. |

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

## A.2 Nnrf\_NFManagement API

*(... text not shown for clarity ...)*

UpfCond:

description: Subscription to a set of NF Instances (UPFs), able to serve a certain service area (i.e. SMF serving area or TAI list)

type: object

required:

- conditionType

properties:

conditionType:

type: string

enum: [ UPF\_COND ]

smfServingArea:

type: array

items:

type: string

minItems: 1

taiList:

type: array

items:

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

minItems: 1

NwdafCond:

description: Subscription to a set of NF Instances (NWDAFs), identified by Analytics ID(s).

type: object

required:

- conditionType

properties:

conditionType:

type: string

enum: [ NWDAF\_COND ]

analyticsIds:

type: array

items:

type: string

minItems: 1

NefCond:

description: Subscription to a set of NF Instances (NEFs), identified by Event ID(s) provided by AF.

type: object

required:

- conditionType

properties:

conditionType:

type: string

enum: [ NEF\_COND ]

eventIds:

type: array

items:

$ref: 'TS29520\_Nnwdaf\_AnalyticsInfo.yaml#/components/schemas/EventId'

minItems: 1

*(... text not shown for clarity ...)*

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

##### 