**3GPP TSG-CT WG3 Meeting #108-eC3-201112**

[**E-Meeting**](https://www.3gpp.org/ftp/tsg_ct/WG3_interworking_ex-CN3/TSGC3_108_Sophia_Antipolis/)**, 19th -28th February 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **0122** | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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:*** | Nnef\_ServiceParameter Service | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eV2XARC | | | | |  | ***Date:*** | | | 2020-02-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Nnef\_ServiceParameter service is defined in stage 2 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Define the procedure of the Nnef\_ServiceParameter service. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Feature is not supported | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.1, 4.4.x | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

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

## 4.1 Overview

The NEF Northbound interface is between the NEF and the AF. It specifies RESTful APIs that allow the AF to access the services and capabilities provided by 3GPP network entities and securely exposed by the NEF.

This document also specifies the procedures triggered at the NEF by API requests from the AF and by event notifications received from 3GPP network entities.

The stage 2 level requirements and signalling flows for the NEF Northbound interface are defined in 3GPP TS 23.502 [2].

The NEF Northbound interface supports the following procedures:

1) Procedures for Monitoring

2) Procedures for Device Triggering

3) Procedures for resource management of Background Data Transfer

4) Procedures for CP Parameters, Network Configuration Parameters Provisioning and 5G LAN Parameters Provisioning

5) Procedures for PFD Management

6) Procedures for Traffic Influence

7) Procedures for changing the chargeable party at session set up or during the session

8) Procedures for setting up an AF session with required QoS

9) Procedures for MSISDN-less Mobile Originated SMS

10) Procedures for non-IP data delivery

11) Procedures for analytics information exposure

12) Procedure for applying BDT policy

13) Procedures for Enhanced Coverage Restriction Control

14) Procedures for IPTV Configuration

x) Procedures for Service Parameter Provisioning

Which correspond to the following services respectively, supported by the NEF as defined in 3GPP TS 23.502 [2]:

1) Nnef\_EventExposure service and Nnef\_APISupportCapability service

2) Nnef\_Trigger service

3) Nnef\_BDTPNegotiation service

4) Nnef\_ParameterProvision service

5) Nnef\_PFDManagement service

6) Nnef\_TrafficInfluence service

7) Nnef\_ChargeableParty service

8) Nnef\_AFsessionWithQoS service

9) Nnef\_MSISDN-less\_MO\_SMS service

10) Nnef\_NIDDConfiguration and Nnef\_NIDD services

11) Nnef\_AnalyticsExposure service

12) Nnef\_ApplyPolicy service

13) Nnef\_ECRestriction service

14) Nnef\_IPTVConfiguration service

x) Nnef\_ServiceParameter service

NOTE 1: For Nnef\_PFDManagement service, only the Nnef\_PFDManagement\_Create/Update/Delete service operations are applicable for the NEF Northbound interface.

NOTE 2: For Nnef\_NIDD service, NF consumer other than the AF does not use the NEF Northbound interface.

NOTE 3: For Nnef\_NIDDConfiguration service, the Nnef\_NIDDConfiguration\_Trigger service operation is only applicable for the NEF Northbound interface.

NOTE 4: The Nnef\_APISupportCapability service is only applicable in the MonitoringEvent API when the monitoring type sets to "API\_SUPPORT\_CAPABILITY".

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

### 4.4.x Procedures for service specific parameter provisioning

The procedures are used by the AF to provide service specific parameters to 5G system via NEF.

In order to provision the service specific parameter, the AF shall send an HTTP POST message to the NEF to the resource "Service Parameter Subscriptions", the HTTP POST message shall include ServiceParameterData data structure as request body. The ServiceParameterData data structure shall include:

- service description via:

a) an combination of DNN and S-NSSAI within the "dnn" attribute and the "snssai" attribute respectively; or

b) an AF servcie identifier within the "afServiceId" attribute; or

c) an application identifier within the "appId" attribute;

- indication of the UEs to which the subscription applies via:

a) identification of an individual UE within the "gpsi" attribute; or

b) an IPv4 address of the UE within the "ueIpv4" attribute; or

c) an IPv6 address of the UE within the "ueIpv6" attribute; or

d) an MAC address of the UE within the "ueMac" attribute; or

e) an identification of a group of UE(s) within the "exterGroupId" attribute; or

f) identification of any UE within the "anyUeInd" attribute.

- configuration parameters for V2X communication over PC5 within the "paramOverPc5" attribute; and

- configuration parameters for V2X communication over Uu within the "paramOverUu" attribute.

In order to update an existing analytics exposure subscription, the AF shall send an HTTP PUT or HTTP PATCH message to the NEF to the resource "Individual Service Parameter Subscription" requesting to change the subscription.

In order to delete an existing service paramter subscription, the AF shall send an HTTP DELETE message to the NEF to the resource "Individual Service Parameter Subscription".

Upon receipt of the HTTP request from the AF, if the AF is authorized, the NEF shall interact with the UDM by invoking the Nudm\_SubscriberDataManagement service as described in 3GPP TS 29.503 [17] to retrieve the SUPI or Internal Group Identifier. Then the NEF shall interact with the UDR to create, update or delete the service parameter by using the Nudr\_DataRepository service as defined in 3GPP TS 29.519 [23]. If the NEF receives an error code from the UDR, the NEF shall not create, update or delete the resource and shall respond to the AF with a status code set to 500 Internal Server Error.

After receiving a successful response from the UDR, the NEF shall,

- for the HTTP POST request, create a resource "Individual Service Parameter Subscription" which represents the Service Parameter provisioning request, addressed by a URI that contains the AF Identifier and an NEF-created configuration identifier, and shall respond to the AF with a 201 Created status code, including a Location header field containing the URI for the created resource. The AF shall use the URI received in the Location header in subsequent requests to the NEF to refer to this Service Parameter Subscription.

- for the HTTP PUT or HTTP PATCH request, update a resource "Individual Service Parameter Subscription" which represents the service parameter, and shall responds to the AF with a 200 OK or 204 No Content status code.

- for the HTTP DELETE request, remove all properties of the resource and delete the corresponding active resource "Individual Service Parameter Subscription", then shall responds to the AF with a 204 No Content status code.

\*\*\* End of Change \*\*\*