**3GPP TSG-CT WG3 Meeting #118e C3-215149**

**E-Meeting, 11th – 15th October 2021 (Revision of C3-21xxxx)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **0422** | **rev** | **-** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | Procedures on AF subscribed notification of service parameter invocation outcome | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eEDGE\_5GC | | | | |  | ***Date:*** | | | 2021-09-26 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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:*** | | TS 23.502 5.2.6.11.2 Nnef\_ServiceParameter\_Create operation defines subscribedEvents and notificationDestination as the Input optional parameters, to support the AF subscribed notficiation event of the outcome related to the invocation of service parameters defined in clause 4.15.6.7.  Hence need to implement the related procedures in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding procedures on AF subscrbe to event notification of invocation related to service parameters provisioning. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment with stage 2. AF cannot subscribe to notification of the outcome of invocation of service specific parameter provisioning. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.4.20 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \*\*\*

### 4.4.20 Procedures for service specific parameter provisioning

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

In order to provision service specific parameters to the 5G system, the AF shall send an HTTP POST message to the NEF targetting the resource "Service Parameter Subscriptions", the HTTP POST message shall include the ServiceParameterData data structure as request body. The ServiceParameterData data structure shall include:

- service description via:

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

b) an AF service 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;

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

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

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

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

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

- service parameters for at least one of the following:

- V2X service parameters via:

a) configuration parameters for V2X communications over PC5 within the "paramOverPc5" attribute;

b) configuration parameters for V2X communications over Uu within the "paramOverUu" attribute;

- if the "ProSe" feature is supported, 5G ProSe service parameters via:

a) configuration parameters for 5G ProSe direct discovery within the "paramForProSeDd" attribute;

b) configuration parameters for 5G ProSe direct communication within the "paramForProSeDc" attribute;

c) configuration parameters for 5G ProSe UE-to-network relay within the "paramForProSeU2N" attribute;

- If the "EnEDGE" feature is supported, URSP service parameters via:

a) contents for the AF influence on URSP within the "urspInfluence" attribute, which shall include one or more URSP rule requests. Each URSP rule request may include a traffic descriptor within the "trafficDesc" attribute and one or more route selection parameter sets within the "routeSelParamSets" attribute. Each route selection parameter set may include a precedence value within the "precedence" attribute, a DNN within the "dnn" attribute, an S-NSSAI within the "snssai" attribute, and a spatial validity condition within the "spatialValidity" attribute. If the request contains only one route selection parameter set, each of the optional attributes "dnn", "snssai", "precedence", and "spatialValidity" that is missing from the request may be complemented by the NEF based on local configuration for the provided AF service identifier. It is up to the NEF or PCF to transform the information of the "spatialValidity" attribute into Location criteria as defined in 3GPP TS 24.526 [48], which can be used in the URSP to be delivered to the UE.

Editor's note: It is FFS whether the spatial validity would be translated by NEF or PCF, pending stage 2 resolution.

Editor's Note: It is FFS to consider if "urspInfluence" should be encoded exactly in the same way that URSP rules are encoded in NAS messages (see TS 24.526).

Editor's Note: It is FFS to consider if a separate feature should be used for "urspInfluence" instead of the EnEDGE feature.

and may include:

- If the "AfNotifications" feature is supported,

a) subscription to event notification of the outcome related to invocation of service parameter provisioning within the "subNotifEvents" attribute;

b) notification URI within the "notificationDestination" attribute;

In order to update an existing service parameter subscription, the AF shall send an HTTP PUT or HTTP PATCH message to the NEF targetting the resource "Individual Service Parameter Subscription" and requesting to change the subscription with the Transaction Reference ID in the "afTransId" attribute which is assigned by NEF in the HTTP POST response message of service parameter provision subscription.

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

Upon receipt of the HTTP request from the AF, and 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 associated service parameters 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 proper error status code.

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

- for an HTTP POST request, create an "Individual Service Parameter Subscription" resource which represents the Service Parameter provisioning request, addressed by a URI that contains the AF Identifier and a 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 an HTTP PUT or HTTP PATCH request, update the "Individual Service Parameter Subscription" resource which represents the service parameter provisioning request, and respond to the AF with a 200 OK or 204 No Content status code.

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

When the NEF receives the notification of the outcome of invocation related to AF provisioned service parameters from the PCF by Npcf\_EventExposure\_Notify service operation defined in 3GPP TS 29.523 [22], the NEF shall provide a notification to AF by sending HTTP POST message that include the AfNotification data structure and shall include the "afTransId" attribute, "reportEvent" attribute and one of the targeted UE in the request body. Upon receipt of the notification, the AF shall respond with a "204 No Content" status code to confirm the received notification.

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