**3GPP TSG-CT WG4 Meeting #111-eC4-224nnn**

**E-Meeting, 18th – 26th August 2022 *Was C4-224393***

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **29.505**  | **CR** | **0446** | **rev** | **1** | **Current version:** | **V17.7.0** |  |
|  |
| *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:***  | Roaming Information Correction |
|  |  |
| ***Source to WG:*** | Hewlett Packard Enterprise, Nokia, Nokia Shanghai Bell, Ericsson |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | TEI17, UDICOM |  | ***Date:*** | 2022-08-09 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | As proposed in C4-224382, the resource to store Roaming Information in UDR should contain the last 5GC/EPC common Roaming Information in the 3GPP access, and not just the roaming information received from EPC.Incorrect Data Type RoamingInfo.Roaming Info missing from context data sets |
|  |  |
| ***Summary of change:*** | Clarify that RoamingInfo in the EPC domain is not stored in AMF 3GPP registration context.Change Data Type RoamingInfo to RoamingInfoUpdate.Add Roaming Info in context data setsChange POST to PUT for resource RoamingInfo to align with yaml.Update the description of the resource and its operations, to indicate that the information contained is the resource representation is common to both EPC and 5GC. |
|  |  |
| ***Consequences if not approved:*** | Incorrect specification with data model and yaml differing. No way for the UDM to retrieve the RoamingInfo together with other context resources with a single GET possibly resulting in capacity degradation of the UDM and the UDR. |
|  |  |
| ***Clauses affected:*** | 5.2.1, 5.2.50.3.1, 5.4.2.22, 5.4.3.6, 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 makes backward compatibility changes in A.2 Nudr\_DataRepository API for Subscription Data. |
|  |  |
| ***This CR's revision history:*** | rev1: Merged with C4-224114 and C4-224384 |

**\*\*\*\*\*\*\***

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

### 5.2.1 Overview



Figure 5.2.1-1: Resource URI sub-level structure for subscription data

Figure 5.2.1-2: Resource URI sub-level structure for subscription data (cont.)



Figure 5.2.1-3: Resource URI sub-level structure for subscription data (cont.)

Table 5.2.1-1 provides an overview of the resources, applicable HTTP methods and whether subscribe (implicit and explicit) to be notified about data change applies.

Table 5.2.1-1: Resources and methods overview

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Resource name | Resource URI | Subscribe to be notified about data change supported | HTTP method  | Description |
| AuthenticationSubscription(Document) | /subscription-data/{ueId}/authentication-data/authentication-subscription | N | GET | Retrieve a UE's authentication subscription data |
| PATCH | Update a UE's authentication subscription dataUpdates shall be limited to the sequenceNumber attribute. Attempts to patch any other attribute shall be rejected by the UDR. |
| AuthenticationSoR(Document) | /subscription-data/{ueId}/ue-update-confirmation-data/sor-data | Y | PUT | Store UE's SOR acknowledgement information (SoR-XMAC-IUE) and "ME support of SOR-CMCI" |
| GET | Retrieve UE's SoR acknowledgement information, "ME support of SOR-CMCI" |
| PATCH | Update "ME support of SOR-CMCI" |
| AuthenticationUPU(Document) | /subscription-data/{ueId}/ue-update-confirmation-data/upu-data | Y | PUT | Store UE Parameter Update acknowledgement information (UPU-XMAC-IUE) |
| GET | Retrieve UE Parameter Update acknowledgement information |
| SubscribedSNSSAIs(Document) | /subscription-data/{ueId}/ue-update-confirmation-data/subscribed-snssais | Y | PUT | Store UE-acknowledgement info for change of subscribed S-NSSAIs  |
| GET | Retrieve UE-acknowledgement info for change of subscribed S-NSSAIs  |
| SubscribedCAG(Document) | /subscription-data/{ueId}/ue-update-confirmation-data/subscribed-cag | Y | PUT | Store UE-acknowledgement info for change of subscribed CAG |
| GET | Retrieve UE-acknowledgement info for change of subscribed CAG |
| AuthenticationStatus(Document) | /subscription-data/{ueId}/authentication-data/authentication-status | N | PUT | Store a UE's authentication status |
| GET | Retrieve a UE's authentication status |
| DELETE | Delete a UE's authentication status |
| IndividualAuthenticationStatus(Document) | /subscription-data/{ueId}/authentication-data/authentication-status/{servingNetworkName} | Y | PUT | When the feature "PerUePerSnAuthStatus" is supported, store a UE's Individual authentication status |
| GET | When the feature "PerUePerSnAuthStatus" is supported, retrieve a UE's Individual authentication status |
| DELETE | When the feature "PerUePerSnAuthStatus" is supported, delete a UE's Individual authentication status |
| ProvisionedData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data | N | GET | Retrieve the UE's subscribed Provisioned Data |
| AccessAndMobilitySubscriptionData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/am-data | Y | GET | Retrieve the UE's subscribed Access and Mobility Data |
| SmfSelectionSubscriptionData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data | Y | GET | Retrieve the UE's subscribed SMF Selection Data |
| SessionManagementSubscriptionData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data | Y | GET | Retrieve the UE's subscribed SM Subscription Data |
| ContextData(Document) | /subscription-data/{ueId}/context-data | N | GET | Retrieve the UE's context Data |
| Amf3GppAccessRegistration(Document) | /subscription-data/{ueId}/context-data/amf-3gpp-access | Y | PUT | Create and Update the AMF registration for 3GPP access |
| PATCH | Modify the AMF registration for 3GPP access |
| GET | Retrieve the AMF registration information for 3GPP access |
| AmfNon3GppAccessRegistration(Document) | /subscription-data/{ueId}/context-data/amf-non-3gpp-access | Y | PUT | Update the AMF registration for non 3GPP access |
| PATCH | Modify the AMF registration for non 3GPP access |
| GET | Retrieve the AMF registration information for non 3GPP access |
| SmfRegistrations(Store) | /subscription-data/{ueId}/context-data/smf-registrations | Y | GET | Retrieve the list of the SMF registrations |
| IndividualSmfRegistration(Document) | /subscription-data/{ueId}/context-data /smf-registrations/{pduSessionId} | Y | PUT | Store an individual SMF registration identified by PDU Session Id |
| DELETE | Delete an individual SMF registration |
| GET | Retrieve individual SMF registration |
| PATCH | Modify the individual SMF registration |
| OperatorSpecificData(Document) | /subscription-data/{ueId}/operator-specific-data | Y | GET | retrieve the operator specific subscription data of a UE |
| PATCH | modify the operator specific subscription data of a UE |
| PUT | create/update the operator specific subscription data of a UE |
| DELETE | delete the operator specific subscription data of a UE |
| OperatorDeterminedBarringData(Document) | /subscription-data/{ueId}/operator-determined-barring-data | Y | GET | Retrieve the UE's Operator Determined Barring |
| SMSManagementSubscriptionData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data | Y | GET | Retrieve the UE's subscribed SMS management subscription data. |
| Smsf3GppAccessRegistration(Document) | /subscription-data/{ueId}/context-data /smsf-3gpp-access | Y | PUT | Create or Update the SMSF registration |
| DELETE | Delete the SMSF registration for 3GPP access |
| GET | Retrieve the SMSF registration information |
| SmsfNon3GppAccessRegistration(Document) | /subscription-data/{ueId}/context-data /smsf-non-3gpp-access | Y | PUT | Create or Update the SMSF registration for non 3GPP access |
| DELETE | Delete the SMSF registration for non 3GPP access |
| GET | Retrieve the SMSF registration information for non 3GPP access |
| IpSmGwRegistration(Document) | /subscription-data/{ueId}/context-data/ip-sm-gw | Y | PUT | Create or Update the IP-SM-GW registration |
| DELETE | Delete the IP-SM-GW registration |
| PATCH | Modify the IP-SM-GW registration |
| GET | Retrieve the IP-SM-GW registration information |
| MessageWaitingData(Document) | /subscription-data/{ueId}/context-data/mwd | Y | PUT | Create or Update the SMS Message Waiting Data |
| DELETE | Delete the SMS Message Waiting Data |
| PATCH | Modify the SMS Message Waiting Data |
| GET | Retrieve the SMS Message Waiting Data |
| SdmSubscriptions(Collection) | /subscription-data/{ueId}/context-data/sdm-subscriptions | N | GET | Retrieve SDM subscriptions |
| POST | Create an individual SDM subscription |
| IndividualSdmSubscription(Document) | /subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId} | N | PUT | Update an individual SDM subscription |
| DELETE | Delete an individual SDM subscription |
| PATCH | Update an individual SDM Subscription |
| GET | Retrieve an individual SDM subscription |
| HssSdmSubscriptionInfo(Document) | /subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}/hss-sdm-subscriptions | N | PUT | Store information related to the Hss-SDM-Subscriptions |
| DELETE | Delete the Hss-SDM-subscriptions |
| GET | Retrieve Hss-SDM-subscriptions |
| PATCH | Update Hss-SDM-subscriptions |
| EeSubscriptions(Collection) | /subscription-data/{ueId}/context-data/ee-subscriptions | N | GET | Retrieve EE subscriptions |
| POST | Create an EE subscription |
| IndividualEeSubscription(Document) | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId} | N | PUT | Update an individual EE subscription |
| DELETE | Delete an individual EE subscription |
| PATCH | Update an individual EE subscription |
| GET | Retrieve an individual EE subscription |
| AmfSubscriptionInfo(Document) | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions | N | PUT | Store information related to the Amf-EE-Subscription response |
| DELETE | Delete the Amf-EE-subscriptions |
| GET | Retrieve AMF-subscriptions |
| PATCH | Update AMF-subscriptions |
| SmfSubscriptionInfo(Document) | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/smf-subscriptions | N | PUT | Store information related to the received Smf-EE-Subscription response |
| DELETE | Delete the Smf-EE-subscriptions |
| GET | Retrieve SMF-subscriptions |
| PATCH | Update SMF-subscriptions |
| HssSubscriptionInfo(Document) | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/hss-subscriptions | N | PUT | Store information related to the Hss-EE-Subscriptions |
| DELETE | Delete the Hss-EE-subscriptions |
| GET | Retrieve Hss-EE-subscriptions |
| PATCH | Update Hss-EE-subscriptions |
| EeProfileData(Document) | /subscription-data/{ueId}/ee-profile-data | Y | GET | Retrieve the UE's subscribed EE profile data. |
| ProvisionedParamenterData(Document) | /subscription-data/{ueId}/pp-data | y | PATCH | Update of provisioned parameters. |
| GET | Retrieves the UE's provisioned parameters. |
| PpProfileData(Document) | /subscription-data/{ueId}/pp-profile-data | Y | GET | Retrieve the UE's subscribed PP profile data. |
| ProvisionedParameterDataEntries(Store) | /subscription-data/{ueId}/pp-data-store | Y | GET | Retrieve a Provisioned Parameter Data of multiple Entries |
| ProvisionedParameterDataEntry(Document) | /subscription-data/{ueId}/pp-data-store/{afInstanceId} | Y | PUT | Create a Provisioned Parameter Data Entry |
| DELETE | Delete a Provisioned Parameter Data Entry |
| GET | Retrieve a Provisioned Parameter Data Entry |
| SMSSubscriptionData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data | Y | GET | Retrieve the UE's subscribed SMS subscription data. |
| SubscriptionDataSubscriptions(Collection) | /subscription-data/subs-to-notify | N | GET | Retrieve existing subscriptions |
| POST | Create a subscription, i.e. subscribe a node to receive notification for change of data |
| DELETE | Deletes multiple subscriptions for a given UE. |
| IndividualSubscriptionDataSubscription(Document) | /subscription-data/subs-to-notify/{subsId} | N | DELETE | Delete the subscription identified by {subsId}, i.e. unsubscribe a node to receive notification for change of data |
| PATCH | Update an individual Subscription to notification |
| GET | Retrieve an individual Subscription to notification |
| EeGroupSubscriptions(Collection) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions | N | GET | Retrieve EE subscriptions for groups of UEs |
| POST | Create an EE subscription for groups of UEs |
| IndividualEeGroupSubscription(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId} | N | PUT | Update an individual EE subscription for a group of UEs |
| DELETE | Delete an individual EE subscription for a group of UEs |
| PATCH | Update an individual EE subscription for a group of UEs |
| GET | Retrieve an individual EE subscription for a group of UEs |
| AmfGroupSubscriptionInfo(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/amf-subscriptions | N | PUT | Store information related to the Amf-EE-Subscription response for a group of UEs |
| DELETE | Delete the Amf-EE-subscriptions for a group of UEs |
| GET | Retrieve AMF-subscriptions for a group of UEs |
| PATCH | Update AMF-subscriptions for a group of UEs |
| SmfGroupSubscriptionInfo(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/smf-subscriptions | N | PUT | Store information related to the received Smf-EE-Subscription response for a group of UEs |
| DELETE | Delete the Smf-EE-subscriptions for a group of UEs |
| GET | Retrieve SMF-subscriptions for a group of UEs |
| PATCH | Update SMF-subscriptions for a group of UEs |
| HssGroupSubscriptionInfo(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/hss-subscriptions | N | PUT | Store information related to the Hss-EE-Subscriptions for a group of UEs |
| DELETE | Delete the Hss-EE-subscriptions for a group of UEs |
| GET | Retrieve Hss-EE-subscriptions for a group of UEs |
| PATCH | Update Hss-EE-subscriptions for a group of UEs |
| EeGroupProfileData(Document) | /subscription-data/group-data/{ueGroupId}/ee-profile-data | Y | GET | Retrieve the subscribed EE profile data for a group of UEs. |
| TraceData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data | Y | GET | Retrieve the UE's trace configuration data |
| IdentityData(Document) | /subscription-data/{ueId}/identity-data | Y | GET | Retrieve identity data that corresponds to the provided ueId |
| SharedData(Collection) | /subscription-data/shared-data | N | GET | Retrieve shared data |
| IndividualSharedData(Document) | /subscription-data/shared-data/{sharedDataId} | Y | GET | Retrieve the individual Shared Data |
| GroupIdentifiers(Document) | /subscription-data/group-data/group-identifiers | Y | GET | Retrieve group identifiers and the UE identifiers belong to the group identifiers. |
| 5GvnGroups(Store) | /subscription-data/group-data/5g-vn-groups | Y | GET | Retrieve 5G VN Groups |
| Individual5GvnGroup(Document) | /subscription-data/group-data/5g-vn-groups/{externalGroupId} | Y | PUT | Create a 5G VN Group |
| PATCH | Update a 5G VN Group |
| DELETE | Delete a 5G VN Group |
| GET | Retrieve a 5G VN Group |
| 5GVnGroupsInternal(Document) | /subscription-data/group-data/5g-vn-groups/internal | Y | GET | Retrieve 5G VN Group Data based on Internal Group Identifier(s) |
| Pp5gVnGroupProfileData(Document) | /subscription-data/group-data/5g-vn-groups/pp-profile-data | Y | GET | Retrieve the UE's subscribed PP profile data for accessing 5G VN Groups service operations. |
| LcsPrivacySubscriptionData(Document) | /subscription-data/{ueId}/lcs-privacy-data | Y | GET | Retrieve the UE's subscribed LCS privacy Subscription Data |
| LcsMobileOriginatedSubscriptionData(Document) | /subscription-data/{ueId}/lcs-mo-data | Y | GET | Retrieve the UE's subscribed LCS Mobile Originated Subscription Data |
| NiddAuthorizationData(Document) | /subscription-data/{ueId}/nidd-authorization-data | Y | GET | Retrieve the UE's NIDD Authorization Data |
| ServiceSpecificAuthorizationData(Document) | /subscription-data/{ueId}/service-specific-authorization-data/{serviceType} | Y | GET | Retrieve the UE's Authorization Data for a specific service |
| CoverageRestrictionData(Document) | /subscription-data/{ueId}/coverage-restriction-data | Y | GET | Retrieve the UE's subscribed enhanced Coverage Restriction Data |
| Location(Document) | /subscription-data/{ueId}/context-data/location | Y | GET | Retrieve the UE's Location Information |
| V2xSubscriptionData(Document) | /subscription-data/{ueId}/v2x-data | Y | GET | Retrieve the UE's subscribed V2X Data |
| ProseSubscriptionData(Document) | /subscription-data/{ueId}/prose-data | Y | GET | Retrieve the UE's subscribed ProSe Service Data |
| 5MBSSubscriptionData(Document) | /subscription-data/{ueId}/5mbs-data | Y | GET | Retrieve the UE's 5MBS Subscription Data |
| UcSubscriptionData(Document) | /subscription-data/{ueId}/uc-data | Y | GET | Retrieve the UE's User Consent Data |
| LcsBroadcastAssistanceSubscriptionData(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-bca-data | Y | GET | Retrieve the UE's subscribed LCS Broadcast Assistance subscription data |
| NiddAuthorizations(Document) | /subscription-data/{ueId}/context-data/nidd-authorizations | Y | PUT | Store information related to the NIDD Authorization |
| DELETE | Delete the NIDD Authorizations |
| GET | Retrieve NIDD Authorizations |
| PATCH | Update a specific NIDD Authorization |
| UeSubscriptionData(Document) | /subscription-data/{ueId} | N | GET | Retrieve data set(s) from the UE's subscription data |
| SpecificServiceAuthorizations(Document) | /subscription-data/{ueId}/context-data/service-specific-authorizations/{serviceType} | Y | PUT | Store information related to the service specific Authorization |
| DELETE | Delete the service specific Authorization |
| GET | Retrieve service specific Authorizations |
| PATCH | Update a service specific Authorization |
| RoamingInfo(Document) | /subscription-data/{ueId}/context-data/roaming-information | Y | GET | Retrieve the last 5GC/EPC common Roaming Information in the 3GPP access |
| PUT | Update or create the last 5GC/EPC common Roaming Information in the 3GPP access  |

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

### 5.2.50 Resource: RoamingInfo

#### 5.2.50.1 Description

This resource is used to represent the last 5GC/EPC common Roaming Information in the 3GPP access to be stored in the UDR by the UDM.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

\* \* \* Next Changes \* \* \* \*

##### 5.2.50.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.50.3.1-1.

Table 5.2.50.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.50.3.1-2 and the response data structures and response codes specified in table 5.2.50.3.1-3.

Table 5.2.50.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| RoamingInfoUpdate | M | 1 |  Contains the last 5GC/EPC common Roaming Information in the 3GPP access. |

Table 5.2.50.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| RoamingInfoUpdate | M | 1 | 201 Created | Upon success, a response body containing a representation of the created Roaming Information resourceshall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. |

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

##### 5.2.50.3.2 GET

This method shall support the URI query parameters specified in table 5.2.50.3.2-1.

Table 5.2.50.3.2-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.50.3.2-2 and the response data structures and response codes specified in table 5.2.50.3.2-3.

Table 5.2.50.3.2-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.50.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| RoamingInfoUpdate | M | 1 | 200 OK | Upon success, a response body containing the last 5GC/EPC common Roaming Information in the 3GPP access shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. |

\* \* \* Next Changes \* \* \* \*

#### 5.4.2.22 Type: ContextDataSets

Table 5.4.2.22-1: ContextDataSets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| amf3Gpp | Amf3GppAccessRegistration | O | 0..1 | AMF 3GPP Access registration |
| amfNon3Gpp | AmfNon3GppAccessRegistration | O | 0..1 | AMF Non 3GPP Access registration |
| sdmSubscriptions | array(SdmSubscription) | O | 1..N | SDM-Subscriptions |
| eeSubscriptions | array(EeSubscription) | O | 1..N | Event Exposure Subscriptions |
| smsf3GppAccess | SmsfRegistration | O | 0..1 | SMSF 3GPP Access registration |
| smsfNon3GppAccess | SmsfRegistration | O | 0..1 | SMSF Non 3GPP Access registration |
| subscriptionDataSubscriptions | array(SubscriptionDataSubscriptions) | O | 1..N | This attribute contain the Subscription Data Subscriptions (subs-to-notify) associated with the Notification. |
| smfRegistrations | SmfRegList | O | 0..1 | SMF Registrations |
| ipSmGw | IpSmGwRegistration | O | 0..1 | IP-SM-GW Registration |
| roamingInfo | RoamingInfoUpdate | O | 0..1 | Roaming Information |

\* \* \* Next Changes \* \* \* \*

#### 5.4.3.6 Enumeration: ContextDataSetName

Table 5.4.3.6-1: Enumeration ContextDataSetName

|  |  |
| --- | --- |
| Enumeration value | Description |
| "AMF\_3GPP" | AMF 3GPP Access Registration |
| "AMF\_NON\_3GPP" | SMF Non 3GPP Access Registration |
| "SDM SUBSCRIPTIONS" | SDM Subscriptions |
| "EE\_SUBSCRIPTIONS" | EE Subscriptions |
| "SMSF\_3GPP" | SMSF 3GPP Access Registration |
| "SMSF\_NON\_3GPP" | SMSF Non 3GPP Access Registration |
| "SUBS\_TO\_NOTIFY" | UDR Subscriptions |
| "SMF\_REG" | SMF Registrations |
| "IP\_SM\_GW" | IP-SM-GW Registration |
| “ROAMING\_INFO” | Roaming Information |

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

# A.2 Nudr\_DataRepository API for Subscription Data

For the purpose of referencing entities in the Open API file defined in this Annex, it shall be assumed that this Open API file is contained in a physical file named "TS29505\_Subscription\_Data.yaml".

<…skip…next part for info only>

 /subscription-data/{ueId}/context-data/roaming-information:

 put:

 summary: Update the Roaming Information of the EPC domain

 operationId: UpdateRoamingInformation

 tags:

 - Update the Roaming Information of the EPC domain (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - nudr-dr

 - oAuth2ClientCredentials:

 - nudr-dr

 - nudr-dr:subscription-data

 parameters:

 - name: ueId

 in: path

 description: UE id

 required: true

 schema:

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

 requestBody:

 content:

 application/json:

 schema:

 $ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/RoamingInfoUpdate'

 required: true

 responses:

 '201':

 description: Created

 content:

 application/json:

 schema:

 $ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/RoamingInfoUpdate'

 headers:

 Location:

 description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/roaming-information'

 required: true

 schema:

 type: string

 '204':

 description: Upon success, an empty response body shall be returned

 default:

 description: Unexpected error

 get:

 summary: Retrieves the Roaming Information of the EPC domain

 operationId: QueryRoamingInformation

 tags:

 - Retrieve the Roaming Information of the EPC domain (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - nudr-dr

 - oAuth2ClientCredentials:

 - nudr-dr

 - nudr-dr:subscription-data

 parameters:

 - name: ueId

 in: path

 description: UE id

 required: true

 schema:

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

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

 $ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/RoamingInfoUpdate'

 default:

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

<…skip…>

 AmfSubscriptionInfo:

 description: Information the UDR stores and retrieves related to active subscriptions at the AMF(s).

 type: object

 required:

 - amfInstanceId

 - subscriptionId

 properties:

 amfInstanceId:

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

 subscriptionId:

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

 subsChangeNotifyCorrelationId:

 type: string

 contextInfo:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/ContextInfo'

 ContextDatasetNames:

 description: The name of context data set.

 type: array

 items:

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

 minItems: 2

 uniqueItems: true

 ContextDataSetName:

 anyOf:

 - type: string

 enum:

 - AMF\_3GPP

 - AMF\_NON\_3GPP

 - SDM\_SUBSCRIPTIONS

 - EE\_SUBSCRIPTIONS

 - SMSF\_3GPP

 - SMSF\_NON\_3GPP

 - SUBS\_TO\_NOTIFY

 - SMF\_REG

 - IP\_SM\_GW

 - ROAMING\_INFO

 - type: string

 ContextDataSets:

 description: Contains the context data sets.

 type: object

 properties:

 amf3Gpp:

 $ref: '#/components/schemas/Amf3GppAccessRegistration'

 amfNon3Gpp:

 $ref: '#/components/schemas/AmfNon3GppAccessRegistration'

 sdmSubscriptions:

 type: array

 items:

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

 minItems: 1

 eeSubscriptions:

 type: array

 items:

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

 minItems: 1

 smsf3GppAccess:

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

 smsfNon3GppAccess:

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

 subscriptionDataSubscriptions:

 type: array

 items:

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

 minItems: 1

 smfRegistrations:

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

 ipSmGw:

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

 roamingInfo:

 $ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/RoamingInfoUpdate'

 IpSmGwRegistration:

 $ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/IpSmGwRegistration'

 MessageWaitingData:

 description: Message Waiting Data list.

 type: object

 properties:

 mwdList:

 type: array

 items:

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

 minItems: 1

<…skip…>

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