**3GPP TSG-CT WG4 Meeting #97eC4-202abc**

**E-Meeting, 15th – 23rd April 2020 *was* C4-202158**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.505** | **CR** | **0276** | **rev** | **1** | **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** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Resource LcsPrivacySubscriptionData | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, CATT | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_CIoT | | | | |  | ***Date:*** | | | 2020-04-06 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The current definition of resource LcsPrivacySubscriptionData is misaligned with definitions in 29.503 after C4-201312 was agreed in CT4 96e.  The plmn-id was removed from URI query parameters of GET method of Resource LcsPrivacySubscriptionData and the UE identity in Resource URI is changed from supi to ueId in C4-201312, therefore the definition of resource LcsPrivacySubscriptionData should have the corresponding change.  Resources LcsMobileOriginatedSubscriptionData are missing in Figure 5.2.1-2.  There are some redundant spaces in Table 5.2.1-1 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Change the Resource URI of LcsPrivacySubscriptionData to /subscription-data/{ueId}/lcs-privacy-data from /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-privacy-data 2. Add resources LcsPrivacySubscriptionData, LcsMobileOriginatedSubscriptionData in Figure 5.2.1-2: Resource URI sub-level structure for subscription data (cont.) 3. Remove redundant spaces in Table 5.2.1-1: Resources and methods overview. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The definition of resource LcsPrivacySubscriptionData won't be aligned with corresponding definitions in 29.503. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2.1, 5.2.36.1, 5.2.36.2, 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 will introduce backward compatible new features in the OpenAPI specification file of TS29505\_Subscription\_Data.yaml. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1:   1. Added CATT in ***Source to WG:*** of coverpage. | | | | | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*The start of changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 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.)

Table 5.2.1-1 provides an overview of the resources and applicable HTTP methods.

Table 5.2.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method | Description |
| AuthenticationSubscription | /subscription-data/{ueId}/authentication-data/authentication-subscription | GET | Retrieve a UE's authentication subscription data |
| PATCH | Update a UE's authentication subscription data  Updates shall be limited to the sequenceNumber attribute. Attempts to patch any other attribute shall be rejected by the UDR. |
| AuthenticationSoR | /subscription-data/{ueId}/ue-update-confirmation-data/sor-data | PUT | Store UE's SOR acknowledgement information (SoR-XMAC-IUE) |
| GET | Retrieve UE's SoR acknowledgement information |
| AuthenticationUPU | /subscription-data/{ueId}/ue-update-confirmation-data/upu-data | PUT | Store UE Parameter Update acknowledgement information (UPU-XMAC-IUE) |
| GET | Retrieve UE Parameter Update acknowledgement information |
| SubscribedSNSSAIs | /subscription-data/{ueId}/ue-update-confirmation-data/subscribed-snssais | PUT | Store UE-acknowledgement info for change of subscribed S-NSSAIs |
| GET | Retrieve UE-acknowledgement info for change of subscribed S-NSSAIs |
| SubscribedCAG | /subscription-data/{ueId}/ue-update-confirmation-data/subscribed-cag | PUT | Store UE-acknowledgement info for change of subscribed CAG |
| GET | Retrieve UE-acknowledgement info for change of subscribed CAG |
| AuthenticationStatus | /subscription-data/{ueId}/authentication-data/authentication-status | PUT | Store a UE's authentication status |
| GET | Retrieve a UE's authentication status |
| DELETE | Delete a UE's authentication status |
| ProvisionedData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data | GET | Retrieve the UE's subscribed Provisioned Data |
| AccessAndMobilitySubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/am-data | GET | Retrieve the UE's subscribed Access and Mobility Data |
| SmfSelectionSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data | GET | Retrieve the UE's subscribed SMF Selection Data |
| SessionManagementSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data | GET | Retrieve the UE's subscribed SM Subscription Data |
| ContextData | /subscription-data/{ueId}/context-data | GET | Retrieve the UE's context Data |
| Amf3GppAccessRegistration | /subscription-data/{ueId}/context-data/amf-3gpp-access | 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 | /subscription-data/{ueId}/context-data/amf-non-3gpp-access | 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 | /subscription-data/{ueId}/context-data/smf-registrations | GET | Retrieve the list of the SMF registrations |
| IndividualSmfRegistration | /subscription-data/{ueId}/context-data /smf-registrations/{pduSessionId} | PUT | Store an individual SMF registration identified by PDU Session Id |
| DELETE | Delete an individual SMF registration |
| GET | Retrieve individual SMF registration |
| OperatorSpecificData | /subscription-data/{ueId}/operator-specific-data | GET | retrieve the operator specific subscription data of a UE |
| PATCH | modify the operator specific subscription data of a UE |
| OperatorDeterminedBarringData | /subscription-data/{ueId}/operator-determined-barring-data | GET | Retrieve the UE's Operator Determined Barring |
| SMSManagementSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data | GET | Retrieve the UE's subscribed SMS management subscription data. |
| Smsf3GppAccessRegistration | /subscription-data/{ueId}/context-data /smsf-3gpp-access | PUT | Create or Update the SMSF registration |
| DELETE | Delete the SMSF registration for 3GPP access |
| GET | Retrieve the SMSF registration information |
| SmsfNon3GppAccessRegistration | /subscription-data/{ueId}/context-data /smsf-non-3gpp-access | 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 |
| SdmSubscriptions | /subscription-data/{ueId}/context-data/sdm-subscriptions | GET | Retrieve SDM subscriptions |
| POST | Create an individual SDM subscription |
| IndividualSdmSubscription | /subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId} | PUT | Update an individual SDM subscription |
| DELETE | Delete an individual SDM subscription |
| PATCH | Update an individual SDM Subscription |
| GET | Retrieve an individual SDM subscription |
| EeSubscriptions | /subscription-data/{ueId}/context-data/ee-subscriptions | GET | Retrieve EE subscriptions |
| POST | Create an EE subscription |
| IndividualEeSubscription | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId} | 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 | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions | PUT | Store information related the a received Amf-EE-Subscription response |
| DELETE | Delete the Amf-EE-subscriptions |
| GET | Retrieve AMF-subscriptions |
| PATCH | Update AMF-subscriptions |
| EeProfileData | /subscription-data/{ueId}/ee-profile-data | GET | Retrieve the UE's subscribed EE profile data. |
| ProvisionedParamenterData | /subscription-data/{ueId}/pp-data | PATCH | Update of provisioned parameters. |
| GET | Retrieves the UE's provisioned parameters. |
| SMSSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data | GET | Retrieve the UE's subscribed SMS subscription data. |
| SubscriptionDataSubscriptions | /subscription-data/subs-to-notify | 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 | /subscription-data/subs-to-notify/{subsId} | 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 | /subscription-data/group-data/{ueGroupId}/ee-subscriptions | GET | Retrieve EE subscriptions for groups of UEs |
| POST | Create an EE subscription for groups of UEs |
| IndividualEeGroupSubscription | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId} | 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 |
| TraceData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data | GET | Retrieve the UE's trace configuration data |
| IdentityData | /subscription-data/{ueId}/identity-data | GET | Retrieve identity data that corresponds to the provided ueId |
| SharedData (Collection) | /subscription-data/shared-data | GET | Retrieve shared data |
| GroupIdentifiers | /subscription-data/group-data/group-identifiers | GET | Retrieve group identifiers and the UE identifiers belong to the group identifiers. |
| 5GVnGroups | /subscription-data/group-data/5g-vn-groups | GET | Retrieve 5G VN Groups |
| Individual5GVnGroup | /subscription-data/group-data/5g-vn-groups/{externalGroupId} | PUT | Create a 5G VN Group |
| PATCH | Update a 5G VN Group |
| DELETE | Delete a 5G VN Group |
| GET | Retrieve a 5G VN Group |
| LcsPrivacySubscriptionData | /subscription-data/{ueId}//lcs-privacy-data | GET | Retrieve the UE's subscribed LCS privacy Subscription Data |
| LcsMobileOriginatedSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-mo-data | GET | Retrieve the UE's subscribed LCS Mobile Originated Subscription Data |
| NiddAuthorizationData | /subscription-data/{ueId}/nidd-authorization-data | GET | Retrieve the UE's NIDD Authorization Data |
| CoverageRestrictionData | /subscription-data/{ueId}/coverage-restriction-data | GET | Retrieve the UE's subscribed enhanced Coverage Restriction Data |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Next change\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 5.2.36.1 Description

This resource represents the subscribed LcsPrivacySubscriptionData for an UE. It is queried by the HGMLC or NEF via the UDM.

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

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Next change\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 5.2.36.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/lcs-privacy-data

This resource shall support the resource URI variables defined in table 5.2.36.2-1.

Table 5.2.36.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*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".

openapi: 3.0.0

***<\*\*\*Text skipped for clarity\*\*\*>***

/subscription-data/{ueId}/lcs-privacy-data:

get:

summary: Retrieves the LCS Privacy subscription data of a UE

operationId: QueryLcsPrivacyData

tags:

- LCS Privacy Subscription Data

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

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

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

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

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

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

minItems: 1

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

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

***<\*\*\*Text skipped for clarity\*\*\*>***

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*The end of changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*