**3GPP TSG CT WG3 Meeting #138 *C3-246373***

**Orlando, US, 18th – 22nd November, 2024 C3-246079**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0341** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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:*** | Define the OpenAPI description of the SS\_LocationHistoryInfoEvent API | | | | | | | | |
|  |  | | | | | | | | |
| ***Source to WG:*** | Huawei, CATT, Samsung | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | |
|  |  | | | | | | | | |
| ***Work item code:*** | eLSAPP | | | | |  | ***Date:*** | | 2024-11-18 |
|  |  | | | |  | |  | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | |  |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | |
| ***Reason for change:*** | | | The "Location history querying" functionality was defined in Rel-19 in clause 9.3.21 of TS 23.434 and led to the introduction of a new LM Server exposed API, i.e., the SS\_LocationHistoryInfoEvent API. | | | | | | |
|  | | |  | | | | | | |
| ***Summary of change:*** | | | This CR proposes to:   * Define the OpenAPI description of the new SS\_LocationHistoryInfoEvent API. | | | | | | |
|  | | |  | | | | | | |
| ***Consequences if not approved:*** | | | * The above-detailed Rel-19 updates are not specified in stage 3. | | | | | | |
|  | |  | | | | | | | |
| ***Clauses affected:*** | | A.23 (new Annex) | | | | | | | |
|  | |  | | | | | | | |
|  | | **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 a new OpenAPI description for the new SS\_LocationHistoryInfoEvent the API introduced in this specification. | | | | | | | |
|  | |  | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | |

\* \* \* \* Start of changes \* \* \* \*

# A.23 SS\_LocationHistoryInfoEvent API

openapi: 3.0.0

info:

title: LM Server Location Tracing Configuration Management Service

version: 1.0.0-alpha.1

description: |

LM Server Location Tracing Configuration Management Service.

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externalDocs:

description: >

3GPP TS 29.549 V19.1.0 Service Enabler Architecture Layer for Verticals (SEAL);

Application Programming Interface (API) specification; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.549/

servers:

- url: '{apiRoot}/ss-lhie/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 6.5 of 3GPP TS 29.549.

security:

- {}

- oAuth2ClientCredentials: []

paths:

/configurations:

post:

summary: Request the creation of a Location Tracing Configuration.

operationId: CreateLocTracingConfig

tags:

- Location Tracing Configurations (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

Created. The Location Tracing Configuration is successfully created and

a representation of the created Individual Location Tracing Configuration

resource shall be returned.

content:

application/json:

schema:

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

headers:

Location:

description: >

Contains the URI of the created Individual Location Tracing Configuration resource.

required: true

schema:

type: string

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/configurations/{configId}:

parameters:

- name: configId

in: path

description: >

Represents the identifier of the Individual Location Tracing Configuration resource.

required: true

schema:

type: string

get:

summary: Retrieve an existing Individual Location Tracing Configuration resource.

operationId: GetIndLocTracingConfig

tags:

- Individual Location Tracing Configuration (Document)

responses:

'200':

description: >

OK. The requested Individual Location Tracing Configuration resource shall be returned.

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'406':

$ref: 'TS29122\_CommonData.yaml#/components/responses/406'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

put:

summary: Request the update of an existing Individual Location Tracing Configuration resource.

operationId: UpdateIndLocTracingConfig

tags:

- Individual Location Tracing Configuration (Document)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The Individual Location Tracing Configuration resource is successfully updated and a

representation of the updated resource shall be returned in the response body.

content:

application/json:

schema:

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

'204':

description: >

No Content. The Individual Location Tracing Configuration resource is successfully

updated and no content is returned in the response body.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

patch:

summary: Request the modification of an existing Individual Location Tracing Configuration resource.

operationId: ModifyIndLocTracingConfig

tags:

- Individual Location Tracing Configuration (Document)

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: >

OK. The Individual Location Tracing Configuration resource is successfully modified and

a representation of the updated resource shall be returned in the response body.

content:

application/json:

schema:

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

'204':

description: >

No Content. The Individual Location Tracing Configuration resource is successfully

modified and no content is returned in the response body.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

delete:

summary: Request the deletion of an existing Individual Location Tracing Configuration resource.

operationId: DeleteIndLocTracingConfig

tags:

- Individual Location Tracing Configuration (Document)

responses:

'204':

description: >

No Content. The Individual Location Tracing Configuration resource is successfully

deleted.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/reports:

get:

summary: Retrieve Location History Report(s).

operationId: GetHistTransQualMeasReports

tags:

- Location History Reports (Collection)

parameters:

- name: target-id

in: query

required: true

content:

application/json:

schema:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

- name: val-service-id

in: query

required: false

schema:

type: string

- name: req-loc-history

in: query

required: false

content:

application/json:

schema:

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

- name: supp-feat

in: query

required: false

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The requested Location History Report(s), if any, shall be returned.

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'406':

$ref: 'TS29122\_CommonData.yaml#/components/responses/406'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

#

# STRUCTURED DATA TYPES

#

LocTracingConfig:

description: >

Represents a Location Tracing Configuration.

type: object

properties:

target:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

valServiceId:

type: string

locArea:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

locQoS:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LocationQoS'

triggerConds:

$ref: 'TS29549\_SS\_LocationReporting.yaml#/components/schemas/TriggeringCriteria'

duration:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/DurationSec'

posMethod:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethod'

suppFeat:

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

required:

- target

LocTracingConfigPatch:

description: >

Represents the parameters to request the modification of a Location Tracing Configuration.

type: object

properties:

locArea:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

locQoS:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LocationQoS'

triggerConds:

$ref: 'TS29549\_SS\_LocationReporting.yaml#/components/schemas/TriggeringCriteria'

duration:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/DurationSec'

posMethod:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethod'

ReqLocHistory:

description: >

Represents the requested location history filtering information.

type: object

properties:

locArea:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

time:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/DateTime'

duration:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/DurationSec'

anyOf:

- required: [locArea]

- required: [time]

- required: [duration]

LocHistoryReports:

description: >

Represents Location History Report(s).

type: object

properties:

reports:

type: array

items:

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

minItems: 0

description: >

Contains the Location History Report(s).

If there are no Location History Report(s) fulfilling the request, this attribute shall

contain an empty array.

suppFeat:

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

required:

- reports

LocHistoryReport:

description: >

Represents a Location History Report.

type: object

properties:

targets:

type: array

items:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

minItems: 1

locData:

type: object

additionalProperties:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/LocationInfo'

minProperties: 1

description: >

Contains the location history information report.

The key of the map shall be set to the identifier of the VAL UE/user (among the ones

provided within the targets attribute) to which the provided location history

information provided within the map value is related.

timestamp:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/DateTime'

required:

- locData

oneOf:

- required: [valUEs]

- required: [valUsers]

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

# Data types describing alternative data types or combinations of data types

#

\* \* \* \* End of changes \* \* \* \*