**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)*.* |
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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***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 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-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 \* \* \* \*