**3GPP TSG-CT WG4 Meeting #101eC4-205abc**

**E-Meeting, 10th – 20th November 2020 *was C4-205368***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.518** | **CR** | **0432** | **rev** | **1** | **Current version:** | **15.8.0** |  |
|  | | | | | | | | |
| *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:*** | Initial Location | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GS\_Ph1-CT | | | | |  | ***Date:*** | | | 2020-10-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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:*** | | 3GPP TS 29.518 has specified location type "INITIAL\_LOCATION" which should not be supported.  “Initial Location” was introduce in GSM (last millennium) due to some US-specs (likely J-STD-036) for emergency calls, which will be stored in GMLC for LCS client (emergency service agent) during the emergency call, but not handled in AMF (not in MME in EPS). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1/ Remove the enumeration value "INITIAL\_LOCATION" from LocationType data type.  2/ Update incorrect descriptions for LocationType and LocationEvent.  3/ Update OpenAPI accordingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect specification for not supported feature defined in API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.4.6.1, 6.4.6.2.2, 6.4.6.3.3, 6.4.6.3.4, A.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 backward compatible corrections to OpenAPI file of Namf\_Location API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1:  1/ Correct WIC in cover page.  2/ Update incorrect descriptions for LocationType and LocationEvent. | | | | | | | | |

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

#### 6.4.6.1 General

This clause specifies the application data model supported by the API.

Table 6.4.6.1-1 specifies the data types defined for the Namf\_Location service based interface protocol.

Table 6.4.6.1-1: Namf\_Location specific Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Clause defined | Description |
| RequestPosInfo | 6.4.6.2.2 | Information within Provide Positioning Information Request |
| ProvidePosInfo | 6.4.6.2.3 | Information within Provide Positioning Information Response |
| NotifiedPosInfo | 6.4.6.2.4 | Information within EventNotify notification |
| RequestLocInfo | 6.4.6.2.5 | Information within Provide Location Information Request |
| ProvideLocInfo | 6.4.6.2.6 | Information within Provide Location Information Response |
| LocationType | 6.4.6.3.3 | Type of location measurement requested |
| LocationEvent | 6.4.6.3.4 | Type of events initiating location procedures |

Table 6.4.6.1-2 specifies data types re-used by the Namf\_Location service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Namf\_Location service based interface.

Table 6.4.6.1-2: Namf\_Location re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| Supi | 3GPP TS 29.571 [6] | Subscription Permanent Identifier |
| Gpsi | 3GPP TS 29.571 [6] | General Public Subscription Identifier |
| Pei | 3GPP TS 29.571 [6] | Permanent Equipment Identifier |
| ExternalClientType | 3GPP TS 29.572 [25] | LCS Client Type (Emergency, Lawful Interception …) |
| LocationQoS | 3GPP TS 29.572 [25] | LCS QoS (accuracy, response time) |
| SupportedGADShapes | 3GPP TS 29.572 [25] | LCS supported GAD shapes |
| GeographicArea | 3GPP TS 29.572 [25] | Estimate of the location of the UE |
| AccuracyFulfilmentIndicator | 3GPP TS 29.572 [25] | Requested accuracy was fulfilled or not |
| AgeOfLocationEstimate | 3GPP TS 29.572 [25] | Age Of Location Estimate |
| PositioningMethodAndUsage | 3GPP TS 29.572 [25] | Usage of each non-GANSS positioning method |
| VelocityEstimate | 3GPP TS 29.572 [25] | Estimate of the velocity of the target UE |
| VelocityRequested | 3GPP TS 29.572 [25] | Indication of the Velocity requirement |
| LcsPriority | 3GPP TS 29.572 [25] | Priority of the LCS client |
| GnssPositioningMethodAndUsage | 3GPP TS 29.572 [25] | Usage of each GANSS positioning method |
| CivicAddress | 3GPP TS 29.572 [25] | Civic address |
| BarometricPressure | 3GPP TS 29.572 [25] | Barometric Pressure |
| Altitude | 3GPP TS 29.572 [25] | Altitude estimate of the UE |
| Ecgi | 3GPP TS 29.571 [6] | UE EUTRAN cell information |
| Ncgi | 3GPP TS 29.571 [6] | UE NR cell information |
| SupportedFeatures | 3GPP TS 29.571 [6] | Supported Features |
| RatType | 3GPP TS 29.571 [6] | RAT type |
| TimeZone | 3GPP TS 29.571 [6] | Time Zone |
| DateTime | 3GPP TS 29.571 [6] | Date and Time |
| UserLocation | 3GPP TS 29.571 [6] | User Location |

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

##### 6.4.6.2.2 Type: RequestPosInfo

Table 6.4.6.2.2-1: Definition of type RequestPosInfo

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| lcsClientType | ExternalClientType | M | 1 | This IE shall contain the type of LCS client (Emergency, Lawful Interception etc.,.) issuing the location request |
| lcsLocation | LocationType | M | 1 | This IE shall contain the type of location measurement requested, such as current location, current or last known location, etc. |
| supi | Supi | C | 0..1 | If the SUPI is available, this IE shall be present. |
| gpsi | Gpsi | C | 0..1 | If the GPSI is available, this IE shall be present. |
| priority | LcsPriority | O | 0..1 | If present, this IE shall contain the priority of the LCS client issuing the positioning request. |
| lcsQoS | LocationQoS | O | 0..1 | If present, this IE shall contain the quality of service requested, such as the accuracy of the positioning measurement and the response time of the positioning operation |
| velocityRequested | VelocityRequested | O | 0..1 | If present, this IE shall contain an indication of whether or not the Velocity of the target UE is requested. |
| lcsSupportedGADShapes | SupportedGADShapes | O | 0..1 | If present, this IE shall contain oneGAD shape supported by the LCS client. |
| additionalLcsSuppGADShapes | array(SupportedGADShapes) | C | 1..N | Shall be absent if lcsSupportedGADShapes is absent.  Shall be present if the LCS client supports more than one GAD shape. |
| locationNotificationUri | Uri | O | 0..1 | The callback URI on which location change event notification is reported. |
| supportedFeatures | SupportedFeatures | C | 0..1 | This IE shall be present if at least one optional feature defined in clause 6.4.8 is supported. |
| oldGuami | Guami | C | 0..1 | This IE shall be present during an AMF planned removal procedure when the NF Service Consumer initiates a request towards the target AMF, for a UE associated to an AMF that is unavailable (see clause 5.21.2.2 of 3GPP TS 29.502 [16]). |

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

##### 6.4.6.3.3 Enumeration: LocationType

The enumeration LocationType represents the type of location measurement requested.

Table 6.4.6.3.3-1: Enumeration LocationType

|  |  |
| --- | --- |
| Enumeration value | Description |
| "CURRENT\_LOCATION" | This value indicates that the current location of the target UE is required. |
| "CURRENT\_OR\_LAST\_KNOWN\_LOCATION" | This value indicates that the current location or last known location of the target UE is required. |

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

##### 6.4.6.3.4 Enumeration: LocationEvent

The enumeration LocationEvent represents the type of events initiating location procedures.

Table 6.4.6.3.4-1: Enumeration LocationEvent

|  |  |
| --- | --- |
| Enumeration value | Description |
| "EMERGENCY\_CALL\_ORIGINATION" | Emergency session initiation |
| "EMERGENCY\_CALL\_RELEASE" | Emergency session termination |
| "EMERGENCY\_CALL\_HANDOVER" | Handover of an Emergency session |

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

## A.5 Namf\_Location

openapi: 3.0.0

info:

version: 1.0.4

title: Namf\_Location

description: |

AMF Location Service

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security:

- {}

- oAuth2ClientCredentials:

- namf-loc

externalDocs:

description: 3GPP TS 29.518 V15.6.0; 5G System; Access and Mobility Management Services

url: 'http://www.3gpp.org/ftp/Specs/archive/29\_series/29.518/'

servers:

- url: '{apiRoot}/namf-loc/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause clause 4.4 of 3GPP TS 29.501

\*\*\*\*\*\*\*\*\*\*\*\*\*\* Text Skipped for clarity \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

LocationType:

anyOf:

- type: string

enum:

- CURRENT\_LOCATION

- CURRENT\_OR\_LAST\_KNOWN\_LOCATION

- type: string

\*\*\*\*\*\*\*\*\*\*\*\*\*\* Text Skipped for clarity \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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