



# Namf\_Location

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The Namf\_Location service is used by NF service consumers to request the AMF for initiating positioning requests and provide the location information. It is also used to subsequently notify the location change events towards the NF service consumers. The following are the key functionalities of this NF service:

- Allow NFs to request the current geodetic and optionally civic location of a target UE.
- Allow NFs to be notified of event information related to emergency sessions.
- Allow NFs to request Network Provided Location Information (NPLI) and/or local time zone corresponding to the location of a target UE.

**Reference:** 3GPP TS 29.518 [15]

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## OpenAPI

OpenAPI Version: 3.0.0

## info

**Version:** 1.0.0

**Title:** Namf\_Location

**Description:** AMF Location Service

## externalDocs

**Description:** 3GPP TS 29.518 V15.2.0; 5G System; Access and Mobility Management Services

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

## security

- {}
- oAuth2Clientcredentials:
- namf-loc

## servers

**URL:** '{apiRoot}/namf-loc/v1'

**Variables:**

**API Root:**

**Default:** https://example.com

**Description:** apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

## paths

### ueContextId provide pos info

**Method:** Post

**Summary:** Namf\_Location ProvidePositioningInfo service Operation

**Tags:**

- Individual UE context (Document)

**Operation ID:** ProvidePositioningInfo

**Parameters:**

- name: ueContextId

**In:** path

**Description:** UE Context Identifier

**Required/Optional:** true

**Schema:**

**Type:** string

**pattern:** ^(imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

**Request Body:**

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/RequestPosInfo'

**Required/Optional:** true

**Responses:**

'200' Expected response to a valid request

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/ProvidePosInfo'

'400': Reference 'TS29571\_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571\_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571\_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571\_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571\_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571\_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571\_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571\_CommonData.yaml#/components/responses/503'

'504': Reference 'TS29571\_CommonData.yaml#/components/responses/504'

**default:**

**Description:** Unexpected error

**Callbacks:**

**onUELocationNotification:**

'{\$request.body#/locationNotificationUri}':

**Method:** Post

**Request Body:**

**Description:** UE Location Event Notification

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/NotifiedPosInfo'

**Responses:**

'204' Expected response to a successful callback processing

'400': Reference 'TS29571\_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571\_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571\_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571\_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571\_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571\_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571\_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571\_CommonData.yaml#/components/responses/503'

## ueContextId provide loc info

**Method:** Post

**Summary:** Namf\_Location ProvideLocationInfo service Operation

**Tags:**

- Individual UE context (Document)

**Operation ID:** ProvideLocationInfo

**Parameters:**

- name: ueContextId

**In:** path

**Description:** UE Context Identifier

**Required/Optional:** true

**Schema:**

**Type:** string

**pattern:** '^(imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

**Request Body:**

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/RequestLocInfo'

**Required/Optional:** true

**Responses:**

'200' Expected response to a valid request

**Content:**

**Application/JSON:****Schema:****Reference:** '#/components/schemas/ProvideLocInfo'

'400': Reference 'TS29571\_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571\_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571\_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571\_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571\_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571\_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571\_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571\_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571\_CommonData.yaml#/components/responses/503'

**default:****Description:** Unexpected error

## components

### securitySchemes

#### oAuth2ClientCredentials

**Type:** oauth2**Flows:****clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****namf-loc:** Access to the Namf\_Location API

### schemas

#### RequestPosInfo

**Type:** object**Properties:****lcsClientType:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/ExternalClientType'

**lcsLocation:****Reference:** '#/components/schemas/LocationType'**supi:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Supi'**gpsi:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'**priority:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LcsPriority'**lcsQoS:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LocationQoS'**velocityRequested:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityRequested'**lcsSupportedGADShapes:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/SupportedGADShapes'**locationNotificationUri:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Uri'**supportedFeatures:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- lcsClientType
- lcsLocation

**ProvidePosInfo****Type:** object**Properties:****locationEstimate:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'**accuracyFulfilmentIndicator:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AccuracyFulfilmentIndicator'**ageOfLocationEstimate:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'**velocityEstimate:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityEstimate'**positioningDataList:****Type:** array

**Items:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethodAndUsage'**minItems:** 0**maxItems:** 9**gnssPositioningDataList:****Type:** array**Items:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GnssPositioningMethodAndUsage'**minItems:** 0**maxItems:** 9**ecgi:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Ecgi'**ncgi:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Ncgi'**targetServingNode:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'**civicAddress:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'**barometricPressure:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/BarometricPressure'**altitude:****Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/Altitude'**supportedFeatures:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

## NotifiedPosInfo

**Type:** object**Properties:****locationEvent:****Reference:** '#/components/schemas/LocationEvent'**supi:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Supi'**gpsi:****Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'**pei:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Pei'

**locationEstimate:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

**ageOfLocationEstimate:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

**velocityEstimate:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityEstimate'

**positioningDataList:**

**Type:** array

**Items:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethodAndUsage'

**minItems:** 0

**maxItems:** 9

**gnssPositioningDataList:**

**Type:** array

**Items:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GnssPositioningMethodAndUsage'

**minItems:** 0

**maxItems:** 9

**ecgi:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Ecgi'

**ncgi:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/Ncgi'

**servingNode:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

**civicAddress:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

**barometricPressure:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/BarometricPressure'

**altitude:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/Altitude'

**Required:**

- locationEvent



## RequestLocInfo

**Type:** object

**Properties:**

**req5gsLoc:**

**Type:** boolean

**Default:** false

**reqCurrentLoc:**

**Type:** boolean

**Default:** false

**reqRatType:**

**Type:** boolean

**Default:** false

**reqTimeZone:**

**Type:** boolean

**Default:** false

**supportedFeatures:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

## ProvideLocInfo

**Type:** object

**Properties:**

**currentLoc:**

**Type:** boolean

**location:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/UserLocation'

**geoInfo:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

**locatoInAge:**

**Reference:** 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

**ratType:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/RatType'

**timezone:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/TimeZone'

**supportedFeatures:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

## LocationType

**anyOf:**

- type: string

## LocationEvent

**anyOf:**

- type: string