TM Forum Specification

Geographic Address API Conformance Profile

TMF673B

Team Approved Date: 02-Oct-2020

Release Status: Pre-production	Approval Status: Team Approved
Version 4.0.0	IPR Mode: RAND

Notice

Direct inquiries to the TM Forum office:

8 Campus Drive, #105
Parsippany, NJ 07054 USA
Tel No. +1 973 944 5100
Fax No. +1 973 998 7916
TM Forum Web Page: www.tmforum.org

TABLE OF CONTENTS

INTRODUCTION - API DESCRIPTION

The Geographic Address API provides a standardized client interface to an Address management system.

It allows looking for worldwide addresses.
It can also be used to validate geographic address data, to be sure that it corresponds to a real address.

RESOURCE MODEL CONFORMANCE

API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

Resource Name	Comment
GeographicAddress	
GeographicSubAddress	
GeographicAddressValidation	

General Notes on Resource Attribute Conformance

There are three situations that could occur for an attribute:

- o Mandatory attribute,
- o Mandatory attribute if the optional parent attribute is present,
- o Non-mandatory/Optional attribute. Those are all the other attributes not mentioned in the following subsections. Please refer to the corresponding API REST Specification for more details.

- The tables in the subsections below indicate which attributes are mandatory including mandatory when an optional parent is present.
- Where a resource is an input into an API (e.g. POST, PATCH), Mandatory means that the attribute value must be supplied by the API consumer in the input (and must not be blank or null).
- Where a resource is an output from an API (e.g. GET, POST), Mandatory means that the attribute value must be supplied by the API provider in the output (and must not be blank or null).
- For a sub-resource that is not an array, Mandatory (cardinality 1..1) means that the sub-resource must be present, while Optional (cardinality 0..1) means that the sub-resource may be absent. Mandatory and Optional on the sub-resource attributes apply to the sub-resource if present.
- For a sub-resource that is an array, Mandatory (cardinality 1..*) means that at least one sub-resource must be present in the array, while Optional (cardinality 0..*) means that the array may be absent. Mandatory and Optional on the sub-resource attributes apply to each of the sub-resources if present.

In this table are listed all mandatory attributes. A mandatory attribute MUST be retrieved in resource representation when no attribute selection is used (e.g. GET /../{id}) without any attribute selection

When an attribute is listed with an indentation (in second column) it means this attribute is mandatory if root (parent) attribute is present.

GeographicAddress Resource Mandatory Attributes

Mandatory attribute when parent is present		Rule
city		M
country		M
geographicSubAddress		M Array of GeographicSubAddress. See mandatory attributes for GeographicSubAddress.
href		M
id		M Generated by the server
postcode		M
stateOrProvince		M
streetName		M
streetNr		M
streetType		M
geographicLocation (if present)		The geographicLocation could be pass by ref or by value. If geographicLocation is passed by reference (@type valued to GeographicLocationRef) id & @referredType attributes must be provided.
	@type	M

GeographicSubAddress Resource Mandatory Attributes

Mandatory attribute when parent is present	Rule
href	M
id	M
levelNumber	M
levelType	M
privateStreetName	M
privateStreetNumber	M

Mandatory attribute when parent is present	Rule
subAddressType	M

GeographicAddressValidation Resource Mandatory Attributes

Mandatory attribute when parent is present		Rule
href		M
id		M
provideAlternative		M
state		M
validationDate		M
validationResult		M
submittedGeographicAddress		M
submittedGeographicAddress.geographicLocation (if present)		The geographicLocation could be passed by ref or by value. If geographicLocation is passed by reference (@type valued to GeographicLocationRef) id & @referredType attributes must be provided. If passed by value then it must comply to GeographicLocation (or polymorphic version specified by @referredType)
	@type	M
validGeographicAddress		M (if validationResult is success) See conditions for GeographicAddress at submittedGeographicAddress
validGeographicAddress.geographicLocation (if present)		See conditions for GeographicLocationRefOrValue at submittedGeographicAddress.geographicLocation
alternateGeographicAddress.geographicLocation (if present)		The geographicLocation could be pass by ref or by value. If geographicLocation is passed by reference (@type valued to GeographicLocationRef) id & @referredType attributes must be provided. See conditions for GeographicLocationRefOrValue at submittedGeographicAddress.geographicLocation

API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

GeographicAddress Mandatory Operations

The following table indicates which ones are mandatory for the GeographicAddress resource:

Uniform API Operation
GET

GeographicSubAddress Mandatory Operations

The following table indicates which ones are mandatory for the GeographicSubAddress resource:

Uniform API Operation
GET

GeographicAddressValidation Mandatory Operations

The following table indicates which ones are mandatory for the GeographicAddressValidation resource:

Uniform API Operation
GET
POST

API GET OPERATION CONFORMANCE

All the GET operations in this API share the same status code pattern.

GET	Mandatory/Optional
Response Status Code 200 if successful	M
Response Status Code 404 if not found	M

Definitions for Filter

The following definitions apply to all the GET operations:

- Filtered Search: A filtered search can be applied using query parameters to obtain only the resources that meet the criteria defined by the filtering parameters included in the query request. Several elements can be applied to the filtered search. In that case logic, a logical AND is applied to combine the criteria (e.g.:?severity=<value>&status=<value>).
- Attribute selection (Limiting Response Data): In order to limit which attributes are included in the response, the GET request can include the ?fields= query parameter. Only those attributes whose names are supplied in this parameter will be returned. Attribute selection capabilities are the same for collections retrieval and individual resource queries.
- Level: The filtering and attribute selection can apply to the top level properties (attributes) and subproperties. The tables below show which attributes need to be supported in top-level or contained resources.

GET /geographicAddress?fields=...&{filtering}

This operation list or find GeographicAddress entities

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

GET /geographicAddress/{id}?fields=...&{filtering}

This operation retrieves a GeographicAddress entity. Attribute selection is enabled for all first level attributes.

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

GET /geographicAddress/{geographicAddressId}/geographicSubAddress?fields=...&{filtering}

This operation list or find GeographicSubAddress entities

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

GET /geographicAddress/{geographicAddressId}/geographicSubAddress/{id}?fields=...&{filtering}

This operation retrieves a GeographicSubAddress entity. Attribute selection is enabled for all first level attributes.

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

GET /geographicAddressValidation?fields=...&{filtering}

This operation list or find GeographicAddressValidation entities

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

GET /geographicAddressValidation/{id}?fields=...&{filtering}

This operation retrieves a GeographicAddressValidation entity. Attribute selection is enabled for all first level attributes.

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

API POST OPERATION CONFORMANCE

All the POST operations in this API share the same status code pattern.

POST	Mandatory/Optional
Status Code 201 if resource created	M

POST /geographicAddressValidation

This operation creates a GeographicAddressValidation entity.

The following table provides the list of mandatory attributes when creating an instance of the GeographicAddressValidation resource, including any possible rule, conditions and applicable default values.

Mandatory Attributes	Rule
provideAlternative	
submittedGeographicAddress	
submittedGeographicAddress.city	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present
submittedGeographicAddress.country	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present
submittedGeographicAddress.geographicLocation	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present
submittedGeographicAddress.locality	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present
submittedGeographicAddress.postcode	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present
submittedGeographicAddress.stateOrProvince	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present

Mandatory Attributes	Rule
submittedGeographicAddress.streetName	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present
submittedGeographicAddress.streetType	at least (streetName + streetType + (locality or city) + (stateorProvince or postcode) + country) OR geographicLocation must be present

ADMINISTRATIVE APPENDIX

Document History

Release History

Release Status	Date	Release led by:	Description
Pre-production	02-Oct-2020	Alexis de Peufeilhoux, Deutsche Telekom	2020 Sprint 5

Version History

Version Number	Date	Modified by	Description
4.0.0	02-Oct-2020	Alan Pope	Final edits prior to publication