**Geographic Site Management
API REST Specification**

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# Introduction

The following document is the specification of the REST API for Site Management. It includes the model definition as well as all available operations for SID GeographicSite entity.

This API covers the operations to manage (create, read, delete) sites that can be associated to a customer, an account, a service delivery or other entities.

This API defines a Site as a convenience class that allows to easily refer to places important to other entities, where a geographic place is the entity that can answer the question “where?”, allowing to determine where things are in relation to the earth's surface, and can be represented either in a textual structured way (geographic address) or as a geometry referred to a spatial reference system (geograpich location)

This API relates with the following two APIs also covering SID GeographicPlace entity

* Address Management API, specific to manage places defined in a structured textual way (street name, street number, …) and validate existence of given address definition.
* GeoLocation API specific for management of places defined as a geometry in the spatial reference regarding the surface of the Earth (coordinates, …) and the relationship between different geolocations (distance, proximity, …)

This API allows the following operations

* Create a new site
* Retrieve a list of sites stored in a server filtered by a given criteria
* Retrieve a specific site

# SAMPLE USE CASES

This section includes a set of main use cases that can be performed with this API. Additional use cases can be generated using the operations and resources defined in this specification.

* Create a site in the server and associate a given customer/account to that site. The site definition includes all the address definition (street name, street number, ….) as well as the type of site it is in the relationship with the customer and the validity period for the relationship
* Request a new product order and associate the delivery of any of the products/services in the order to one of the sites that have been associated to a customer/account
* A customer creates a new trouble ticket for technical assistamce requiring an agent to provide assistance in an specific geographic address, identified as one of the sites allocated to the customer

# RESOURCE MODEL

## GEOGRAPHIC SITE RESOURCE

The GeographicSite resource represents an class that allows to easily refer to Places important to other entities (such as a customer, an account, a product, ….).

**Resource model**



**Lifecycle**

No state machine for the resources detailed in this API

**Field descriptions**

*GeographicSite* fields

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| id | Yes in response | A string. Unique identifier of the site within the server |
| href | Yes in response | A string. An URI used to access to the site resource |
| name | Yes | A string. The name that the site is known by |
| description | No | A string. Text describing additional information regarding the site |
| code | No | A string. A code that may be used for some addressing schemes e.g. [ANSI T1.253-1999] |
| status | Yes in response | A string. The condition of the GeographicSite, such as active, inactive, planned |
| address | Yes if geographicLocation not included | An address (GeographicAddress) passed by reference or by value. Used to identify the physical place over the surface of the Earth that is associated to the site based on an entity uniquely identified in the server or , providing the geographic address (textual description) and the geographic location (geometry description) of the physical place |
| geographicLocation | Yes if address not included | A geo location (GeographicLocation) passed by reference or by value. A GeoLocation allows describing through coordinate(s) a point, a line or a space. |
| calendar | No | A list of calendar period entries (CalendarPeriod[\*]) indicating the time availability of the site for different periods |
| relatedParty | No | A list of related party references (RelatedPartyRef [\*]). A related party defines party or party role linked to a specific entity |
| siteRelationship | No | A list of site relationships (SiteRelationship [\*]).Linked sites |
| @baseType | No | A string. Indicates the base type of the resource for extensibility and polymorphism purposes to differentiate the definition of different type of sites (enterprise, residential, …). |
| @type | No | A string. Indicates the type of the resource for extensibility purposes. |
| @schemaLocation | No | A string. A Link to the schema describing this REST Resource.  |
|  |  |  |

*GeographicAddress* sub-resource

Address reference. Defines an address and/or identifies an existing address entity

An address allows textual description of an existing place over the surface of the Earth

This resource could be invoked as reference or value

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| id | No | A string. Unique identifier of the entity within the server |
| href | No | A string. Reference of the entity |
| streetNr | Yes if neither id nor href nor are included | A string. Number identifying a specific property on a public street. It may be combined with streetNrLast for ranged addresses. |
| streetNrSuffix | No | A string. the first street number suffix. |
| streetNrLast | No | A string. Last number in a range of street numbers allocated to a property. |
| streetNrLastSuffix | No | A string. Last street number suffix for a ranged address. |
| streetName | Yes if neither id nor href nor are included | A string. Name of the street or other street type. |
| streetType | Yes if neither id nor href nor are included | A string. Alley, avenue, boulevard, brae, crescent, drive, highway, lane, terrace, parade, place, tarn, way, wharf. |
| streetSuffix | No | A string. A modifier denoting a relative direction. |
| postcode | Yes if neither id nor href nor are included | A string. Descriptor for a postal delivery area, used to speed and simplify the delivery of mail (also known as zipcode). |
| locality | Yes if neither id nor href nor are included | A string. "An area of defined or undefined boundaries within a local authority or other legislatively defined area, usually rural or semi-rural in nature." [ANZLIC-STREET], or a suburb "a bounded locality within a city, town or shire principally of urban character " [ANZLICSTREET]. |
| city | No | A string. City that the address is in. |
| stateOrProvince | Yes if neither id nor href nor are included | A string. the State or Province that the address is in. |
| country | Yes if neither id nor href nor are included | A string. Country that the address is in. |
| geographicLocation | No | A geo location (GeographicLocation) passed by reference or by value. A GeoLocation allows describing through coordinate(s) a point, a line or a space. |
| geographicSubAddress | No | A list of sub addresses (GeographicSubAddress [\*]). Representation of a SubAddress It is used for addressing within a property in an urban area (country properties are often defined differently). It may refer to a building, a building cluster, or a floor of a multistory building. |
| @type | No | A string. Indicates the type of the resource. Here can be 'UrbanPropertyAddress', ‘FormattedAddress’, ‘JapanesePropertyAddress’ , ‘AustralianPropertyAddress’, etc… |
| @schemaLocation | No | A string. A Link to the schema describing this REST Resource. The resource described 'UrbanPropertyAddress' but a schema could be used for other property address description. |

*GeoGraphicLocation* sub-resource

GeographicLocation reference. Defines a geo location and/or identifies an existing geo location entity

A GeoLocation allows describing through coordinate(s) a point, a line or a space.

This resource could be invoked as reference or value

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| id | No | A string. Unique Identifier of a GeoLocation. |
| href | No | A string. href of the GeoLocation. |
| name | No | A string. Name of a GeoLocation. |
| type | Yes if href not included | A string. Type allows describing Geolocation form: it could be a point, a line, a polygon, a cylinder, etc.... |
| geographicPoint | Yes if href not included | A list of geo points (GeographicPoint [\*]). A GeoPoint defines a geographic point through coordinates. |
| @type | No | A string. Indicates the type of the resource for extensibility purposes. |
| @schemaLocation | No | A string. A Link to the schema describing this REST Resource.  |

*GeographicPoint* sub-resource

A GeoPoint defines a geographic point through coordinates.

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| accuracy | Yes | A string. Accuracy of the coordinate specified. |
| spatialRef | Yes | A string. Geocoding referential. |
| x | Yes | A string. x coordinate (usually latitude). |
| y | Yes | A string. y coordinate (usually longitude). |
| z | No | A string. z coordinate (usually elevation). |

*GeographicSubAddress* sub-resource

Representation of a SubAddress
It is used for addressing within a property in an urban area (country properties are often defined differently). It may refer to a building, a building cluster, or a floor of a multistory building.

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| id | No | A string. Unique Identifier of the subAddress. |
| href | No | A string. Href of the subAddress. |
| type | No | A string. type of subAddress : it can be a subunit or a private street. |
| name | No | A string. Name of the subAddress to identify it with a meaningful identification. |
| subUnitType | No | A string. the type of subunite.g.BERTH, FLAT, PIER, SUITE, SHOP, TOWER, UNIT, WHARF. |
| subUnitNumber | No | A string. the discriminator used for the subunitoften just a simple number e.g. FLAT 5, may also be a range. |
| levelType | No | A string. describes level types within a building. |
| levelNumber | No | A string. used where a level type may be repeated e.g. BASEMENT 1, BASEMENT 2. |
| buildingName | No | A string. allows for buildings that have well-known names. |
| privateStreetName | No | A string. private streets internal to a property (e.g. a university) may have internal names that are not recorded by the land title office. |
| privateStreetNumber | No | A string. private streets numbers internal to a private street. |
| @type | No | A string. Type of the resource for thus subResource |
| @schemaLocation | No | A string. A Link to the schema describing the structure of this REST Resource to allow for extensions |

*RelatedPartyRef* relationship

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| id | Yes | A string. Unique identifier of the entity within the server |
| href | No | A string. Reference of the entity |
| name | No | A string. Name of the related party |
| role | No | A string. Role of the related party |
| validFor | No | TimeperiodType. Validity for the relationship with the related party |
| @type | No | A string. Indicates the type of the resource. Here can be 'Individual', ‘Organization’, etc… |

*SiteRelationship* relationship

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| id | Yes | A string. Unique identifier of the related site entity within the server |
| href | No | A string. Reference of the related site |
| type | Yes | A string. Type of relationship |
| role | No | A string. Role of the related site in the relationship |
| validFor | No | TimePeriodType. Validity for the relationship |

*CalendarPeriod* sub-resource

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| status | Yes | A string. Indication of the availability of the site (e.g.: open) |
| day | Yes | A string. Day where the calendar status applies (e.g.: monday, mon-to-fri, weekdays, weekend, all week, …) |
| timeZone | No | A string. Indication of the timezone applicable to the calendar information (e.g.: Paris, GMT+1) |
| hourPeriod | Yes | A list of periods of hours (HourPeriod [\*]). Defines the time period when the status for the place is applicable |

*HourPeriod type*

|  |  |  |
| --- | --- | --- |
| Field | Mandatory in API messages | Description |
| startHour | Yes | A string. The time when the status starts applying |
| endHour | Yes | A string. The time when the status ends applying |

**Json representation sample**

The example below provides the json representation of a 'GeographicSite' resource object (including main elements) where the physical place associated is included via reference to an address entity registered in the server

{
 "id": "12345",
 "href": "https://host:port/siteManagementlocation/v1/site/12345",
 "name": "Main Building",

 "description": "This site refers to the Main Building of the company",

 "status": "active",

 "address": {
 "id": "9912",
 "href": " https://host:port/addressManagement/v1/address/9912"
 },
 "calendar": [{
 "status": "open",
 "day": "weekdays",
 "timeZone": "GMT+1",
 "hourPeriod": [
 {
 "startHour": "9:00 am ",
 "endHour": "18:00 pm"
 }
 }],

 "siteRelationship": [{
 "id": "9913",
 "href": " https://host:port/addressManagement/v1/address/9913",

 "type": "alternative site",
 "role": "emergency available office"
 }]
}

The example below provides the json representation of a 'GeographicSite' resource object (including main elements) where the physical place associated is included directly, providing all the geographic address and geolocation information

{
 "id": "12345",
 "href": "https://host:port/siteManagementlocation/v1/site/12345",
 "name": "Main Building",

 "description": "This site refers to the Main Building of the company",

 "status": "active",

 "address": {
 "streetNr": "56",
 "streetName": "Arlington",
 "streetType": "Road",
 "postcode": "W45E02",
 "locality": "London",
 "city": "London",
 "stateOrProvince": "Great London",
 "country": "England",

 "geographicLocation": {
 "type": "point",
 "geographicPoint": [
 {
 "accuracy": "",
 "spatialRef": "WGS84",
 "x": " 1.430937",
 "y": " 43.597208",
 "z": ""
 }
 ]

 }
 },
 "calendar": [{
 "status": "open",
 "day": "weekdays",
 "timeZone": "GMT+1",
 "hourPeriod": [
 {
 "startHour": "9:00 am ",
 "endHour": "18:00 pm"
 }
 }],

 "siteRelationship": [{
 "id": "9913",
 "href": " https://host:port/addressManagement/v1/address/9913",

 "type": "alternative site",
 "role": "emergency available office"
 }]
}

The example below provides the json representation of a 'GeographicSite' resource object (including main elements) where the physical place associated is included via reference to a geographical location entity registered in the server and also associated at creation to an specific party (organization)

{
 "id": "12345",
 "href": "https://host:port/siteManagementlocation/v1/site/12345",
 "name": "Main Building",

 "description": "This site refers to the Main Building of the company (organization XYZ)",

 "status": "planned",

 " geographicLocation ": {
 "id": "geo001",
 "href": " https://host:port/ geographicLocationManagement/v1/geographicLocation /geo001"
 },
 "calendar": [{
 "status": "open",
 "day": "weekdays",
 "timeZone": "GMT+1",
 "hourPeriod": [
 {
 "startHour": "9:00 am ",
 "endHour": "18:00 pm"
 }
 }],

 "relatedParty": [{
 "id": "1234",
 "href": " https://host:port/partyManagement/organization/1234",

 "name": "organizationXYZ",
 "role": "headquarters" ,

 "@type": "organization",
 }]
}

## Notification Resource Models

2 notifications are defined for this API

Notifications related to GeographicSite:
 - GeographicSiteCreationNotification
 - GeographicSiteChangeNotification

The notification structure for all notifications in this API follow the pattern depicted by the figure below.
A notification resource (depicted by "SpecificNotification" placeholder) is a sub class of a generic Notification structure containing an id of the event occurrence (eventId), an event timestamp (eventTime), and the name of the notification resource (eventType).
This notification structure owns an event structure ("SpecificEvent" placeholder) linked to the resource concerned by the notification using the resource name as access field ("resourceName" placeholder).

### GeographicSite Creation Notification

Notification sent when a new GeographicSite resource is created.

**Json representation sample**

We provide below the json representation of an example of an 'GeographicSiteCreationNotification' notification object

|  |
| --- |
| { "eventId":"00001", "eventTime":"2015-11-16T16:42:25-04:00", "eventType":"GeographicSiteCreationNotification", "event": { "geographicSite" :  {-- SEE GeographicSite RESOURCE SAMPLE --} }} |

### GeographicSite Change Notification

Notification sent when a new GeographicSite resource is modified.

**Json representation sample**

We provide below the json representation of an example of an 'GeographicSiteModificationNotification' notification object

|  |
| --- |
| { "eventId":"00001", "eventTime":"2015-11-16T16:42:25-04:00", "eventType":"GeographicSiteModificationNotification", "event": { "geographicSite" :  {-- SEE GeographicSite RESOURCE SAMPLE --} }} |

# API OPERATION TEMPLATES

For every single of operation on the entities use the following templates and provide sample REST requests and responses.

Remember that the following Uniform Contract rules must be used:

|  |  |  |
| --- | --- | --- |
| Operation on Entities | Uniform API Operation | Description |
| Query Entities | GET Resource | GET must be used to retrieve a representation of a resource. |
| Create Entity | POST Resource | POST must be used to create a new resource |
| Partial Update of an Entity | PATCH Resource | PATCH must be used to partially update a resourceFor reconciliation processes |
| Complete Update of an Entity | PUT Resource | PUT must be used to completely update a resource identified by its resource URI  |
| Remove an Entity | DELETE Resource | DELETE must be used to remove a resource |

Filtering and attribute selection rules are described in the TMF REST Design Guidelines.

Notifications are also described in a subsequent section.

## Operations on Geographicsite

### List sites

 **GET /geographicSiteManagement/v1/geographicSite?{fields=attributes}&{filtering expression}**

**Description**

The Application invokes this operation to retrieve a list of sites stored in the server.

The request could include filters in order to retrieve only a specific subset of all the sites stored in the server such as filtering by status.

At least one filter is expected in order to prevent from having a response to an unbounded collection but each specific server and application must define the limits on the maximum number of elements in the response

Behavior:

| Status Code | Description |
| --- | --- |
| 200 | List of Sites information was returned successfully |
| 400 | Request Error |
| 500 | The server encountered an unexpected condition which prevented it from fulfilling the request |
| Other | The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specification. |

**Usage Samples**

The example below includes the attributes within the Sites resource model that must be included in the query response

|  |
| --- |
| **REQUEST** |
| GET https://{serverRoot}/geographicSiteManagement/v1/geographicSite Accept: application/json |
| **RESPONSE** |
| 200Content-Type: application/json[{ "id": "12345",  "href": "https://host:port/geographicSiteManagement/v1/geographicSite/12345",  "name": "Main Building",  "description": "This site refers to the Main Building of the company",  "status": "active",  "address": { "id": "9912",  "href": " https://host:port/ geographicAddressManagement/v1/ geographicAddress/9912"  },  "calendar": [{ "status": "open",  "day": "weekdays",  "timeZone": "GMT+1",  "hourPeriod": [ { "startHour": "9:00 am ",  "endHour": "18:00 pm"  } }]},{ "id": "9876",  "href": "https://host:port/ geographicSiteManagement /v1/geographicSite/9876",  "name": "Second Building",  "description": "This site refers to the Second Building of the company, open in weekends",  "status": "active",  "address": { "streetNr": "60",  "streetName": "Arlington",  "streetType": "Road", "postcode": "W45E02",  "locality": "London",  "stateOrProvince": "Great London",  "country": "England", } },  "calendar": [{ "status": "open",  "day": "weekends",  "timeZone": "GMT+1",  "hourPeriod": [ { "startHour": "9:00 am ",  "endHour": "13:00 pm"  } }]}] |

### Register new site

 **POST /geographicSiteManagement/v1/geographicSite**

**Description**

The Application invokes this operation to request a new geopgraphicSite resorce to be created in tehs erver

Behavior:

| Status Code | Description |
| --- | --- |
| 201 | Successful site registration (resource created) |
| 400 | Request Error |
| 500 | The server encountered an unexpected condition which prevented it from fulfilling the request |
| Other | The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specification. |

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a RetrieveGeographicLocation, including any possible rule conditions and applicable default values. Notice that it is up to an implementer to add additional mandatory attributes.

|  |  |
| --- | --- |
| Mandatory Attributes | Rule |
| name |  |
| address | Required if geographicLocation not included |
| geographicLocation | required if address not included |

|  |  |  |
| --- | --- | --- |
| Non Mandatory Attributes | Default Value | Rule |
| description |  |  |
| code |  |  |
| status |  |  |
| calendar |  |  |
| relatedParty |  |  |
| siteRelationship |  |  |

**Usage Samples**

The example below includes the attributes within the GeographicSite entity resource model that are mandatory to be included in the request when creating a new resource in the server when associating an address to a site

|  |
| --- |
| **REQUEST** |
| POST https://{serverRoot}/geographicSiteManagement/v1/geographicSite Content-type: application/json{ "name": "New branch to be open in France ",  "description": "This site refers to the new branch office to be open in France",  "status": "planned",  "address": { "streetNr": "1",  "streetName": "République (de la)",  "streetType": "Rue", "postcode": "13001",  "locality": "Marseille",  "stateOrProvince": "Bouches-du-Rhône",  "country": "France", } } |
| **RESPONSE** |
| 201Content-Type: application/jsonLocation: https://{serverRoot}/geographicSiteManagement/v1/geographicSite/12345Response is not required to include a BODY with the contents of the geographicSite resource created, but if included it must be filled with at least the mandatory parameters. |

The example below includes the attributes within the GeographicSite entity resource model that are mandatory to be included in the request when creating a new resource in the server when associating a geographic location to a site for an specific party (organization)

|  |
| --- |
| **REQUEST** |
| POST https://{serverRoot}/geographicSiteManagement/v1/geographicSite Content-type: application/json{ "name": "New branch to be open in France ",  "description": "This site refers to the new branch office to be open in France",  "status": "planned",  "address": { "streetNr": "1",  "streetName": "République (de la)",  "streetType": "Rue", "postcode": "13001",  "locality": "Marseille",  "stateOrProvince": "Bouches-du-Rhône",  "country": "France", },  "relatedParty": [{ "id": "1234",  "href": " https://host:port/partyManagement/organization/1234",  "name": "organizationXYZ",  "role": "headquarters" , "@type": "organization",  }] } |
| **RESPONSE** |
| 201Content-Type: application/jsonLocation: https://{serverRoot}/geographicSiteManagement/v1/geographicSite/12345Response is not required to include a BODY with the contents of the geographicSite resource created, but if included it must be filled with at least the mandatory parameters. |

### Retrieve individual site

 **GET /geographicSiteManagement/v1/geographicSite/{siteId}?{fields=attribs}**

**Description**

This operation retrieves a site entity using its unique ID. This ID should be retrieve either using the site creation process, or in another API of the ecosystem (party, appointment, etc.)

Attribute selection is enabled for all first level attributes.
Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Behavior:

| Status Code | Description |
| --- | --- |
| 200 | the site information was returned successfully |
| 400 | Request Error |
| 500 | The server encountered an unexpected condition which prevented it from fulfilling the request |
| Other | The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specification. |

**Usage Samples**

The example below includes the attributes within the GeographicSite resource model that must be included in the query response where the physical place associated is included via reference to an address entity regoistered in the server

|  |
| --- |
| **REQUEST** |
| GET https://{serverRoot}/geographicSiteManagement/v1/geographicSite/12345 Accept: application/json |
| **RESPONSE** |
| 200Content-Type: application/json{ "id": "12345",  "href": "https://host:port/geographicSiteManagement/v1/geographicSite/12345",  "name": "Main Building",  "status": "active",  "address": { "id": "9912",  "href": " https://host:port/geographicAddressManagement/v1/geographicAddress/9912"  } } |

The example below includes the attributes within the GeographicSite resource model that must be included in the query response where the physical place associated is included directly, providing all the gepgraphic address and geolocation information

|  |
| --- |
| **REQUEST** |
| GET https://{serverRoot}/geographicSiteManagement/v1/geographicSite/12345 Accept: application/json |
| **RESPONSE** |
| 200Content-Type: application/json{ "id": "12345",  "href": "https://host:port/geographicSiteManagement/v1/geographicSite/12345",  "name": "Main Building",  "status": "active",  "address": { "streetNr": "56",  "streetName": "Arlington",  "streetType": "Road", "postcode": "W45E02", "locality": "London",  "stateOrProvince": "Great London",  "country": "England",  } } |

### Complete update of an individual site

 **PUT /geographicSiteManagement/v1/geographicSite/{siteId}**

**Description**

This operation is optional to be supported in this API

This operation updates completely the ocntents of a geographicSite resource by replacing the contents of that entity with the contents of the resource structure provided in the request.

Notice that the PUT method is intended to modify completely the resource impacted, meaning that optional values that are not included in the request may be erased in the server after updating, and will not keep the previous value stored. Behaviour of the server on optional valuesnot included is undefined.

Behavior:

| Status Code | Description |
| --- | --- |
| 200 | Successful site modification (resource updated) |
| 400 | Request Error |
| 500 | The server encountered an unexpected condition which prevented it from fulfilling the request |
| Other | The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specification. |

**Usage Samples**

The example below includes the attributes within the GeographicSite entity resource model that are mandatory to be included in the request when updating completely a resource in the server

|  |
| --- |
| **REQUEST** |
| PUT https://{serverRoot}/geographicSiteManagement/v1/geographicSite/12345 Content-type: application/json{ "name": "New branch open in France ",  "description": "This site refers to the new branch office recently open in France",  "status": "active",  "address": { "streetNr": "1",  "streetName": "République (de la)",  "streetType": "Rue", "postcode": "13001",  "locality": "Marseille",  "stateOrProvince": "Bouches-du-Rhône",  "country": "France", } } |
| **RESPONSE** |
| 200Content-Type: application/jsonResponse is not required to include a BODY with the contents of the GeographicSite resource created, but if included it must be filled with the new values set and include at least the mandatory parameters (including id and href). |

### Partial update of an individual site

 **PATCH /geographicSiteManagement/v1/geographicSite/{siteId}**

**Description**

This operation is optional to be supported in this API

This operation allows partial updates of a geographicSite resource entity. The definition of the modification is recommended to follow the json/patch (<http://tools.ietf.org/html/rfc5789>) and the extension proposed in Design Guidelines to manage modification of array entities.

**Patchable and Non Patchable Attributes**

The tables below provide the list of patchable and non patchable attributes, including constraint rules on their usage.

| Patchable attributes | Rule |
| --- | --- |
| name |  |
| description |  |
| code |  |
| status |  |
| addressRef |  |
| address |  |
| calendar |  |
| relatedParty |  |
| siteRelationship |  |

| Non Patchable attributes | Rule |
| --- | --- |
| id |  |
| href |  |

Behavior:

| Status Code | Description |
| --- | --- |
| 200 | Successful site modification (resource modified) |
| 400 | Request Error |
| 500 | The server encountered an unexpected condition which prevented it from fulfilling the request |
| Other | The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specification. |

**Usage Samples**

The example below shows how to complete a partial update os a GeographicSite entity resource model using the the json/patch (RFC5789) approach

To Be Completed

### Delete an individual site

 **DELETE /geographicSiteManagement/v1/geographicSite/{siteId}**

**Description**

This operation is optional to be supported in this API

*Note: this operation is available only to ADMIN API users*

This operation deletes and removes from the server geographicSite resource previously registered.

Behavior:

| Status Code | Description |
| --- | --- |
| 204 | Successful site removal |
| 400 | Request Error |
| 500 | The server encountered an unexpected condition which prevented it from fulfilling the request |
| Other | The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specification. |

**Usage Samples**

The example below shows a request for deleting a GeographicSite resource

|  |
| --- |
| **REQUEST** |
| DELETE https://{serverRoot}/geographicSiteManagement/v1/geographicSite/12345  |
| **RESPONSE** |
| 204 |

# API NOTIFICATIONS

For every single of operation on the entities use the following templates and provide sample REST notification POST calls.

It is assumed that the Pub/Sub uses the Register and UnRegister mechanisms described in the REST Guidelines reproduced below.

## Register listener

 **POST /hub**

**Description**

Sets the communication endpoint address the service instance must use to deliver information about its health state, execution state, failures and metrics. Subsequent POST calls will be rejected by the service if it does not support multiple listeners. In this case DELETE /api/hub/{id} must be called before an endpoint can be created again.

**Behavior**

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 409 if request is not successful.

**Usage Samples**

Here's an example of a request for registering a listener.

|  |
| --- |
| **Request** |
| POST /api/hubAccept: application/json{"callback": "http://in.listener.com"} |
| **Response** |
| 201Content-Type: application/jsonLocation: /api/hub/42{"id":"42","callback":"http://in.listener.com","query":null} |

## Unregister listener

 **DELETE /hub/{id}**

**Description**

Clears the communication endpoint address that was set by creating the Hub..

**Behavior**

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 404 if the resource is not found.

**Usage Samples**

Here's an example of a request for un-registering a listener.

|  |
| --- |
| **Request** |
| DELETE /api/hub/42Accept: application/json |
| **Response** |
| 204 |

## Publish Event to listener

 **POST /client/listener**

**Description**

Clears the communication endpoint address that was set by creating the Hub.

Provides to a registered listener the description of the event that was raised. The /client/listener url is the callback url passed when registering the listener.

**Behavior**

Returns HTTP/1.1 status code 201 if the service is able to set the configuration.

**Usage Samples**

Here's an example of a notification received by the listener. In this example “EVENT TYPE” should be replaced by one of the notification types supported by this API (see Notification resources Models section) and EVENT BODY refers to the data structure of the given notification type.

|  |
| --- |
| **Request** |
| POST /client/listenerAccept: application/json{ "event": {  EVENT BODY  }, "eventType": "EVENT\_TYPE"} |
| **Response** |
| 201 |

For detailed examples on the general TM Forum notification mechanism, see the TMF REST Design Guidelines.

# Acknowledgements

## Release History

|  |  |  |  |
| --- | --- | --- | --- |
| **Release Number** | **Date**  | **Release led by:** | **Description**  |
| Release 1.0-1 | 22/05/2017 | Luis Velarde (Telefónica) | First Release of Draft Version of the Document. |
| Release 1.0-2 | 24/10/2017 | Luis Velarde(Telefónica) | Updated to be aligned with TMF API guidelines 3.0Updated after review comments in R17.5 (October review cycle) |

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