

TM Forum Specification

Party Management API REST Specification

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Introduction

The following document is the specification of the REST API for Party Management. It includes the model definition as well as all available operations. Possible actions are creating, updating and retrieving parties (individuals or organizations), including filtering.

Party is an abstract concept that represents an individual (person) or an organization that has any kind of relation with the enterprise.

Party is created to record an individual or an organization before the assignment of any role.

Party API manages the following data resource:

Individual

- Individual represents a single human being (a man, woman or child). The individual can be a customer, an employee or any other person that the organization needs to store information about.

Organization

- Organization represents a group of people identified by shared interests or purpose. Examples include business, department and enterprise. Because of the complex nature of many businesses, both organizations and organization units are represented by the same data.

Party API performs the following operations on individuals and organizations:

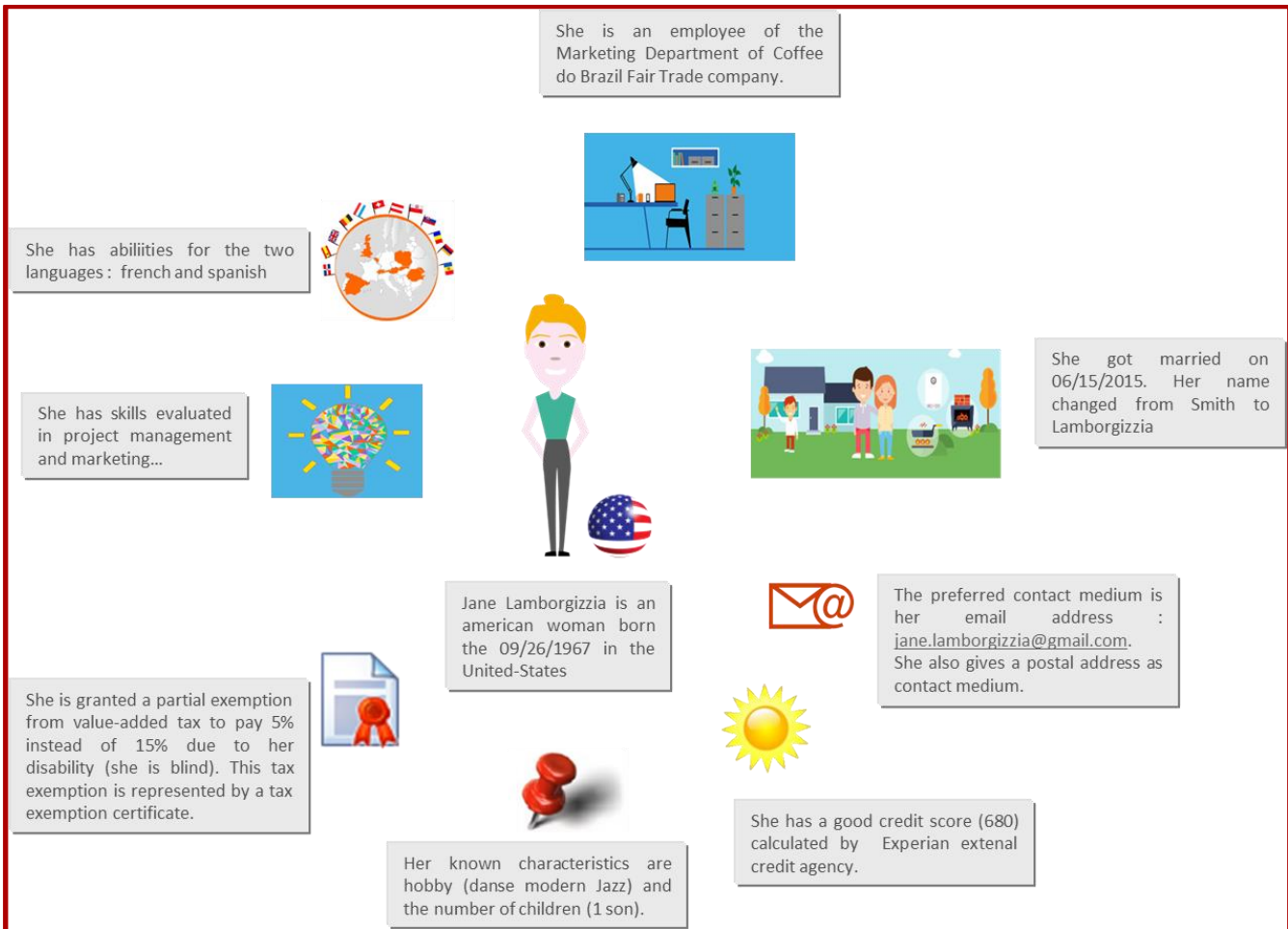
- Retrieval of an individual or an organization
- List a collection of individuals or organization depending on filter criteria
- Partial update of an individual or an organization
- Creation of an individual or an organization
- Deletion of an individual or an organization
- Notification of events relating to an individual or an organization.

Sample Use Cases

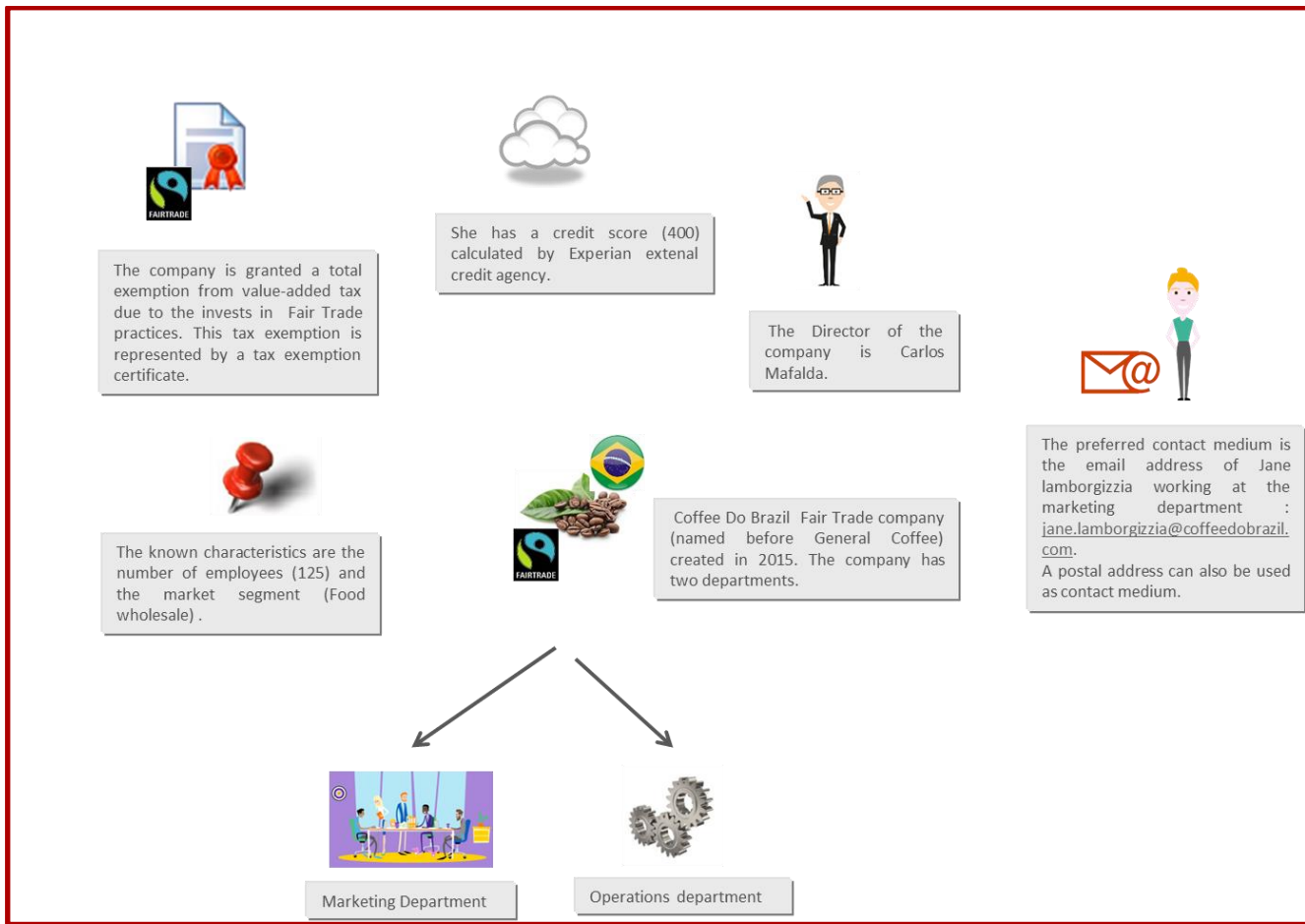
In order to illustrate JSON message we will use a Quote with following features:

To illustrate JSON representation of resources concerned by this API, we use the two use cases detailed below.

Use case 1 (UC1): An individual employee of an organization



Use case 2 (UC2): a company (organization) with two departments (organizations)



Support of polymorphism and extension patterns

Support of polymorphic collections and types and schema based extension is provided by means of a list of generic meta-attributes that we describe below. Polymorphism in collections occurs when entities inherit from base entities, for instance a PricingRequest and Quoting inheriting properties from the abstract Quote entity.

Generic support of polymorphism and pattern extensions is described in the TMF API Guidelines v3.0 Part 2 document.

The @type attribute provides a way to represent the actual class type of an entity. For example, within a list of Quote instances some may be instances of PricingRequest where other could be instances of Quoting. The @type gives this information. All resources and sub-resources of this API have a @type attributes that can be provided when this is useful.

The @referredType can be used within reference entities (like for instance a QuoteRef object) to explicitly denote the actual entity type of the referred class. Notice that in reference entities the @type, when used, denotes the class type of the reference itself, such as PricingRequestRef or QuotingRef, and not the class type of the referred object. However since reference classes are rarely sub-classed, @type is generally not useful in reference objects.

The @schemaLocation property can be used in resources to allow specifying user-defined properties of an Entity or to specify the expected *characteristics* of an entity.

The @baseType attribute gives a way to provide explicitly the base of class of a given resource that has been extended.

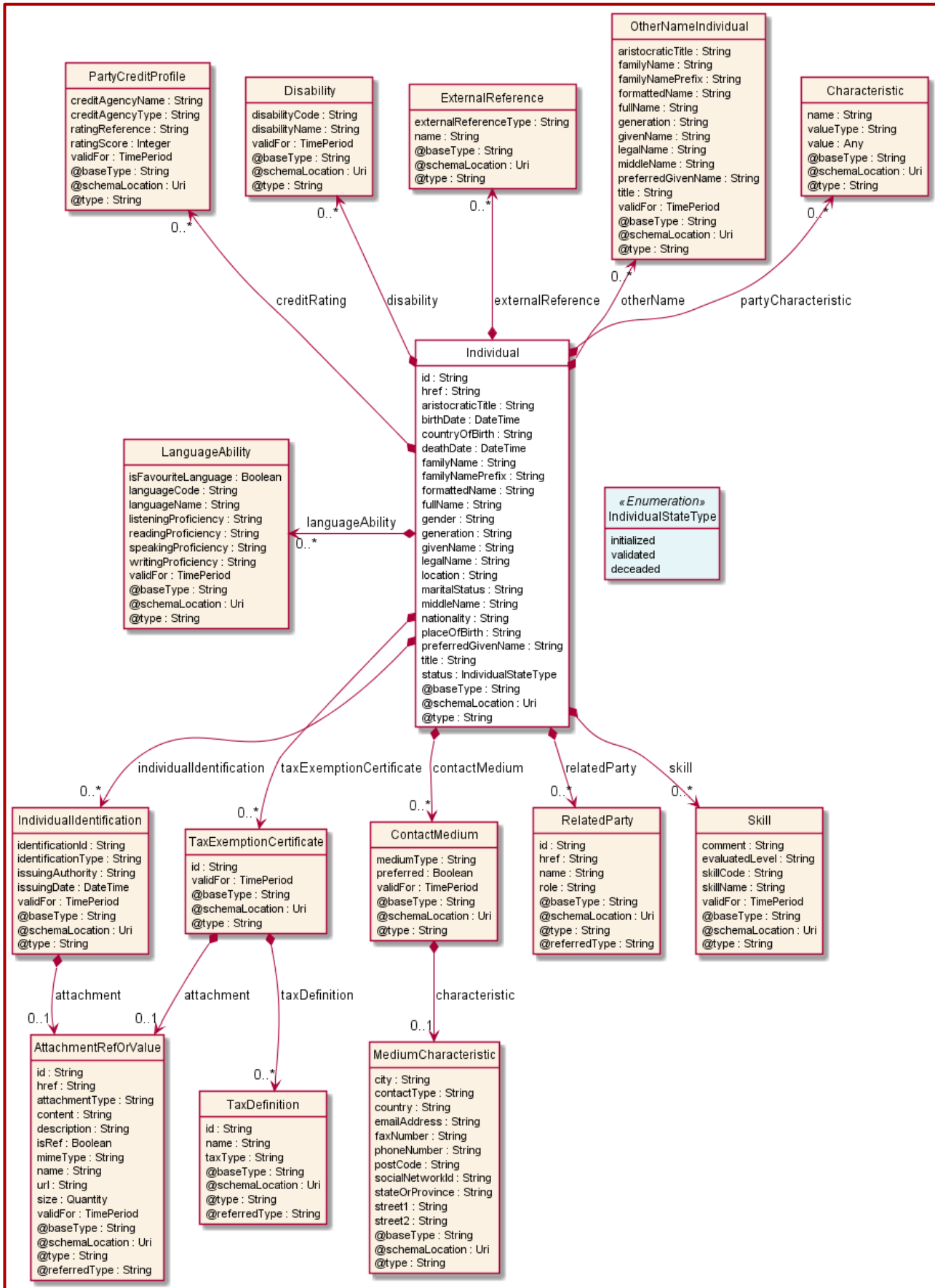
RESOURCE MODEL

Managed Entity and Task Resource Models

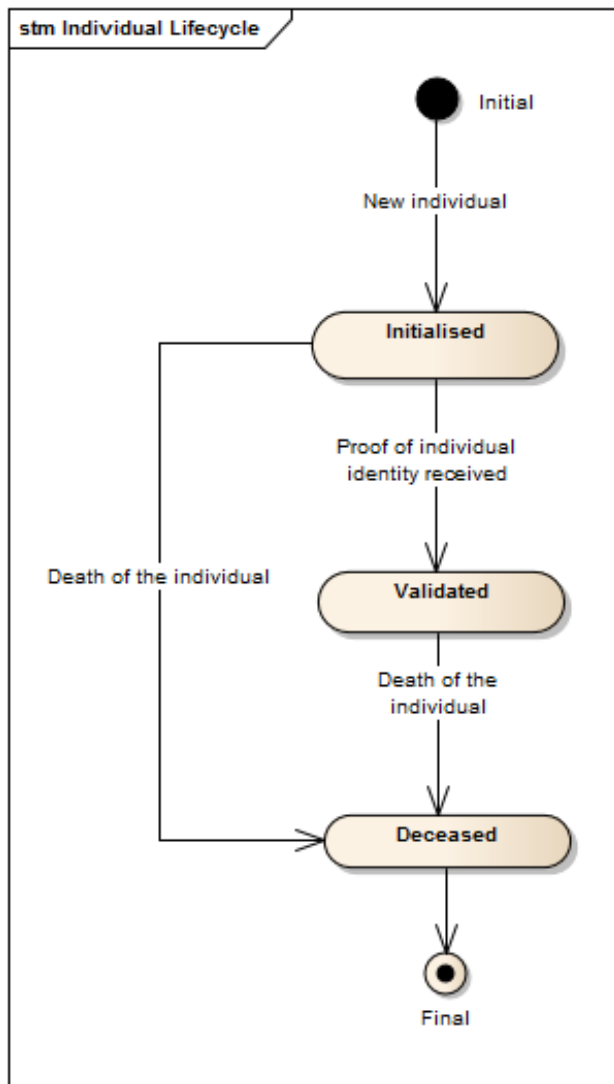
Individual resource

Individual represents a single human being (a man, woman or child). The individual can be a customer, an employee or any other person that the organization needs to store information about.

Resource model



Lifecycle



Field descriptions

Individual fields

href	A string. Hyperlink to access the organization.
id	A string. Unique identifier of the organization.
aristocraticTitle	A string. e.g. Baron, Graf, Earl,....
birthDate	A date time (DateTime). Birth date.
countryOfBirth	A string. Country where the individual was born.
deathDate	A date time (DateTime). Date of death.
disability	A list of disabilities (Disability [*]). Lack or inadequate strength or ability.

familyName	A string. Contains the non-chosen or inherited name. Also known as last name in the Western context.
familyNamePrefix	A string. Family name prefix.
formattedName	A string. A fully formatted name in one string with all of its pieces in their proper place and all of the necessary punctuation. Useful for specific contexts (Chinese, Japanese, Korean,...).
fullName	A string. Full name flatten (first, middle, and last names).
gender	A string. Gender.
generation	A string. e.g.. Sr, Jr, III (the third),....
givenName	A string. First name of the individual.
individualIdentification	A list of individual identifications (IndividualIdentification [*]). Represents our registration of information used as proof of identity by an individual (passport, national identity card, drivers license, social security number, birth certificate).
languageAbility	A list of language abilities (LanguageAbility [*]). Ability of an individual to understand or converse in a language.
legalName	A string. Legal name or birth name (name one has for official purposes).
location	A string. Temporary current location of the individual (may be used if the individual has approved its sharing).
maritalStatus	A string. Marital status (married, divorced, widow ...).
middleName	A string. Middles name or initial.
nationality	A string. Nationality.
otherName	A list of other name individuals (OtherNameIndividual [*]). Keeps track of other names, for example the old name of a woman before marriage or an artist name.
placeOfBirth	A string. Reference to the place where the individual was born.
preferredGivenName	A string. Contains the chosen name by which the individual prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.
skill	A list of skills (Skill [*]). Skills evaluated for an individual with a level and possibly with a limited validity when an obsolescence is defined (Ex: the first-aid certificate first level is limited to one year and an update training is required each year to keep the level).
status	An individual state type (IndividualStateType). Status of the individual.

title	A string. Useful for titles (aristocratic, social,...) Pr, Dr, Sir, ...
contactMedium	A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party.
creditRating	A list of party credit profiles (PartyCreditProfile [*]). An individual might be evaluated for its worthiness and this evaluation might be based on a credit rating given by a credit agency.
externalReference	A list of external references (ExternalReference [*]). External reference of the individual or reference in other system.
partyCharacteristic	A list of characteristics (Characteristic [*]). Describes a given characteristic of an object or entity through a name/value pair.
relatedParty	A list of related parties (RelatedParty [*]). Related Entity reference. A related party defines party or party role linked to a specific entity.
taxExemptionCertificate	A list of tax exemption certificates (TaxExemptionCertificate [*]). A tax exemption certificate represents a tax exemption granted to a party (individual or organization) by a tax jurisdiction which may be a city, state, country,... An exemption has a certificate identifier (received from the jurisdiction that levied the tax) and a validity period. An exemption is per tax types and determines for each type of tax what portion of the tax is exempted (partial by percentage or complete) via the tax definition.

AttachmentRefOrValue sub-resource

An attachment by value or by reference.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
description	A string. A narrative text describing the content of the attachment.
href	A string. URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
url	A string. Uniform Resource Locator, is a web page address (a subset of URI).
@referredType	A string. The actual type of the target instance when needed for disambiguation.
href	A string. URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
name	A string. The name of the attachment.
attachmentType	A string. Attachment type such as video, picture.

description	A string. A narrative text describing the content of the attachment.
href	A string. URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
mimeType	A string. Attachment mime type such as extension file for video, picture and document.
name	A string. The name of the attachment.
url	A string. Uniform Resource Locator, is a web page address (a subset of URI).
isRef	A boolean. If true, a reference is given.
content	A string with base64 encoded characters. The actual contents of the attachment object, if embedded, encoded as base64
size	A quantity (Quantity). The size of the attachment.
validFor	A time period (TimePeriod). The period of time for which the attachment is valid.

Characteristic sub-resource

Describes a given characteristic of an object or entity through a name/value pair.

name	A string. Name of the characteristic.
value	An any (Any). The value of the characteristic.
valueType	A string. Data type of the value of the characteristic.

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

characteristic	A medium characteristic (MediumCharacteristic). Any additional characteristic(s) of this contact medium.
mediumType	A string. Type of the contact medium, such as: email address, telephone number, postal address.
preferred	A boolean. If true, indicates that is the preferred contact medium.
validFor	A time period. The time period that the contact medium is valid for.

Disability sub-resource

Lack or inadequate strength or ability.

disabilityCode	A string. Code of the disability.
----------------	-----------------------------------

disabilityName	A string. Name of the disability.
validFor	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

ExternalReference sub-resource

External reference of the individual or reference in other system.

externalReferenceType	A string. Type of the external reference.
name	A string. External reference name.

IndividualIdentification sub-resource

Represents our registration of information used as proof of identity by an individual (passport, national identity card, drivers license, social security number, birth certificate).

attachment	An attachment ref or value (AttachmentRefOrValue). An attachment by value or by reference.
identificationId	A string. Identifier.
identificationType	A string. Identification type (passport, national identity card, drivers license, social security number, birth certificate).
issuingAuthority	A string. Authority which has issued the identifier, such as: social security, town hall.
issuingDate	A date time (DateTime). Date at which the identifier was issued.
validFor	A time period. The period for which the identification information is valid.

LanguageAbility sub-resource

Ability of an individual to understand or converse in a language.

isFavouriteLanguage	A boolean. A "true" value specifies whether the language is considered by the individual as his favourite one.
languageCode	A string. Language code (RFC 5646).
languageName	A string. Language name.
listeningProficiency	A string. Listening proficiency evaluated for this language.
readingProficiency	A string. Reading proficiency evaluated for this language.
speakingProficiency	A string. Speaking proficiency evaluated for this language.

validFor	A time period (TimePeriod). A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
writingProficiency	A string. Writing proficiency evaluated for this language.

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

city	A string. The city.
contactType	A string. The type of contact, for example: phone number such as mobile, fixed home, fixed office. postal address such as shipping instalation....
country	A string. The country.
emailAddress	A string. Full email address in standard format.
faxNumber	A string. The fax number of the contact.
phoneNumber	A string. The primary phone number of the contact.
postCode	A string. Postcode.
socialNetworkId	A string. Identifier as a member of a social network.
stateOrProvince	A string. State or province.
street1	A string. Describes the street.
street2	A string. Complementary street description.

OtherNameIndividual sub-resource

Keeps track of other names, for example the old name of a woman before marriage or an artist name.

aristocraticTitle	A string. e.g. Baron, Graf, Earl,....
familyName	A string. Contains the non-chosen or inherited name. Also known as last name in the Western context.
familyNamePrefix	A string. Family name prefix.
formattedName	A string. . A fully formatted name in one string with all of its pieces in their proper place and all of the necessary punctuation. Useful for specific contexts (Chinese, Japanese, Korean,...).
fullName	A string. Full name flatten (first, middle, and last names).
generation	A string. e.g. Sr, Jr....

givenName	A string. First name.
legalName	A string. Legal name or birth name (name one has for official purposes).
middleName	A string. Middle name or initial.
preferredGivenName	A string. Contains the chosen name by which the person prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.
title	A string. Use for titles (aristocratic, social, ...): Pr, Dr, Sir,....
validFor	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

PartyCreditProfile sub-resource

An individual might be evaluated for its worthiness and this evaluation might be based on a credit rating given by a credit agency.

creditAgencyName	A string. Name of the credit agency giving the score.
creditAgencyType	A string. Type of the credit agency giving the score.
ratingReference	A string. Reference corresponding to the credit rating.
ratingScore	An integer. A measure of a party's creditworthiness calculated on the basis of a combination of factors such as their income and credit history.
validFor	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

Quantity sub-resource

An amount in a given unit.

amount	A float. Numeric value in a given unit.
units	A string. Unit.

RelatedParty sub-resource

Related Entity reference. A related party defines party or party role linked to a specific entity.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
href	A string. Reference of the related entity.
id	A string. Unique identifier of a related entity.
name	A string. Name of the related entity.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
role	A string. Role played by the related party.

Skill sub-resource

Skills evaluated for an individual with a level and possibly with a limited validity when an obsolescence is defined (Ex: the first-aid certificate first level is limited to one year and an update training is required each year to keep the level).

comment	A string. A free text comment linked to the evaluation done.
evaluatedLevel	A string. Level of expertise in a skill evaluated for an individual.
skillCode	A string. Code of the skill.
skillName	A string. Name of the skill such as Java language,....
validFor	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

TaxDefinition sub-resource

Reference of a tax definition. A tax is levied by an authorized tax jurisdiction. There are many different types of tax (Federal Tax levied by the US Government, State Tax levied by the State of California,...).

@referredType	A string. The actual type of the target instance when needed for disambiguation.
id	A string. Unique identifier of the tax.
name	A string. Tax name.
taxType	A string. Type of the tax.

TaxExemptionCertificate sub-resource

A tax exemption certificate represents a tax exemption granted to a party (individual or organization) by a tax jurisdiction which may be a city, state, country,... An exemption has a certificate identifier (received from the jurisdiction that levied the tax) and a validity period. An exemption is per tax types and determines for each type of tax what portion of the tax is exempted (partial by percentage or complete) via the tax definition.

attachment	An attachment ref or value (AttachmentRefOrValue). An attachment by value or by reference.
id	A string. Unique identifier of the certificate of the tax exemption.
taxDefinition	A list of tax definitions (TaxDefinition [*]). Reference of a tax definition. A tax is levied by an authorized tax jurisdiction. There are many different types of tax (Federal Tax levied by the US Government, State Tax levied by the State of California,...).

validFor A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

Json representation sample

We provide below the json representation of an example of a 'Individual' resource object

```
{
  "id": "42",
  "href": "https://serverRoot/tmf-api/party/v4/individual/42",
  "@type": "individual",
  "gender": "female",
  "placeOfBirth": "",
  "countryOfBirth": "United States",
  "nationality": "American",
  "maritalStatus": "married",
  "birthDate": "1967-09-26T05:00:00.246Z",
  "deathDate": "",
  "title": "",
  "aristocraticTitle": "",
  "generation": "",
  "givenName": "Jane",
  "preferredGivenName": "Lamborgizzia",
  "familyNamePrefix": "",
  "familyName": "Lamborgizzia",
  "legalName": "Smith",
  "middleName": "JL",
  "fullName": "Jane Smith ep Lamborgizzia",
  "formattedName": "Jane Smith ep Lamborgizzia",
  "location": "",
  "status": "validated",
  "externalReference": [
    {
      "name": "http://facebook.com/17263635",
      "externalReferenceType": "facebookId"
    },
    {
      "name": "http://google.com/17263635",
      "externalReferenceType": "googleId"
    }
  ],
  "partyCharacteristic": [
    {
      "name": "hobby",
      "value": "Modern Jazz",
      "valueType": "string"
    },
    {
      "name": "hobby",
      "value": "Cinema",
      "valueType": "string"
    },
    {
      "name": "childrenNumber",
```

```
    "value": "1",
    "valueType": "number"
  }
],
"otherName": [
  {
    "title": "",
    "aristocraticTitle": "",
    "generation": "",
    "givenName": "Jane",
    "preferredGivenName": "",
    "familyNamePrefix": "",
    "familyName": "Smith",
    "legalName": "",
    "middleName": "",
    "fullName": "",
    "formattedName": "",
    "validFor": {
      "startDateTime": "1967-09-26T00:00:00.246Z",
      "endDateTime": "2015-06-15T00:00:00.246Z"
    }
  }
],
"individualIdentification": [
  {
    "identificationType": "passport",
    "identificationId": "51DD1234",
    "issuingAuthority": "US Government",
    "issuingDate": "2017-10-22T07:49:25.246Z",
    "validFor": {
      "startDateTime": "2017-10-22T07:49:25.246Z",
      "endDateTime": "2027-10-21T07:49:25.246Z"
    }
  },
  {
    "id": "321",
    "href": "/documentManagement/v4/attachment/321",
    "attachmentType": "passportCopy",
    "isRef": true,
    "name": "PassportCopy321.pdf",
    "description": "Scanned copy of the passport"
  }
]
},
"taxExemptionCertificate": [
  {
    "id": "555",
    "validFor": {
      "startDateTime": "2018-10-22T07:49:25.246Z",
      "endDateTime": ""
    }
  },
  {
    "taxDefinition": [
      {
        "id": "96",
```

```
        "name": "value-added tax",
        "taxType": "federalVat"
      }
    ],
    "attachment": {
      "id": "666",
      "href": "/documentManagement/v4/attachment/666",
      "attachmentType": "documentCopy",
      "isRef": true,
      "name": "TaxExemptionCertificate-555.pdf",
      "description": "Electronic version of the tax exemption certificate",
      "mimeType": "application/pdf",
      "size": {
        "amount": 130,
        "name": "bytes"
      },
      "url": "http://DocumentManager/666/TaxExemptionCertificate-555.pdf"
    }
  },
  "creditRating": [
    {
      "creditAgencyName": "Experian",
      "creditAgencyType": "externalAgency",
      "ratingReference": "ref123",
      "ratingScore": 680,
      "validFor": {
        "startDateTime": "2018-10-22T07:49:25.246Z",
        "endDateTime": ""
      }
    }
  ],
  "relatedParty": [
    {
      "id": "128",
      "href": "https://serverRoot/tmf-api/party/v4/organization/128",
      "role": "employee",
      "name": "Coffee Do Brazil Fair Trade Marketing Department",
      "@referredType": "organization"
    }
  ],
  "contactMedium": [
    {
      "preferred": true,
      "mediumType": "email",
      "validFor": {
        "startDateTime": "2017-03-15T07:49:25.246Z",
        "endDateTime": ""
      },
      "characteristic": {
        "emailAddress": "jane.lamborgizzia@gmail.com"
      }
    }
  ],
  {
    "preferred": false,
```

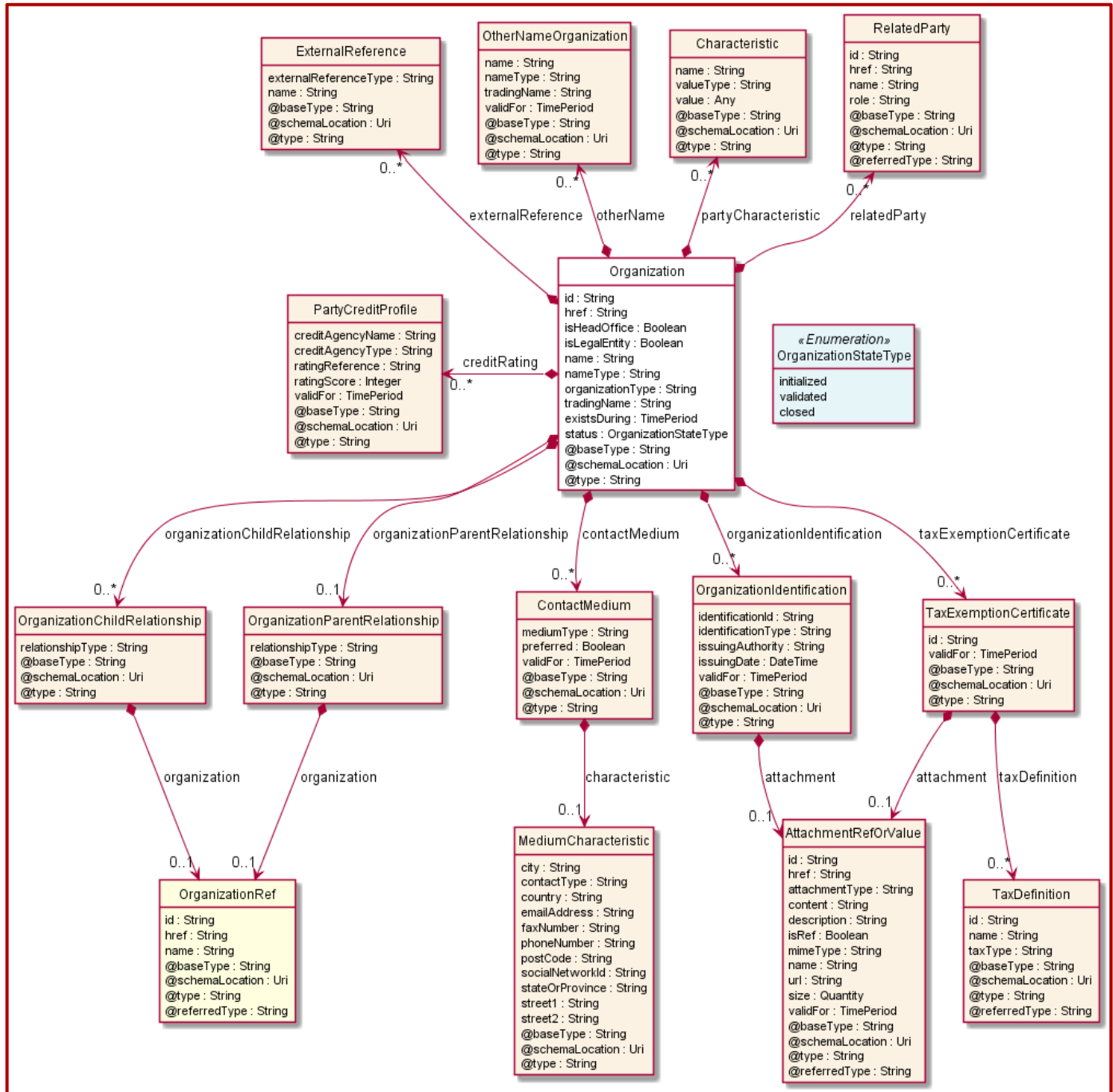
```
"mediumType": "postalAddress",
"validFor": {
  "startDateTime": "2017-03-15T07:49:25.246Z",
  "endDateTime": ""
},
"characteristic": {
  "city": "Morristown",
  "country": "USA",
  "postcode": "07960",
  "stateOrProvince": "New Jersey",
  "street1": "240 Headquarters Plaza",
  "street2": "East Tower - 10th Floor"
}
},
],
"disability": [
  {
    "disabilityCode": "BLD",
    "disabilityName": "Blind",
    "validFor": {
      "startDateTime": "1967-09-26T07:49:25.246Z",
      "endDateTime": ""
    }
  }
],
"languageAbility": [
  {
    "languageCode": "FR",
    "languageName": "French",
    "isFavouriteLanguage": "true",
    "writingProficiency": "advanced",
    "readingProficiency": "advanced",
    "speakingProficiency": "intermediate",
    "listeningProficiency": "intermediate",
    "validFor": {
      "startDateTime": "2018-10-22T07:49:25.246Z",
      "endDateTime": ""
    }
  },
  {
    "languageCode": "SP",
    "languageName": "Spanish",
    "isFavouriteLanguage": "false",
    "writingProficiency": "scholar",
    "readingProficiency": "scholar",
    "speakingProficiency": "scholar",
    "listeningProficiency": "scholar",
    "validFor": {
      "startDateTime": "2018-10-22T07:49:25.246Z",
      "endDateTime": ""
    }
  }
],
"skill": [
  {
```

```
"skillCode": "SK001",
"skillName": "marketing",
"evaluatedLevel": "Advanced",
"comment": "Ten years experience",
"validFor": {
  "startDateTime": "2018-10-22T07:49:25.246Z",
  "endDateTime": ""
}
},
{
  "skillCode": "SK002",
  "skillName": "Project Management",
  "evaluatedLevel": "newbie",
  "comment": "First work experience",
  "validFor": {
    "startDateTime": "2018-10-22T07:49:25.246Z",
    "endDateTime": ""
  }
}
]
}
```

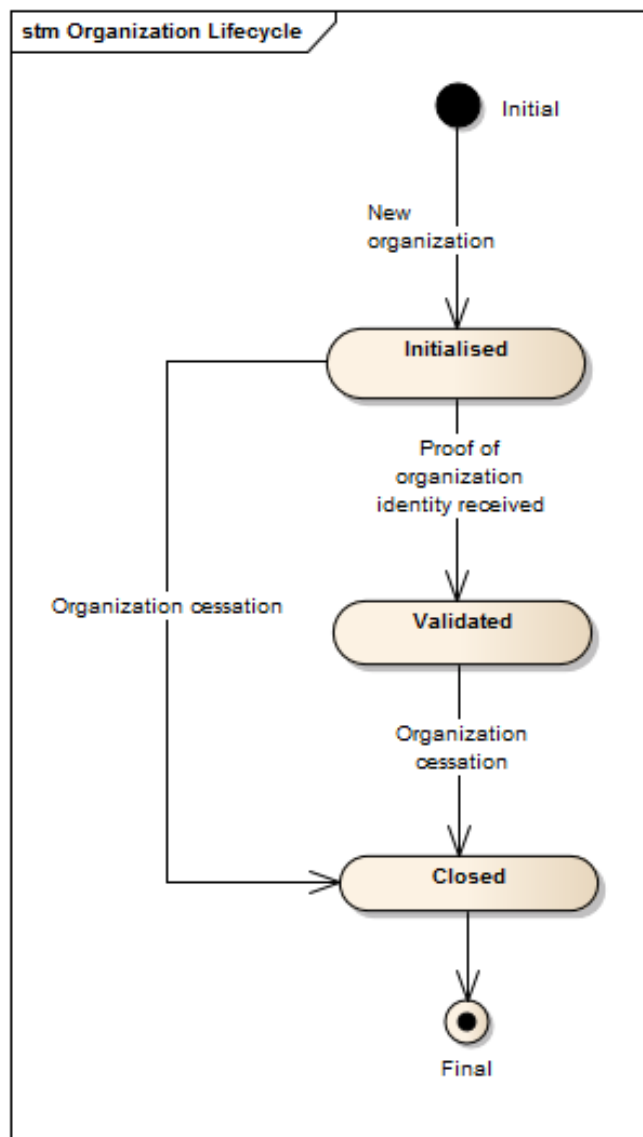
Organization resource

Organization represents a group of people identified by shared interests or purpose. Examples include business, department and enterprise. Because of the complex nature of many businesses, both organizations and organization units are represented by the same data.

Resource model



Lifecycle



Field descriptions

Organization fields

href	A string. Hyperlink to access the organization.
id	A string. Unique identifier of the organization.
existsDuring	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
isHeadOffice	A boolean. If value is true, the organization is the head office.
isLegalEntity	A boolean. If value is true, the organization is a legal entity known by a national referential.

name	A string. Organization name (department name for example).
nameType	A string. Type of the name : Co, Inc, Ltd,....
organizationChildRelationship	A list of organization child relationships (OrganizationChildRelationship [*]). Child references of an organization in a structure of organizations.
organizationIdentification	A list of organization identifications (OrganizationIdentification [*]). Represents our registration of information used as proof of identity by an organization.
organizationParentRelationship	An organization parent relationship (OrganizationParentRelationship). Parent references of an organization in a structure of organizations.
organizationType	A string. Type of Organization (company, department...).
otherName	A list of other name organizations (OtherNameOrganization [*]). Keeps track of other names, for example the old name of an organization.
status	An organization state type (OrganizationStateType). Status of the organization.
tradingName	A string. Name that the organization (unit) trades under.
contactMedium	A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party.
creditRating	A list of party credit profiles (PartyCreditProfile [*]). An individual might be evaluated for its worthiness and this evaluation might be based on a credit rating given by a credit agency.
externalReference	A list of external references (ExternalReference [*]). External reference of the individual or reference in other system.
partyCharacteristic	A list of characteristics (Characteristic [*]). Describes a given characteristic of an object or entity through a name/value pair.
relatedParty	A list of related parties (RelatedParty [*]). Related Entity reference. A related party defines party or party role linked to a specific entity.
taxExemptionCertificate	A list of tax exemption certificates (TaxExemptionCertificate [*]). A tax exemption certificate represents a tax exemption granted to a party (individual or organization) by a tax jurisdiction which may be a city, state, country,... An exemption has a certificate identifier (received from the jurisdiction that levied the tax) and a validity period. An exemption is per tax types and determines for each type of tax what portion of the tax is exempted (partial by percentage or complete) via the tax definition.

AttachmentRefOrValue sub-resource

An attachment by value or by reference.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
description	A string. A narrative text describing the content of the attachment.
href	A string. URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
url	A string. Uniform Resource Locator, is a web page address (a subset of URI).
@referredType	A string. The actual type of the target instance when needed for disambiguation.
href	A string. URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
name	A string. The name of the attachment.
attachmentType	A string. Attachment type such as video, picture.
description	A string. A narrative text describing the content of the attachment.
href	A string. URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
contentType	A string. Attachment mime type such as extension file for video, picture and document.
name	A string. The name of the attachment.
url	A string. Uniform Resource Locator, is a web page address (a subset of URI).
isRef	A boolean. If true, a reference is given.
content	A string with base64 encoded characters. The actual contents of the attachment object, if embedded, encoded as base64.
size	A quantity (Quantity). The size of the attachment.
validFor	A time period (TimePeriod). The period of time for which the attachment is valid.

Characteristic sub-resource

Describes a given characteristic of an object or entity through a name/value pair.

name	A string. Name of the characteristic.
------	---------------------------------------

value	An any (Any). The value of the characteristic.
valueType	A string. Data type of the value of the characteristic.

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

characteristic	A medium characteristic (MediumCharacteristic). Any additional characteristic(s) of this contact medium.
mediumType	A string. Type of the contact medium, such as: email address, telephone number, postal address.
preferred	A boolean. If true, indicates that is the preferred contact medium.
validFor	A time period. The time period that the contact medium is valid for.

ExternalReference sub-resource

External reference of the individual or reference in other system.

externalReferenceType	A string. Type of the external reference.
name	A string. External reference name.

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

city	A string. The city.
contactType	A string. The type of contact, for example: phone number such as mobile, fixed home, fixed office. postal address such as shipping instalation....
country	A string. The country.
emailAddress	A string. Full email address in standard format.
faxNumber	A string. The fax number of the contact.
phoneNumber	A string. The primary phone number of the contact.
postCode	A string. Postcode.
socialNetworkId	A string. Identifier as a member of a social network.
stateOrProvince	A string. State or province.
street1	A string. Describes the street.

street2 A string. Complementary street description.

OrganizationChildRelationship sub-resource

Child references of an organization in a structure of organizations.

organization An organization reference (OrganizationRef).

relationshipType A string. Type of the relationship. Could be juridical, hierarchical, geographical, functional for example.

OrganizationIdentification sub-resource

Represents our registration of information used as proof of identity by an organization.

attachment An attachment ref or value (AttachmentRefOrValue). An attachment by value or by reference.

identificationId A string. Identifier.

identificationType A string. Type of identification information used to identify the company in a country or internationally.

issuingAuthority A string. Authority which has issued the identifier (chamber of commerce...).

issuingDate A date time (DateTime). Date at which the identifier was issued.

validFor A time period. The period for which the identification information is valid.

OrganizationParentRelationship sub-resource

Parent references of an organization in a structure of organizations.

organization An organization reference (OrganizationRef).

relationshipType A string. Type of the relationship. Could be juridical, hierarchical, geographical, functional for example.

OtherNameOrganization sub-resource

Keeps track of other names, for example the old name of an organization.

name A string. Organization name (department name for example).

nameType A string. Co. , Inc. , Ltd. , Pty Ltd. , Plc; , Gmbh.

tradingName A string. The name that the organization trades under.

validFor A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

PartyCreditProfile sub-resource

An individual might be evaluated for its worthiness and this evaluation might be based on a credit rating given by a credit agency.

creditAgencyName	A string. Name of the credit agency giving the score.
creditAgencyType	A string. Type of the credit agency giving the score.
ratingReference	A string. Reference corresponding to the credit rating.
ratingScore	An integer. A measure of a party's creditworthiness calculated on the basis of a combination of factors such as their income and credit history.
validFor	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

Quantity sub-resource

An amount in a given unit.

amount	A float. Numeric value in a given unit.
units	A string. Unit.

RelatedParty sub-resource

Related Entity reference. A related party defines party or party role linked to a specific entity.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
href	A string. Reference of the related entity.
id	A string. Unique identifier of a related entity.
name	A string. Name of the related entity.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
role	A string. Role played by the related party.

TaxDefinition sub-resource

Reference of a tax definition. A tax is levied by an authorized tax jurisdiction. There are many different types of tax (Federal Tax levied by the US Government, State Tax levied by the State of California,...).

@referredType	A string. The actual type of the target instance when needed for disambiguation.
id	A string. Unique identifier of the tax.
name	A string. Tax name.

taxType A string. Type of the tax.

TaxExemptionCertificate sub-resource

A tax exemption certificate represents a tax exemption granted to a party (individual or organization) by a tax jurisdiction which may be a city, state, country,... An exemption has a certificate identifier (received from the jurisdiction that levied the tax) and a validity period. An exemption is per tax types and determines for each type of tax what portion of the tax is exempted (partial by percentage or complete) via the tax definition.

attachment An attachment ref or value (AttachmentRefOrValue). An attachment by value or by reference.

id A string. Unique identifier of the certificate of the tax exemption.

taxDefinition A list of tax definitions (TaxDefinition [*]). Reference of a tax definition. A tax is levied by an authorized tax jurisdiction. There are many different types of tax (Federal Tax levied by the US Government, State Tax levied by the State of California,...).

validFor A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

OrganizationRef relationship

@referredType A string. The actual type of the target instance when needed for disambiguation.

href A string. Reference of the related entity.

id A string. Unique identifier of a related entity.

name A string. Name of the related entity.

Json representation sample

We provide below the json representation of an example of a 'Organization' resource object

```
{
  "id": "128",
  "href": "https://serverRoot/tmf-api/party/v4/organization/128",
  "@type": "organization",
  "isLegalEntity": true,
  "isHeadOffice": true,
  "organizationType": "company",
  "existsDuring": {
    "startDateTime": "2015-10-22T08:31:52.026Z",
    "endDateTime": ""
  },
  "tradingName": "Coffee Do Brazil Fair Trade",
  "name": "",
  "nameType": "inc",
  "status": "validated",
  "externalReference": [
    {
```



```
    "name": "http://coffeedobrazil.com",
    "externalReferenceType": "internetSite"
  }
],
"partyCharacteristic": [
  {
    "name": "number of employees",
    "value": "125",
    "valueType": "number"
  },
  {
    "name": "market segment",
    "value": "Food wholesale",
    "valueType": "string"
  }
],
"otherName": {
  "nameType": "inc",
  "tradingName": "General Coffee",
  "name": "",
  "validFor": {
    "startDateTime": "2015-10-22T08:31:52.026Z",
    "endDateTime": "2017-10-22T08:31:52.026Z"
  }
},
"organizationIdentification": [
  {
    "identificationType": "commercialRegistration",
    "identificationId": "12345678",
    "issuingAuthority": "US Government",
    "issuingDate": "2015-10-22T08:31:52.028Z",
    "validFor": {
      "startDateTime": "2015-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "attachment": [
      {
        "@referredType": "Attachment",
        "name": "TaxExemptionCertificate-555.pdf",
        "description": "Electronic version of the tax exemption certificate",
        "mimeType": "application/pdf",
        "url": "http://DocumentManager/666/TaxExemptionCertificate-555.pdf"
      }
    ]
  }
],
"taxExemptionCertificate": [
  {
    "id": "999",
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "taxDefinition": [
      {
```

```
        "id": "97",
        "name": "value-added tax"
      }
    ],
    "attachment": {
      "id": "777",
      "href": "/documentManagement/v4/attachment/777",
      "attachmentType": "documentCopy",
      "isRef": true,
      "name": "TaxExemptionCertificate",
      "description": "Electronic version of the tax exemption certificate",
    }
  }
],
"creditRating": [
  {
    "creditAgencyName": "Experian",
    "creditAgencyType": "externalAgency",
    "ratingReference": "ref456",
    "ratingScore": 400,
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    }
  }
],
"relatedParty": [
  {
    "id": "54",
    "href": "https://serverRoot/tmf-api/party/v4/individual/54",
    "name": "Carlos Mafalda",
    "role": "director",
    "@referredType": "individual"
  },
  {
    "id": "42",
    "href": "https://serverRoot/tmf-api/party/v4/individual/42",
    "name": "Jane Lamborgizzia",
    "role": "employer",
    "@referredType": "individual"
  }
],
"contactMedium": [
  {
    "preferred": true,
    "mediumType": "email",
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "characteristic": {
      "emailAddress": "jane.lamborgizzia@coffeedobrazil.com"
    }
  }
],
```

```
{
  "preferred": false,
  "mediumType": "postalAddress",
  "validFor": {
    "startDateTime": "2018-10-22T08:31:52.028Z",
    "endDateTime": ""
  },
  "characteristic": {
    "city": "Morristown",
    "country": "USA",
    "postcode": "07960",
    "stateOrProvince": "New Jersey",
    "street1": "240 Headquarters Plaza",
    "street2": "East Tower 10th Floor"
  }
},
"organizationParentRelationship": {
  "relationshipType": "juridical",
  "organization": {
    "id": "800",
    "href": "https://serverRoot/tmf-api/party/v4/organization/800"
  }
},
"organizationChildRelationship": [
  {
    "relationshipType": "juridical",
    "organization": {
      "id": "149",
      "href": "https://serverRoot/tmf-api/party/v4/organization/149"
    }
  },
  {
    "relationshipType": "juridical",
    "organization": {
      "id": "150",
      "href": "https://serverRoot/tmf-api/party/v4/organization/150"
    }
  }
]
}
```

Notification Resource Models

8 notifications are defined for this API

Notifications related to Individual:

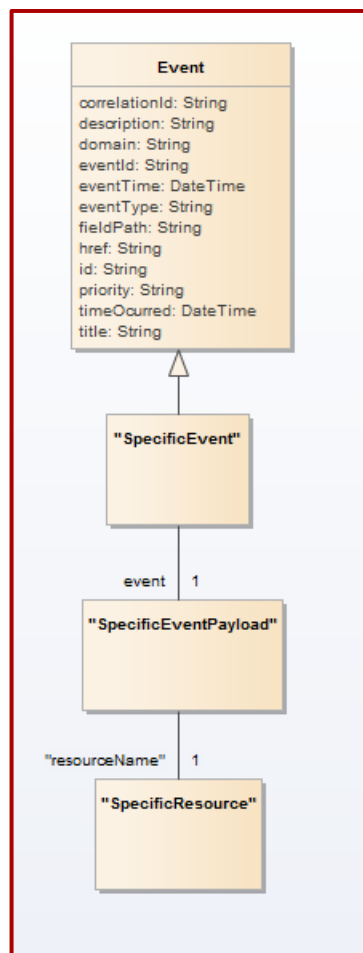
- IndividualCreateEvent
- IndividualAttributeValueChangeEvent
- IndividualStateChangeEvent
- IndividualDeleteEvent

Notifications related to Organization:

- OrganizationCreateEvent
- OrganizationAttributeValueChangeEvent
- OrganizationStateChangeEvent
- OrganizationDeleteEvent

The notification structure for all notifications in this API follow the pattern depicted by the figure below. A notification event resource (depicted by "SpecificEvent" placeholder) is a sub class of a generic Event structure containing at least an id of the event occurrence (eventId), an event timestamp (eventTime), and the name of the resource (eventType).

This notification structure owns an event payload structure ("SpecificEventPayload" placeholder) linked to the resource concerned by the notification using the resource name as access field ("resourceName" placeholder).



Individual Create Event

Notification IndividualCreateEvent case for resource Individual

Json representation sample

We provide below the json representation of an example of an 'IndividualCreateEvent' notification event object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "IndividualCreateEvent",
  "event": {
    "individual":
      {-- SEE Individual RESOURCE SAMPLE --}
  }
}
```

Individual Attribute Value Change Event

Notification IndividualAttributeValueChangeEvent case for resource Individual.

Json representation sample

We provide below the json representation of an example of an 'IndividualAttributeValueChangeEvent' notification event object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "IndividualAttributeValueChangeEvent",
  "event": {
    "individual":
      {-- SEE Individual RESOURCE SAMPLE --}
  }
}
```

Individual State Change Event

Notification IndividualStateChangeEvent case for resource Individual.

Json representation sample

We provide below the json representation of an example of an 'IndividualStateChangeEvent' notification event object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "IndividualStateChangeEvent",
  "event": {
    "individual":
      {-- SEE Individual RESOURCE SAMPLE --}
  }
}
```

Individual Delete Event

Notification IndividualDeleteEvent case for resource Individual.

Json representation sample

We provide below the json representation of an example of an 'IndividualDeleteEvent' notification event object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"IndividualDeleteEvent",
  "event": {
    "individual" :
      {-- SEE Individual RESOURCE SAMPLE --}
  }
}
```

Organization Create Event

Notification OrganizationCreateEvent case for resource Organization.

Json representation sample

We provide below the json representation of an example of an 'OrganizationCreateEvent' notification event object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"OrganizationCreateEvent",
  "event": {
    "organization" :
      {-- SEE Organization RESOURCE SAMPLE --}
  }
}
```

Organization Attribute Value Change Event

Notification OrganizationAttributeValueChangeEvent case for resource Organization.

Json representation sample

We provide below the json representation of an example of an 'OrganizationAttributeValueChangeEvent' notification event object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"OrganizationAttributeValueChangeEvent",
  "event": {
    "organization" :
      {-- SEE Organization RESOURCE SAMPLE --}
  }
}
```

Organization State Change Event

Notification OrganizationStateChangeEvent case for resource Organization.

Json representation sample

We provide below the json representation of an example of an 'OrganizationStateChangeEvent' notification event object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"OrganizationStateChangeEvent",
  "event": {
    "organization" :
      {-- SEE Organization RESOURCE SAMPLE --}
  }
}
```

Organization Delete Event

Notification OrganizationDeleteEvent case for resource Organization.

Json representation sample

We provide below the json representation of an example of an 'OrganizationDeleteEvent' notification event object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"OrganizationDeleteEvent",
  "event": {
    "organization" :
      {-- SEE Organization RESOURCE SAMPLE --}
  }
}
```

API OPERATIONS

Document only allows following operations:

Operation on Entities	Uniform API Operation	Description
Query Entities	GET individual GET organization	GET must be used to retrieve a representation of a resource.
Create Entity	POST individual POST organization	POST must be used to create a new resource
Partial Update of an Entity	PATCH individual PATCH organization	PATCH must be used to partially update a resource
Remove an Entity	DELETE individual DELETE organization	DELETE must be used to remove a resource
Execute an Action on an Entity	POST on TASK Resource	POST must be used to execute Task Resources
Other Request Methods	POST on TASK Resource	GET and POST must not be used to tunnel other request methods.

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

Notifications are also described in a subsequent section.

Operations on Individual

List individuals

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

Description

This operation list individual entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving Individual resources. Retrieving all individuals with validated status and credit store equal to 700. The result items are shrunk to show only the id, the family name and the given name.

Request
GET /serverRoot/tmf-api/party/v4/individual?fields=id,familyName,givenName&status=validated&creditRating.ratingScore=700 Accept: application/json
Response
200 <pre>[{ "id": "42", "@type": "individual", "givenName": "Jane", "familyName": "Lamborgizzia" }, { "id": "52", "@type": "individual", "givenName": "Paul", "familyName": "Newman" }]</pre>

Retrieve individual**GET /individual/{id}?fields=...&{filtering}****Description**

This operation retrieves an individual entity.

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.

Usage Samples

Here's a sample of a request for retrieving an individual resource based on its id.

Request
<pre>GET /serverRoot/tmf-api/party/v4/individual/42 Accept: application/json</pre>
Response
<pre>200 { "id": "42", "href": "https://serverRoot/tmf-api/party/v4/individual/42", "@type": "individual", "gender": "female", "placeOfBirth": "", "countryOfBirth": "United States", "nationality": "American", "maritalStatus": "married", "birthDate": "1967-09-26T05:00:00.246Z", "deathDate": "", "title": "", "aristocraticTitle": "", "generation": "", "givenName": "Jane", "preferredGivenName": "Lamborgizzia", "familyNamePrefix": "", "familyName": "Lamborgizzia", "legalName": "Smith", "middleName": "JL", "fullName": "Jane Smith ep Lamborgizzia", "formattedName": "Jane Smith ep Lamborgizzia", "location": "", "status": "validated", "externalReference": [{ "name": "http://facebook.com/17263635",</pre>

```
    "externalReferenceType": "facebookId"
  },
  {
    "name": "http://google.com/17263635",
    "externalReferenceType": "googleId"
  }
],
"partyCharacteristic": [
  {
    "name": "hobby",
    "value": "Modern Jazz",
    "valueType": "string"
  },
  {
    "name": "hobby",
    "value": "Cinema",
    "valueType": "string"
  },
  {
    "name": "childrenNumber",
    "value": "1",
    "valueType": "number"
  }
],
"otherName": [
  {
    "title": "",
    "aristocraticTitle": "",
    "generation": "",
    "givenName": "Jane",
    "preferredGivenName": "",
    "familyNamePrefix": "",
    "familyName": "Smith",
    "legalName": "",
    "middleName": "",
    "fullName": "",
    "formattedName": "",
    "validFor": {
      "startDateTime": "1967-09-26T00:00:00.246Z",
      "endDateTime": "2015-06-15T00:00:00.246Z"
    }
  }
],
"individualIdentification": [
  {
    "identificationType": "passport",
    "identificationId": "51DD1234",
    "issuingAuthority": "US Government",
    "issuingDate": "2017-10-22T07:49:25.246Z",
    "validFor": {
      "startDateTime": "2017-10-22T07:49:25.246Z",
      "endDateTime": "2027-10-21T07:49:25.246Z"
    }
  },
  "attachment": [
    {
```

```
        "id": "321",
        "href": "/documentManagement/v4/attachment/321",
        "attachmentType": "passportCopy",
        "isRef": true,
        "name": "PassportCopy",
        "description": "Scanned copy of the passport",
      }
    ]
  },
  "taxExemptionCertificate": [
    {
      "id": "555",
      "validFor": {
        "startDateTime": "2018-10-22T07:49:25.246Z",
        "endDateTime": ""
      },
      "taxDefinition": [
        {
          "id": "96",
          "name": "value-added tax",
          "taxType": "federalVat"
        }
      ],
      "attachment": {
        "@referredType": "Attachment",
        "name": "TaxExemptionCertificate-555.pdf",
        "description": "Electronic version of the tax exemption certificate",
        "mimeType": "application/pdf",
        "url": "http://DocumentManager/666/TaxExemptionCertificate-555.pdf"
      }
    }
  ],
  "creditRating": [
    {
      "creditAgencyName": "Experian",
      "creditAgencyType": "externalAgency",
      "ratingReference": "ref123",
      "ratingScore": 680,
      "validFor": {
        "startDateTime": "2018-10-22T07:49:25.246Z",
        "endDateTime": ""
      }
    }
  ],
  "relatedParty": [
    {
      "id": "128",
      "href": "https://serverRoot/tmf-api/party/v4/organization/128",
      "role": "employee",
      "name": "Coffee Do Brazil Fair Trade Marketing Department",
      "@referredType": "organization"
    }
  ],
  "contactMedium": [
```

```
{
  "preferred": true,
  "mediumType": "email",
  "validFor": {
    "startDateTime": "2017-03-15T07:49:25.246Z",
    "endDateTime": ""
  },
  "characteristic": {
    "emailAddress": "jane.lamborgizzia@gmail.com"
  }
},
{
  "preferred": false,
  "mediumType": "postalAddress",
  "validFor": {
    "startDateTime": "2017-03-15T07:49:25.246Z",
    "endDateTime": ""
  },
  "characteristic": {
    "city": "Morristown",
    "country": "USA",
    "postcode": "07960",
    "stateOrProvince": "New Jersey",
    "street1": "240 Headquarters Plaza",
    "street2": "East Tower - 10th Floor"
  }
}
],
"disability": [
  {
    "disabilityCode": "BLD",
    "disabilityName": "Blind",
    "validFor": {
      "startDateTime": "1967-09-26T07:49:25.246Z",
      "endDateTime": ""
    }
  }
],
"languageAbility": [
  {
    "languageCode": "FR",
    "languageName": "French",
    "isFavouriteLanguage": "true",
    "writingProficiency": "advanced",
    "readingProficiency": "advanced",
    "speakingProficiency": "intermediate",
    "listeningProficiency": "intermediate",
    "validFor": {
      "startDateTime": "2018-10-22T07:49:25.246Z",
      "endDateTime": ""
    }
  },
  {
    "languageCode": "SP",
    "languageName": "Spanish",
```

```
"isFavouriteLanguage": "false",
"writingProficiency": "scholar",
"readingProficiency": "scholar",
"speakingProficiency": "scholar",
"listeningProficiency": "scholar",
"validFor": {
  "startDateTime": "2018-10-22T07:49:25.246Z",
  "endDateTime": ""
}
},
"skill": [
  {
    "skillCode": "SK001",
    "skillName": "marketing",
    "evaluatedLevel": "Advanced",
    "comment": "Ten years experience",
    "validFor": {
      "startDateTime": "2018-10-22T07:49:25.246Z",
      "endDateTime": ""
    }
  },
  {
    "skillCode": "SK002",
    "skillName": "Project Management",
    "evaluatedLevel": "newbie",
    "comment": "First work experience",
    "validFor": {
      "startDateTime": "2018-10-22T07:49:25.246Z",
      "endDateTime": ""
    }
  }
]
}
```

Create individual**POST /individual****Description**

This operation creates an individual entity.

Mandatory and Non Mandatory Attributes

The following tables provide the list of mandatory and non mandatory attributes when creating a Individual, 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
givenName	
familyName	

Non Mandatory Attributes	Rule
aristocraticTitle	
birthDate	
countryOfBirth	
deathDate	
disability	
familyNamePrefix	
formattedName	
fullName	
gender	
generation	
individualIdentification	
languageAbility	
legalName	
location	
maritalStatus	
middleName	
nationality	
otherName	
placeOfBirth	
preferredGivenName	
skill	
status	
title	
contactMedium	
creditRating	
externalReference	
partyCharacteristic	
relatedParty	
taxExemptionCertificate	

Usage Samples

Here's a sample of a request for creating an Individual resource. In this example the request only passes mandatory attributes.

Request
<pre>POST /serverRoot/tmf-api/party/v4/individual Content-Type: application/json { "givenName": "Jane", "familyName": "Lamborgizzia" }</pre>
Response
<pre>201 { "id": "42", "href": "https://serverRoot/tmf-api/party/v4/individual/42", "@type": "individual", "givenName": "Jane", "familyName": "Lamborgizzia", "status": "initialized" }</pre>

Patch individual

PATCH /individual/{id}

Description

This operation allows partial updates of an individual entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

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
aristocraticTitle	
birthDate	
countryOfBirth	
deathDate	
disability	
familyName	
familyNamePrefix	
formattedName	
fullName	
gender	
generation	
givenName	
individualIdentification	
languageAbility	
legalName	
location	
maritalStatus	
middleName	
nationality	
otherName	
placeOfBirth	
preferredGivenName	
skill	
status	
title	
contactMedium	
creditRating	
externalReference	
partyCharacteristic	
relatedParty	
taxExemptionCertificate	

Non Patchable Attributes	Rule
id	
href	

Usage Samples

Here's an example of a request for patching an individual resource with change on following attribute (using json-patch): maritalStatus

Request

PATCH /serverRoot/tmf-api/party/v4/individual/42 Content-Type: application/merge-patch+json { "maritalStatus": "divorced" }
Response
200 { Similar JSON as in GET response with marital status changed }

Delete individual

DELETE /individual/{id}

Description

This operation deletes an individual entity.

Usage Samples

Here's an example of a request for deleting an individual resource.

Request
DELETE /serverRoot/tmf-api/party/v4/individual/42
Response
204

Operations on Organization

List organizations

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

Description

This operation list organization entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving organization resources. Retrieving all organizations with validated status and with organization parent relationship id equal to 128. The result items are shrunk to show only the id, the trading name and the name (fields=id,tradingName,name).

Request
GET /serverRoot/tmf-api/party/v4/organization?fields=id,tradingName,name&status=validated&organizationParentRelationship.id=128 Accept: application/json
Response
200 <pre>[{ "id": "129", "@type": "organization", "tradingName": "Coffee Do Brazil Fair Trade", "name": "Marketing Department" }, { "id": "130", "@type": "organization", "tradingName": "Coffee Do Brazil Fair Trade", "name": "Operations Department" }]</pre>

Retrieve organization

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

Description

This operation retrieves an organization entity.

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.

Usage Samples

Here's a sample of a request for retrieving an organization resource based on its id.

Request

GET /serverRoot/tmf-api/party/v4/organization/128
 Accept: application/json

Response

200

```
{
  "id": "128",
  "href": "https://serverRoot/tmf-api/party/v4/organization/128",
  "@type": "organization",
  "isLegalEntity": true,
  "isHeadOffice": true,
  "organizationType": "company",
  "existsDuring": {
    "startDateTime": "2015-10-22T08:31:52.026Z",
    "endDateTime": ""
  },
  "tradingName": "Coffee Do Brazil Fair Trade",
  "name": "",
  "nameType": "inc",
  "status": "validated",
  "externalReference": [
    {
      "name": "http://coffeedobrazil.com",
      "externalReferenceType": "internetSite"
    }
  ],
  "partyCharacteristic": [
    {
      "name": "number of employees",
      "value": "125",
      "valueType": "number"
    },
    {
      "name": "market segment",
      "value": "Food wholesale",
      "valueType": "string"
    }
  ],
  "otherName": {
    "nameType": "inc",
    "tradingName": "General Coffee",
    "name": "",
    "validFor": {
      "startDateTime": "2015-10-22T08:31:52.026Z",
      "endDateTime": "2017-10-22T08:31:52.026Z"
    }
  }
},
```

```
"organizationIdentification": [
  {
    "identificationType": "commercialRegistration",
    "identificationId": "12345678",
    "issuingAuthority": "US Government",
    "issuingDate": "2015-10-22T08:31:52.028Z",
    "validFor": {
      "startDateTime": "2015-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "attachment": [
      {
        "id": "421",
        "href": "https://serverRoot/tmf-api/documentManagement/v4/attachment/421",
        "attachmentType": "documentCopy",
        "isRef": true,
        "name": "RegistrationCertificate421.pdf",
        "description": "Scanned copy of the registration certificate"
      }
    ]
  }
],
"taxExemptionCertificate": [
  {
    "id": "999",
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "taxDefinition": [
      {
        "id": "97",
        "name": "value-added tax"
      }
    ],
    "attachment": {
      "id": "777",
      "href": "/documentManagement/v4/attachment/777",
      "attachmentType": "documentCopy",
      "isRef": true,
      "name": "TaxExemptionCertificate-999.pdf",
      "description": "Electronic version of the tax exemption certificate"
    }
  }
],
"creditRating": [
  {
    "creditAgencyName": "Experian",
    "creditAgencyType": "externalAgency",
    "ratingReference": "ref456",
    "ratingScore": 400,
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    }
  }
]
```

```
],
"relatedParty": [
  {
    "id": "54",
    "href": "https://serverRoot/tmf-api/party/v4/individual/54",
    "name": "Carlos Mafalda",
    "role": "director",
    "@referredType": "individual"
  },
  {
    "id": "42",
    "href": "https://serverRoot/tmf-api/party/v4/individual/42",
    "name": "Jane Lamborgizzia",
    "role": "employer",
    "@referredType": "individual"
  }
],
"contactMedium": [
  {
    "preferred": true,
    "mediumType": "email",
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "characteristic": {
      "emailAddress": "jane.lamborgizzia@coffeedobrazil.com"
    }
  },
  {
    "preferred": false,
    "mediumType": "postalAddress",
    "validFor": {
      "startDateTime": "2018-10-22T08:31:52.028Z",
      "endDateTime": ""
    },
    "characteristic": {
      "city": "Morristown",
      "country": "USA",
      "postcode": "07960",
      "stateOrProvince": "New Jersey",
      "street1": "240 Headquarters Plaza",
      "street2": "East Tower 10th Floor"
    }
  }
],
"organizationParentRelationship": {
  "relationshipType": "juridical",
  "organization": {
    "id": "800",
    "href": "https://serverRoot/tmf-api/party/v4/organization/800"
  }
},
"organizationChildRelationship": [
  {
```

```

    "relationshipType": "juridical",
    "organization": {
      "id": "149",
      "href": "https://serverRoot/tmf-api/party/v4/organization/149"
    }
  },
  {
    "relationshipType": "juridical",
    "organization": {
      "id": "150",
      "href": "https://serverRoot/tmf-api/party/v4/organization/150"
    }
  }
]
}

```

Create organization

POST /organization

Description

This operation creates an organization entity.

Mandatory and Non Mandatory Attributes

The following tables provide the list of mandatory and non mandatory attributes when creating a Organization, 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
tradingName	

Non Mandatory Attributes	Rule
existsDuring	
isHeadOffice	
isLegalEntity	
name	
nameType	
organizationChildRelationship	
organizationIdentification	
organizationParentRelationship	
organizationType	
otherName	
status	
contactMedium	
creditRating	
externalReference	

partyCharacteristic	
relatedParty	
taxExemptionCertificate	

Usage Samples

Here's a sample of a request for creating an organization resource. In this example the request only passes mandatory attributes.

Request
<pre>POST /serverRoot/tmf-api/party/v4/organization Content-Type: application/json { "tradingName": "Coffee Do Brazil Fair Trade" }</pre>
Response
<pre>201 { "id": "128", "href": "https://serverRoot/tmf-api/party/v4/organization/128", "@type": "organization", "tradingName": "Coffee Do Brazil Fair Trade", "status": "initialized" }</pre>

Patch organization

PATCH /organization/{id}

Description

This operation allows partial updates of an organization entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

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
existsDuring	
isHeadOffice	
isLegalEntity	
name	
nameType	
organizationChildRelationship	
organizationIdentification	
organizationParentRelationship	
organizationType	
otherName	
status	
tradingName	
contactMedium	
creditRating	
externalReference	
partyCharacteristic	
relatedParty	
taxExemptionCertificate	

Non Patchable Attributes	Rule
id	
href	

Usage Samples

Here's an example of a request for patching an organization resource with change on following attribute (using json-patch): isLegalEntity

Request
PATCH /serverRoot/tmf-api/party/v4/organization/42 Content-Type: application/merge-patch+json <pre>{ "isLegalEntity": true }</pre>
Response
200

```
{ Similar JSON as in GET response with isLegalEntity changed }
```

Delete organization

DELETE /organization/{id}

Description

This operation deletes an organization entity.

Usage Samples

Here's an example of a request for deleting an organization resource.

Request
DELETE {apiRoot}/organization/128
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/hub Accept: application/json {"callback": "http://in.listener.com"}
Response
201 Content-Type: application/json Location: /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/42 Accept: 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/listener Accept: 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

VERSION History

Release Number	Date	Release led by:	Description
Release 1.0.0	09/06/2017	Sophie Bouleau Orange sophie.bouleau@orange.com	First Release of the Document.
Release 4.0.0	23/06/2019	Sophie Bouleau Orange sophie.bouleau@orange.com	<p>Schema-driven API with polymorphism pattern</p> <p>Following Jira have been integrated:</p> <ul style="list-style-type: none"> • AP-1016 • AP-1017 • AP-1195 • AP-1282 <p><i>Note: the version 4.0 is assigned to all the APIs delivered in the release 19.0</i></p>

Release History

Release Number	Date	Release led by:	Description
Release 14.5	09/06/2017	Sophie Bouleau Orange sophie.bouleau@orange.com	Version 1.0 of the API REST
Release 19.0	23/06/2019	Sophie Bouleau Orange sophie.bouleau@orange.com	<p>Version 4.0 of the API REST</p> <p><i>Note: the version 4.0 is assigned to all the APIs delivered in the release 19.0</i></p>