

TM Forum Specification

TMF646 Appointment API REST Specification

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INTRODUCTION

The following document is the specification of the REST API for Any management. It includes the model definition as well as all available operations.

SAMPLE USE CASES

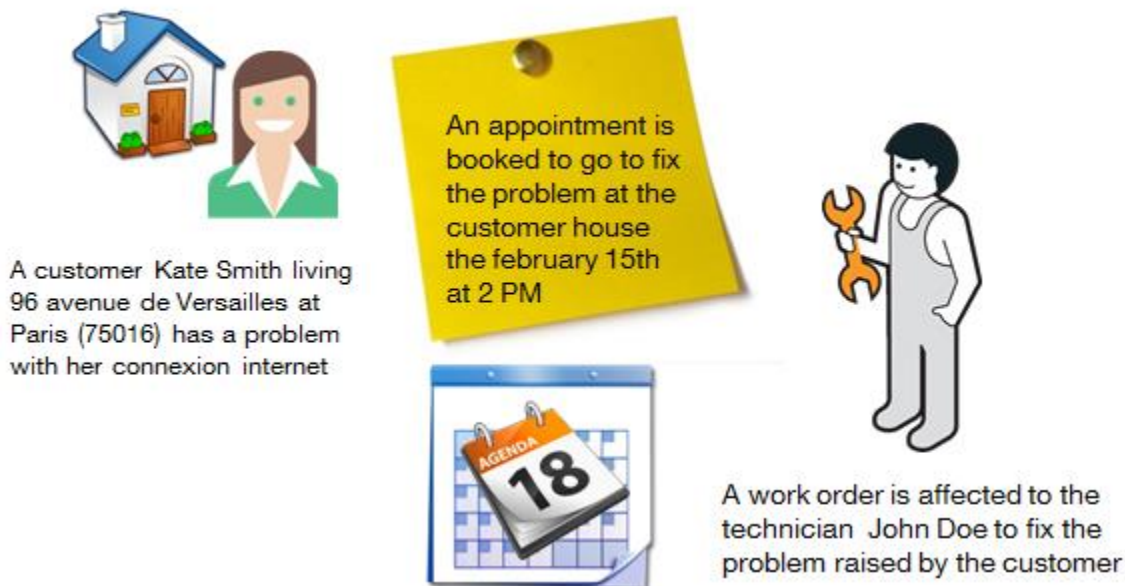
The use cases are:

- Create a new appointment,
- Update an existing appointment because its status has changed (cancel an appointment for example) or party availabilities have changed (reschedule an appointment for example)
- Retrieve a specific appointment or a collection of appointments

Before creating or rescheduling an appointment, the available time slots could be checked according to criteria (like the reference of a specific technician for example...).

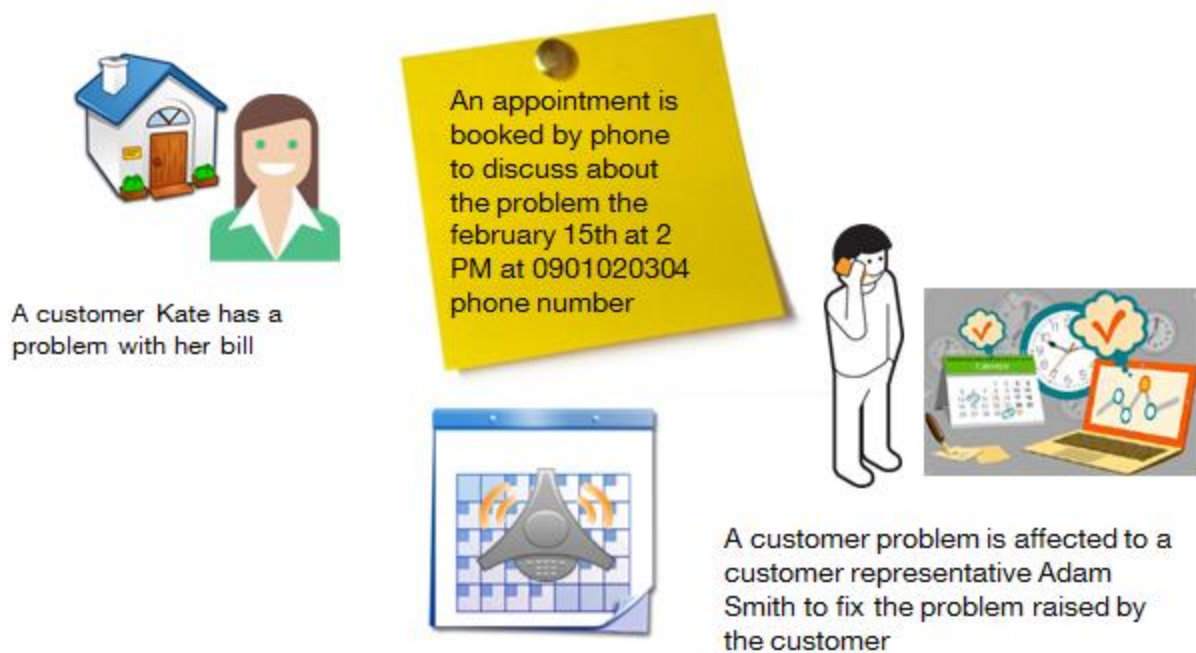
To illustrate the JSON representation of resource concerned by this API, we use the two uses cases detailed below:

Use case 1 (UC1): an appointment at a place



Kate wishes that the appointment will be booked between the 13 and 16 of February.

Use case 2 (UC2) : an appointment by phone



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 `BillingAccount` and `SettlementAccount` inheriting properties from the abstract `Account` 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 `Account` instances some may be instances of `BillingAccount` where other could be instances of `SettlementAccount`. 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 an `AccountRef` 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 `BillingAccountRef` or `SettlementAccountRef`, 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.

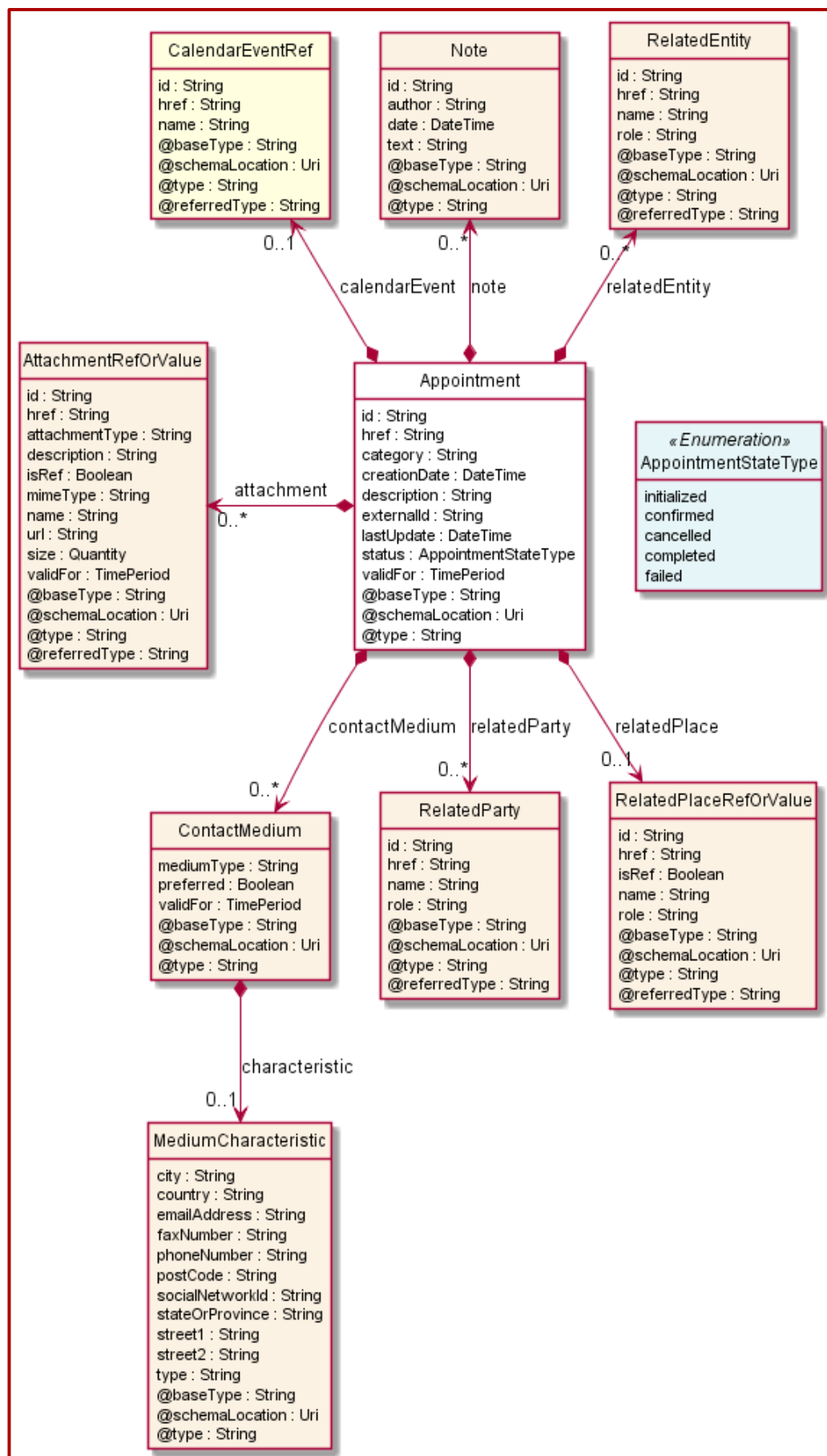
RESOURCE MODEL

Managed Entity and Task Resource Models

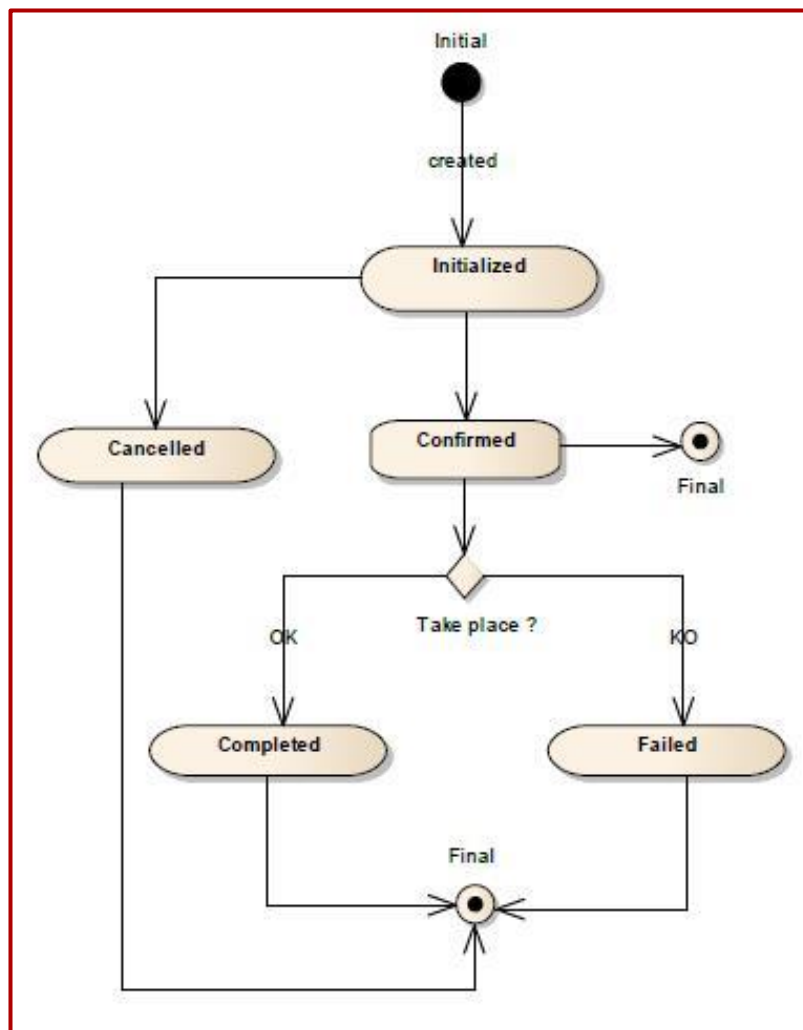
APPOINTMENT RESOURCE

An Appointment is an arrangement to do something or meet someone at a particular time, at a place (for face to face appointment) or in a contact medium (for phone appointment).

Resource model



Lifecycle



Field descriptions

Appointment fields

attachment	A list of attachment ref or values (AttachmentRefOrValue [*]). An attachment by value or by reference.
calendarEvent	A calendar event reference (CalendarEventRef). A calendar event reference (CalendarEventRef). The appointment is associated with a calendar event (an happening at a point of time) associated to a calendar entry.
category	A string. Business category : intervention for example or to be more precise after SalesIntervention, orderDeliveryIntervention,...
contactMedium	A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party.
creationDate	A date time (DateTime). Appointment creation date.

description	A string. Short free text describing the appointment.
externalId	A string. External reference known by the customer.
href	A string. Unique URI used to access to the appointment resource.
id	A string. Unique identifier of the appointment.
lastUpdate	A date time (DateTime). Date of last appointment update.
note	A list of notes (Note [*]). Extra information about a given entity.
relatedEntity	A list of related entities (RelatedEntity [*]). A reference to an entity, where the type of the entity is not known in advance.
relatedParty	A list of related parties (RelatedParty [*]). Related Entity reference. A related party defines party or party role linked to a specific entity.
relatedPlace	A related place ref or value (RelatedPlaceRefOrValue). Related place defines (by reference or value) the place where the appointment will take place.
status	An appointment state type (AppointmentStateType). Valid values for the lifecycle state of the appointment.
validFor	A time period. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

AttachmentRefOrValue sub-resource

An attachment by value or by reference.

id	A string. Unique identifier for this particular attachment.
href	A string. URI for this Attachment.
description	A string. A narrative text describing the content of the 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.
name	A string. The name of the attachment.
attachmentType	A string. Attachment type such as video, picture.
contentType	A string. Attachment mime type such as extension file for video, picture and document.
isRef	A boolean.
size	A quantity (Quantity). The size of the attachment.

validFor A time period. The period of time for which the attachment is valid.

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.

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.

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.

type A string. The type of phone number such as mobile, fixed home, fixed office,....

Note sub-resource

Extra information about a given entity.

author A string. Author of the note.

date A date time (DateTime). Date of the note.

id A string. Identifier of the note within its containing entity (may or may not be globally unique, depending on provider implementation).

text	A string. Text of the note.
------	-----------------------------

Quantity sub-resource

An amount in a given unit.

amount	A float. Numeric value in a given unit.
--------	---

units	A string. Unit.
-------	-----------------

RelatedEntity sub-resource

A reference to an entity, where the type of the entity is not known in advance.

@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.
------	---------------------------------------

role	A string. The role of an entity.
------	----------------------------------

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.
------	---------------------------------------

role	A string. Role played by the related party.
------	---

RelatedPlaceRefOrValue sub-resource

Related Entity reference. A related place defines a place described by reference or by value linked to a specific entity.

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

href	A string. Unique reference of the place.
------	--

id	A string. Unique identifier of the place.
----	---

name	A string. A user-friendly name for the place, such as [Paris Store], [London Store], [Main Home].
role	A string.

CalendarEventRef relationship

Reference of a CalendarEvent.

@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 'Appointment' resource object for UC1:

```
{
  "id": "21",
  "href": "https://host:port/appointment/appointment/21",
  "category": "intervention",
  "creationDate": "2018-02-01T14:40:43.000Z",
  "description": "Fix an internet connexion problem for a customer",
  "externalId": "432113",
  "lastUpdate": "2018-02-04T14:40:43.000Z",
  "validFor": {
    "startDateTime": "2018-02-15T14:00:00.000Z",
    "endDateTime": "2018-02-15T16:00:00.000Z"
  },
  "attachment": [
    {
      "id": "4444",
      "href": "https://host:port/documentManagement/customerContract/4444",
      "isRef": true,
      "@referredType": "CustomerContract",
      "@baseType": "attachment"
    }
  ],
  "calendarEvent": {
    "id": "33",
    "href": "https://host:port/timeManagement/calendarEvent/33",
    "name": "Outlook calendar event"
  },
  "contactMedium": [
    {
      "mediumType": "phoneNumber",
      "preferred": true,
      "characteristic": {
        "phoneNumber": "+33650981065",
        "type": "mobile"
      }
    }
  ]
}
```



```
    },
    "validFor": {
      "startDateTime": "2018-02-01T14:40:43.000Z",
      "endDateTime": ""
    }
  },
  ],
  "note": [
    {
      "date": "2018-02-04T11:00:18.000Z",
      "author": "Ludovic Robert",
      "text": "Problem explained to the technician"
    },
    {
      "date": "2018-02-04T14:40:43.000Z",
      "author": "Ludovic Robert",
      "text": "Work order generated"
    }
  ],
  "relatedEntity": [
    {
      "id": "789",
      "href": "https://host:port/troubleTicket/troubleTicket/789",
      "role": "Problem description",
      "name": "Internet connexion problem to solve",
      "@referredType": "TroubleTicket"
    },
    {
      "id": "465",
      "href": "https://host:port/workForceManagement/workOrder/465",
      "role": "work order description",
      "name": "Work order generated for technician intervention",
      "@referredType": "WorkOrder"
    }
  ],
  "relatedParty": [
    {
      "id": "32",
      "href": "https://host:port/partyManagement/individual/32",
      "role": "customer",
      "name": "Kate Smith",
      "@referredType": "Individual"
    },
    {
      "id": "56",
      "href": "https://host:port/partyManagement/individual/56",
      "role": "technician",
      "name": "John Doe",
      "@referredType": "Individual"
    }
  ],
  "RelatedPlace": {
    "id": "888",
    "href": "https://host:port/addressManagement /geographicAddress /888",
    "name": "Main Home",
    "role": "interventionAddress",
```

```
    "@referredType": "GeographicAddress"
  },
  "status": "confirmed"
}
```

We provide below the json representation of an example of an 'Appointment' resource object for UC2:

```
{
  "id": "22",
  "href": "https://host:port/appointment/appointment/22",
  "externalId": "432114",
  "category": "customerProblem",
  "description": "Customer bill problem explanation",
  "status": "accepted",
  "creationDate": "2018-02-01T14:40:43.071Z",
  "lastUpdate": "2018-02-04T14:40:43.071Z",
  "validFor": {
    "startDateTime": "2018-02-15T14:00:00.071Z",
    "endDateTime": "2018-02-15T15:00:00.071Z"
  },
  "attachment": [
    {
      "id": "123456",
      "href": "https://host:port/customerBillManagement/customerBill/123456",
      "isRef": true,
      "@referredType": "CustomerBill",
      "@baseType": "attachment"
    }
  ],
  "calendarEvent": {
    "id": "33",
    "href": "https://host:port/timeManagement/calendarEvent/33",
    "name": "Outlook calendar event"
  },
  "relatedParty": [
    {
      "id": "32",
      "href": "https://host:port/partyManagement/individual/32",
      "name": "Kate Smith",
      "role": "customer",
      "@referredType": "Individual"
    },
    {
      "id": "62",
      "href": "https://host:port/partyManagement/individual/62",
      "name": "Adam Smith",
      "role": "customerRepresentative",
      "@referredType": "Individual"
    }
  ],
  "contactMedium": [
    {
      "mediumType": "phoneNumber",

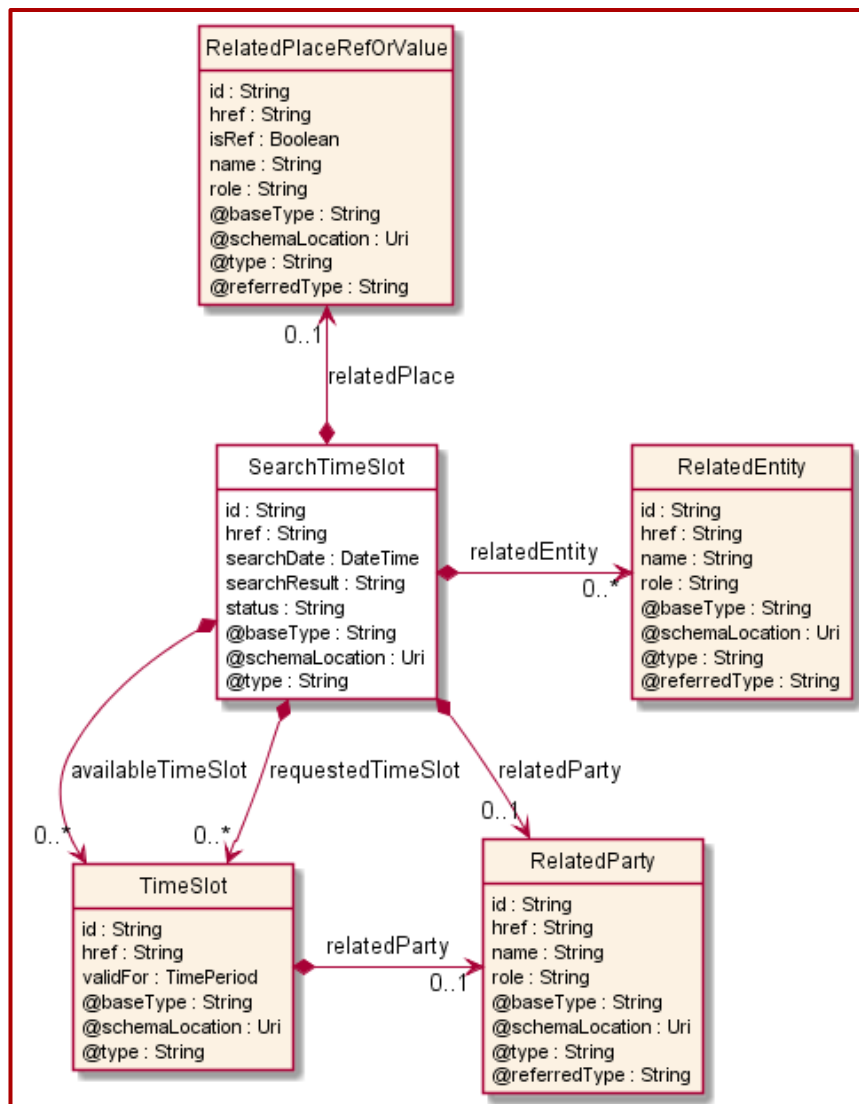
```

```
    "preferred": true,
    "characteristic": {
      "phoneNumber": "+33650981065",
      "type": "mobile"
    }
  },
  "relatedEntity": [
    {
      "id": "789",
      "href": "https://host:port/troubleTicket/troubleTicket/789",
      "name": "Customer bill amount disputed by the customer",
      "role": "Problem description",
      "@referredType": "TroubleTicket"
    }
  ],
  "note": [
    {
      "date": "2018-02-04T11:00:18.071Z",
      "author": "Ludovic Robert",
      "text": "Customer bill amount analyzed – reason found"
    }
  ]
}
```

SEARCH TIME SLOT RESOURCE

This task resource is used to retrieve available time slots. One of this available time slot is after used to create or reschedule an appointment.

Resource model



Field descriptions

SearchTimeSlot fields

availableTimeSlot	A list of time slots (TimeSlot [*]).
href	A string. Reference to access the search time slot resource.
id	A string. Unique identifier of the search time slot request.
relatedEntity	A list of related entities (RelatedEntity [*]). A reference to an entity, where the type of the entity is not known in advance.
relatedParty	A related party (RelatedParty). RelatedParty reference. A related party defines party or party role linked to a specific entity.
relatedPlace	A related place ref or value (RelatedPlaceRefOrValue). Related place defines (by reference or value) the place where the appointment will take place.

requestedTimeSlot	A list of time slots (TimeSlot [*]).
searchDate	A date time (DateTime). Date when the search time slot is performed.
searchResult	A string. Result of the search time slot (success or fail for example).
status	A string. Status of the search time slot (rejected, inProgress, done or terminatedWithError).

RelatedEntity sub-resource

A reference to an entity, where the type of the entity is not known in advance.

@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.
role	A string. The role of an entity.

RelatedParty sub-resource

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

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.

RelatedPlaceRefOrValue sub-resource

Related Entity reference. A related place defines a place described by reference or by value linked to a specific entity.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
href	A string. Unique reference of the place.
id	A string. Unique identifier of the place.
name	A string. A user-friendly name for the place, such as [Paris Store], [London Store], [Main Home].

isRef	A boolean.
role	A string.

TimeSlot sub-resource

href	A string. Reference of the TimeSlot.
id	A string. Unique identifier of the TimeSlot.
relatedParty	A related party (RelatedParty). RelatedParty reference. A related party defines party or party role linked to a specific entity.
validFor	A time period. Start date and end date of the timeSlot.

Json representation sample

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

```
{
  "id": "99",
  "href": "https://host:port/appointment/searchTimeSlot/99",
  "searchDate": "2018-02-01T14:40:43.000Z",
  "searchResult": "success",
  "status": "done",
  "RelatedPlace": {
    "id": "888",
    "href": "https://host:port/addressManagement /geographicAddress /888",
    "name": "Main Home",
    "role": "interventionAddress",
    "@referredType": "GeographicAddress"
  },
  "relatedEntity": [
    {
      "id": "789",
      "href": "https://host:port/troubleTicket/troubleTicket/789",
      "name": "Internet connexion problem to solve",
      "role": "Problem description",
      "@referredType": "TroubleTicket"
    }
  ],
  "requestedTimeSlot": [
    {
      "validFor": {
        "startDateTime": "2018-02-15T00:00:00.000Z",
        "endDateTime": "2018-02-18T00:00:00.000Z"
      }
    }
  ],
  "availableTimeSlot": [
    {
      "id": "365",
      "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/365",
```

```
"validFor": {
  "startDateTime": "2018-02-15T14:00:00.000Z",
  "endDateTime": "2018-02-15T16:00:00.000Z"
},
"relatedParty": {
  "id": "56",
  "href": "https://host:port/partyManagement/individual/56",
  "name": "John Doe",
  "role": "technician",
  "@referredType": "Individual"
}
},
{
  "id": "921",
  "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/921",
  "validFor": {
    "startDateTime": "2018-02-16T16:30:00.000Z",
    "endDateTime": "2018-02-16T18:00:00.000Z"
  },
  "relatedParty": {
    "id": "56",
    "href": "https://host:port/partyManagement/individual/56",
    "name": "John Doe",
    "role": "technician",
    "@referredType": "Individual"
  }
},
{
  "id": "325",
  "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/325",
  "validFor": {
    "startDateTime": "2018-02-15T16:00:00.000Z",
    "endDateTime": "2018-02-15T17:00:00.000Z"
  },
  "relatedParty": {
    "id": "58",
    "href": "https://host:port/partyManagement/individual/58",
    "name": "Adam Smith",
    "role": "technician",
    "@referredType": "Individual"
  }
}
]
}
```

Notification Resource Models

8 notifications are defined for this API

Notifications related to Appointment:

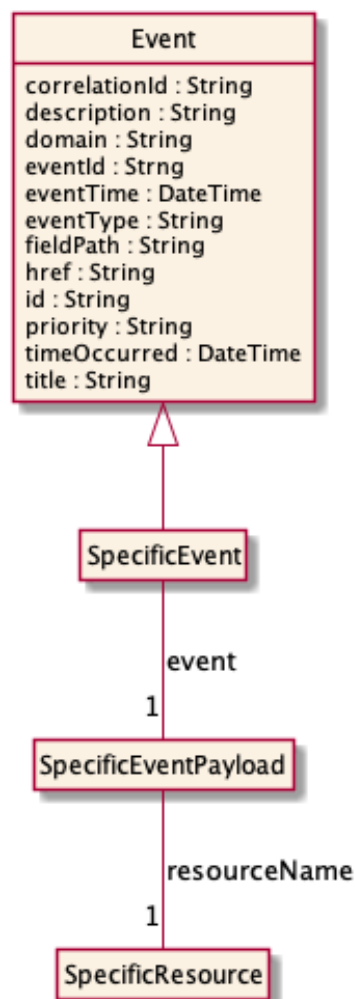
- AppointmentCreateEventNotification
- AppointmentAttributeValueChangeEventNotification

- AppointmentStateChangeEventNotification
- AppointmentDeleteEventNotification

Notifications related to SearchTimeSlot:

- SearchTimeSlotCreateEventNotification
- SearchTimeSlotAttributeValueChangeEventNotification
- SearchTimeSlotStateChangeEventNotification
- SearchTimeSlotDeleteEventNotification

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).



APPOINTMENT CREATE EVENT

Notification AppointmentCreateEvent case for resource Appointment

Json representation sample

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

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AppointmentCreateEvent",
  "event": {
    "appointment" :
      {-- SEE Appointment RESOURCE SAMPLE --}
  }
}
```

APPOINTMENT ATTRIBUTE VALUE CHANGE EVENT

Notification AppointmentAttributeValueChangeEvent case for resource Appointment

Json representation sample

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

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AppointmentAttributeValueChangeEvent",
  "event": {
    "appointment" :
      {-- SEE Appointment RESOURCE SAMPLE --}
  }
}
```

APPOINTMENT STATE CHANGE EVENT

Notification AppointmentStateChangeEvent case for resource Appointment

Json representation sample

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

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AppointmentStateChangeEvent",
  "event": {
    "appointment" :
      {-- SEE Appointment RESOURCE SAMPLE --}
  }
}
```

APPOINTMENT DELETE EVENT

Notification AppointmentDeleteEvent case for resource Appointment

Json representation sample

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

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AppointmentDeleteEvent",
  "event": {
    "appointment" :
      {-- SEE Appointment RESOURCE SAMPLE --}
  }
}
```

SEARCH TIME SLOT CREATE EVENT

Notification SearchTimeSlotCreateEvent case for resource SearchTimeSlot

Json representation sample

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

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"SearchTimeSlotCreateEvent",
  "event": {
    "searchTimeSlot" :
      {-- SEE SearchTimeSlot RESOURCE SAMPLE --}
  }
}
```

SEARCH TIME SLOT ATTRIBUTE VALUE CHANGE EVENT

Notification SearchTimeSlotAttributeValueChangeEvent case for resource SearchTimeSlot

Json representation sample

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

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"SearchTimeSlotAttributeValueChangeEvent",
  "event": {
    "searchTimeSlot" :
```

```
    {-- SEE SearchTimeSlot RESOURCE SAMPLE --}  
  }  
}
```

SEARCH TIME SLOT STATE CHANGE EVENT

Notification SearchTimeSlotStateChangeEvent case for resource SearchTimeSlot

Json representation sample

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

```
{  
  "eventId":"00001",  
  "eventTime":"2015-11-16T16:42:25-04:00",  
  "eventType":"SearchTimeSlotStateChangeEvent",  
  "event": {  
    "searchTimeSlot" :  
      {-- SEE SearchTimeSlot RESOURCE SAMPLE --}  
  }  
}
```

SEARCH TIME SLOT DELETE EVENT NOTIFICATION

Notification SearchTimeSlotDeleteEvent case for resource SearchTimeSlot

Json representation sample

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

```
{  
  "eventId":"00001",  
  "eventTime":"2015-11-16T16:42:25-04:00",  
  "eventType":"SearchTimeSlotDeleteEvent",  
  "event": {  
    "searchTimeSlot" :  
      {-- SEE SearchTimeSlot RESOURCE SAMPLE --}  
  }  
}
```

API OPERATIONS

Remember the following Uniform Contract:

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 resource
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
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 APPOINTMENT

LIST APPOINTMENTS

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

Description

This operation list appointment 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

This operation list appointment entities. Attribute selection is enabled for all first level attributes. Filtering may be available depending on the compliance level supported by an implementation.

Request
GET {apiRoot}/appointment?fields=id,category,status,validFor&relatedParty.id=32&relatedParty.role=customer Accept: application/json
Response
200 [{ "id": "21", "category": "intervention", "status": "accepted", "validFor": { "startDateTime": "2018-02-15T14:00:00.071Z", "endDateTime": "2018-02-15T16:00:00.071Z" } }, { "id": "22", "category": "customerProblem", "status": "accepted", "validFor": { "startDateTime": "2018-02-15T14:00:00.071Z", "endDateTime": "2018-02-15T15:00:00.071Z" } }]

RETRIEVE APPOINTMENT

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

This operation retrieves an appointment 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 an example of a request for retrieving a specific appointment.

Request
<pre>GET {apiRoot}/appointment/21 Accept: application/json</pre>
Response
<pre>200 { "id": "21", "href": "https://host:port/appointment/appointment/21", "externalId": "432113", "category": "intervention", "description": "Fix an internet connexion problem for a customer", "status": "accepted", "creationDate": "2018-02-01T14:40:43.071Z", "lastUpdate": "2018-02-04T14:40:43.071Z", "validFor": { "startDateTime": "2018-02-15T14:00:00.071Z", "endDateTime": "2018-02-15T16:00:00.071Z" }, "attachment": [{ "id": "4444", "href": "https://host:port/documentManagement/customerContract/4444", "isRef": true, "@referredType": "CustomerContract", "@baseType": "attachment" }], "calendarEvent": { "id": "33", "href": "https://host:port/timeManagement/calendarEvent/33", "name": "Outlook calendar event" }, }</pre>

```
"relatedParty": [
  {
    "id": "32",
    "href": "https://host:port/partyManagement/individual/32",
    "name": "Kate Smith",
    "role": "customer",
    "@referredType": "Individual"
  },
  {
    "id": "56",
    "href": "https://host:port/partyManagement/individual/56",
    "name": "John Doe",
    "role": "technician",
    "@referredType": "Individual"
  }
],
"RelatedPlace": {
  "id": "888",
  "href": "https://host:port/addressManagement/geographicAddress/888",
  "name": "Main Home",
  "role": "interventionAddress",
  "@referredType": "GeographicAddress"
},
"relatedEntity": [
  {
    "id": "789",
    "href": "https://host:port/troubleTicket/troubleTicket/789",
    "role": "Problem description",
    "name": "Internet connexion problem to solve",
    "@referredType": "TroubleTicket"
  },
  {
    "id": "465",
    "href": "https://host:port/workForceManagement/workOrder/465",
    "role": "work order description",
    "name": "Work order generated for technician intervention",
    "@referredType": "WorkOrder"
  }
],
"note": [
  {
    "date": "2018-02-04T11:00:18.071Z",
    "author": "Ludovic Robert",
    "text": "Problem explained to the technician"
  },
  {
    "date": "2018-02-04T14:40:43.071Z",
    "author": "Ludovic Robert",
    "text": "Work order generated"
  }
]
```

CREATE APPOINTMENT

POST /appointment**Description**

This operation creates an appointment entity.

Mandatory and Non Mandatory Attributes

The following tables provide the list of mandatory and non mandatory attributes when creating a Appointment, 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
validFor	

Non Mandatory Attributes	Rule
attachment	
calendarEvent	
category	
contactMedium	
creationDate	
description	
externalId	
lastUpdate	
note	
relatedEntity	
relatedParty	
relatedPlace	
status	

Usage Samples

Here's an example of a request for creating a specific appointment.

Request
POST {apiRoot}/appointment Content-Type: application/json <pre>{ "externalId": "432113", "category": "intervention", "description": "Fix an internet connexion problem for a customer", "validFor": { "startDateTime": "2018-02-15T14:00:00.071Z", "endDateTime": "2018-02-15T16:00:00.071Z" }, "attachment": [{ "id": "4444",</pre>


```
"href": "https://host:port/documentManagement/customerContract/4444",
"isRef": true,
"@referredType": "CustomerContract",
"@baseType": "Attachment"
}
],
"calendarEvent": {
  "id": "33",
  "href": "https://host:port/timeManagement/calendarEvent/33",
  "name": "Outlook calendar event"
},
"relatedParty": [
  {
    "id": "32",
    "href": "https://host:port/partyManagement/individual/32",
    "name": "Kate Smith",
    "role": "customer",
    "@referredType": "Individual"
  },
  {
    "id": "56",
    "href": "https://host:port/partyManagement/individual/56",
    "name": "John Doe",
    "role": "technician",
    "@referredType": "Individual"
  }
],
"RelatedPlace": {
  "id": "888",
  "href": "https://host:port/addressManagement/geographicAddress/888",
  "name": "Main Home",
  "role": "interventionAddress",
  "@referredType": "GeographicAddress"
},
"relatedEntity": [
  {
    "id": "789",
    "href": "https://host:port/troubleTicket/troubleTicket/789",
    "role": "Problem description",
    "name": "Internet connexion problem to solve",
    "@referredType": "TroubleTicket"
  },
  {
    "id": "465",
    "href": "https://host:port/workForceManagement/workOrder/465",
    "role": "work order description",
    "name": "Work order generated for technician intervention",
    "@referredType": "WorkOrder"
  }
],
"note": [
  {
    "date": "2018-02-04T11:00:18.071Z",
    "author": "Ludovic Robert",
    "text": "Problem explained to the technician"
  }
],
```

```
{
  "date": "2018-02-04T14:40:43.071Z",
  "author": "Ludovic Robert",
  "text": "Work order generated"
}
```

Response

201

```
{
  "id": "21",
  "href": "https://host:port/appointment/appointment/21",
  "externalId": "432113",
  "category": "intervention",
  "description": "Fix an internet connexion problem for a customer",
  "status": "accepted",
  "creationDate": "2018-02-01T14:40:43.071Z",
  "lastUpdate": "2018-02-04T14:40:43.071Z",
  "validFor": {
    "startDateTime": "2018-02-15T14:00:00.071Z",
    "endDateTime": "2018-02-15T16:00:00.071Z"
  },
  "attachment": [
    {
      "id": "4444",
      "href": "https://host:port/documentManagement/customerContract/4444",
      "isRef": true,
      "@referredType": "CustomerContract",
      "@baseType": "Attachment"
    }
  ],
  "calendarEvent": {
    "id": "33",
    "href": "https://host:port/timeManagement/calendarEvent/33",
    "name": "Outlook calendar event"
  },
  "relatedParty": [
    {
      "id": "32",
      "href": "https://host:port/partyManagement/individual/32",
      "name": "Kate Smith",
      "role": "customer",
      "@referredType": "Individual"
    },
    {
      "id": "56",
      "href": "https://host:port/partyManagement/individual/56",
      "name": "John Doe",
      "role": "technician",
      "@referredType": "Individual"
    }
  ]
}
```

```

    }
  ],
  "RelatedPlace": {
    "id": "888",
    "href": "https://host:port/addressManagement/geographicAddress/888",
    "name": "Main Home",
    "role": "interventionAddress",
    "@referredType": "GeographicAddress"
  },
  "relatedEntity": [
    {
      "id": "789",
      "href": "https://host:port/troubleTicket/troubleTicket/789",
      "role": "Problem description",
      "name": "Internet connexion problem to solve",
      "@referredType": "TroubleTicket"
    },
    {
      "id": "465",
      "href": "https://host:port/workForceManagement/workOrder/465",
      "role": "work order description",
      "name": "Work order generated for technician intervention",
      "@referredType": "WorkOrder"
    }
  ],
  "note": [
    {
      "date": "2018-02-04T11:00:18.071Z",
      "author": "Ludovic Robert",
      "text": "Problem explained to the technician"
    },
    {
      "date": "2018-02-04T14:40:43.071Z",
      "author": "Ludovic Robert",
      "text": "Work order generated"
    }
  ]
}

```

PATCH APPOINTMENT

PATCH /appointment/{id}

Description

This operation allows partial updates of an appointment 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
attachment	
calendarEvent	
category	
contactMedium	
description	
externalId	
lastUpdate	
note	
relatedEntity	
relatedParty	
relatedPlace	
status	
validFor	

Non Patchable Attributes	Rule
id	
href	
creationDate	

Usage Samples

Here's an example of a request for patching an appointment.

Request
<pre> PATCH {apiRoot}/appointment/21 Content-Type: application/merge-patch+json { "status": "cancelled" } </pre>
Response
<pre> 200 { "id": "21", "href": "https://host:port/appointment/appointment/21", "externalId": "432113", "category": "intervention", "description": "Fix an internet connexion problem for a customer", "status": "cancelled", </pre>

```

"creationDate": "2018-02-01T14:40:43.071Z",
"lastUpdate": "2018-02-04T14:40:43.071Z",
"validFor": {
  "startDateTime": "2018-02-15T14:00:00.071Z",
  "endDateTime": "2018-02-15T16:00:00.071Z"
},
"attachment": [
  {
    "id": "4444",
    "href": "https://host:port/documentManagement/customerContract/4444",
    "isRef": true,
    "@referredType": "CustomerContract",
    "@baseType": "Attachment"
  }
],
"calendarEvent": {
  "id": "33",
  "href": "https://host:port/timeManagement/calendarEvent/33",
  "name": "Outlook calendar event"
},
"relatedParty": [
  {
    "id": "32",
    "href": "https://host:port/partyManagement/individual/32",
    "name": "Kate Smith",
    "role": "customer",
    "@referredType": "Individual"
  },
  {
    "id": "56",
    "href": "https://host:port/partyManagement/individual/56",
    "name": "John Doe",
    "role": "technician",
    "@referredType": "Individual"
  }
],
"RelatedPlace": {
  "id": "888",
  "href": "https://host:port/addressManagement/geographicAddress/888",
  "name": "Main Home",
  "role": "interventionAddress",
  "@referredType": "GeographicAddress"
},
"relatedEntity": [
  {
    "id": "789",
    "href": "https://host:port/troubleTicket/troubleTicket/789",
    "role": "Problem description",
    "name": "Internet connexion problem to solve",
    "@referredType": "TroubleTicket"
  },
  {
    "id": "465",
    "href": "https://host:port/workForceManagement/workOrder/465",
    "role": "work order description",
    "name": "Work order generated for technician intervention",
  }
]

```

```
    "@referredType": "WorkOrder"
  },
  "note": [
    {
      "date": "2018-02-04T11:00:18.071Z",
      "author": "Ludovic Robert",
      "text": "Problem explained to the technician"
    },
    {
      "date": "2018-02-04T14:40:43.071Z",
      "author": "Ludovic Robert",
      "text": "Work order generated"
    }
  ]
}
```

DELETE APPOINTMENT

DELETE /appointment/{id}

Description

This operation deletes an appointment entity.

Usage Samples

This operation deletes an appointment entity.

Request
DELETE {apiRoot}/appointment/21
Response
204

OPERATIONS ON SEARCH TIME SLOT

LIST SEARCH TIME SLOTS

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

Description

This operation list search time slot 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 SearchTimeSlot resources.

Request
<pre>GET {apiRoot}/searchTimeSlot?fields=id,status,searchResult,availableTimeSlot&relatedParty.id=56&relatedParty.role=technician Accept: application/json</pre>
Response
<pre>200 [{ "id": "99", "status": "created", "searchResult": "success", "availableTimeSlot": [{ "id": "365", "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/365", "validFor": { "startDateTime": "2018-02-15T14:00:00.000Z", "endDateTime": "2018-02-15T16:00:00.000Z" }, "relatedParty": { "id": "56", "href": "https://host:port/partyManagement/individual/56", "name": "John Doe", "role": "technician", "@referredType": "Individual" } }, { "validFor": { "id": "921", "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/921", "startDateTime": "2018-02-16T16:30:00.000Z", "endDateTime": "2018-02-16T18:00:00.000Z" }, "relatedParty": { "id": "56", "href": "https://host:port/partyManagement/individual/56",</pre>

```

        "name": "John Doe",
        "role": "technician",
        "@referredType": "Individual"
      }
    }
  ]
}
]

```

RETRIEVE SEARCH TIME SLOT

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

Description

This operation retrieves a search time slot 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 an example of a request for retrieving a SearchTimeSlot resource.

Request
GET {apiRoot}/searchTimeSlot/99 Accept: application/json
Response
200 <pre> { "id": "99", "href": "https://host:port/appointment/searchTimeSlot/99", "searchDate": "2018-02-01T14:40:43.071Z", "searchResult": "success", "status": "done", "RelatedPlace": { "id": "888", "href": "https://host:port/addressManagement/geographicAddress/888", "name": "Main Home", "role": "interventionAddress", "@referredType": "GeographicAddress" }, "relatedEntity": [{ </pre>


```
    "id": "789",
    "href": "https://host:port/troubleTicket/troubleTicket/789",
    "name": "Internet connexion problem to solve",
    "@referredType": "TroubleTicket"
  }
],
"requestedTimeSlot": [
  {
    "validFor": {
      "startDateTime": "2018-02-15T00:00:00.000Z",
      "endDateTime": "2018-02-18T00:00:00.000Z"
    }
  }
],
"availableTimeSlot": [
  {
    "id": "365",
    "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/365",
    "validFor": {
      "startDateTime": "2018-02-15T14:00:00.000Z",
      "endDateTime": "2018-02-15T16:00:00.000Z"
    },
    "relatedParty": {
      "id": "56",
      "href": "https://host:port/partyManagement/individual/56",
      "name": "John Doe",
      "role": "technician",
      "@referredType": "Individual"
    }
  },
  {
    "id": "921",
    "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/921",
    "validFor": {
      "startDateTime": "2018-02-16T16:30:00.000Z",
      "endDateTime": "2018-02-16T18:00:00.000Z"
    },
    "relatedParty": {
      "id": "56",
      "href": "https://host:port/partyManagement/individual/56",
      "name": "John Doe",
      "role": "technician",
      "@referredType": "Individual"
    }
  },
  {
    "id": "325",
    "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/325",
    "validFor": {
      "startDateTime": "2018-02-15T16:00:00.000Z",
      "endDateTime": "2018-02-15T17:00:00.000Z"
    },
    "relatedParty": {
      "id": "58",
      "href": "https://host:port/partyManagement/individual/58",
      "name": "Adam Smith",
```

```

    "role": "technician"
  }
}
]
}

```

CREATE SEARCH TIME SLOT

POST /searchTimeSlot

Description

This operation creates a search time slot entity.

Mandatory and Non Mandatory Attributes

The following tables provide the list of mandatory and non mandatory attributes when creating a SearchTimeSlot, 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
----------------------	------

Non Mandatory Attributes	Rule
availableTimeSlot	
relatedEntity	
relatedParty	
relatedPlace	
requestedTimeSlot	
searchDate	
searchResult	
status	

Additional Rules

The following table provides additional rules indicating mandatory fields in sub-resources or relationships when creating a SearchTimeSlot resource.

Context	Mandatory Sub-Attributes
requestedTimeSlot	validFor

Usage Samples

This operation creates a search time slot entity. It is used to retrieve, according to a set of criteria, available time slots used after to book or reschedule an appointment on.

Request

POST {apiRoot}/searchTimeSlot
Content-Type: application/json

```
{
  "requestedTimeSlot": [
    {
      "validFor": {
        "startDateTime": "2018-02-15T00:00:00.000Z",
        "endDateTime": "2018-02-18T00:00:00.000Z"
      }
    }
  ],
  "relatedParty": {
    "id": "56",
    "href": "https://host:port/partyManagement/individual/56",
    "name": "John Doe",
    "role": "technician",
    "@referredType": "Individual"
  },
  "RelatedPlace": {
    "id": "888",
    "href": "https://host:port/addressManagement /geographicAddress /888",
    "name": "Main Home",
    "role": "interventionAddress",
    "@referredType": "GeographicAddress"
  },
  "relatedEntity": [
    {
      "id": "789",
      "href": "https://host:port/troubleTicket/troubleTicket/789",
      "name": "Internet connexion problem to solve",
      "role": "Problem description",
      "@referredType": "TroubleTicket"
    }
  ]
}
```

Response

201

```
{
  "id": "99",
  "href": "https://host:port/appointment/searchTimeSlot/99",
  "status": "created",
  "searchDate": "2018-02-01T14:40:43.071Z",
  "searchResult": "success",
  "RelatedPlace": {
    "id": "888",
    "href": "https://host:port/addressManagement /geographicAddress /888",
    "name": "Main Home",
    "role": "interventionAddress",
    "@referredType": "GeographicAddress"
  }
}
```

```
},
"requestedTimeSlot": [
  {
    "validFor": {
      "startDateTime": "2018-02-15T00:00:00.000Z",
      "endDateTime": "2018-02-18T00:00:00.000Z"
    }
  }
],
"relatedEntity": [
  {
    "id": "789",
    "href": "https://host:port/troubleTicket/troubleTicket/789",
    "name": "Internet connexion problem to solve",
    "role": "Problem description",
    "@referredType": "TroubleTicket"
  }
],
"availableTimeSlot": [
  {
    "validFor": {
      "startDateTime": "2018-02-15T14:00:00.000Z",
      "endDateTime": "2018-02-15T16:00:00.000Z"
    },
    "relatedParty": {
      "id": "56",
      "href": "https://host:port/partyManagement/individual/56",
      "name": "John Doe",
      "role": "technician",
      "@referredType": "Individual"
    }
  },
  {
    "validFor": {
      "startDateTime": "2018-02-16T16:30:00.000Z",
      "endDateTime": "2018-02-16T18:00:00.000Z"
    },
    "relatedParty": {
      "id": "56",
      "href": "https://host:port/partyManagement/individual/56",
      "name": "John Doe",
      "role": "technician",
      "@referredType": "Individual"
    }
  },
  {
    "validFor": {
      "startDateTime": "2018-02-15T16:00:00.000Z",
      "endDateTime": "2018-02-15T17:00:00.000Z"
    },
    "relatedParty": {
      "id": "58",
      "href": "https://host:port/partyManagement/individual/58",
      "name": "Adam Smith",
      "role": "technician",
      "@referredType": "Individual"
    }
  }
]
```

```

    }
  }
]
}

```

PATCH SEARCH TIME SLOT

PATCH /searchTimeSlot/{id}

Description

This operation allows partial updates of a search time slot 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
availableTimeSlot	
relatedEntity	
relatedParty	
relatedPlace	
requestedTimeSlot	
status	

Non Patchable Attributes	Rule
id	
href	
searchDate	
searchResult	

Usage Samples

This operation allows partial updates of a search time slot 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.

Request

```

PATCH {apiRoot}/searchTimeSlot/99
Content-Type: application/merge-patch+json

```

```
{
  "status": "done"
}
```

Response

200

```
{
  "id": "99",
  "href": "https://host:port/appointment/searchTimeSlot/99",
  "searchDate": "2018-02-01T14:40:43.000Z",
  "searchResult": "success",
  "status": "done",
  "RelatedPlace": {
    "id": "888",
    "href": "https://host:port/addressManagement /geographicAddress /888",
    "name": "Main Home",
    "role": "interventionAddress",
    "@referredType": "GeographicAddress"
  },
  "relatedEntity": [
    {
      "id": "789",
      "href": "https://host:port/troubleTicket/troubleTicket/789",
      "name": "Internet connexion problem to solve",
      "@referredType": "TroubleTicket"
    }
  ],
  "requestedTimeSlot": [
    {
      "validFor": {
        "startDateTime": "2018-02-15T00:00:00.000Z",
        "endDateTime": "2018-02-18T00:00:00.000Z"
      }
    }
  ],
  "availableTimeSlot": [
    {
      "id": "365",
      "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/365",
      "validFor": {
        "startDateTime": "2018-02-15T14:00:00.000Z",
        "endDateTime": "2018-02-15T16:00:00.000Z"
      },
      "relatedParty": {
        "id": "56",
        "href": "https://host:port/partyManagement/individual/56",
        "name": "John Doe",
        "role": "technician",
        "@referredType": "Individual"
      }
    }
  ]
}
```

```
},
{
  "id": "921",
  "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/921",
  "validFor": {
    "startDateTime": "2018-02-16T16:30:00.000Z",
    "endDateTime": "2018-02-16T18:00:00.000Z"
  },
  "relatedParty": {
    "id": "56",
    "href": "https://host:port/partyManagement/individual/56",
    "name": "John Doe",
    "role": "technician",
    "@referredType": "Individual"
  }
},
{
  "id": "325",
  "href": "https://host:port/appointment/searchtimeslot/99/availableTimeSlot/325",
  "validFor": {
    "startDateTime": "2018-02-15T16:00:00.000Z",
    "endDateTime": "2018-02-15T17:00:00.000Z"
  },
  "relatedParty": {
    "id": "58",
    "href": "https://host:port/partyManagement/individual/58",
    "name": "Adam Smith",
    "role": "technician",
    "@referredType": "Individual"
  }
}
]
```

DELETE SEARCH TIME SLOT

DELETE /searchTimeSlot/{id}

Description

This operation deletes a search time slot entity.

Usage Samples

This operation deletes a search time slot entity.

Request

DELETE {apiRoot}/searchTimeSlot/99
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
<div>POST /client/listener</div> <div>Accept: application/json</div> <div><pre>{ "event": { EVENT BODY }, "eventType": "EVENT_TYPE" }</pre></div>
Response
201

For detailed examples on the general TM Forum notification mechanism, see the [TMF REST Design Guidelines](#).

ACKNOWLEDGEMENTS

VERSION HISTORY

Version Number	Date	Release led by:	Description
Release 1.0	04/15/2013	Pierre Gauthier TM Forum pgauthier@tmforum.org Orange Team	First Release of Draft Version of the Document.
2.0	10/07/2016	Orange Team	Second release taking into account remarks
2.1	14/12/2016	Orange Team	Update taking into account validation and approbation remarks from tmforum members for 16.5 release
3.0	10/04/2018	Orange with contribution from amdocs	Update for release 18.0: new features from guidelines 3.0, remarks from SID mapping, remarks from NTS Retail API implementation
3.0.1	27-Jun-2018	Adrienne Walcott	Formatting/style edits prior to R18 publishing
4.0.0		Grégoire Laurent gregoire.laurent@orange.com Pierre Gauthier TM Forum pgauthier@tmforum.org	Schema-driven API with polymorphism pattern searchTimeSlots : Add requestedTimeSlot to the response

RELEASE HISTORY

Release Number	Date	Release led by:	Description
Release 18.0.0	24-Jun-2018	Pierre Gauthier	Initial Release
Release 19.0		Grégoire Laurent - Orange gregoire.laurent@orange.com Pierre Gauthier - TM Forum pgauthier@tmforum.org	Version 4.0 of the API REST <i>Nota: the version 4.0 is assigned to all the APIs delivered in the release 19.0</i>