

Frameworkx Specification

Appointment API REST Specification

TMF621

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INTRODUCTION

The following document is the specification of the REST API for appointment management. It includes the model definition as well as all available operations. Possible actions are to check free slots and, then, creating, updating and retrieving appointment.

The appointment API provides a standardized mechanism to book an appointment with all the necessary appointment characteristics. First, the API consists in searching free slots based on parameters, as for example a party. Then, the appointment is created. The appointment has characteristics such as nature of appointment, place of appointment...

Appointment API performs the following operations:

- Retrieval of free slots depending on filter criteria
- Creation of appointment
- Deletion of appointment
- Update of appointment
- Rescheduling of an appointment

SAMPLE USE CASES

The following table maps out the UC case.

UC
Free slots are checked according to criteria
A new appointment is created
An existing appointment should be updated because the status has changed or party availabilities has changed
An appointment or a collection of appointment should be retrieved
An existing appointment is deleted
An existing appointment has to be rescheduled

RESOURCE MODEL

Managed Entity and Task Resource Models

APPOINTMENT RESSOURCE

Structured textual way of describing what is an appointment.

An appointment is a meeting with several persons, in one place, in order to do an action (an intervention, a sale, ...). This action has a root, for example a trouble ticket.

Example of the JSON representation of an appointment:

```
{
  "id": "21",
  "href": "http://xxx/appointment/21",
  "externalId": " anExternalIdIfNeeded432113",
  "category": "intervention",
  "description": " A useful text to describe the appointment...",
  "status": "Missed",
  "creationDate": "2015-09-01T14:40:43.071Z",
  "lastUpdate": "2015-09-01T14:40:43.071Z",
  "startDate": "2015-09-01T14:00:43.071Z",
  "endDate": "2015-09-01T16:00:43.071Z",
  "alarm": true,
  "alarmAction": "smsToCustomer",
  "attachment": [
    {
      "href": "http://server/path/titi.pdf"
    }
  ],
}
```

```
"relatedParty": [
  {
    "id": "32",
    "href": "http://xxxx/individual/ 32",
    "role": "customer",
    "name": "John Doe"
  }
],
"address": {
  "id": " jkfdjgkldjf ",
  "href" : "http://xxx/address/jkfdjgkldjf"
},
"relatedObject": [
  {
    "involvement": " problemToSolve ",
    "reference": "http://xxxx/troubleTicket/789745465"
  }
]
"note": [
  {
    "date": " 2015-09-01T14:40:43.071Z ",
    "author": "Arthur Ewans"
    "text": " Alreay called the expert ",
  }
]
}
```

Fields descriptions :Appointment details :

Field	Description
id	Appointment unique identifier
href	Appointment unique identifier
externalID	Reference of an external identifier
description	Description of appointment
category	A business category: for example "intervention", or in a finer grain "afterSalesIntervention", orderDeliveryIntervention"...
status	Status corresponding to appointment lifecycle
creationDate	Date of creation of appointment
lastUpdate	Date of last update of appointment
startDate	Date of the beginning of appointment
endDate	Date of the end of appointment
alarm	Indicates if there is a reminder
alarmAction	The actions to be invoked when an alarm is triggered for all participants (send email, send sms, etc.)
relatedParty	<p>Party who participates to appointment.</p> <p>It can be a person (customer, ...), a team (intervention team, ...)</p> <p>There are at least 2 parties involved in the appointment</p>
relatedObject	<p>It allows other resources to be linked to the appointment.</p> <p>For example, it can be an orderToDeliver, for an order, a problemToSolve for trouble ticket</p>
attachment	URI attached to appointment
address	Place of appointment

note	Extra-information about the appointment
------	---

Note details :

Field	Description
date	date of the note
author	author of the note
text	text of the note

SEARCH TASK RESSOURCE

Example of the JSON representation of a SearchTask **input**:

This task has to be used to look for free slots before booking an appointment (cf. operations)

```
{
  "marketSegment": "B2C",
  "favoriteAmpm": "PM",
  "weekNumber": "38",
  "startDate": "2015-09-01T14:00:43.071Z ",
  "endDate": "2015-09-01T16:00:43.071Z ",
  "category": "intervention",
  "limit": "10",
  "productSpecification": {
    "id": " productSpec42"
  },
  "address": {
    "id": " jkfdjgkljdf "
    "href" : "http://xxx/address/jkfdjgkljdf"
  },
  "relatedParty": {
    "id": "32",
    "href": "http://xxxxx/individual/ 32"
  }
}
```

Example of the JSON representation of a SearchTask **output**:

```
{
```

```

"freeSlot":[
  {
    "startDate":"2015-09-01T14:00:43.071Z",
    "endDate":"2015-09-01T16:00:43.071Z"
    "relatedParty":{
      "id":"32"
      "href":"http://xxxxx/individual/ 32"
    }
  }
]
}

```

SearchTask input :

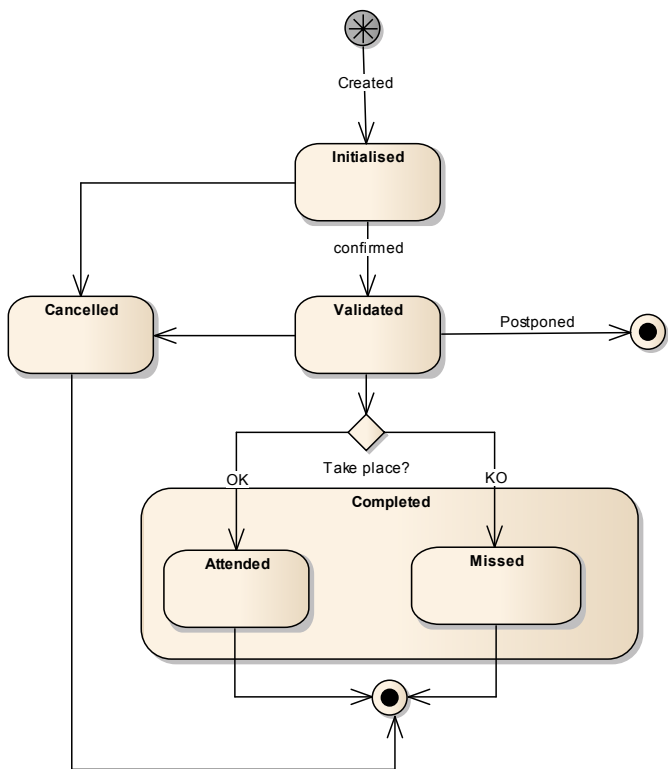
Field	Description
marketSegment	The market segment linked to appointment
productSpecification	Product linked to appointment
favoriteAmpm	Favorite moment of the day for the party . Two values : AM or PM
weekNumber	The week where free slots are researched
startDate	The beginning date of the research
endDate	The end date of the research
category	Category of appointment
limit	Number of free slots researched
address	Address of appointment
relatedParty	Party who is the owner of the calendar on which we want to plan an appointment (for example : an intervention team)

Searchtask output: **free slots**

FreeSlot is derivated from slot and slot is derivated from SID calendarEntry.

Field	Description
startDate	Beginning of free slot
endDate	End of free slot
relatedParty	Party (with the associated role) available during this free slot (e.g. an intervention team)

Appointment Status



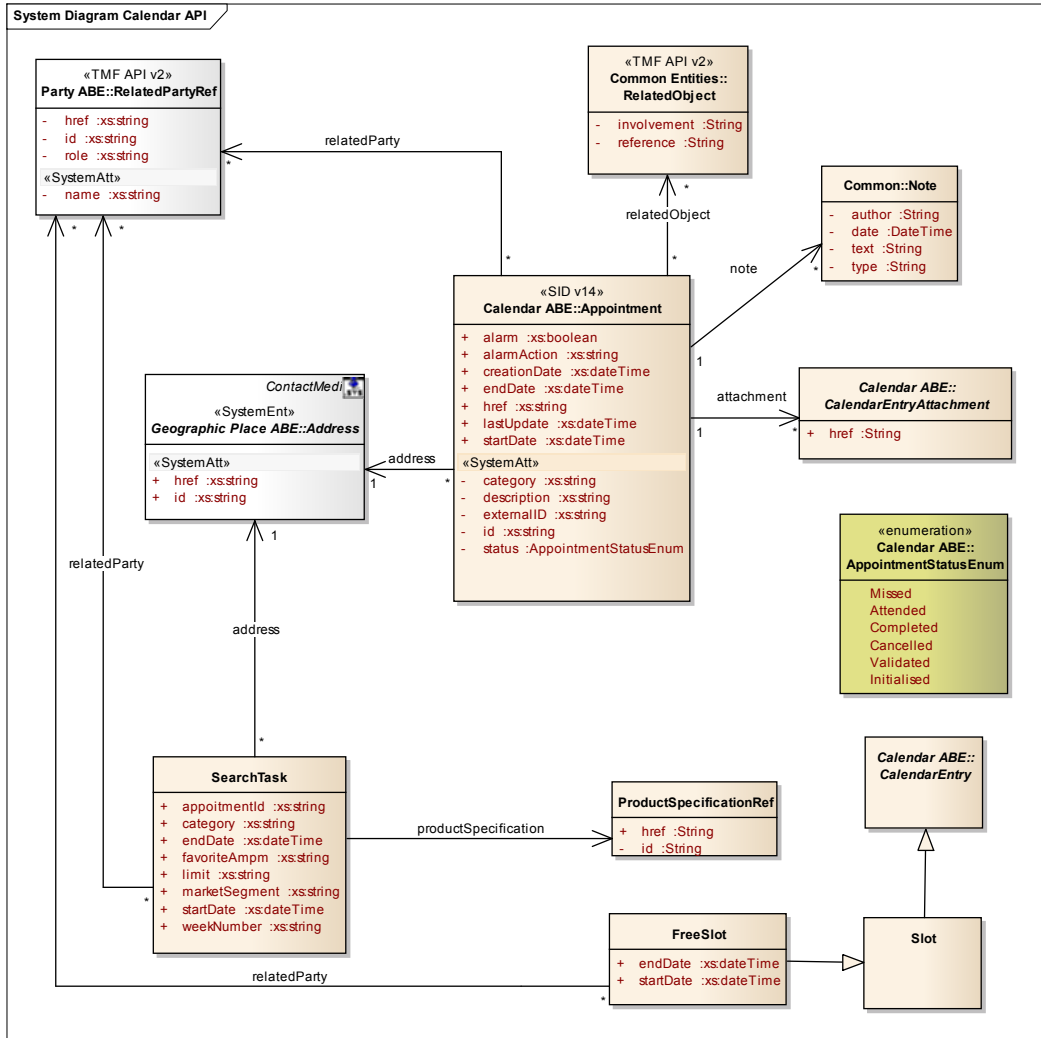
The following table explains the meaning of the states.

State	Description
Initialised	When an appointment is created, the status is 'Initialised'
Validated	When an appointment is confirmed by all parties, the status is 'validated'
Cancelled	When an appointment is not confirmed by, at least, one party, it is 'cancelled'
Attended	When an appointment took place and it is OK , the status is 'attended'
Missed	When an appointment took place and it is KO , the status is 'missed'

Ampm Status

State	Description
AM	Slot in the morning
PM	Slot in the afternoon

UML model



Notification Resource Models

APPOINTMENT STATUS CHANGE NOTIFICATION

```
{
  "eventId": "00001",
  "eventTime": "2013-04-19T16:42:25-04:00",
  "eventType": "appointmentStatusChangeNotification",
  "appointment": {
    "id": "21",
    "href": "http://xxx/appointment/21",
    "status": "Missed"
  }
}
```

APPOINTMENT RESCHEDULE NOTIFICATION

```
{
  "eventId": "00001",
  "eventTime": "2013-04-19T16:42:25-04:00",
  "eventType": "appointmentRescheduleNotification",
  "appointment": {
    "id": "21",
    "href": "http://xxx/appointment/21",
    "startDate": "2015-09-01T14:00:00.071Z",
    "endDate": "2015-09-01T16:00:00.071Z"
  }
}
```

APPOINTMENT CATEGORY CHANGE NOTIFICATION

```
{
  "eventId": "00001",
  "eventTime": "2013-04-19T16:42:25-04:00",
  "eventType": "appointmentCategoryChangeNotification",
  "appointment": {
    "id": "21",
    "href": "http://xxx/appointment/21",
    "category": "intervention"
  }
}
```

APPOINTMENT CREATION NOTIFICATION

```
{
  "eventId": "00001",
  "eventTime": "2013-04-19T16:42:25-04:00",
  "eventType": "appointmentCreationNotification",
  "appointment": {
    "id" : "21",
    "href" : "http://xxx/appointment/21",
    "externalId" : "anExternalIDIfNeeded432113",
    "category" : "intervention",
    "description" : "A useful text to describe the appointment...",
    "status" : "initialised",
    "startDate" : "2015-09-01T14:00:43.071Z",
    "endDate" : "2015-09-01T16:00:43.071Z",
  }
}
```

```
"alarm" : false,

"creationDate": "2015-08-28T08:00:43.071Z",

"lastUpdate": "2015-08-28T08:00:43.071Z ",

"attachment":[

  {

    "href" : "http://myDocumentServer/myRep/myDocument.pdf"

  }

],

"relatedParty" : [

  {

    "id" : "32",

    "href" : "http://xxxx/individual/ 32",

    "role" : "customer",

    "name" : "John Doe"

  }

],

"address" : {

  "id" : "jkfdjgkljdjf",

  "href" : "http://xxx/address/jkfdjgkljdjf"

},

"relatedObject":[

  {

    "involvement" : "problemToSolve",

    "reference" : "http://xxxx/troubleTicket/789745465"

  }

],

"note":[

  {
```

```
        "date": "2015-09-01T14:40:43.071Z ",
        "author": "Arthur Ewans"
        "text": " Alreay called the expert ",
    }
]
}
}
```

APPOINTMENT DELETE NOTIFICATION

```
{
  "eventId": "00001",
  "eventTime": "2013-04-19T16:42:25-04:00",
  "eventType": "appointmentDeleteNotification",
  "appointment": {
    "id": "21",
    "href": "http://xxx/appointment/21",
  }
}
```

APPOINTMENT VALUE CHANGE NOTIFICATION

```
{
  "eventId": "00001",
  "eventTime": "2013-04-19T16:42:25-04:00",
  "eventType": "appointmentValueChangeNotification",
}
```

```
"appointment": {  
  "id": "21",  
  "href": "http://xxx/appointment/21",  
  "alarm": "false"  
}  
}
```

API OPERATION FOR APPOINTMENTS

Summary of operations :

1 - A party (customer service representative, customer, etc.) wants to check free periods into a calendar

A party wants to book an appointment for a customer: the party checks free periods in a calendar.

This calendar can be one of a single person, or an aggregation of persons (a team).

In case of a team calendar, the party identification (competent/relevant team to perform an intervention) is realized via a context: a product specification (FTTH, Copper, etc.), a marketSegment (Pro / Residential), a place/localization, etc.

2 - A party wants to create an appointment

A party books a slot, this slot will be used to realize a task (an intervention, etc.) or to meet a customer service representative.

This booking is done on an organization calendar (a team, a shop, etc.).

3 - A party wants to delete an appointment

If, for example, the customer is not available anymore, the party can cancel the appointment.

4 - A party wants to update an appointment

If, for example, the customer is not available anymore, the party can update the appointment by changing the slot.

5 - A party wants to find appointments with criterias

A party can search all the appointments booked by a customer in a determined period for example.

6 - A party wants to reschedule an appointment

Availabilities of parties have changed. The appointment must be rescheduled.

POST /api/freeSlot/search

This operation is used to retrieve relevant free slots, available to book an appointment on, and matching a set of criterias.

Attribute name	Mandatory	Default	Rule
marketSegment	Y		
productSpecification	Y		
startDate	N		StartDate is mandatory if weekNumber is empty. If startDate is filled, endDate must be filled
endDate	N		EndDate is mandatory if weekNumber is empty. If endDate is filled, startDate must be filled
weekNumber	N		WeekNumber is mandatory if startDate and endDate are empty
favoriteAmpm	N		
relatedParty	N		When party is specified, either id or href must be filled
address	Y		Either id or href must be filled
category	Y		
limit	N	Value to define by the project	

Behavior :

- Return status codes
 - 201 Created - the request was successful
 - 400 Bad Request – error, for example to cover these functional error cases:

- startDate must not be in the past
- endDate must not be in the past
- endDate must be superior to startDate

REQUEST

POST /api/freeSlot/search

Content-type: application/json

```
{
  "marketSegment" : "B2C",
  "favoriteAmpm" : "PM",
  "weekNumber" : "36",
  "category" : "intervention",
  "limit" : "5",
  "productSpecification" : {
    "id" : "productSpec42"
  },
  "address" : {
    "id" : "78798744541",
    "href" : "http://xxx/address/jkfdjgkljif"
  },
  "relatedParty" : {
    "id" : "32",
    "href" : "http://xxxxx/organisation/ 32"
  }
}
```

RESPONSE

201

Content-Type: application/json

```
{
  "freeSlot":[
    {
      "relatedParty" : {
        "id" : "32",
        "href" : "http://xxxxx/organisation/ 32",
      },
      "startDate":"2015-09-01T14:00:00.071Z",
      "endDate":"2015-09-01T16:00:00.071Z"
    },
    {
      "relatedParty" : {
        "id" : "32",
        "href" : "http://xxxxx/organisation/ 32",
      },
      "startDate":"2015-09-01T16:00:00.071Z",
      "endDate":"2015-09-01T18:00:00.071Z"
    },
    {
      "relatedParty" : {
        "id" : "32",
        "href" : "http://xxxxx/organisation/ 32",
      }
    }
  ]
}
```

```
    },  
    "startDate": "2015-09-01T14:00:00.071Z",  
    "endDate": "2015-09-01T16:00:00.071Z"  
  },  
  {  
    "relatedParty": {  
      "id": "32",  
      "href": "http://xxxxx/organisation/ 32",  
    },  
    "startDate": "2015-09-03T14:00:00.071Z",  
    "endDate": "2015-09-03T16:00:00.071Z"  
  },  
  {  
    "relatedParty": {  
      "id": "32",  
      "href": "http://xxxxx/organisation/ 32",  
    },  
    "startDate": "2015-09-05T14:00:00.071Z",  
    "endDate": "2015-09-05T16:00:00.071Z"  
  }  
]  
}
```

POST api/appointment

After checking free slots, this operation is used to create an appointment with all its characteristics.

POST should be used without specifying the id and the href, the system is in charge of generating the id + href for the appointment.

When performing a POST, these are the allowed attributes (all attributes that are not in that list MUST NOT be used during POST, they are calculated/defined by the system) :

Attribute name	Mandatory	Default	Rule
externalId	N	N/A	
category	Y		
description	N	N/A	
status	N	initialised	
startDate	Y		
endDate	Y		
alarm	N	N/A	
alarmAction	N	N/A	If alarm is false, alarmAction doesn't appear
attachment.href	N	N/A	
address	Y		Either id or href must be filled at least
relatedParty	Y		At least one party must be linked to the appointment (customer, ...)
relatedParty.id	Y		Either id or href must be filled at least

relatedParty.href	Y		Either id or href must be filled at least
relatedParty.role	N		
relatedParty.name	N		
relatedObject	N	N/A	For example, orderToDeliver, problemToSolve for trouble ticket
relatedObject.involvement	N	N/A	If a relatedObject is selected, involvement and reference must be filled.
relatedObject.reference	N	N/A	If a relatedObject is selected, involvement and reference must be filled.
note	N	N/A	
note.date	N	N/A	
note.author	N	N/A	
note.text	N	N/A	

Behavior :

- Return status codes
 - 201 Created - the request was successful
 - 400 Bad Request – error, for example to cover these functional use cases :
 - startDate must not be in the past
 - endDate must not be in the past
 - endDate must be superior to startDate

- appointment on a slot already booked

- status lifecycle is not respected

DELON Maxime ..., 2015-10-21 11:17 AM

Comment [1]: C'est problématique en fait car le TMF ne propose (dans ses Design Guidelines) pas de pattern d'erreur pour spécifier d'où vient le problème en cas d'erreur fonctionnelle. A remonter à Pierre.

REQUEST

POST api/appointment

Content-type: application/json

```
{
  "externalId" : "anExternalIDIfNeeded432113",
  "category" : "intervention",
  "description" : "A useful text to describe the appointment...",
  "status" : "initialised",
  "startDate" : "2015-09-01T14:00:43.071Z",
  "endDate" : "2015-09-01T16:00:43.071Z",
  "alarm" : false,
  "attachment":[
    {
      "href" : "http://myDocumentServer/myRep/myDocument.pdf"
    }
  ],
  "relatedParty" : [
    {
      "id" : "32",
      "href" : "http://xxxxx/individual/ 32",
      "role" : "customer",
      "name" : "John Doe"
    }
  ],
  "address" : {
    "id" : "jkfdjgkldjf",
```

```
"href" : "http://xxx/address/jkfdjgkldj"
},
"relatedObject":[
{
  "involvement" : "problemToSolve",
  "reference" : "http://xxx/troubleTicket/789745465"
}
]
"note":[
{
  "date":" 2015-09-01T14:40:43.071Z ",
  "author":"Arthur Ewans"
  "text":" Alreay called the expert ",
}
]
}
```

RESPONSE

201

Content-Type: application/json

```
{
  "id" : "21",
  "href" : "http://xxx/appointment/21",
  "externalId" : "anExternalIDIfNeeded432113",
  "category" : "intervention",
  "description" : "A useful text to describe the appointment..."
}
```



```
"status" : "initialised",

"startDate" : "2015-09-01T14:00:43.071Z",

"endDate" : "2015-09-01T16:00:43.071Z",

"alarm" : false,

"creationDate": "2015-08-28T08:00:43.071Z",

"lastUpdate": "2015-08-28T08:00:43.071Z ",

"attachment":[

  {

    "href" : "http://myDocumentServer/myRep/myDocument.pdf"

  }

],

"relatedParty" : [

  {

    "id" : "32",

    "href" : "http://xxxx/individual/ 32",

    "role" : "customer",

    "name" : "John Doe"

  }

],

"address" : {

  "id" : "jkfdjgkldjf",

  "href" : "http://xxx/address/jkfdjgkldjf"

},

"relatedObject":[

  {

    "involvement" : "problemToSolve",

    "reference" : "http://xxxx/troubleTicket/789745465"

  }

]
```

```
}
]
"note":[
{
  "date":" 2015-09-01T14:40:43.071Z ",
  "author":"Arthur Ewans"
  "text":" Alreay called the expert ",
}
]
}
```

PATCH api/appointment/{id}

This operation can be used to update an appointment if information has changed.

This is also used to cancel an appointment by modifying the status. The new status is 'cancelled'.

Attribute name	Patchable	Rule
id	N	
href	N	
externalId	N	
category	Y	
description	Y	
status	Y	To manage the appointment process (cf. appointment lifecycle)
creationDate	N	

lastUpdate	N	
startDate	Y	
endDate	Y	
alarm	Y	
alarmAction	Y	
attachment.href	Y	
relatedParty	Y	Only when the party is not the customer
address	N	
relatedObject	Y	
note	Y	

Behavior :

- Return status codes
 - 200 OK - the request was successful
 - 400 Bad Request – error, for example to cover these errors :*
 - startDate must not be in the past
 - endDate must not be in the past
 - endDate must be superior to startDate

- appointment on a slot already booked

- status lifecycle is not respected

DELON Maxime ..., 2015-10-21 11:17 AM

Comment [2]: Idem, problem : pas de reco dans les guidelines...

REQUEST

PATCH api/appointment/21

Content-type: application/json

```
{
  "status": "Cancelled"
}
```

RESPONSE

201

Content-Type: application/json

```
{
  "id" : "21",
  "href" : "http://xxx/appointment/21",
  "externalId" : "anExternalIdIfNeeded432113",
  "category" : "intervention",
  "description" : "A useful text to describe the appointment...",
  "status": "Cancelled"
  "creationDate": "2015-08-28T08:00:43.071Z",
  "lastUpdate": "2015-08-28T08:00:43.071Z ",
  "startDate" : "2015-09-01T14:00:43.071Z",
  "endDate" : "2015-09-01T16:00:43.071Z",
  "alarm" : false,
  "attachment": [
    {
      "href" : "http://myDocumentServer/myRep/myDocument.pdf"
    }
  ],
  "relatedParty" : [
```

```
{
  "id" : "32",
  "href" : "http://xxxx/individual/ 32",
  "role" : "customer",
  "name" : "John Doe"
},
"address" : {
  "id" : "jkfdjgkldjf",
  "href" : "http://xxx/address/jkfdjgkldjf"
},
"relatedObject": [
  {
    "involvement" : "problemToSolve",
    "reference" : "http://xxxx/troubleTicket/789745465"
  }
]
"note": [
  {
    "date": "2015-09-01T14:40:43.071Z ",
    "author": "Arthur Ewans"
    "text": " Alreay called the expert ",
  }
]
}
```

GET api/appointment/{Id}

This operation is used to research an appointment by its identifier.

Note that collections can be retrieved via GET /api/appointment with no {ID}

REQUEST
GET api/appointment/21 Accept: application/json
RESPONSE
200 Content-Type: application/json <pre>{ "id" : "21", "href" : "http://xxxx/appointment/21", "externalId" : "anExternalIDIfNeeded432113", "category" : "intervention", "description" : "A useful text to describe the appointment...", "status": "Validated", "creationDate": "2015-08-28T08:00:43.071Z", "lastUpdate": "2015-08-28T08:00:43.071Z ", "startDate" : "2015-09-01T14:00:43.071Z", "endDate" : "2015-09-01T16:00:43.071Z", "alarm" : false, "attachment": [{ "href" : "http://myDocumentServer/myRep/myDocument.pdf" }] }</pre>

```
}
],
"relatedParty" : [
  {
    "id" : "32",
    "href" : "http://xxxx/individual/ 32",
    "role" : "customer",
    "name" : "John Doe"
  }
],
"address" : {
  "id" : "jkfdjgkldjf",
  "href" : "http://xxx/address/jkfdjgkldjf"
},
"relatedObject": [
  {
    "involvement" : "problemToSolve",
    "reference" : "http://xxx/troubleTicket/789745465"
  }
]
"note": [
  {
    "date": "2015-09-01T14:40:43.071Z ",
    "author": "Arthur Ewans"
    "text": " Alreay called the expert ",
  }
]
```

```
}
```

Behavior :

- Return status codes
 - 200 OK - the request was successful
 - 404 Not found - the supplied ID does not match a known appointment

GET api/appointment?{field selector}&{filtering expression}

This operation is used to retrieve appointment information using filter criteria. Especially criteria like period or party

Filtering selection is enabled on all attributes: first level and inner classes

Behavior :

- Return status codes
 - 200 OK - the request was successful (includes situation in which no orders matched supplied criteria)
 - 400 Bad Request – error

REQUEST
GET api/appointment?relatedParty.id=32&relatedParty.role=customer&startDate.gt=2015-08-31&startDate.lt=2015-09-04 Accept: application/json
RESPONSE
200 Content-Type: application/json [{ "id" : "21", "href" : " http://xxx/appointment/21 ", "externalId" : "anExternalIdIfNeeded432113", "category" : "intervention", "description" : "A useful text to describe the appointment...", "status": "Validated"

```
"creationDate": "2015-08-28T08:00:43.071Z",
"lastUpdate": "2015-08-28T08:00:43.071Z ",
"startDate" : "2015-09-01T14:00:43.071Z",
"endDate" : "2015-09-01T16:00:43.071Z",
"alarm" : false,
"attachment":[
  {
    "href" : "http://myDocumentServer/myRep/myDocument.pdf"
  }
],
"relatedParty" : [
  {
    "id" : "32",
    "href" : "http://xxxx/individual/ 32",
    "role" : "customer",
    "name" : "John Doe"
  }
],
"address" : {
  "id" : "jkfdjgkldjf",
  "href" : "http://xxx/address/jkfdjgkldjf"
},
"relatedObject":[
  {
    "involvement" : "problemToSolve",
    "reference" : "http://xxxx/troubleTicket/789745465"
  }
]
```

```
]
"note":[
  {
    "date":" 2015-09-01T14:40:43.071Z ",
    "author":"Arthur Ewans"
    "text":" Alreay called the expert ",
  }
]
}
]
```

POST api/freeSlot/search

This operation is used to retrieve relevant free slots, available for rescheduling an existing appointment on.

Attribute name	Mandatory	Default	Rule
appointmentId	Y		

Behavior :

- Return status codes
 - 201 Created - the request was successful
 - 400 Bad Request – error, for example for :
 - startDate must not be in the past
 - endDate must not be in the past
 - endDate must be superior to startDate

REQUEST
POST /api/freeSlot/search Content-type: application/json { "appointmentId": "36", }
RESPONSE
201 Content-Type: application/json { "freeSlot": [{

```
"relatedParty" : {  
  "id" : "32",  
  "href" : "http://xxxxx/organisation/ 32",  
}  
"startDate": "2015-09-01T14:00:00.071Z",  
"endDate": "2015-09-01T16:00:00.071Z"  
},  
{  
  "relatedParty" : {  
    "id" : "32",  
    "href" : "http://xxxxx/organisation/ 32",  
  }  
  "startDate": "2015-09-01T16:00:00.071Z",  
  "endDate": "2015-09-01T18:00:00.071Z"  
},  
{  
  "relatedParty" : {  
    "id" : "32",  
    "href" : "http://xxxxx/individual/ 32",  
  }  
  "startDate": "2015-09-01T14:00:00.071Z",  
  "endDate": "2015-09-01T16:00:00.071Z"  
},  
{  
  "relatedParty" : {  
    "id" : "32",  
    "href" : "http://xxxxx/individual/ 32",
```

```
    }  
    "startDate": "2015-09-03T14:00:00.071Z",  
    "endDate": "2015-09-03T16:00:00.071Z"  
  },  
  {  
    "relatedParty": {  
      "id": "32",  
      "href": "http://xxxxx/individual/ 32",  
    }  
    "startDate": "2015-09-05T14:00:00.071Z",  
    "endDate": "2015-09-05T16:00:00.071Z"  
  }  
]  
}
```

API NOTIFICATION

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.

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.

REQUEST

DELETE /api/hub/{id}
Accept: application/json

RESPONSE

204

PUBLISH {EVENTTYPE} POST /LISTENER

Description :

Provide the Event description

Behavior :

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

REQUEST

POST /client/listener
Accept: application/json

```
{
  "eventType": "EventType",
  "eventTime": "2014-09-27T05:46:25.0Z",
  "eventId": "1562231",
  "event": {
    EVENT BODY
  }
}
```

RESPONSE

201
Content-Type: application/json

Example see TMF REST Design Guidelines.

