

Göttingen Campus Event Calendar REST API

API Developer Documentation

Christof Pohl, Péter Király

Gesellschaft für wissenschaftliche

Datenverarbeitung mbH Göttingen (GWDG)

March 30, 2017

Version 1.2.1

Contents

1	Introduction	3
1.1	Prerequisites	3
1.2	Results of REST Calls	3
1.3	Event JSON Document Example	4
1.4	Event Attribute Data Types and Default Values	5
2	Create Events	7
3	Event Files	9
3.1	Add Logo	9
3.2	Remove Logo	10
3.3	Add Image	11
3.4	Remove Image	12
3.5	Add PDF Attachment	13
3.6	Remove PDF Attachment	14
4	Read Events	15
4.1	Read a Single Event	15
4.2	Read All Future Events	16
4.3	Read Future Events of a Head Organization	17
4.4	Total Number of Events	18
5	Update Events	19

6	Delete Events	21
7	Event Search	22
8	Recurrence Attribute	27
8.1	Supported Recurrence Values	27
8.2	Total Number of Recurrence Values	28
9	Location Attribute	29
9.1	Supported Location Values	29
9.2	Total Number of Location Values	29
10	Type Attribute	30
10.1	Supported Type Values	30
10.2	Total Number of Type Values	31
11	Language Attribute	31
11.1	Supported Language Values	31
11.2	Total Number of Language Values	32
12	Category Attribute	32
12.1	Supported Category Values	32
12.2	Total Number of Category Values	33
13	Keywords Attribute	34
13.1	Supported Keyword Values	34
13.2	Total Number of Keyword Values	34
13.3	Supported Language-Specific Keyword Values	35
13.4	Total Number of Language-Specific Keyword Values	36
14	Head Organization Attribute	36
14.1	Supported Head Organization Values	36
14.2	Read a Single Head Organization	37
14.3	Head Organization of REST User	38
15	Administrative Tasks	38
15.1	Refresh Event Search Index	39

1 Introduction

1.1 Prerequisites

This documentation leverages `curl` commands to demonstrate the Event Calendar REST API usage. For this it is assumed that two shell variables containing the server name and the login credentials have been set. An example for setting these variables in a bash shell would be:

```
1 export API_SERVER="https://events-dev.gwdg.de"
2 export API_CREDENTIALS="your_email@your_domain.xx:your_password"
```

Alternatively, you can set the actual values directly inside the `curl` commands instead of using these variables.

1.2 Results of REST Calls

The response to a REST call usually consists of a result message in JSON format as well as a corresponding HTTP status code. Example result messages for successful calls (status code *HTTP/1.1 200 OK*) are documented in the following chapters. In case of an error, a JSON document containing a textual representation of the HTTP status code and a detailed error message will be returned. All error messages will use the same JSON document scheme as outlined below:

```
1 {
2   "statusCode" : "Bad Request",
3   "message" : [
4     "Please specify a 'title' attribute in event data.",
5     "The 'language' attribute value 'japanese' in event data is invalid.",
6     "The 'category' attribute value 'soccer' in event data is invalid."
7   ]
8 }
```

The following HTTP status codes are used within the Event Calendar REST API:

Success Status Code	HTTP/1.1 200 OK
Client Error Status Codes	HTTP/1.1 400 Bad Request HTTP/1.1 401 Unauthorized HTTP/1.1 403 Forbidden HTTP/1.1 404 Not Found
Server Error Status Code	HTTP/1.1 500 Internal Server Error

Please note that the status code *HTTP/1.1 500 Internal Server Error* represents a severe internal application or server error and may potentially occur during any REST call. It will therefore not be listed explicitly in the synopsis of the REST API calls.

1.3 Event JSON Document Example

For reference, the box below shows a complete event JSON document containing all attributes supported by event objects with example values.

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isDraft" : false,
5   "series" : null,
6   "title" : "A Great Event Title",
7   "subtitle" : null,
8   "speaker" : null,
9   "speakerInstitute" : null,
10  "startDate" : "2016-11-14T10:00:00+01:00",
11  "endDate" : "2016-11-14T11:00:00+01:00",
12  "recurrence" : "",
13  "details" : null,
14  "location" : "Anderer Ort/Other Location",
15  "room" : null,
16  "locationOther" : null,
17  "type" : null,
18  "language" : "german",
19  "category" : "research",
20  "keywords" : [ "Special Event" ],
21  "isInternal" : false,
22  "isRegistrationRequired" : false,
23  "host" : null,
24  "contact" : "Person to contact",
25  "contactEmail" : "contact.person@somewhere.xx",
26  "contactPhone" : null,
27  "headOrganizationId" : 18901,
28  "institute" : "Name of Institute (free text)",
29  "logoUrl" : null,
30  "originalLogoFileName" : null,
31  "imageUrl" : null,
32  "originalImageFileName" : null,
33  "attachmentUrl" : null,
34  "originalAttachmentFileName" : null,
35  "externalLinkUri" : null,
36  "externalLinkText" : null,
37  "externalSystemId" : null,
38  "creationDate" : "2016-11-12T15:16:56+01:00",
39  "creatorUserId" : 10502,
40  "editDate" : null,
41  "editorUserId" : null,
42  "timestamp" : 1478960216407
43 }
```

1.4 Event Attribute Data Types and Default Values

The event attributes use the following data types and default values:

Boolean	<pre>isDraft : false isInternal : false isRegistrationRequired : false</pre>
Date	<pre>startDate : "2016-11-14T10:00:00+01:00" (user specified) endDate : "2016-11-14T11:00:00+01:00" (user specified) creationDate : "2016-11-12T15:16:56+01:00" (automatically generated) editDate : "2016-11-12T15:27:22+01:00" (automatically generated¹)</pre>
Long	<pre>id : 1234 (automatically generated) parentId : null (automatically generated) headOrganizationId : 19763² creatorUserId : 19501 (automatically generated) editorUserId : 19501 (automatically generated¹)</pre>
String ³	<pre>series : null title : "A Great Event Title" (user specified) subtitle : null speaker : null speakerInstitute : null recurrence : "" location : "Anderer Ort/Other Location" (user specified) room : null locationOther : null type : null language : "german" (user specified) category : "research" (user specified) host : null contact : "Person to contact" (user specified) contactEmail : "contact.person@somewhere.xx" (user specified) contactPhone : null institute : "Name of Institute (free text)" (user specified) logoUrl : null originalLogoFileName : null imageUrl : null originalImageFileName : null attachmentUrl : null originalAttachmentFileName : null</pre>

¹Value is null if event has not been edited.

²If not specified or null, value will be set to the head organization id of the user.

³Strings are limited to 255 characters maximum.

```

        externalLinkUri : null
        externalLinkText : null
        externalSystemId : null

String[]3      keywords : [ "Special Event" ] (user specified)
Longtext      details : null
Timestamp4    timestamp : 1478032468138 (automatically generated)

```

Automatically Generated Values

Please note that *automatically generated* values can not be set by the user.

Value Restrictions

The following attributes expect values from predefined lists. Please refer to the stated chapters for supported or recommended values:

- recurrence: chapter 8
- location: chapter 9
- type: chapter 10
- language: chapter 11
- category: chapter 12
- keywords: chapter 13
- headOrganizationId: chapter 14

Date Output Format

By default, an ISO8601⁵ compliant date format consisting of a full date and time is used. It conforms to the following pattern:

```
yyyy-MM-dd'T'HH:mm:ssZZ
```

The character *'T'* is used as a delimiter to separate the date from the time value. The time zone offset is *Z* for zero (UTC⁶). A zone offset other than zero is represented in the form \pm HH:mm.

Date Input Formats

Date values can be provided in one of the following formats:

- *ISO8601 Format* (String): yyyy-MM-dd'T'HH:mm:ssZZ or yyyy-MM-dd'T'HH:mm:ss.SSSZZ (cf. previous section). The milliseconds part of the time value is optional.

⁴Timestamp format: milliseconds since the epoch (January 1, 1970 midnight/00:00 UTC⁶).

⁵Cf. https://en.wikipedia.org/wiki/ISO_8601.

⁶Cf. https://en.wikipedia.org/wiki/Coordinated_Universal_Time.

- *Timestamp Format (Long)*: numeric value with 13 digits as milliseconds since the epoch (January 1, 1970 midnight/00:00 UTC⁶).
- *Simple Date Format (String)*: yyyy-MM-dd HH:mm[:ss]. The seconds part of the time value is optional. Please note that the time value will be treated as German local time, CET⁷ or CEST⁸, respectively. Because of the missing time zone information, it is encouraged to use the ISO8601 or timestamp formats instead of the simple date format.

Please note that the parser of the ISO8601 and simple date formats is strict by default, thus the time value 24:00 cannot be parsed. Please use the following day's date with time 00:00 instead.

2 Create Events

The following `curl` call creates a new event from a provided JSON document.

Synopsis

Path	/api/event
Parameters	POST data: JSON document of an event (without id attribute) sent with content type <code>application/json</code>
HTTP Method	POST
Authentication	Basic HTTP Authentication ⁹
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 401 Unauthorized HTTP/1.1 403 Forbidden

Example Call

```
1 curl -X POST -d "@new-event.json" -H "Content-Type: application/json" -u
   → "${API_CREDENTIALS}" "${API_SERVER}/api/event"
```

The file `new-event.json` needs to contain a valid JSON event document including at least the attributes presented in the following example.

```
1 {
2   "title": "A Great Event Title",
3   "startDate" : "2016-11-14T10:00:00+01:00",
```

⁷Cf. https://en.wikipedia.org/wiki/Central_European_Time.

⁸Cf. https://en.wikipedia.org/wiki/Central_European_Summer_Time.

⁹Cf. https://en.wikipedia.org/wiki/Basic_access_authentication.

```

4  "endDate" : "2016-11-14T11:00:00+01:00",
5  "location": "Anderer Ort/Other Location",
6  "language": "german",
7  "category": "research",
8  "keywords": ["Special Event"],
9  "contact": "Person to contact",
10 "contactEmail": "contact.person@somewhere.xx",
11 "institute": "Name of Institute (free text)"
12 }

```

The next JSON document provides a more verbose example which contains all reasonable attributes for event creation.

```

1  {
2  "isDraft" : false,
3  "series" : "Series label",
4  "title" : "Full Data Event Title",
5  "subtitle" : "This is a subtitle",
6  "speaker" : "Speaker's name",
7  "speakerInstitute" : "Speaker's institute",
8  "startDate" : "2016-11-14T11:00:00-02:00",
9  "endDate" : "2016-11-14T12:00:00-02:00",
10 "recurrence" : "",
11 "details" : "This can be quite a long text...",
12 "location" : "Anderer Ort/Other Location",
13 "room" : "Room information",
14 "locationOther" : "Other location information",
15 "type" : "other",
16 "language" : "english",
17 "category" : "research",
18 "keywords" : [ "Special Event", "Other Keyword" ],
19 "isInternal" : false,
20 "isRegistrationRequired" : false,
21 "host" : "Host's name",
22 "contact" : "Person to contact",
23 "contactEmail" : "contact.person@somewhere.xx",
24 "contactPhone" : "0123-4567890",
25 "headOrganizationId" : 19763,
26 "institute" : "Institute's name (free text)",
27 "externalLinkUri" : "http://www.somewhere.xx/path/to/external/event/information",
28 "externalLinkText" : "More information",
29 "externalSystemId" : "12-3456-78-9"
30 }

```

Please note that the JSON document must not include an identifier (id) attribute. Additionally, the following attributes expect values from predefined lists. Please refer to the stated chapters for supported or recommended values:

- recurrence: chapter 8

- location: chapter 9
- type: chapter 10
- language: chapter 11
- category: chapter 12
- keywords: chapter 13
- headOrganizationId: chapter 14

Example Result Document

The JSON document contained in the response will look similar to the following one.

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isDraft" : false,
5   "series" : null,
6   "title" : "A Great Event Title",
7   "...",
8   "creationDate" : "2016-11-12T15:16:56+01:00",
9   "creatorUserId" : 10502,
10  "editDate" : null,
11  "editorUserId" : null,
12  "timestamp" : 1478960216407
13 }
```

Please note that the returned JSON document contains the id of the created event.

3 Event Files

This chapter describes how to manage additional files like a logo, image or PDF attachment for an event.

3.1 Add Logo

Adds a logo image file to an event or replaces an existing one.

Synopsis

Path	/api/event/[id]/logo
Parameters	id (path parameter): the identifier of an event file (form parameter): the logo image file in GIF, JPEG or PNG format
HTTP Method	POST
Authentication	Basic HTTP Authentication

HTTP Response Codes	HTTP/1.1 200 OK
	HTTP/1.1 400 Bad Request
	HTTP/1.1 401 Unauthorized
	HTTP/1.1 403 Forbidden
	HTTP/1.1 404 Not Found

Example Call

```
1 curl -X POST -F "file=@event-logo.png" -u "${API_CREDENTIALS}"
   ↪ "${API_SERVER}/api/event/1234/logo"
```

Example Result Document

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isAncestor" : false,
5   "isDraft" : false,
6   "series" : null,
7   "title" : "A Great Event Title",
8   "...",
9   "logoUrl" : "https://events-dev.gwdg.de/gfx/2016-11/1478960842342-event-logo.png",
10  "originalLogoFileName" : "event-logo.png",
11  "...",
12  "creationDate" : "2016-11-12T15:16:56+01:00",
13  "creatorUserId" : 10502,
14  "editDate" : "2016-11-12T15:27:22+01:00",
15  "editorUserId" : 10502,
16  "timestamp" : 1478960842342
17 }
```

Please note that the logo attributes of the event are set to non-null values.

3.2 Remove Logo

Removes a logo image file from an event (if present).

Synopsis

Path	/api/event/[id]/logo
Parameters	id (path parameter): the identifier of an event
HTTP Method	DELETE
Authentication	Basic HTTP Authentication

HTTP Response Codes	HTTP/1.1 200 OK
	HTTP/1.1 400 Bad Request
	HTTP/1.1 401 Unauthorized
	HTTP/1.1 403 Forbidden
	HTTP/1.1 404 Not Found

Example Call

```
1 curl -X DELETE -u "${API_CREDENTIALS}" "${API_SERVER}/api/event/1234/logo"
```

Example Result Document

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isAncestor" : false,
5   "isDraft" : false,
6   "series" : null,
7   "title" : "A Great Event Title",
8   "...",
9   "logoUrl" : null,
10  "originalLogoFileName" : null,
11  "...",
12  "creationDate" : "2016-11-12T15:16:56+01:00",
13  "creatorUserId" : 10502,
14  "editDate" : "2016-11-12T15:31:54+01:00",
15  "editorUserId" : 10502,
16  "timestamp" : 1478961114856
17 }
```

Please note that the logo attributes of the event are set to null values.

3.3 Add Image

Adds an image file to an event or replaces an existing one.

Synopsis

Path	/api/event/[id]/image
Parameters	id (path parameter): the identifier of an event file (form parameter): the image file in GIF, JPEG or PNG format
HTTP Method	POST
Authentication	Basic HTTP Authentication

HTTP Response Codes HTTP/1.1 200 OK
 HTTP/1.1 400 Bad Request
 HTTP/1.1 401 Unauthorized
 HTTP/1.1 403 Forbidden
 HTTP/1.1 404 Not Found

Example Call

```
1 curl -X POST -F "file=@event-image.jpg" -u "${API_CREDENTIALS}"  
  ↪ "${API_SERVER}/api/event/1234/image"
```

Example Result Document

```
1 {  
2   "id" : 1234,  
3   "parentId" : null,  
4   "isAncestor" : false,  
5   "isDraft" : false,  
6   "series" : null,  
7   "title" : "A Great Event Title",  
8   ...  
9   "imageUrl" :  
10  ↪ "https://events-dev.gwdg.de/gfx/2016-11/1478961210469-event-image.jpg",  
11  "originalImageFileName" : "event-image.jpg",  
12  ...  
13  "creationDate" : "2016-11-12T15:16:56+01:00",  
14  "creatorUserId" : 10502,  
15  "editDate" : "2016-11-12T15:33:30+01:00",  
16  "editorUserId" : 10502,  
17  "timestamp" : 1478961210470  
}
```

Please note that the image attributes of the event are set to non-null values.

3.4 Remove Image

Removes an image file from an event (if present).

Synopsis

Path	/api/event/[id]/image
Parameters	id (path parameter): the identifier of an event
HTTP Method	DELETE
Authentication	Basic HTTP Authentication

HTTP Response Codes	HTTP/1.1 200 OK
	HTTP/1.1 400 Bad Request
	HTTP/1.1 401 Unauthorized
	HTTP/1.1 403 Forbidden
	HTTP/1.1 404 Not Found

Example Call

```
1 curl -X DELETE -u "${API_CREDENTIALS}" "${API_SERVER}/api/event/1234/image"
```

Example Result Document

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isAncestor" : false,
5   "isDraft" : false,
6   "series" : null,
7   "title" : "A Great Event Title",
8   "...",
9   "imageUrl" : null,
10  "originalImageFileName" : null,
11  "...",
12  "creationDate" : "2016-11-12T15:16:56+01:00",
13  "creatorUserId" : 10502,
14  "editDate" : "2016-11-12T15:35:19+01:00",
15  "editorUserId" : 10502,
16  "timestamp" : 1478961319917
17 }
```

Please note that the image attributes of the event are set to null values.

3.5 Add PDF Attachment

Adds a PDF attachment to an event or replaces an existing one.

Synopsis

Path	/api/event/[id]/attachment
Parameters	id (path parameter): the identifier of an event file file (form parameter): the PDF file to attach
HTTP Method	POST
Authentication	Basic HTTP Authentication

HTTP Response Codes	HTTP/1.1 200 OK
	HTTP/1.1 400 Bad Request
	HTTP/1.1 401 Unauthorized
	HTTP/1.1 403 Forbidden
	HTTP/1.1 404 Not Found

Example Call

```
1 curl -X POST -F "file=@event-attachment.pdf" -u "${API_CREDENTIALS}"
   ↪ "${API_SERVER}/api/event/1234/attachment"
```

Example Result Document

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isAncestor" : false,
5   "isDraft" : false,
6   "series" : null,
7   "title" : "A Great Event Title",
8   "...",
9   "attachmentUrl" :
10  ↪ "https://events-dev.gwdg.de/gfx/2016-11/1478961542377-event-attachment.pdf",
11  "originalAttachmentFileName" : "event-attachment.pdf",
12  "...",
13  "creationDate" : "2016-11-12T15:16:56+01:00",
14  "creatorUserId" : 10502,
15  "editDate" : "2016-11-12T15:39:02+01:00",
16  "editorUserId" : 10502,
17  "timestamp" : 1478961542377
18 }
```

Please note that the attachment attributes of the event are set to non-null values.

3.6 Remove PDF Attachment

Removes a PDF attachment from an event (if present).

Synopsis

Path	/api/event/[id]/attachment
Parameters	id (path parameter): the identifier of an event
HTTP Method	DELETE
Authentication	Basic HTTP Authentication

HTTP Response Codes	HTTP/1.1 200 OK
	HTTP/1.1 400 Bad Request
	HTTP/1.1 401 Unauthorized
	HTTP/1.1 403 Forbidden
	HTTP/1.1 404 Not Found

Example Call

```
1 curl -X DELETE -u "${API_CREDENTIALS}" "${API_SERVER}/api/event/1234/attachment"
```

Example Result Document

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isAncestor" : false,
5   "isDraft" : false,
6   "series" : null,
7   "title" : "A Great Event Title",
8   "...",
9   "attachmentUrl" : null,
10  "originalAttachmentFileName" : null,
11  "...",
12  "creationDate" : "2016-11-12T15:16:56+01:00",
13  "creatorUserId" : 10502,
14  "editDate" : "2016-11-12T15:40:00+01:00",
15  "editorUserId" : 10502,
16  "timestamp" : 1478961600241
17 }
```

Please note that the attachment attributes of the event are set to null values.

4 Read Events

4.1 Read a Single Event

Returns a JSON document containing the data of a single event.

Synopsis

Path	/api/event/[id]
Parameters	id (path parameter): the identifier of an event
HTTP Method	GET
Authentication	No authentication needed

HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 404 Not Found
---------------------	---

Example Call

```
1 curl -X GET "${API_SERVER}/api/event/1234"
```

Example Result Document

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isDraft" : false,
5   "series" : null,
6   "title" : "A Great Event Title",
7   "...",
8   "creationDate" : "2016-11-12T15:16:56+01:00",
9   "creatorUserId" : 10502,
10  "editDate" : "2016-11-12T15:40:00+01:00",
11  "editorUserId" : 10502,
12  "timestamp" : 1478961600241
13 }
```

4.2 Read All Future Events

Returns a JSON document containing the data of all future events.

Synopsis

Path	/api/event/all/future
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/event/all/future"
```


Example Result Document

```

1  [ {
2    "id" : 2839,
3    "parentId" : null,
4    "isDraft" : false,
5    "series" : null,
6    "title" : "Nationaler Aktionstag für die Erhaltung schriftlichen Kulturguts",
7    "...",
8    "creationDate" : "2016-11-09T16:19:31+01:00",
9    "creatorUserId" : 24089,
10   "editDate" : null,
11   "editorUserId" : null,
12   "timestamp" : 1478704771000
13 }, ..., {
14   "id" : 1562,
15   "parentId" : null,
16   "isDraft" : false,
17   "series" : "CNMPB Nobel Lecture",
18   "title" : "CNMPB Nobel Lecture 2017 with Stefan W. Hell",
19   "...",
20   "creationDate" : "2016-05-04T10:57:49+02:00",
21   "creatorUserId" : 21501,
22   "editDate" : "2016-05-04T10:58:41+02:00",
23   "editorUserId" : 21501,
24   "timestamp" : 1462352321000
25 } ]

```

4.3 Read Future Events of a Head Organization

Returns the data of a head organization's future events.

Synopsis

Path	/api/event/head_organization/[id]/future
Parameters	id (path parameter): the identifier of a head organization ¹⁰
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 404 Not Found

¹⁰For information on how to retrieve head organization ids please refer to chapter 14.

Example Call

```
1 curl -X GET "${API_SERVER}/api/event/head_organization/19728/future"
```

Example Result Document

```
1 [ {
2   "id" : 1654,
3   "parentId" : null,
4   "isDraft" : false,
5   "series" : "Department of Molecular Biology Seminar Series",
6   "title" : "Sorting DNA for function or decay",
7   "...",
8   "creationDate" : "2016-07-11T15:45:51+02:00",
9   "creatorUserId" : 21911,
10  "editDate" : "2016-09-01T09:55:38+02:00",
11  "editorUserId" : 21911,
12  "timestamp" : 1472716538000
13 }, ..., {
14  "id" : 1661,
15  "parentId" : null,
16  "isDraft" : false,
17  "series" : "Fassberg Seminar - Special Date",
18  "title" : "Visualizing macromolecular structure and function by cryo-EM",
19  "...",
20  "creationDate" : "2016-07-11T15:52:52+02:00",
21  "creatorUserId" : 21911,
22  "editDate" : "2016-09-01T09:55:41+02:00",
23  "editorUserId" : 21911,
24  "timestamp" : 1472716541000
25 } ]
```

4.4 Total Number of Events

Return the number of all events available.

Synopsis

Path	/api/event/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET "${API_SERVER}/api/event/count"
```

Example Result Document

```
1 {
2   "value": 613
3 }
```

5 Update Events

Modifies the data of an existing event using the values from a given JSON document. Please note that it is mandatory to include the identifier of the event to be modified in the JSON document. If the ids provided in the JSON document and the URL do not match, an *HTTP/1.1 400 Bad Request* error will occur.

Synopsis

Path	/api/event/[id]
Parameters	id (path parameter): the identifier of an event POST data: JSON document of an event (including id attribute) sent with content type application/json
HTTP Method	PUT
Authentication	Basic HTTP Authentication
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 401 Unauthorized HTTP/1.1 403 Forbidden HTTP/1.1 404 Not Found

Example Call

```
1 curl -X PUT -d "@existing-event.json" -H "Content-Type: application/json" -u
  → "${API_CREDENTIALS}" "${API_SERVER}/api/event/1234"
```

The file `existing-record.json` needs to contain the modified event data in JSON format, as outlined in the following example.

```
1 {
2   "id" : 1234,
3   "parentId" : null,
4   "isDraft" : false,
5   "series" : "Series label",
6   "title" : "A Changed Event Title",
7   "subtitle" : "This is a subtitle",
8   "speaker" : "Speaker's name",
9   "speakerInstitute" : "Speaker's institute",
10  "startDate" : "2016-11-15T15:00:00+01:00",
11  "endDate" : "2016-11-15T16:00:00+01:00",
12  "recurrence" : "",
13  "details" : "This can be quite a long text...",
14  "location" : "Zentrales Hörsaalgebäude",
15  "room" : "Room information",
16  "locationOther" : "Other location information",
17  "type" : "conference",
18  "language" : "english",
19  "category" : "technology",
20  "keywords" : [ "Special Event", "Changing Events", "Computer Sciences" ],
21  "isInternal" : false,
22  "isRegistrationRequired" : false,
23  "host" : "Host's name",
24  "contact" : "Other Person to contact",
25  "contactEmail" : "other.contact.person@somewhere.xx",
26  "contactPhone" : "0987-6543210",
27  "headOrganizationId" : 19763,
28  "institute" : "Institute's name (free text)",
29  "logoUrl" : null,
30  "originalLogoFileName" : null,
31  "imageUrl" : null,
32  "originalImageFileName" : null,
33  "attachmentUrl" : null,
34  "originalAttachmentFileName" : null,
35  "externalLinkUri" : "http://www.somewhere.xx/path/to/external/event/information",
36  "externalLinkText" : "More information",
37  "externalSystemId" : "12-3456-78-9",
38  "creationDate" : "2016-11-12T15:16:56+01:00",
39  "creatorUserId" : 10502,
40  "editDate" : "2016-11-12T15:40:00+01:00",
41  "editorUserId" : 10502,
42  "timestamp" : 1478961600241
43 }
```

Please note that users with editor rights are restricted to editing events created by themselves or belonging to their head organization (cf. section 14.3).

Automatically generated attribute values (e.g., id, parentId, logoUrl, originalImageFileName, creatorUserId, editDate or timestamp; cf. section 1.4) are handled internally by the Event Cal-

endar application and can not be set to specific values using the REST API. Attributes missing in the JSON document will be left unchanged.

The following attributes expect values from predefined lists. Please refer to the stated chapters for supported or recommended values:

- recurrence: chapter 8
- location: chapter 9
- type: chapter 10
- language: chapter 11
- category: chapter 12
- keywords: chapter 13
- headOrganizationId: chapter 14

Example Result Document

```

1  {
2    "id" : 1234,
3    "parentId" : null,
4    "isDraft" : false,
5    "series" : "Series label",
6    "title" : "A Changed Event Title",
7    ...
8    "creationDate" : "2016-11-12T15:16:56+01:00",
9    "creatorUserId" : 10502,
10   "editDate" : "2016-11-12T16:26:48+01:00",
11   "editorUserId" : 10502,
12   "timestamp" : 1478964408016
13  }
```

6 Delete Events

Deletes the event with the provided identifier.

Synopsis

Path	/api/event/[id]
Parameters	id (path parameter): the identifier of an event
HTTP Method	DELETE
Authentication	Basic HTTP Authentication
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 401 Unauthorized

HTTP/1.1 403 Forbidden
HTTP/1.1 404 Not Found

Example Call

```
1 curl -X DELETE -u "${API_CREDENTIALS}" "${API_SERVER}/api/event/1234"
```

Example Result Document

```
1 {  
2   "statusCode" : "OK",  
3   "message" : [ "Event with id '1234' deleted successfully." ]  
4 }
```

7 Event Search

Returns a JSON document containing all events that match the provided search term and parameters. Please note that the number of events returned is controlled by the `limit` parameter, which is set to 10 by default.

Synopsis

Path `/api/search?query=[search_term]`
`/api/search?query=[search_term]&[parameter]=[value]&...`

Parameters

- `query` (query parameter): the main search term. The content of the following event attributes will be considered for matching the search term: `series`, `title`, `subtitle`, `details` and `keywords`. All events containing the search term in one of these attributes will be part of the search result. Use the asterisk (*) as wildcard.
- `limit` (query parameter): the number of matching event objects to include in the search result. The default `limit` value is 10.
- `offset` (query parameter): the position of the first event object to retrieve within the search result list. The first position in the list is 0. The default `offset` value is 0.
- `startDate` (query parameter): search for events starting on the provided date or later. The `startDate` value can be provided in one of the formats described in chapter 1.4¹¹. If not specified a search will return events with any start date.

¹¹The plus sign (+) for the time zone offset in ISO8601 date format needs to be URL-encoded as %2B, e.g. for January 1, 2016 00:00:00 CET: 2016-01-01T00:00:00%2B01:00. Cf. <https://en.wikipedia.org/wiki/Percent-encoding>.

endDate (query parameter): search for events ending on endDate or earlier. The endDate value can be provided in one of the formats described in chapter 1.4¹¹. If not specified a search will return events with any end date.

filter (query parameter): additional [attribute]:[value] pair that is applied to the search results and needs to be matched. It is possible to specify multiple filter parameters for a search query. The default is to not filter the search results.

regexFilter (query parameter): same as the filter parameter, except the [value] is interpreted as a regular expression.¹² Optional operators are not supported (only standard operators).

sort (query parameter): expects the values date or relevance and will sort the resulting events accordingly. By default the result list will be sorted by the start date.

HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 404 Not Found

Example Calls

```

1 # Simple search query for "Göttingen"
2 curl -X GET "${API_SERVER}/api/search?query=Göttingen"
3
4 # Select a search result interval (20 events starting with event number 10)
5 curl -X GET "${API_SERVER}/api/search?query=Göttingen*&limit=20&offset=10"
6
7 # Search for events starting at 2016-01-01+00:00 or later sorted by relevance
8 curl -X GET "${API_SERVER}/api/search?query=Göttingen*&startDate=2016-01-
9   → 01T00:00:00%2B01:00&sort=relevance"
10
11 # Search for events ending before 2016-04-01+00:00:00
12 curl -X GET
13   → "${API_SERVER}/api/search?query=Göttingen*&endDate=2016-04-01T00:00:00%2B01:00"
14
15 # Search for events between 2016-01-01+00:00 and 2016-04-01+00:00:00
16 curl -X GET
17   → "${API_SERVER}/api/search?query=Göttingen*&startDate=2016-01-01T00:00:00%2B01:00
18   → &endDate=2016-04-01T00:00:00%2B01:00"

```

¹²Regular expression syntax documentation: <https://www.elastic.co/guide/en/elasticsearch/reference/1.7/query-dsl-regex-query.html#regex-syntax>

```

16 # Filter search result for 'Various' speakers
17 curl -X GET "${API_SERVER}/api/search?query=*&filter=speaker:Various"
18
19 # Filter search result for events taking place next month
20 curl -X GET "${API_SERVER}/api/search?query=*&filter=daterange:next-month"
21
22 # Filter search result with a regular expression
23 curl -X GET
24 ↪ "${API_SERVER}/api/search?query=*&filter_regex=institute:Fakultät+für+Physik.*"
25
26 # Search for all events of head organization 19728 in 2016
27 curl -X GET "${API_SERVER}/api/search?query=*&startDate=2016-01-01T00:00:00%2B01:00
28 ↪ &endDate=2017-01-01T00:00:00%2B01:00&filter=headOrganizationId:19728"

```

Example Result Document

```

1 {
2   "totalHits" : 249,
3   "events" : [ {
4     "id" : 2775,
5     "parentId" : null,
6     "isDraft" : false,
7     "series" : null,
8     "title" : "Geschäftsmodellentwicklung",
9     "...",
10    "creationDate" : "2016-11-09T16:17:00+01:00",
11    "creatorUserId" : 24089,
12    "editDate" : null,
13    "editorUserId" : null,
14    "timestamp" : 1478704620000
15  }, {... {
16    "id" : 2574,
17    "parentId" : null,
18    "isDraft" : false,
19    "series" : null,
20    "title" : "Internationalisierung der Curricula an Hochschulen: Konzepte,
21    ↪ Initiativen, Maßnahmen",
22    "...",
23    "creationDate" : "2016-11-09T16:12:28+01:00",
24    "creatorUserId" : 24089,
25    "editDate" : null,
26    "editorUserId" : null,
27    "timestamp" : 1478704348000
28  } ],
29   "facets" : [ {
30     "name" : "keywords.facet",
31     "type" : "term",

```



```
31     "totalCount" : 19,  
32     "missingCount" : 225,  
33     "otherCount" : 5,  
34     "entries" : [ {  
35         "term" : "Astrophysik",  
36         "count" : 2  
37     }, ... {  
38         "term" : "Special Event",  
39         "count" : 3  
40     } ]  
41 }, {  
42     "name" : "headOrganizationName.facet",  
43     "type" : "term",  
44     "totalCount" : 249,  
45     "missingCount" : 0,  
46     "otherCount" : 0,  
47     "entries" : [ {  
48         "term" : "Deutsches Primatenzentrum (DPZ)",  
49         "count" : 1  
50     }, ... {  
51         "term" : "Zentren und Netzwerke",  
52         "count" : 3  
53     } ]  
54 }, {  
55     "name" : "category.facet",  
56     "type" : "term",  
57     "totalCount" : 249,  
58     "missingCount" : 0,  
59     "otherCount" : 0,  
60     "entries" : [ {  
61         "term" : "campus",  
62         "count" : 232  
63     }, ... {  
64         "term" : "research",  
65         "count" : 14  
66     } ]  
67 }, {  
68     "name" : "series.facet",  
69     "type" : "term",  
70     "totalCount" : 11,  
71     "missingCount" : 238,  
72     "otherCount" : 0,  
73     "entries" : [ {  
74         "term" : "Bernstein Seminar",  
75         "count" : 1  
76     }, ... {  
77         "term" : "Series Name",  
78         "count" : 1
```

```

79     } ]
80   }, {
81     "name" : "institute.facet",
82     "type" : "term",
83     "totalCount" : 80,
84     "missingCount" : 0,
85     "otherCount" : 169,
86     "entries" : [ {
87       "term" : "DFG-Sonderforschungsbereich 1136: Bildung und Religion in Kulturen
↳ des Mittelmeerraums und seiner Umgebung von der Antike bis zum Mittelalter und
↳ zum Klassischen Islam",
88       "count" : 8
89     }, ... {
90       "term" : "Zentrale Kustodie",
91       "count" : 7
92     } ]
93   }, {
94     "name" : "language.facet",
95     "type" : "term",
96     "totalCount" : 249,
97     "missingCount" : 0,
98     "otherCount" : 0,
99     "entries" : [ {
100      "term" : "english",
101      "count" : 50
102    }, {
103      "term" : "german",
104      "count" : 199
105    } ]
106  }, {
107    "name" : "daterange.facet",
108    "type" : "range",
109    "entries" : [ {
110      "term" : "this-week",
111      "count" : 37,
112      "from" : "2016-11-14T00:00:00+01:00",
113      "to" : "2016-11-20T00:00:00+01:00"
114    }, ... {
115      "term" : "next-month",
116      "count" : 69,
117      "from" : "2016-12-01T00:00:00+01:00",
118      "to" : "2017-01-01T00:00:00+01:00"
119    } ]
120  } ]
121 }

```

Search Result Structure

The search result contains the following information:

- the number of events which match the current search term and parameters (`totalHits`),
- a list of matching events according to the values of the limit and offset parameters, and
- a list of search result facets that contain analytic information about the event result list (facets). All facet entries are good candidates for filters to narrow down search results with large number of events matching the current search query.

Search Result Facets

The term facets are based on the found events' keywords, `headOrganizationName`, `category`, `series`, `institute` and `language` attributes and contain the terms (values) most often contained within all resulting event objects. The `daterange` facet (type `range`) provides terms covering certain date ranges:

- `this-week`: events taking place this week,
- `next-week`: events taking place next week,
- `this-mont`: events taking place this month,
- `next-month`: events taking place next month.

The term facets contain the total number of events in the search result that match at least one of the facet entry terms (`totalCount`), the number of events without a valid term value in the respective field (`missingCount`) and the number of events with term values different from those in the facet entry list (`otherCount`).

All facets entries contain a count value with the number of events in the search result that would also match a filter with the respective term. Additionally, the range facets entries contain the number of matching events as well as the range's corresponding from and to values.

8 Recurrence Attribute

8.1 Supported Recurrence Values

Returns a list of all supported recurrence values. An empty recurrence value ("") represents an event taking place at a single date without recurrence.

Synopsis

Path	<code>/api/recurrence</code>
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/recurrence"
```

Example Result Document

```
1 [ {  
2   "value" : ""  
3 }, {  
4   "value" : "daily"  
5 }, {  
6   "value" : "weekly"  
7 }, {  
8   "value" : "monthly"  
9 } ]
```

8.2 Total Number of Recurrence Values

Returns the total number of supported event recurrence values.

Synopsis

Path	/api/recurrence/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET "${API_SERVER}/api/recurrence/count"
```

Example Result Document

```
1 {  
2   "value": 4  
3 }
```

9 Location Attribute

9.1 Supported Location Values

Returns a list of all supported location values.

Synopsis

Path	/api/location
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/location"
```

Example Result Document

```
1 [ {
2   "id" : 15,
3   "name" : "AStA",
4   "address" : "Goßlerstr. 16a"
5 }, {
6   "id" : 2,
7   "name" : "Accouchierhaus",
8   "address" : "Kurze Geismarstr. 1"
9 }, ... {
10  "id" : 1,
11  "name" : "Anderer Ort/Other Location",
12  "address" : null
13 } ]
```

9.2 Total Number of Location Values

Returns the total number of supported location values.

Synopsis

Path	/api/location/count
Parameters	None

HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET "${API_SERVER}/api/location/count"
```

Example Result Document

```
1 {
2   "value": 126
3 }
```

10 Type Attribute

10.1 Supported Type Values

Returns a list of all supported type values.

Synopsis

Path	/api/type
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/type"
```

Example Result Document

```
1 [ {
2   "value" : "colloquium"
3 }, {
4   "value" : "concert"
```

```

5 }, ... {
6   "value" : "other"
7 } ]

```

10.2 Total Number of Type Values

Returns the total number of supported type values.

Synopsis

Path	/api/type/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```

1 curl -X GET "${API_SERVER}/api/type/count"

```

Example Result Document

```

1 {
2   "value": 22
3 }

```

11 Language Attribute

11.1 Supported Language Values

Returns a list of all supported language values.

Synopsis

Path	/api/language
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/language"
```

Example Result Document

```
1 [ {
2   "value" : "german"
3 }, {
4   "value" : "english"
5 }, {
6   "value" : "other"
7 } ]
```

11.2 Total Number of Language Values

Returns the total number of supported language values.

Synopsis

Path	/api/language/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET "${API_SERVER}/api/language/count"
```

Example Result Document

```
1 {
2   "value": 3
3 }
```

12 Category Attribute**12.1 Supported Category Values**

Returns a list of all supported category values.

Synopsis

Path	/api/category
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/category"
```

Example Result Document

```
1 [ {  
2   "value" : "campus"  
3 }, {  
4   "value" : "career"  
5 }, ... {  
6   "value" : "technology"  
7 } ]
```

12.2 Total Number of Category Values

Returns the total number of supported category values.

Synopsis

Path	/api/category/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET "${API_SERVER}/api/category/count"
```

Example Result Document

```

1 {
2   "value": 5
3 }

```

13 Keywords Attribute

13.1 Supported Keyword Values

Returns a list of all predefined and recommended keyword values for all languages.

Synopsis

Path	/api/keyword
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```

1 curl -X GET "${API_SERVER}/api/keyword"

```

Example Result Document

```

1 [ {
2   "value" : "Agrarwissenschaften"
3 }, {
4   "value" : "Agriculture Sciences"
5 }, ... {
6   "value" : "Wirtschaftswissenschaften"
7 } ]

```

13.2 Total Number of Keyword Values

Returns the total number of predefined and recommended keyword values for all languages.

Synopsis

Path	/api/keyword/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET "${API_SERVER}/api/keyword/count"
```

Example Result Document

```
1 {
2   "value": 92
3 }
```

13.3 Supported Language-Specific Keyword Values

Returns a list of all predefined and recommended keyword values for the specified supported language.

Synopsis

Path	/api/keyword/de /api/keyword/en
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/keyword/de"
```

Example Result Document

```

1 [ {
2   "value" : "Agrarwissenschaften"
3 }, {
4   "value" : "Archäologie"
5 }, ... {
6   "value" : "Wirtschaftswissenschaften"
7 } ]

```

13.4 Total Number of Language-Specific Keyword Values

Returns the total number of predefined and recommended keyword values for the specified supported language.

Synopsis

Path	/api/keyword/de/count /api/keyword/en/count
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request

Example Call

```

1 curl -X GET "${API_SERVER}/api/keyword/de/count"

```

Example Result Document

```

1 {
2   "value": 46
3 }

```

14 Head Organization Attribute

14.1 Supported Head Organization Values

Returns a list of all supported head organizations.

Synopsis

Path	/api/head_organization
Parameters	None
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/head_organization"
```

Example Result Document

```
1 [ {
2   "id" : 19693,
3   "name" : "Bibliotheken"
4 }, ... {
5   "id" : 19673,
6   "name" : "Zentren und Netzwerke"
7 } ]
```

14.2 Read a Single Head Organization

Returns information about the specified head organization.

Synopsis

Path	/api/head_organization/[id]
Parameters	id (path parameter)
HTTP Method	GET
Authentication	No authentication needed
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 400 Bad Request HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET "${API_SERVER}/api/head_organization/19728"
```

Example Result Document

```
1 {
2   "id" : 19728,
3   "name" : "Max-Planck-Institut für biophysikalische Chemie (MPIBPC)"
4 }
```

14.3 Head Organization of REST User

Returns information about the head organization of the authenticated REST user.

Synopsis

Path	/api/head_organization/my
Parameters	id (path parameter)
HTTP Method	GET
Authentication	Basic HTTP Authentication
HTTP Response Codes	HTTP/1.1 200 OK HTTP/1.1 404 Not Found

Example Call

```
1 curl -X GET -u "${API_CREDENTIALS}" "${API_SERVER}/api/head_organization/my"
```

Example Result Document

```
1 {
2   "id" : 19763,
3   "name" : "Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen
   → (GWDG)"
4 }
```

15 Administrative Tasks

The REST methods documented in this chapter are available only for users with administrative rights.

15.1 Refresh Event Search Index

Recreates the search index and indexes the content of all events (this will take some time).

Synopsis

Path	/api/event/reindex
Parameters	None
HTTP Method	GET
Authentication	Basic HTTP Authentication
HTTP Response Codes	HTTP/1.1 200 OK

Example Call

```
1 curl -X GET -u "${API_CREDENTIALS}" "${API_SERVER}/api/event/reindex"
```

Example Result Document

```
1 {
2   "statusCode" : "OK",
3   "message" : [ "Event reindex process finished successfully." ]
4 }
```