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# Description Web services Calendar

This document contains a short description of the web services provided to manage the calendar. For questions / in case of issues please send an E-Mail to [danny@dx.com](mailto:danny@dx.com)

A YAML file describing the REST Web Service is also provided.

## General

- Data management and storage is done by the provided Web services. Task of the exam project is the interactive frontend only.
- The Web services are supporting different accounts. The account name has to be sent with every request (no authentication). Each student / group needs to select a unique account name (e.g. Matrikelnummer)
- The Web services have been developed using PHP, data storage is in a MySQL database.

## Web service URL

- The web service is deployed at URL: <https://dhw.cheekbyte.de/calendar/>
- Note: The web service is sending the HTTP headers required for CORS (Cross-Origin Resource Sharing). Though that might not be supported by all browsers.

## Error Handling

- In case of success, HTTP status code 200 and the respective JSON result will be returned.
- In case of an error, a special result and a HTTP status code different than 200 will be returned:
  - ```
{
  "error": true,
  "code": "1",
  "description": "No action given"
}
```
- Every error contains a unique ID and a brief description

## Web Services

### Calendar Entries

Retrieve all available events

|                     |                                                        |
|---------------------|--------------------------------------------------------|
| <b>Description:</b> | This method lists all available events for an account. |
| <b>Resource:</b>    | / {user} / events                                      |
| <b>HTTP method:</b> | GET                                                    |
| <b>Parameter:</b>   | - None -                                               |
| <b>Validations:</b> | - None -                                               |
| <b>HTTP Status:</b> | 200                                                    |

**Result Body:**

For each available event, the details are returned Category assignments (if available) will be returned as an array.

```
[
  {
    "id": 1,
    "title": " Christmas Feast",
    "location": "Stuttgart",
    "organizer": "danny@dxs.com",
    "start": "2014-12-24T18:00",
    "end": "2014-12-24T23:00",
    "status": "Busy",
    "allday": false,
    "webpage": "http://www.dxs.com/",
    "imageurl": "http://www.dxs.com/logo.png",
    "categories": [
      {
        "id": 1,
        "name": "Private"
      },
      {
        "id": 5,
        "name": "DXC"
      }
    ],
    "extra": null
  },
  {
    "id": 18,
    "title": "New Year's Eve",
    "location": null,
    "organizer": "hans@maier.com",
    "start": "2014-12-24T18:00",
    "end": "2014-12-24T23:30",
    "status": "Busy",
    "allday": false,
    "webpage": "http://www.test.de/",
    "imageurl": null,
    "categories": [
      {
        "id": 1,
        "name": "Family"
      },
      {
        "id": 3,
        "name": "Private"
      }
    ]
  }
],
```

```
"extra": null
```

```
}
```

```
]
```

Create event

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description: | This method creates a new event.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Resource:    | / {user} / events                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| HTTP method: | POST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Parameter:   | <pre> {   "title": " Christmas Feast",   "location": "Stuttgart",   "organizer": "danny@dx.com",   "start": "2014-12-24T18:00",   "end": "2014-12-24T23:30",   "status": "Busy",   "allday": false,   "webpage": "http://www.dxc.com/",   "imagedata": "data:Contentype;base64,ImageContent",   "categories": [     {       "id": 3     }   ],   "extra": null } </pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|              | <p>Fields:</p> <ul style="list-style-type: none"> <li>• title – title of the new event</li> <li>• location – location of the event</li> <li>• organizer – organizer of the event</li> <li>• start – time when the event starts. (for all day events, this shall be set to 00:00)</li> <li>• end – time when the event ends. (for all day events, this shall be set to the time 23:59)</li> <li>• status – availability status of the event</li> <li>• allday – true/false to define all day events</li> <li>• webpage – webpage for details</li> <li>• imagedata – (Optional) image of the event [see Image Create service for details]<br/>If not defined / value is null, no image will be added.<br/>If value is set to string value “REMOVE” (case-sensitive), an existing image will be removed.</li> <li>• categories – (Optional) array of categories to which the event shall be assigned to</li> <li>• extra – (Optional) structure to store additional information. Serialized version might not be longer than 2.000 characters.</li> </ul> <p>Supported formats for time information:</p> <ul style="list-style-type: none"> <li>• yyyy-MM-dd'T'HH:mm</li> <li>• yyyy-MM-dd'T'HH:mm:ss'Z'</li> <li>• yyyy-MM-dd'T'HH:mm:ss.mmm'Z'</li> </ul> |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Validations: | <ul style="list-style-type: none"> <li>• title – mandatory, max. 50 characters</li> <li>• location – optional, max. 50 characters</li> <li>• organizer – mandatory, max. 50 characters. Needs to contain a valid E-Mail address</li> <li>• start – mandatory, see format above</li> <li>• end – mandatory, see format above</li> <li>• status – mandatory, one of the values “Free” / “Busy” / “Tentative”</li> <li>• allday – optional, one of the values “true” / “false”. If not given, it is assumed to be “false”</li> <li>• webpage – optional, max. 100 characters</li> <li>• imagedata – see validations in “Add Image” service</li> <li>• categories – if entries are defined, they need to refer to IDs of valid categories</li> </ul> |
| HTTP Status: | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Result Body: | <pre>{   "title": " Christmas Feast",   "location": "Stuttgart",   "organizer": "danny@dx.com",   "start": "2014-12-24T18:00",   "end": "2014-12-24T23:00",   "status": "Busy",   "allday": false,   "webpage": "http://www.dxc.com/",   "imageurl": null,   "categories": [],   "extra": null }</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                           |



## Retrieve event

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method returns an event by ID.                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Resource:</b>    | / {user}/events/{event-id}                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>HTTP method:</b> | GET                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Parameter:</b>   | - None -                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Validations:</b> | - None -                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>HTTP Status:</b> | 200                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Result Body:</b> | <pre>{   "id": 1,   "title": " Christmas Feast",   "location": "Stuttgart",   "organizer": "danny@dx.com",   "start": "2014-12-24T18:00",   "end": "2014-12-24T23:00",   "status": "Busy",   "allday": false,   "webpage": "http://www.dxc.com/",   "imageurl": "http://dxc.com/logo.png",   "categories": [     {       "id": 1,       "name": "Private"     },     {       "id": 5,       "name": "DHBW"     }   ],   "extra": null }</pre> |

## Update event

|                     |                                                                                                                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | <p>This method updates an existing event.</p> <p>Note: when updating an event, always all fields have to be transmitted to the server, also does which have not been changed.</p>                 |
| <b>Resource:</b>    | / {user}/events/{event-id}                                                                                                                                                                        |
| <b>HTTP method:</b> | PUT                                                                                                                                                                                               |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>• event-id – Unique ID of the selected event (see “list” web service)</li><li>• All other parameters as defined in “Create event” above</li></ul>           |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>• The event ID needs to be referencing a valid event for the current account.</li><li>• Constraints defined in “Create event” apply here as well.</li></ul> |
| <b>HTTP Status:</b> | 200                                                                                                                                                                                               |
| <b>Result Body:</b> | Same as for Create event                                                                                                                                                                          |

## Delete event

|                     |                                                                                                                               |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method deleted an existing event.                                                                                        |
| <b>Resource:</b>    | <code>/ {user} / events / {event-id}</code>                                                                                   |
| <b>HTTP method:</b> | DELETE                                                                                                                        |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>• id – Unique ID of the selected event (see “list” web service)</li></ul>               |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>• The event ID needs to be referencing a valid event for the current account.</li></ul> |
| <b>HTTP Status:</b> | 204                                                                                                                           |
| <b>Result Body:</b> | - None -                                                                                                                      |

## Category Management

### List categories

|                     |                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method lists all available categories.                                                          |
| <b>Resource:</b>    | / {user}/categories                                                                                  |
| <b>HTTP method:</b> | GET                                                                                                  |
| <b>Parameter:</b>   | - None -                                                                                             |
| <b>Validations:</b> | - None -                                                                                             |
| <b>HTTP Status:</b> | 200                                                                                                  |
| <b>Result Body:</b> | <pre>[   {     "id": 1,     "name": "Family"   },   {     "id": 3,     "name": "Private"   } ]</pre> |

### Create category

|                     |                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method creates a new category.                                                          |
| <b>Resource:</b>    | / {user}/categories                                                                          |
| <b>HTTP method:</b> | POST                                                                                         |
| <b>Parameter:</b>   | <pre>{   "name": "Private" }</pre>                                                           |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>name may not contain more than 30 characters</li></ul> |
| <b>HTTP Status:</b> | 200                                                                                          |
| <b>Result Body:</b> | <pre>{   "id": 1,   "name": "Private" }</pre>                                                |

### Retrieve category

|                     |                                              |
|---------------------|----------------------------------------------|
| <b>Description:</b> | This method returns a category by ID.        |
| <b>Resource:</b>    | / {user}/categories/{category-id}            |
| <b>HTTP method:</b> | GET                                          |
| <b>Parameter:</b>   | - None -                                     |
| <b>Validations:</b> | - None -                                     |
| <b>HTTP Status:</b> | 200                                          |
| <b>Result Body:</b> | <pre>{   "id": 1,   "name": "Family" }</pre> |

## Delete category

|                     |                                                                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method removes an existing category.                                                                                                           |
| <b>Resource:</b>    | <code>/ {user} /categories / {category-id}</code>                                                                                                   |
| <b>HTTP method:</b> | DELETE                                                                                                                                              |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>• <code>category-id</code> – Unique ID of the selected category (see “list-categories” web service)</li></ul> |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>• The category ID needs to be referencing a valid category for the current account.</li></ul>                 |
| <b>HTTP Status:</b> | 204                                                                                                                                                 |
| <b>Result Body:</b> | - None -                                                                                                                                            |

## Category Assignment

### Add event to category

|                     |                                                                                                                                                                                                                       |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method adds a category to an existing event.                                                                                                                                                                     |
| <b>Resource:</b>    | / {user} /categories/{category-id}/{event-id}                                                                                                                                                                         |
| <b>HTTP method:</b> | POST                                                                                                                                                                                                                  |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>event-id – Unique ID of the selected event (see “list” web service)</li><li>category-id – Unique ID of the selected category (see “list-categories” web service)</li></ul>      |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>The event ID needs to be referencing a valid event for the current account.</li><li>The category ID needs to be referencing a valid category for the current account.</li></ul> |
| <b>HTTP Status:</b> | 204                                                                                                                                                                                                                   |
| <b>Result Body:</b> | - None -                                                                                                                                                                                                              |

### Remove event from category

|                     |                                                                                                                                                                                                                       |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method removes a category from an existing event.                                                                                                                                                                |
| <b>Resource:</b>    | / {user} /categories/{category-id}/{event-id}                                                                                                                                                                         |
| <b>HTTP method:</b> | DELETE                                                                                                                                                                                                                |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>event-id – Unique ID of the selected event (see “list” web service)</li><li>category-id – Unique ID of the selected category (see “list-categories” web service)</li></ul>      |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>The event ID needs to be referencing a valid event for the current account.</li><li>The category ID needs to be referencing a valid category for the current account.</li></ul> |
| <b>HTTP Status:</b> | 204                                                                                                                                                                                                                   |
| <b>Result Body:</b> | - None -                                                                                                                                                                                                              |

## Image Handling

### Add image to event

|                     |                                                                                                                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method adds (or updates) an image to an existing event.                                                                                                                                                                     |
| <b>Resource:</b>    | / {user} / images / {event-id}                                                                                                                                                                                                   |
| <b>HTTP method:</b> | POST                                                                                                                                                                                                                             |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>event-id – Unique ID of the selected event (see “list” web service)</li></ul> <pre>{<br/>  "imagedata": "data: <u>ContentType</u>; base64, <u>ImageContent</u>"<br/>}</pre>                |
| <b>HTTP Status:</b> | 204                                                                                                                                                                                                                              |
| <b>Result Body:</b> | - None -                                                                                                                                                                                                                         |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>The event ID needs to be referencing a valid event for the current account.</li><li>The image is in JPEG / PNG format.</li><li>The image does not exceed maximum size of 500 kB.</li></ul> |

### Remove image from event

|                     |                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | This method removes an image from an existing event.                                                                                                                           |
| <b>Resource:</b>    | / {user} / images / {event-id}                                                                                                                                                 |
| <b>HTTP method:</b> | DELETE                                                                                                                                                                         |
| <b>Parameter:</b>   | <ul style="list-style-type: none"><li>event-id – Unique ID of the selected event (see “list” web service)</li></ul>                                                            |
| <b>HTTP Status:</b> | 204                                                                                                                                                                            |
| <b>Result Body:</b> | - None -                                                                                                                                                                       |
| <b>Validations:</b> | <ul style="list-style-type: none"><li>The event ID needs to be referencing a valid event for the current account.</li><li>The event needs to have an image assigned.</li></ul> |