

CampbellCloud API – Getting Started Guide

Introduction

So you want to use CampbellCloud data in your own application? Then you've come to the right place!

This document describes the Basics and Authentication. It helps to understand these first before getting into the specifics of the supported API calls within the API documentation. Once you have read through this document, please refer to the full API documentation available from <https://campbell-cloud.com/api/v1/docs/>

The Basics

The base URL for all API requests is:

<https://iot.campbell-cloud.com/api/v1>

the /v1 denotes the version number, i.e., this documentation is version 1 of our API (currently the only version)

You then add to this URL depending on the resource you wish to access. E.g., adding /organizations/{organizationId}/stations to access a list of stations across all networks in your organization

HTTP Verbs

As this is a REST API we've used the appropriate HTTP verbs (e.g., GET, POST, PUT, DELETE). For example, you create a new station with a POST, retrieve its details with GET, change its name with PUT, and remove it with DELETE.

The appropriate HTTP verb is shown in front of each request, e.g.,

GET <https://iot.campbell-cloud.com/api/v1/organizations/{organizationId}/stations>

Path Segments

Many of the paths you'll see in the API documentation include path segments into which a specific value should be inserted. Take, for example, the following path:

GET <https://iot.campbell-cloud.com/api/v1/organizations/{organizationId}/stations>

Here we expect you to replace {organizationId} with your Organization ID, which is available from the Organization Information panel within the Organization Settings application in CampbellCloud (see Figure 1 below). These path segments will always be indicated by the curly braces. Thus, the actual request would look like:

GET <https://iot.campbell-cloud.com/api/v1/organizations/867e3a14-7614-47a2-a5fa-73e831cfc170/stations> if your Organization ID were 867e3a14-7614-47a2-a5fa-73e831cfc170

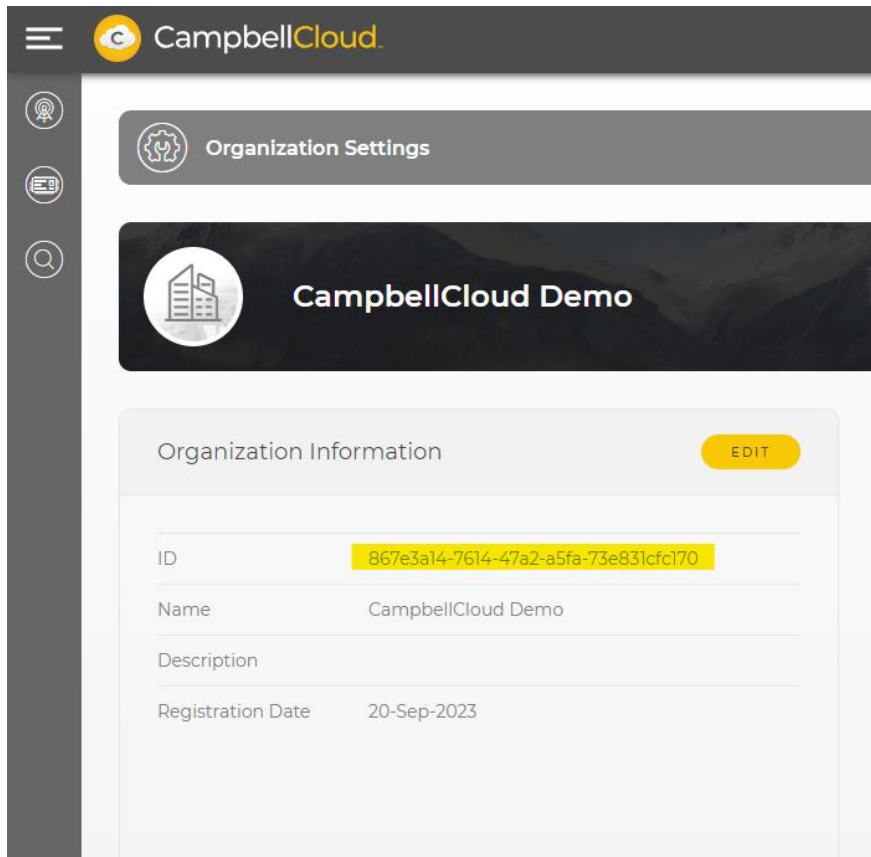


Figure 1: Organization ID can be found in the Organization Information panel within the Organization Settings application.

Request Body Fields

When we ask you to perform a POST request we usually expect content in the request body. We expect the body to be JSON formatted.

Response

Typically the response will have a JSON formatted body (unless we specifically say otherwise).

A 2xx status code indicates a successful request, e.g., POST and GET requests respond with a 200, PUT and DELETE requests respond with a 204. The responses you can expect for each HTTPS request, both success and error responses, are provided within the API documentation. For example, a successful response to the below list-assets request will look something like this:

GET https://iot.campbell-cloud.com/api/v1/organizations/5a63cc03-c203-4dea-99a5-b3f2b8149733/assets

Status Code:
200 OK

JSON Response:

```
[
  {
    "created_ts": 1706648962979,
    "metadata": {
      "serial": "TRBE-6ATE-89JK",
      "name": "Aspen 10 Test",
      "$profile": "aspen10",
      "$version": 1,
      "status": "inactive",
      "uid": "TRBE-6ATE-89JK",
      "manufacturer": "Campbell Scientific",
      "configuration": {
        "communication_threshold": 60,
        "timezone": "Etc/UTC"
      },
      "auto_update": {
        "os": true,
        "recipe_version": "",
        "recipe": true,
        "os_version": ""
      },
      "model": "aspen10"
    },
    "created_by": "kfk83392-03m3-1s4d-90ce-5j1fd9l7e428",
    "id": "39h32e56-fp37-488n-99dd-182bf53a65j9"
  }
]
```

In the above example, a GET request has been used to request a list of all assets within the specified Organization. Since there is only 1 asset in this Organization, the GET request has responded with a 200 OK status code and the JSON formatted body providing information related to this 1 asset.

Authentication

CampbellCloud API access is strictly via Bearer Authentication, requiring a bearer token with every API call made. Bearer token authorization is a two step process. The Bearer token has a limited lifespan and will expire after a set period of time. As a result, the first request made when making an API call must be to retrieve a Bearer token. For example:

POST <https://iot.campbell-cloud.com/api/v1/tokens>

```
{
  "username": "{authUsername}",
  "password": "{authPassword}",
  "client_id": "cloud",
  "grant_type": "password"
}
```

In the above path segments, the user would enter their username and password credentials for their CampbellCloud account User account.

If valid, a response similar to below would be provided:

Status Code:
200 OK

JSON Response:

```
{
  "access_token": "",
  "expires_in": 3600,
  "refresh_expires_in": 1800,
  "refresh_token": "",
  "token_type": "Bearer",
  "not-before-policy": 0
}
```

Note, the actual bearer token and refresh token have been removed from the above response.

You can test using the CampbellCloud API by using the Demo User authentication details to access data from the CampbellCloud Demo Organization. Please use the following authentication details for accessing the Demo Network:

- URL <https://iot.campbell-cloud.com>
- Username demo@campbell-cloud.com
- Password `c^T9m4A4*!tyPu9q`
- Organization ID `867e3a14-7614-47a2-a5fa-73e831cfc170`

Please now refer to the CampbellCloud API documentation at the link below for specific information on supported API calls.

<https://campbell-cloud.com/api/v1/docs/>