



Flowtrac API Specification

This document is a brief introduction to the Flowtrac API. It is designed to be a light reference and introduction to our specification. This document is intended to be a work in progress and is subject to change, particularly as more end-points get developed and documented.

Beta Test and Live Servers

A BetaTest site for testing will be provided to you when you receive your live site. All example requests in the documentation point to the live URL - API Endpoint.

Requests can be sent to the BetaTest URL by replacing the live URL with the following:

```
'https://<company_name_here>.flowtrac.com/BetaTest/'
```

Logging in

Overview

Logging into the API is fairly simple. It requires making a POST request with two JSON fields, badge and pin, in the body of the request. These correspond directly to the badge and pin fields in the system, respectively, of a user badge record (menu path: Administration->Users->Badges).

Last Updated Date : 03/01/2023

Login Example

```
curl -X POST -H "Content-Type: application/x-www-form-urlencoded" -d  
'badge=<your_badge>&pin=<your_pin>'  
'https://<company_name_here>.flowtrac.com/api/device-login/'
```

Authentication of Requests

Overview

After sending a valid POST request to the `device-login` endpoint, two forms of authentication will be included with the response that will be required for making subsequent requests.

Access Token Approach

The log in will return an access token and a type in the authorization sub array as so:

```
{  
  "id" : "00000000-0000-0000-0000-000000000000",  
  "active" : "Active",  
  "browser_username" : "myusername",  
  "browser_password" : "myencryptedpassword",  
  "device_username" : "mybadge",  
  "device_username" : "myencryptedpin",  
  "company_defaults" : {  
    {...},  
  },  
  {...},  
  "access_token" :  
  "9e6efe382ebe46723b7561e43570748711b02f4cfdd92aa19dcaaacc7d0a0ea8",  
  "token_type" : "bearer"  
}
```

You can include this in the headers as `Authorization : ${token_type} ${access_token}`.

NOTE: this is the preferred method, and will be the example used throughout this document.

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Example of subsequent requests

```
curl -X POST -H "Content-Type: application/json" -H "Authorization: Bearer 9e6efe382ebe46723b7561e43570748711b02f4cfdd92aa19dcaaacc7d0a0ea8" -d '{
    "active" : "Active"
    "account" : "My Account"
    "type" : "00000000-0000-0000-0000-000000000000"
}' 'https://<company_name_here>.flowtrac.com/api/accounts'
```

Cookie Approach

A User Cookie will also be returned that can be included in the headers of requests.

Example of subsequent requests

```
curl -X POST -H "Content-Type: application/json" -H "Cookie: flow_auth=9e6efe382ebe46723b7561e43570748711b02f4cfdd92aa19dcaaacc7d0a0ea8" -d '{
    "active" : "Active"
    "account" : "My Account"
    "type" : "00000000-0000-0000-0000-000000000000"
}' 'https://<company_name_here>.flowtrac.com/api/accounts'
```

Using Requests

Overview

Each resource has different allowed requests and can behave slightly differently from other resources. However, each request type follows the same general behavior. Behavior specific to each resource and examples for the different requests can be found in the documentation for the specific resource.

Note: Date values must be formatted as yyyy-mm-dd or yyyy/mm/dd.

POST

Adds a new item to the resource. The body of the request needs to be JSON formatted data that contains at least the minimum required data for the resource. Only one item can be created per POST request.

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Example

```
curl -X POST -H "Content-Type: application/json" -H "Authorization:
<token_type> <access_token>" -d '{
    "active" : "Active"
    "account" : "My Account"
    "type" : "00000000-0000-0000-0000-000000000000"
}' 'https://<company_name_here>.flowtrac.com/api/accounts'
```

PUT

Updates an existing item in the resource. The body of the request needs to be JSON formatted data that contains at least the id of the item to be modified. The rest of the JSON data are the available PUT columns with the new values for those columns. Each resource will have columns that can be null (Nullable) and columns that cannot be null (Non-nullable).

Example

```
curl -X PUT -H "Content-Type: application/json" -H "Authorization:
<token_type> <access_token>" -d '{
    "id" : "00000000-0000-0000-0000-000000000000",
    "active" : "InActive",
    "allow_backorder" : "Yes",
    "default_billing_address_id" : null
}' 'https://<company_name_here>.flowtrac.com/api/accounts'
```

GET

Returns a record or set of records from the resource. Every resource that allows GET requests allows the use of various comparison operators that can be used to filter out items from the results and meta commands to perform various actions with the results. To use a filter and/or meta command, append ? to the end of the url then the filters and/or commands to use with & in between each filter or command. Filters are formatted as:

<column_name>-<operator>=<value> *without the angle brackets.*

Meta commands are formatted as <command>=<value> *without the angle brackets.*

Filter operator values support HTML encoded characters.

Available Filter Operators

eq = Equal

neq = Not Equal

contains = Contains

startswith = Starts With

endswith = Ends With

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gt = Greater Than

gte = Greater Than or Equal

lt = Less Than

lte = Less Than or Equal

in = In

notin = Not In

isnull = Is Null

isnotnull = Is Not Null

Is Null and Is Not Null Filters

The `isnull` and `isnotnull` filters do not require a value and will ignore the value if set.

In and Not In Filters

The `in` and `notin` filters are special filters that require a list to be provided for the value. The list requires its values to be separated by commas.

Example Usage of In and IsNotNull Filters

```
curl -X GET -H "Authorization: <token_type> <access_token>" -H "Content-Type: application/json" 'https://<company_name_here>.flowtrac.com/api/picks?bin_type-in=Inventory,Received&description-isnotnull'
```

Available Meta Commands

`_operator`

`_limit`

`_start`

`_page`

`_columns`

`_distinctColumns`

`_sort`

`_dir`

_operator

Sets whether the GET results have to match all filters or match only one filter. Setting the meta command's value to 'and' filters results to ones that match all filters. Setting the meta command's value to 'or' filters results to ones that match at least one of the filters. By default, this command is treated as if the value is 'and' if the meta command is not used in the URL.

_limit

Limits the number of returned results to the value set for this command. The value for this meta command must be greater than 0.

_start

Starts the list of results at the position specified by this operator's value. Result positions start at 0.

_page

Starts the list of results at the `_page` value MULTIPLIED BY the `_limit` value position. If `_limit` is not set before this command, this command does nothing. Result positions start at 0.

_columns

Selects which of the available filterable columns to return for the GET request. Columns are separated by commas.

_distinctCoulmns

Selects which of the available filterable columns to return for the GET request and removes duplicate items from the result. Columns are separated by commas.

_sort

Selects which of the available filterable columns to sort the results by. Sorts results in ascending order by default.

_dir

Sets how the selected sort column should be ordered. If no sort column has been selected, the 'created' column is selected as the sort column by this command. A value of 'ASC' sorts in ascending order. A value of 'DESC' sort in descending order.

Examples

```
curl -X GET -H "Authorization: <token_type> <access_token>" -H "Content-Type: application/json" 'https://<company_name_here>.flowtrac.com/api/accounts?active-neq=Inactive&account-startswith=My%20Acc&addresses-gte=1&type-in=Supplier,Distributor&default_billing_address_id-isnotnull'
```

```
curl -X GET -H "Authorization: <token_type> <access_token>" -H "Content-Type: application/json" 'https://<company_name_here>.flowtrac.com/api/accounts?_operator=and&_distinctColumns=account,active&_limit=10&_page=2&_sort=account&_dir=DESC'
```

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```
curl -X GET -H "Authorization: <token_type> <access_token>" -H "Content-Type: application/json" 'https://<company_name_here>.flowtrac.com/api/accounts?type-eq=Customer&allow_b\nackorder-eq=Yes&_operator=or&_columns=account_id,type_id&_start=3'
```

DELETE

Removes an item from the resource. Requires a JSON formatted body with an id value.

Example

```
curl -X DELETE -H "Authorization: <token_type> <access_token>" -H "Content-Type: application/json" -d '{\n  "id" : "12345678-90AB-CDEF-FEDC-BA0987654321"\n}' 'https://<company_name_here>.flowtrac.com/api/accounts'
```