



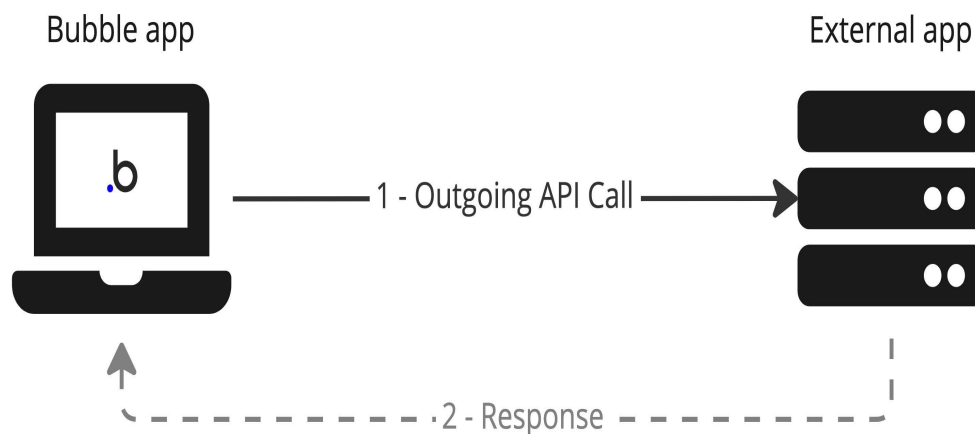
API Integration in Bubble.io

What do you mean by Bubble.io?

Bubble.io is a no-code web development platform that allows you to make custom web applications without need for extensive coding expertise. With Bubble, users can drag-and-drop visual elements to create their application's user interface, define workflows and logic using a visual editor, and integrate with external services using APIs. Bubble provides a powerful and flexible platform that allows users to build sophisticated web applications quickly and easily.

What is the API?

API stands for Application Programming Interface. The API allows developers to interact with any applications programmatically. The API provides endpoints that allow you to read, write and modify data in the application. By integrating the API with mobile apps, websites, or other software applications, you can extend the functionality of your application. The API communicates with applications through HTTP requests. The API supports common HTTP methods such as GET, POST, PUT, PATCH, and DELETE, and its response results in JSON format.



Data can be retrieved from the application through the API, new records can be created, existing records can be updated, and can be deleted. You can also use the API to trigger the workflow in your application, allowing you to automate tasks and streamline your workflow processes.

Bubble provides developers with a powerful tool for integrating API or building custom software solutions based on applications.

The HTTP requests

HTTP methods specify the kind of action we want the server to initiate when we make a call to a specific resource.

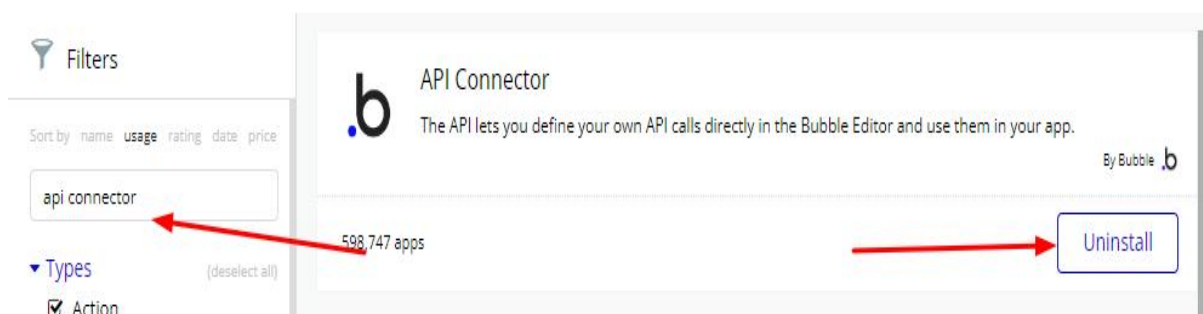
Action	Description	Bubble equivalent
GET	Retrieve data	Do a Search for
POST	Create data	Create a new Thing
PUT	Update data	Make changes to a Thing
PATCH	Replace data	Make changes to a Thing
DELETE	Delete data	Delete a Thing

Instructions to set up the External API in the Bubble application:

In Bubble, we have an API connector plugin to integrate the external API in the Bubble applications. This plugin is provided by Bubble to integrate external APIs, you can install it from the plugin section.

To install the plugin:

1. Navigate to the plugin section of the Bubble editor and click Add plugin.
2. Search for API Connector
3. Click the install button
4. Click Done.



The API Connector is a special plugin developed by Bubble's development team that allows you to connect to external API. This can be used to post data, trigger actions on a service, or you can fetch data from an external service.

Most APIs will go through three steps before they can be used:

1. Firstly, set up the authentications for the API service
2. Secondly, we set up the different calls we want to use

3. Then we initialize the call to make sure it works and see the server's response

For a New API request, you need to click on the Add another API.

New API request

When setting up a new API request begins with naming the service. As part of setting up an API request, the first step is to give the API a descriptive name.

The screenshot shows a form for creating a new API. The 'API Name' field is highlighted with a red box and contains the text 'New API'. To its right is an 'Authentication' dropdown menu set to 'Private key in header' and a trash icon. Below these are fields for 'Key name' (containing 'Authorization') and 'Key value' (empty). A 'Development key value' field contains the text '(optional)'. Further down are sections for 'Shared headers for all calls' with an 'Add a shared header' button, and 'Shared parameters for all calls' with an 'Add a shared parameter' button. At the bottom, there is a link 'Import another call from cURL' and a button 'Add another call'.

Add another call

Also, for make another call in API you need to click on add another call.

The screenshot shows a form for adding another call. The 'Name' field is labeled 'API Call' and has a red '1' next to it. To its right are 'Use as' and 'Data type' dropdowns, both set to 'Data' and 'JSON' respectively. Below these is a 'GET' dropdown and a large empty text field with a red '2' next to it, followed by the text '(use [] for params)'. There are checkboxes for 'Attempt to make the call from the browser', 'Include errors in response and allow workflow actions to continue', and 'Capture response headers'. Below these are buttons for 'Add header' and 'Add parameter'. At the bottom, there is a red warning message: 'You need to initialize this call before it will work.' and a button labeled 'Initialize call' with a red '3' next to it, followed by the text 'Manually enter API response'.

Initialize Call

After added API URL then click on the initialize call button to see the API result in the application.

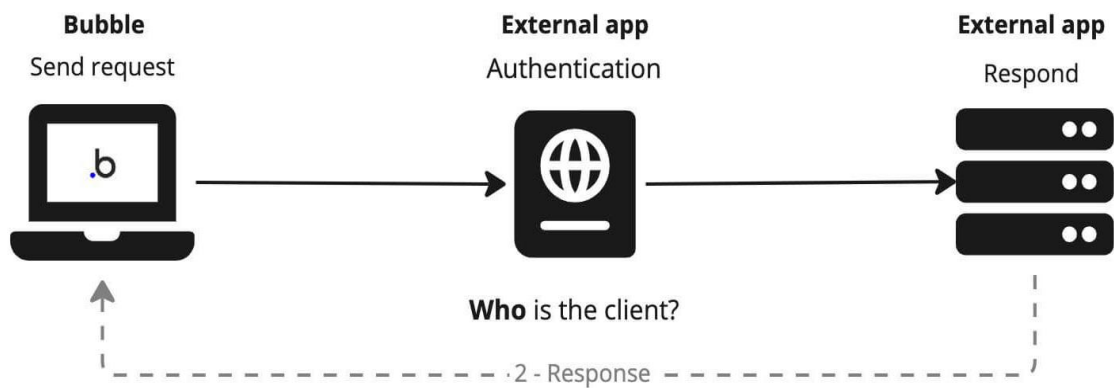
The screenshot shows the 'DELETE Movie by ID' configuration in Bubble. The 'Name' field is 'DELETE Movie by ID', 'Use as' is 'Action', and 'Data type' is 'JSON'. The 'GET' dropdown is selected, and the URL is 'https://academy-demo-api.bubbleapps.io/api/1.1/obj/movie/[id]'. The 'Key' is 'id' and the 'Value' is '1681737812249x6146035'. The 'Private' checkbox is checked, and 'Allow blank' is unchecked. There are sections for 'Headers' and 'Parameters' with 'Add header' and 'Add parameter' buttons respectively. Below these are checkboxes for 'Include errors in response and allow workflow actions to continue' and 'Capture response headers', both of which are unchecked. A red warning triangle with the text 'You need to initialize this call before it will work.' is present. At the bottom, there is an 'Initialize call' button and a 'Manually enter API response' option. A red arrow points from the warning text to the 'Initialize call' button.

In case your call was successful, you will see the popup below. Once you have accepted the API response, click Save.

The screenshot shows a popup titled 'Returned values - DELETE Movie by ID'. It contains a message: 'You can modify the data types that are returned by the call. This affects how you can use the data in Bubble. If you chose 'Ignore field', the fields won't be shown in the dropdowns.' Below this message is a table with columns for the field name, the returned value, and a dropdown menu to select the data type. The fields and their values are: 'response_id' (1682322189563x296910943771139460), 'response title' (Batman Begins PATCH), 'response Created By' (1681714484210x964863879181386900), 'response Created Date' (2023-04-24T07:43:09.571Z), 'response Modified Date' (2023-04-24T07:43:41.422Z), 'response running time' (140), 'response streaming' (true), and 'response tagline' (The Legend Begin...). The dropdown menus are set to 'text' for most fields, 'number' for 'response running time', and 'yes / no' for 'response streaming'. At the bottom of the popup, there is a 'Show raw data' link and a 'SAVE' button. A red arrow points to the 'SAVE' button. On the right side of the popup, there are three 'continue' buttons and a 'Use as' dropdown menu.

API Authentication

The API needs to authenticate you to know who you are, and then it will decide if you are authorized to make requests with it.



Authentication methods

You can authenticate in many ways. A unique API token is required for authentication and is specified in the API documentation. There are many ways to authenticate.

Method	Description
None or self-handled	No authentication required
Private key in URL	The private key is included as a parameter in the URL
Private key in header	The private key is included as an HTTP Header in the request
HTTP Basic Auth	The client sends username and password in plain text
OAuth 2 Password Flow	The client sends username and password and receives an access token in return
OAuth 2 User-Agent Flow	Similar to OAuth2 Password Flow, but for user-agent
OAuth2 Custom Token	The client sends a custom token to the server for verification
JSON Web Token	The client sends a JSON web token to the server for verification
Client-side SSL certificate	The client presents an SSL certificate to the server for verification

API Name

Authentication

Private key in header

Key name

Key value

Development key value

Shared headers for all calls

Add a shared header

Shared parameters for all calls

Add a shared parameter

Shared headers

A shared header will be included in every API call. The “add a shared header” button allows you to define headers for all calls, you can define headers for individual calls. Click to expand the link below the “add a shared header” button to define headers for individual calls.

API Name

Authentication

Private key in header

Key name

Key value

Development key value

Shared headers for all calls

Key

Value

Add a shared header

Shared parameters for all calls

Add a shared parameter

Name

move down expand

Name

Use as

Action

Data type

JSON

POST

(use [] for params)

Key

Value

Private
☒

Optional
☐

Add header

Body type

JSON

Shared Parameters

A shared parameter will be included in every API call, similarly to the header described above. The “add a shared parameter” button allows you to define parameters for all calls, you can define parameters for individual calls. Click to expand link below the “add a shared parameter” button to define parameters for individual calls.

This screenshot shows the configuration panel for the 'Demo Movie API - Authenticated'. It includes fields for 'API Name', 'Authentication' (set to 'Private key in header'), 'Key name' (set to 'Authorization'), and 'Key value' (set to 'Bearer 1681714892891x152683741826116'). There is also a field for 'Development key value' with the placeholder '(optional)'. Below these are sections for 'Shared headers for all calls' and 'Shared parameters for all calls'. The 'Shared parameters for all calls' section is highlighted with a red box and contains a table with 'Key' and 'Value' columns. An 'Add a shared parameter' button is located below this table. At the bottom, there is a section for 'Name' (set to 'Create New Movie') with 'move down' and 'expand' links to its right. A red arrow points to the 'expand' link.

API Name: Demo Movie API - Authenticated Authentication: Private key in header

Key name: Authorization Key value: Bearer 1681714892891x152683741826116

Development key value: (optional)

Shared headers for all calls

Add a shared header

Shared parameters for all calls

Key	Value

Add a shared parameter

Name: Create New Movie

move down expand

This screenshot shows the configuration panel for the 'Create New Movie' API call. It includes fields for 'Name' (set to 'Create New Movie'), 'Use as' (set to 'Action'), and 'Data type' (set to 'JSON'). The 'POST' method is selected, and the URL is 'https://academy-demo-api.bubbleapps.io/api/1.1/wf/create-movie'. There is a section for 'Headers' with an 'Add header' button. The 'Body type' is set to 'JSON'. The 'Parameters' section is highlighted with a red box and contains a table with 'Key', 'Value', 'Private', 'Allow blank', 'Optional', 'Queryst.', 'Long', and a trash icon column. An 'Add parameter' button is located below this table. A red arrow points to the 'Add parameter' button.

Name: Create New Movie Use as: Action Data type: JSON

POST https://academy-demo-api.bubbleapps.io/api/1.1/wf/create-movie (use [] for params)

Headers

Add header

Body type: JSON

Parameters

Key	Value	Private	Allow blank	Optional	Queryst.	Long	
title	Batman Begins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
tagline	The Legend Begin..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
running time	140	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
streaming	true	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

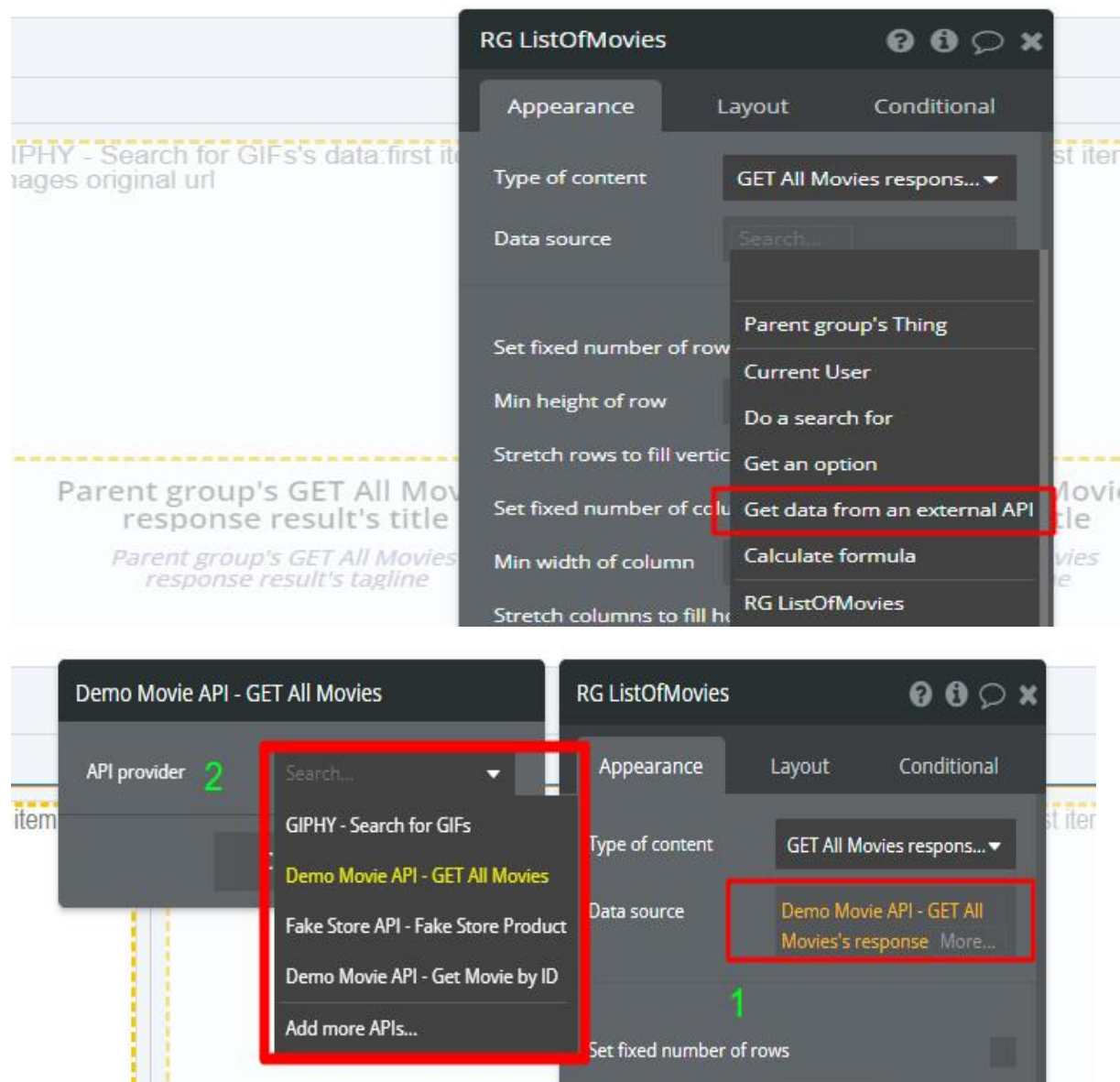
Add parameter

Use as

The Use as dropdown lets you select whether to use that API call as a data source or an action:

Data

Use as data mean that the Bubble will treat the API call as data source. Click on “Get data from an external API” then you can select an API to get data you want.



Action

Use as the action makes the API call available as an action in your workflow editor. Click the “click here to add an action...” block, click Plugins, and select which action you want to run.

p PATCH TITLE →

Click here to add an action...

Search for an action...

- Account
- Navigation
- Data (Things)²
- Email
- Payment
- Analytics
- Element Actions
- Plugins**
- Custom Events

Install more plugins actions...

Demo Movie API - Authenticated -
Create New Movie

Demo Movie API - Authenticated -
DELETE Movie by ID

Demo Movie API - Authenticated -
Modify a Movie by ID- PATCH

Demo Movie API - Authenticated -
Modify a Movie by ID- PUT

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