

# Swagger API Adapter

## Overview

DBSync [Swagger 2.0/ OpenAPI 3.0](#) or OpenAPI adapter facilitates the user to use any homegrown applications and integrate it with other applications by enabling the Swagger API on their systems.

It is a collaboration platform where you can automatically connect SaaS applications using API with the help of DBSync Cloud Workflow.

## Problem Statement

Organizations using varied applications might find it challenging to integrate with other applications to extract, transform and load data across applications. DBSync Swagger / OpenAPI3.0 adapter addresses this issue and enables the user to connect or integrate various applications supporting Swagger API.

We will be using Swagger Demo from <https://petstore.swagger.io> and use it to show how to integrate it using CloudWorkflow

## Quick Review of PetStore API

Let us use an example of Petstore Swagger to understand the functionality of DBSync Swagger API adapter:

## Setting up Swagger API DBSync

- Login into DBSync cloud workflow instance
- To setup Connector follow the steps listed below:
- Click on connectors from the left panel and add New Connection as follows:

Fig: Connector section

- Provide a name for the connector and choose Swagger API Connector from the drop-down menu.
- Click Save to move to the next step.
- Under Connector Settings add respective values as mentioned below. In this example we are setting up process to 'Get' method by status by either using Swagger URL validation <https://petstore.swagger.io/#/pet/findPetsByStatus> or add the query by using Swagger json query box.

Fig: Connector settings

Note: The Username, Password are auto filled fields based on login credentials, and make changes if required while validation.

## Customizable Header Feature

During the setup process, there could be a need to have additional headers to authenticate the API calls. Our platform enables this customizable feature. In this example, an additional header would be 'Special-key', this helps in providing authentication to access and make API calls to the

Petstore. Json query for this would be as below:

```
"x-additional-headers": [  
  {  
    "name": "api_key",  
    "in": "header",  
    "required": true,  
    "value": "special-key"  
  }  
]
```

- Post Successful validation 'Save' the connection.
- This new project can be accessed under projects tab on the left navigation.

## Creating a workflow process

DBSync Swagger API supports the following methods listed below. For each of these methods workflow can be created :

**Read Methods - this can be accessed in the Trigger section of the workflow.**

- Get - this method is used to read data from a list or individually. All Get calls show up under the Trigger section of the workflow.

Fig : 1.Trigger section in a Workflow 2. Select datasource 3. Select object

**Write Methods - this can be accessed in the Rule section of the workflow.**

- Post - this method adds a new record in the target application. All post calls Show up under Rules section of the workflow and work on Insert command.
- Put - deprecated operation can be performed using this method. All put methods Shows up Rules section of the workflow and work on Upsert command.
- Patch - All put methods are listed under the Rules section of the workflow and work on Update command.
- Delete - Deletion operations on API's can be performed using this method. All delete methods are listed under the Rules section of the workflow and work on Delete command.

Fig : 1.Rules section in a Workflow 2. Console Adapter 3. Select insert/upsert/update 4. Select console

## Workflow to create 'GetAll'

- Let us now create a workflow - 'GetAllPets' which has collated 'Get' queries under Processes.
- Click the pencil icon to edit and query all the pets.
- A trigger section will open up. This section basically lists all the Get Calls. You can see this as the first section upon clicking the edit button.
- Get - All Get calls show up under the Trigger section of the workflow. The Get call is basically a Read data which will provide a list of data or individual records.

Fig:Selecting Swagger API from select datasource

- Select the API (the connector that was created from the list in the Select datasource section)
- Select the Object from the list . For this example let us consider Find by Status.Refer image below.
- You can also select by tags, store inventory, user etc.

Fig: How to select objects from Trigger section

- Based on these conditions all the parameters are identified by the application and the Field, Operator and values columns are automatically filled.
- Click Preview to validate.
- Refer below image to verify validation. The query result will reflect as below if validated.

Fig - Query result post validation

- Rules: The rules sections lists all the supported methods of calls such as the below mentioned list:
- The rules section is embedded with a console adapter and you can integrate the data by clicking console.

Fig: Rules Section

- Click Map to create a mapping of the data

Fig: Mapping Screen

- Select the schema from the drop-down
- Click Save and Close
- Click Save Workflow
- A pop-up confirming the workflow is saved will appear on the screen

Fig: Pop-up confirming workflow is saved

- Click Run Now

Fig: Integration complete

- A list of all the pets along with the json will be displayed.

### **Workflow to create a 'Pet'**

Now we will create a new Pet in the Petstore.

Follow the same steps to create a post call.

- Click the edit icon to create a post call
- Select the datasource as console adapter
- Select the target object as console
- Click Preview

Fig: Trigger Section in a Workflow

- Under Rules section enter details as below:

Fig: Rules Section in a Workflow

- Select target connector as the project you created(Petstore Swagger API)
- Select operation: Insert, Update or upsert. For this example select Insert.
- Select target object. For this eg select pet
- Click Map.

Fig: Mapping

- Click Save and Close
- Click Save Workflow
- Click Run Now

Fig: Integration complete

## Steps to get started

1. To get started Click this link to create an account -  
<https://www.mydbsync.com/product/cloud-workflow>
1. Setup your connection using similar steps listed in this document.
2. Create customizable processes and workflow.
3. Use reference links below to create the same workflow.

## Our Blogs

- <https://www.mydbsync.com/blogs/swagger-examined-part-1-how-to-document-an-api-with-incredible-simplicity/>
- <https://www.mydbsync.com/blogs/swagger-examined-part-2-the-dbsyncs-swagger-api/>
- [mydbsync.com/blogs/swagger-examined-part-3-how-to-create-a-connector-to-your-app-using-dbsync/](https://www.mydbsync.com/blogs/swagger-examined-part-3-how-to-create-a-connector-to-your-app-using-dbsync/)
- <https://www.mydbsync.com/blogs/speed-up-connectors-turnaround-with-swagger-specification/>

## References



- Swagger API documentation : <https://swagger.io/docs/specification/paths-and-operations/>
- Swagger Tutorial : <https://swagger.io/blog/api-design/openapi-3-0-specification-training/>
- PetStore : <https://petstore.swagger.io/>
- Json formatter: <https://jsonformatter.curiousconcept.com/#>
- PetStore swagger json: <https://petstore.swagger.io/v2/swagger.json>

