Tableau Automation Starter Kit: Leveraging Tableau's Webhooks to automate and integrate your data across your SaaS apps

Hello Data Rockstars!

The purpose of this guide is to help you set up Webhooks with Tableau's REST API and introduce you to key elements of the Azuqua platform - a tool which will allow you to leverage the JSON payload (that's the output of those Webhooks) Tableau provides in order to drive automated downstream processes across other applications that you use.

This guide will cover the following:
- Beginning your Azuqua Trial and Downloading your Sample FLO Pack
- Registering Webhook URLs from Azuqua with Tableau
- Tableau JSON Payloads (what it means for Azuqua)
- Getting Started in Azuqua - Terminology
- Getting Started in Azuqua - Tips and Tricks

This guide is built on the understanding that you have the following files (if you need them, just reach out and we can get them to you):
-Postman Collection of Webhook-related API calls
-Webhooks Developer Preview

Beginning your Azuqua Trial

If you haven't already done so, [sign up for your free, 14-day trial of Azuqua](.).

Enter your information and activate your trial via the activation email you receive. If for some reason you do not receive this, flag down one of the Azuqua helpers who can work to get you going.

Once you're logged into Azuqua, you will see the Home page. You should see a folder on the left-hand side of your screen that says TC18 Hackathon FLOpack. If you open that up, you'll see 4 starter FLOs built out to show you the ropes.

Congrats! You're now well on your way to harnessing Tableau's upcoming Webhook functionality using Azuqua!

Registering Webhook URLs from Azuqua with Tableau

Open "Webhook FLO 1" in Azuqua.

All FLOs in Azuqua kick off with an "Event", or trigger. Often these are polling events or webhooks, triggered by an action while monitoring an application's API.

In the case of Tableau's new Webhook functionality, we are going to use an API Endpoint Event. This allows us to connect to pretty much any API. The difference between this and application-based Events is that they have some additional layers already built in, such as authentication. For the Webhooks, however, we are registering our Events' URL with Tableau, so authentication will come when we register them.

At this point, be sure to load the provided Postman collection into Postman or a similar tool. We'll leverage Tableau's Webhooks Developer Preview to walk through the Webhook Registration process.

The only part of the next steps that involves Azuqua is generating the URL that we need to register with Tableau.

Within the FLO you just opened, at the bottom of the API Endpoint event card on the far left, you'll see the following symbol   **< / >**

Select this and you'll see a dialogue box appear. Make sure that this window is set to "Expose as Webhook". If you do not see an Alias or Client Token, you'll just need to close out of the window and Save your FLO, then those will populate for you.

The URL that you will register with Tableau is the Invoke URL (the first line of the dialogue box).

Use this URL in the "Create Webhook" process as the Webhook Destination URL.

Note: Tableau does not have any uniqueness across registered URLs. What this means is that you can actually use the same API Endpoint Event in
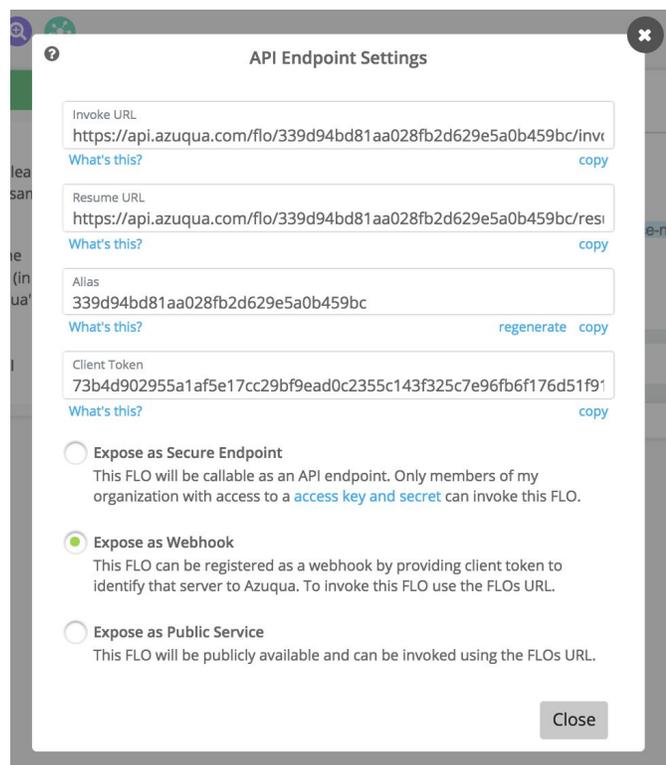
Azuqua to receive information from multiple Tableau events (e.g. DatasourceExtractFailure AND DatasourceExtractSuccess). As such, you can register multiple URLs to each event. *We recommend at this stage in development that you avoid having multiple URLs registered to each event that Tableau experiences.*

Tableau JSON Payloads (and what they mean for Azuqua)

Azuqua operates by taking JSON parcels and data, then manipulating and passing them between applications via their APIs.

As such, you'll notice that the API Endpoint "body" is going to return the values associated with the declared keys. We have preloaded these FLOs with API Endpoints that have the keys included, but note that you can always start from scratch and simply add keys.

From here, you can leverage the drag-and-drop functionality provided by Azuqua. These keys will provide values that can be passed on for dynamic input in business logic, mathematical operations, communications, and many other uses as you look to fire off automated processes to inform and manage your business.
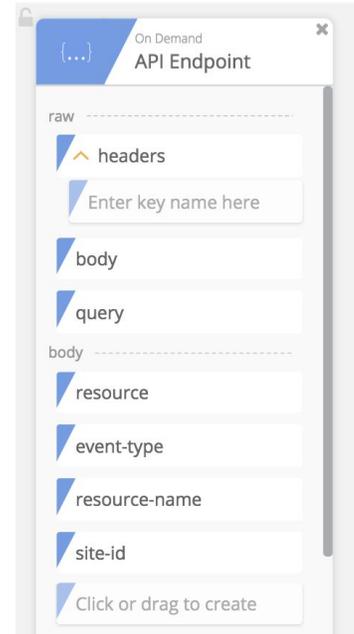
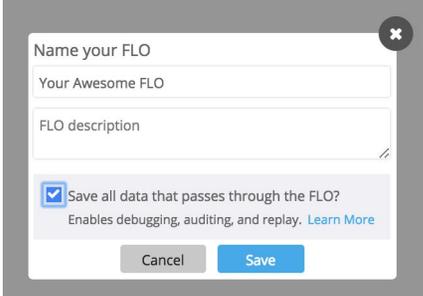**Getting Started in Azuqua - Terminology**

Here are some key terms to keep in mind in Azuqua:
- FLO - workflow beginning with some sort of initial trigger, either schedule or API-based
- Event - the trigger for a FLO.
  - Based on an application (e.g. monitor for new records), a schedule, an API Endpoint, a Form, or a Child FLO (which allows iterative processing).
- Action - an application-based step in the FLO.
  - These are based on API capabilities of tools in our App Library and run the gamut from creating and deleting content and users reading or getting additional information about records in question.
  - There is no limit to how many Actions are used in a FLO once an Event starts it off, or how many applications you want to integrate in one FLO.
- Function - an Application-agnostic step in a FLO
  - These allow for manipulation of data, incorporating building logic, and even performing raw HTTP requests
- FLO History - the history of FLOs you've run, and your best friend when it comes to troubleshooting your FLOs.
- XRay - a tool that shows the source and other uses of a field in a FLO.
- FLOgrammer - You!

Getting Started in Azuqua - Tips and Tricks

1. When you create a new FLO, before you run it be sure to save it and give it a name. While you're there, check the box to retain data - this will allow you to dive into your FLO History and see data as it passed through, allowing for thorough and clear troubleshooting.

2. Turn on "XRay", allowing you to easily track fields as your FLO grows.

3. "Other Options" - These allow you a few options, generally pretty helpful

   a. Choose Fields - some of the JSON objects you'll work with have quite a few fields - keep things simpler by only selecting a few, or expand to incorporate more custom fields.

   b. Edit Card - rename elements of the card to help keep things in order. Rename outputs (you'll eventually have a few "outputs" running around, with only XRay helping you keep them straight), card titles, etc. to stay on top of what's happening in your FLO

4. Functions are amazing! Think Calculated Fields from Tableau, from date, number, and string manipulation to branching logic driving multiple divergent FLOs from the same event.

5. Not sure what a card does? Click the help button for more information.

6. Duplicate! Want to replicate something you did in one FLO? Simply Duplicate that FLO and edit the new one. Similar to how this can be done in Tableau to iterate quickly.

7. Save often! It took Tableau a little while to get Autosave and Azuqua is a lot younger than Tableau :)

8. Test your FLOs - You can test either single cards or entire FLOs!

9. If your screen is getting busy, zoom out.

10. Don't forget to turn your FLO on to receive webhook pings!

11. Feel free to ask! We're here to help, don't hesitate to reach out if you have any questions about using Azuqua.

12. Additional resources:

    a. Azuqua Academy

    b. Azuqua.com