

INTRODUCTION TO BIG DATA ARCHITECTURES

APACHE NIFI LAB (1/3)

Agenda

- Lab context
- Setting up Twitter



The background of the slide is a close-up photograph of water splashes, creating numerous small droplets and ripples. The image is split diagonally from the top-left to the bottom-right. The upper-left portion is white, and the lower-right portion is a teal color that matches the water in the photograph.

1.

**LAB
CONTEXT**

Goals

- To create a complete NiFi flow
- To store streaming data in a distributed file system (HDFS).



Description

The lab is all about creating a data flow with NiFi to ingest tweets into HDFS.

Given that the default processor doesn't work as expected, we'll use a Python library, [Tweepy](#), to ingest tweets from Twitter.



NiFi data flow

sources



ingestion



storage



processing



A close-up photograph of teal-colored water with several raindrops creating ripples and splashes. The background is dark and out of focus.

2.

SETTING UP TWITTER

Setting up Twitter

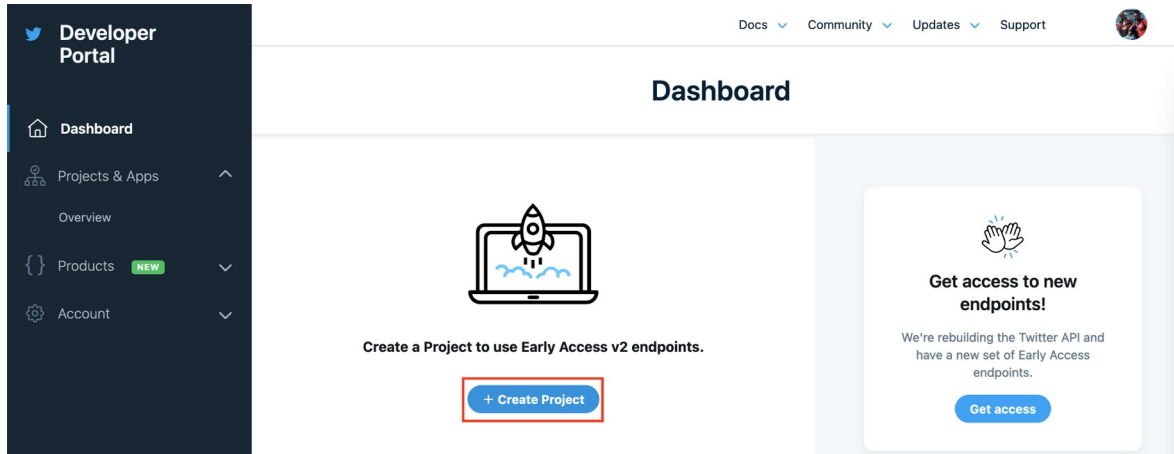
Before anything, you need to create a “Twitter App” by following these steps:

1. Visit [Projects & Apps section](#) in the Developer Portal
2. Sign into your account*
3. Click the “*Create an app*” button.
4. Fill-in the form (*at least required fields*).
5. Grab the details to setup the **ingestion script** later on.

* You might need to create a new one; follow the wizard and provide the required information
(feel free to mention that is going to be used for academic purposes and share my name/email if needed)

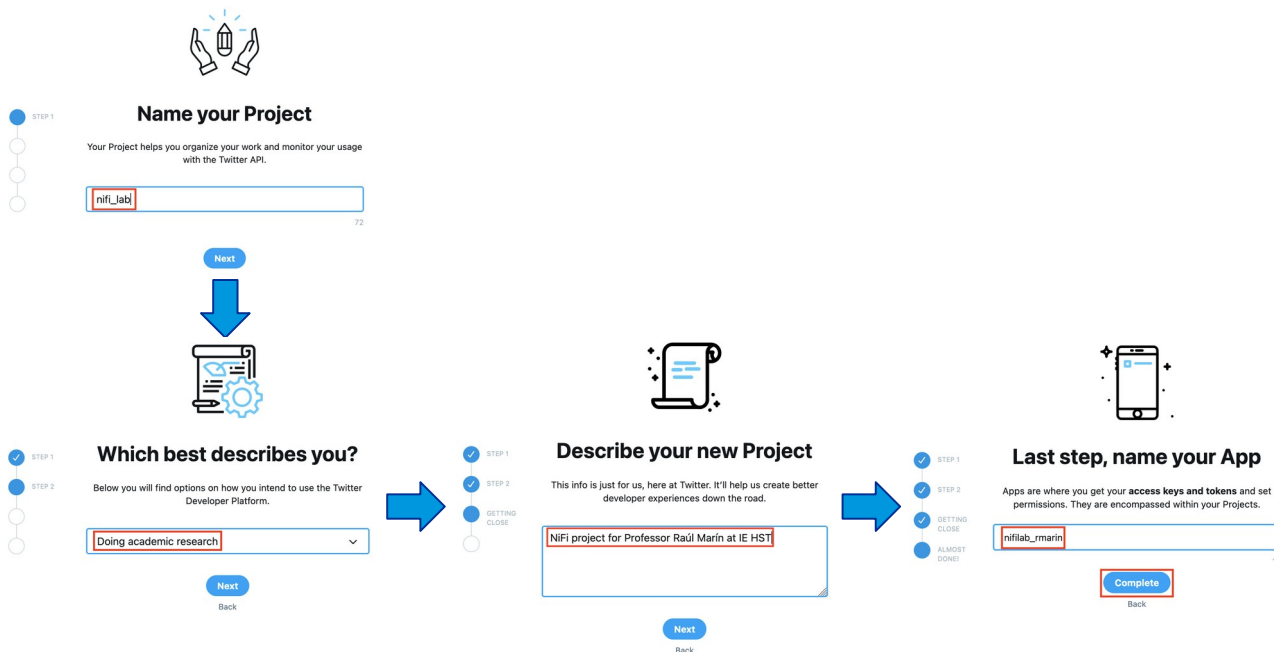
Setting up Twitter - App Creation

1. Once you're in, click the **“Create an app”** button to start the process:




Setting up Twitter - App Creation

2. Let's fill-in **required fields**:




The image shows a three-step wizard for creating a Twitter app. Step 1, 'Name your Project', includes an icon of hands holding a lightbulb and a text input field containing 'nifi_lab1'. Step 2, 'Which best describes you?', includes a dropdown menu with 'Doing academic research' selected. Step 3, 'Describe your new Project', includes a text area with 'NIFI project for Professor Raúl Marín at IE HST'. Step 4, 'Last step, name your App', includes a text input field with 'nifilab_rmarin'. Navigation buttons like 'Next', 'Back', and 'Complete' are visible between and after steps.



STEP 1 **Name your Project**

Your Project helps you organize your work and monitor your usage with the Twitter API.

Next




STEP 1 **Which best describes you?**

Below you will find options on how you intend to use the Twitter Developer Platform.

Next

Back




STEP 1 **Describe your new Project**

This info is just for us, here at Twitter. It'll help us create better developer experiences down the road.

Next

Back



STEP 1 **Last step, name your App**

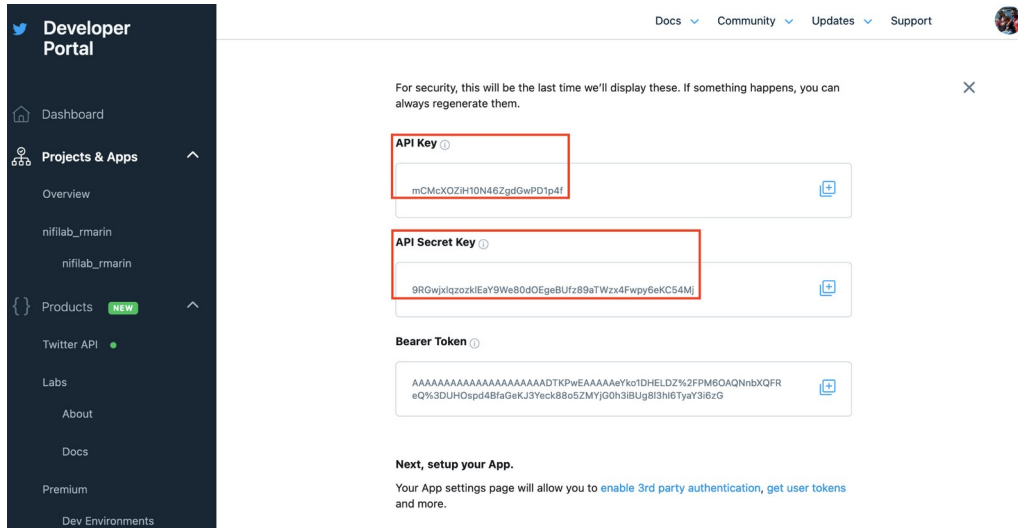
Apps are where you get your **access keys and tokens** and set permissions. They are encompassed within your Projects.

Complete

Back

Setting up Twitter - App Creation

3. If all goes well, your **Twitter App should be created** and the **API Key**, **API Secret Key** will show up*:

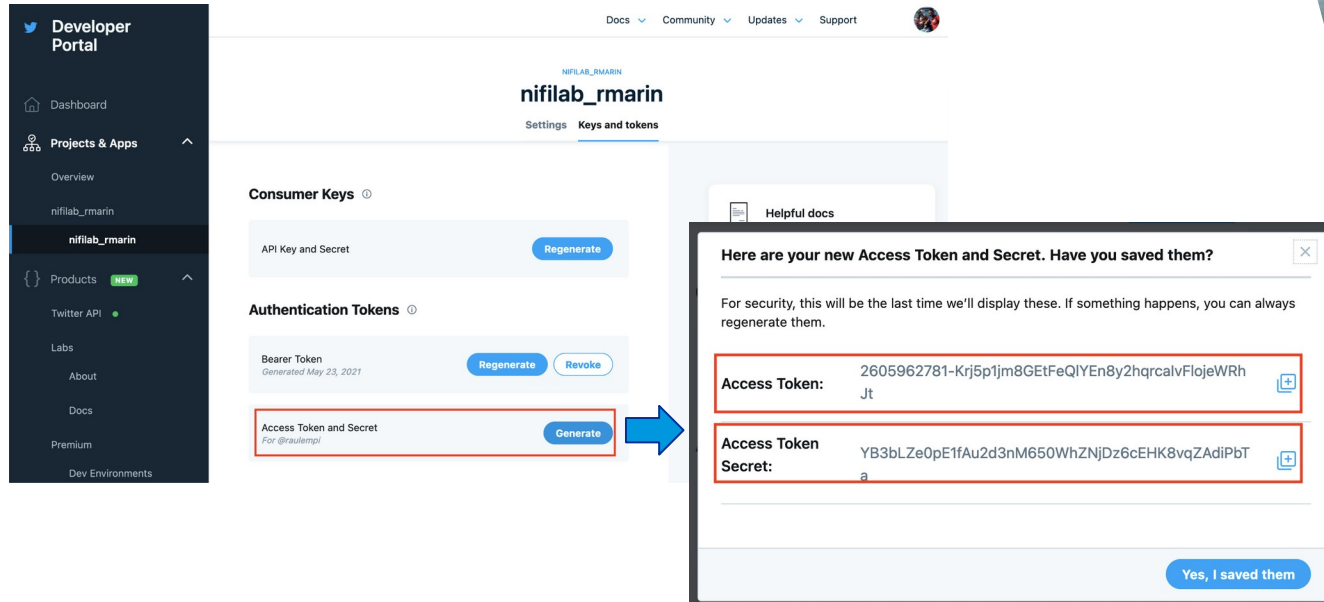


The screenshot displays the Twitter Developer Portal interface. On the left is a dark sidebar with navigation links: Dashboard, Projects & Apps (expanded), Overview, nifilab_rmarin, Products (marked NEW), Twitter API (selected), Labs, About, Docs, Premium, and Dev Environments. The main content area shows a warning message: "For security, this will be the last time we'll display these. If something happens, you can always regenerate them." Below this, three fields are displayed: API Key (mCMcXOZH10N46ZgdGwPD1p4f), API Secret Key (9RQwjxlqzozkiEaY9We80dOEgeBUfz89aTWzx4Fwpy6eKC54Mj), and Bearer Token (AAAAAAAAAAAAAAAAADTKPwEAAAAeYko1DHELDZ%2FPM6QAQNbXQFR eQ%3DUHospd4BfaGeKJ3Yec88o5ZMYG0h3iB Ug8l3h6TyaY3i6zG). Each field has a copy icon. At the bottom, it says "Next, setup your App." and "Your App settings page will allow you to enable 3rd party authentication, get user tokens and more."

* Write them down for the following steps.

Setting up Twitter - App Creation

4. The **Access Token** and **Access Token Secret** will be also needed:



The screenshot shows the Twitter Developer Portal interface. On the left is a dark sidebar with the 'Developer Portal' logo and navigation links: Dashboard, Projects & Apps (with a sub-link for 'nifilab_rmarin'), Products (marked 'NEW'), Twitter API, Labs, About, Docs, Premium, and Dev Environments. The main content area is titled 'nifilab_rmarin' and has tabs for 'Settings' and 'Keys and tokens'. Under 'Keys and tokens', there are sections for 'Consumer Keys' (with a 'Regenerate' button) and 'Authentication Tokens'. The 'Authentication Tokens' section shows a 'Bearer Token' and a highlighted 'Access Token and Secret' section with a 'Generate' button. A blue arrow points from this 'Generate' button to a modal window. The modal window has the title 'Here are your new Access Token and Secret. Have you saved them?' and a close button. It contains a warning message: 'For security, this will be the last time we'll display these. If something happens, you can always regenerate them.' Below this, it displays the 'Access Token' and 'Access Token Secret' for the user, both highlighted with red boxes. At the bottom of the modal is a button that says 'Yes, I saved them'.

Token Type	Value
Access Token	2605962781-Krj5p1jm8GEtFeQlYEn8y2hqrcaIvFlojeWRhJt
Access Token Secret	YB3bLZe0pE1fAu2d3nM650WhZNjDz6cEHK8vqZAdiPbTa

* Write them down for the following steps.