

Twitter Streaming Importer

Clément Levallois, Matthieu Totet

2017-01-31

Table of Contents

Description of the plugin	1
Installing the plugin	1
Initializing the plugin (to be done just once).....	3
Using the plugin	9
Network Logic	9
Timeline	12
The end.....	13



Description of the plugin

This plugin is created by [Matthieu Totet](#), who is a long time community member of Gephi (check his [Gephi Streamer!](#))

You can find additional documentation on this plugin on [Matthieu's website](#).

This plugin enables you to:

- Collect tweets in realtime, on the topic you choose
- Get the connections between the users mentionned in these tweets
- Visualize these connections in Gephi, or just export all the tweets to Excel

Installing the plugin



The setup of the plugin will need you to create a Twitter account, if you don't already have one. Get your Twitter login and password ready. **You also need a mobile phone number where your Twitter account can be confirmed.**



Setting up a Twitter account and creating a Twitter app is a boring task.

It takes just 15 minutes, and you have to do it just once. Then you'll have Twitter at your fingertips.

Let's go!

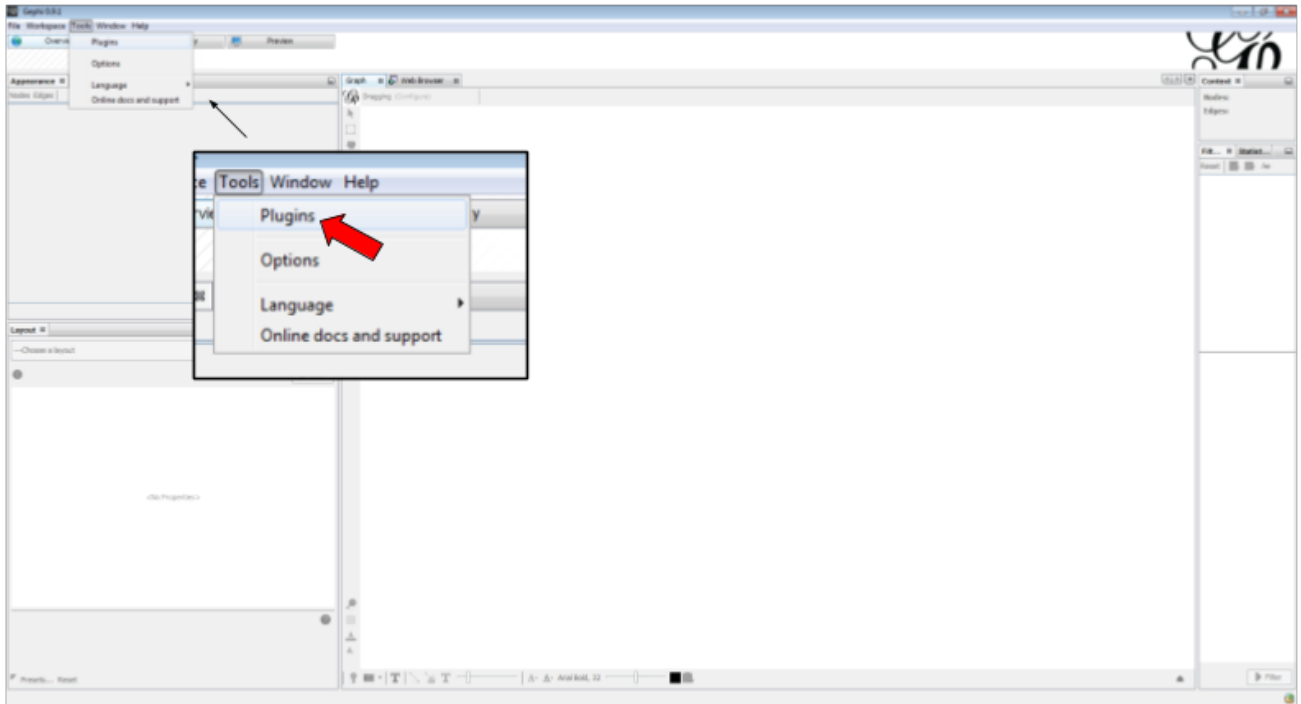


Figure 1. Choose the menu Tools then Plugins

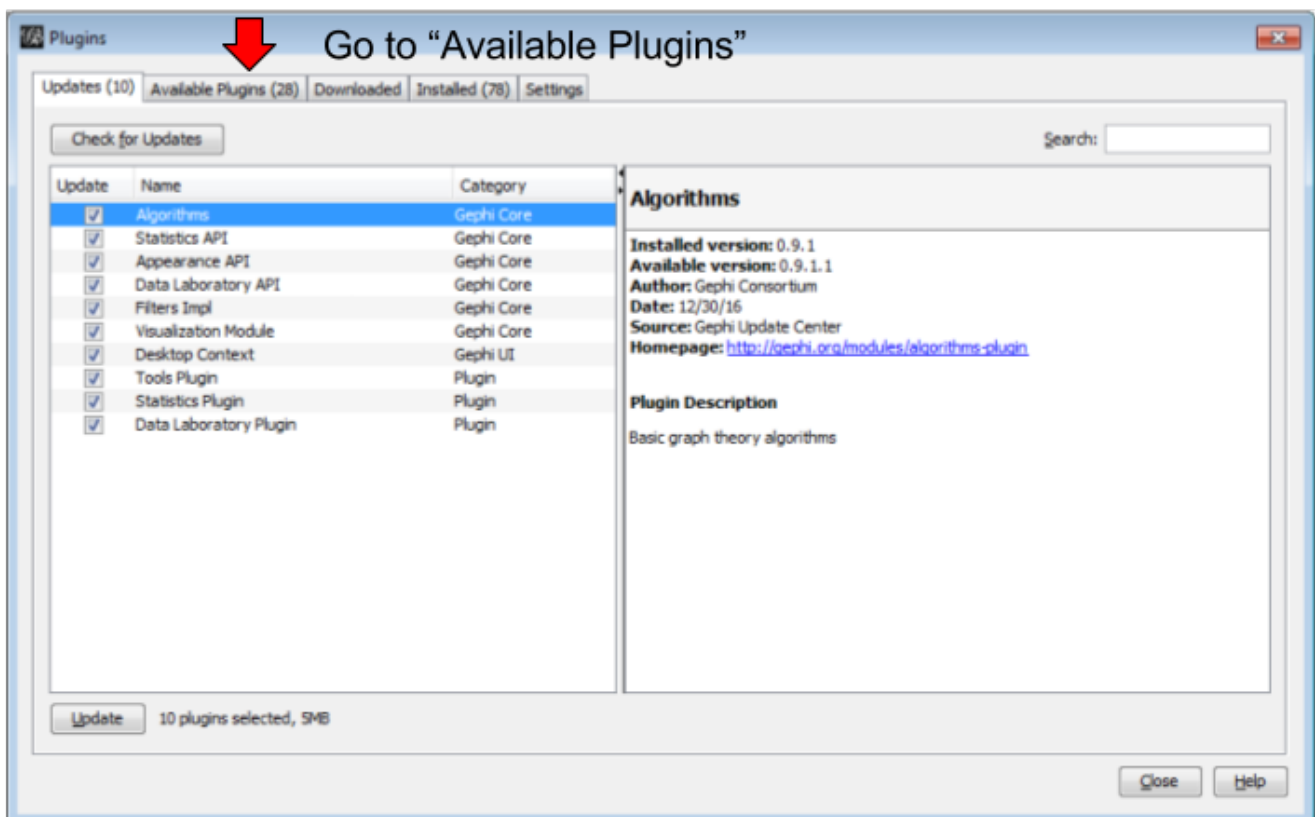


Figure 2. Click on the tab Available Plugins

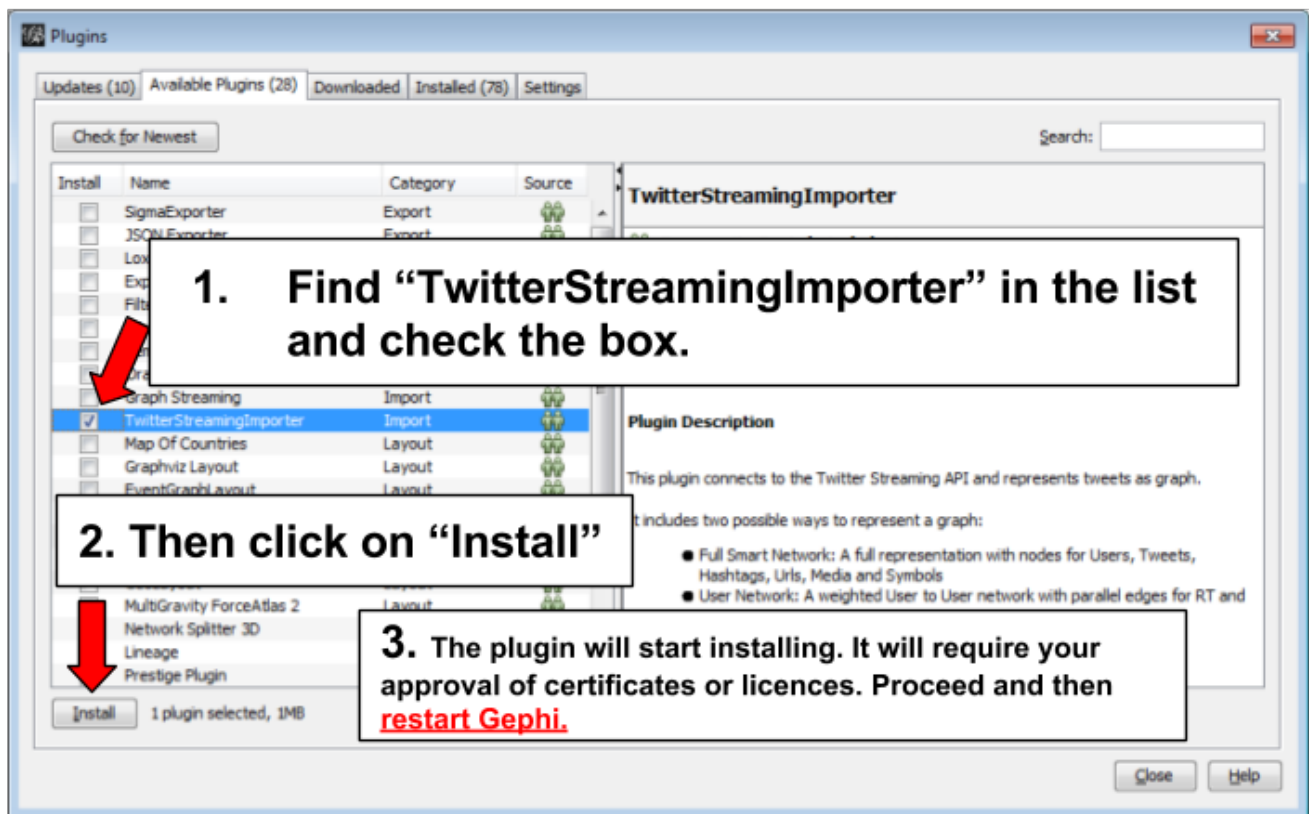


Figure 3. Install the plugin then restart Gephi

Initializing the plugin (to be done just once)

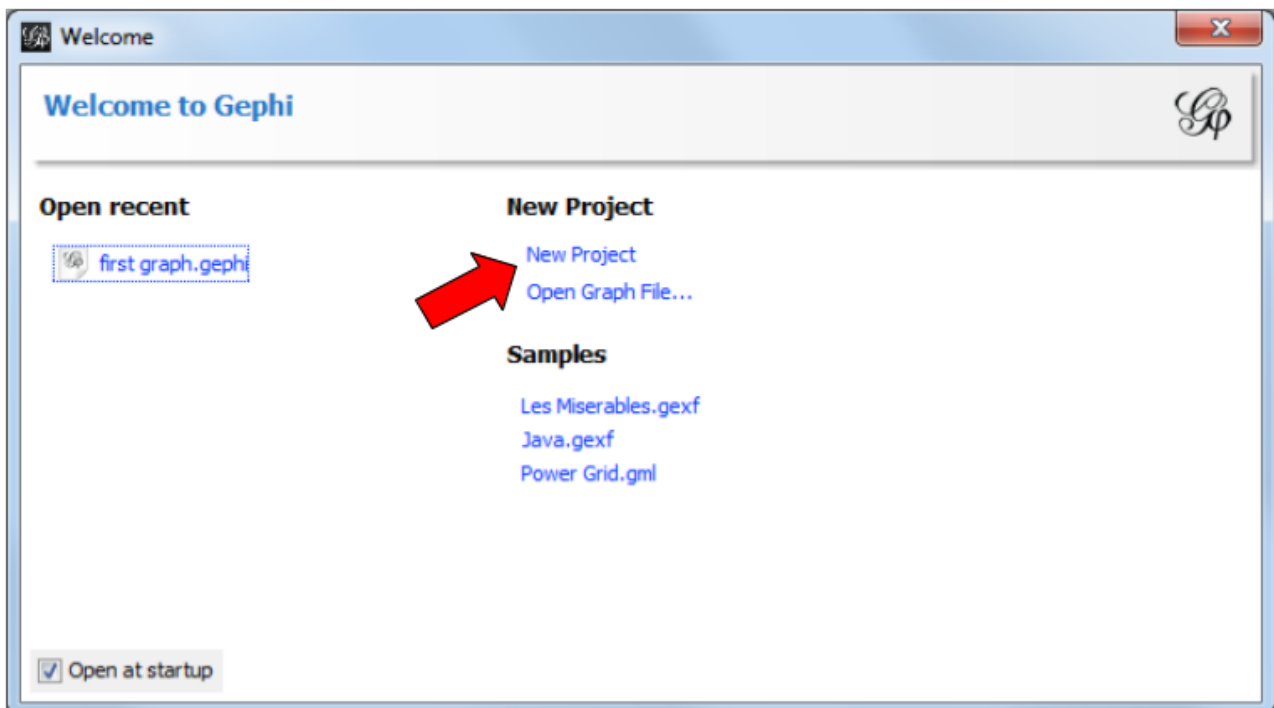


Figure 4. Open a new project in Gephi

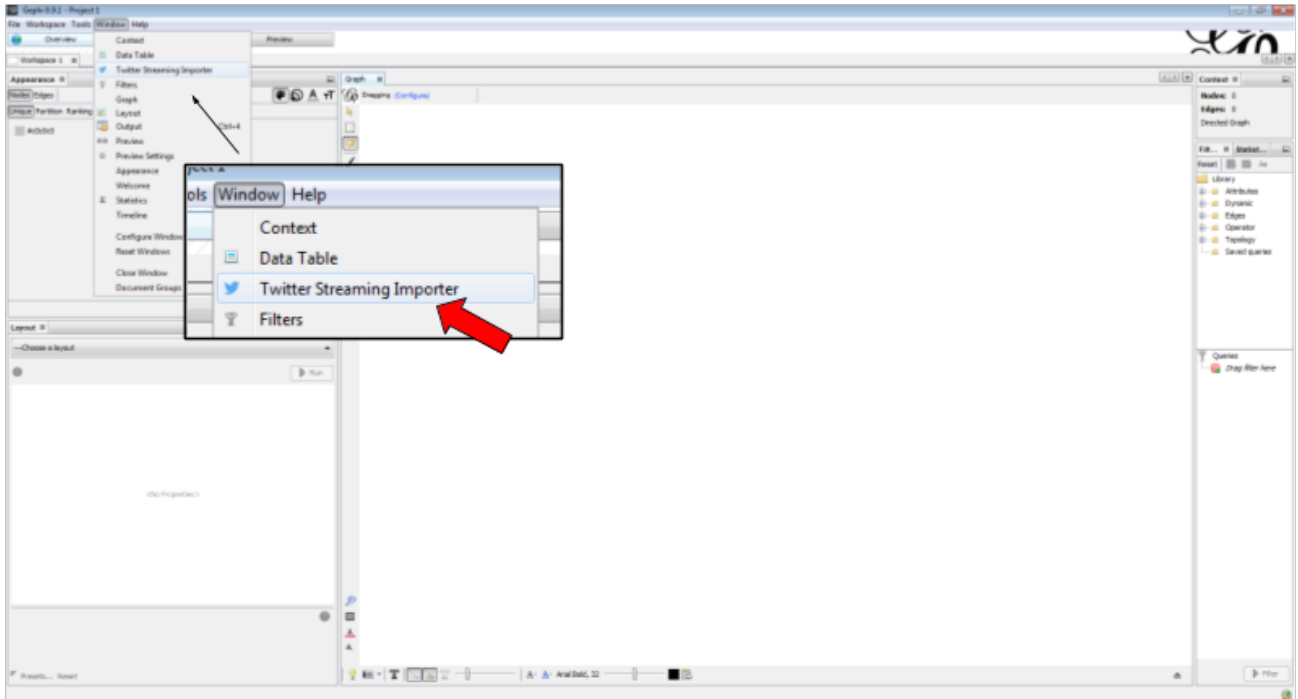


Figure 5. Display the plugin in Gephi

We need now to connect to a Twitter account. If you already have a Twitter account and you are logged in, [skip to here](#).

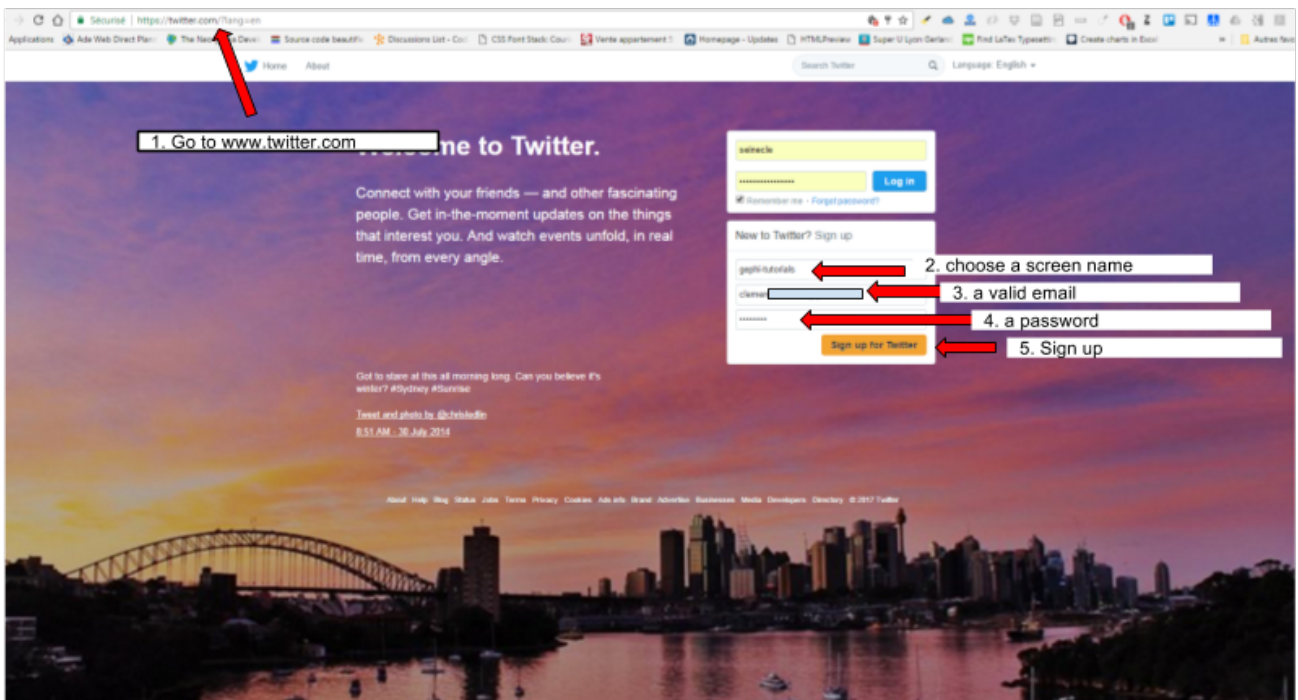


Figure 6. Creating a Twitter account

Join Twitter today.

gephi-tutorials ✓

clem... ✓

..... ✓

Sign up

By signing up, you agree to the Terms of Service and Privacy Policy, including Cookie Use. Others will be able to find you by email or phone number when provided.

Advanced options

Just click here

Figure 7. Confirmation of the sign-up



You have received an email by Twitter about the sign up. At some point (but now would be a good time), you must click on the link in this email to confirm it.

Verify your phone.

We sent a code to +33 6 [] Enter it below so we know you're a real person.

Verification code

Verify

Re-send SMS Edit phone number

Enter here the code you received via text messaging

Figure 8. Enter the verification code you received by sms

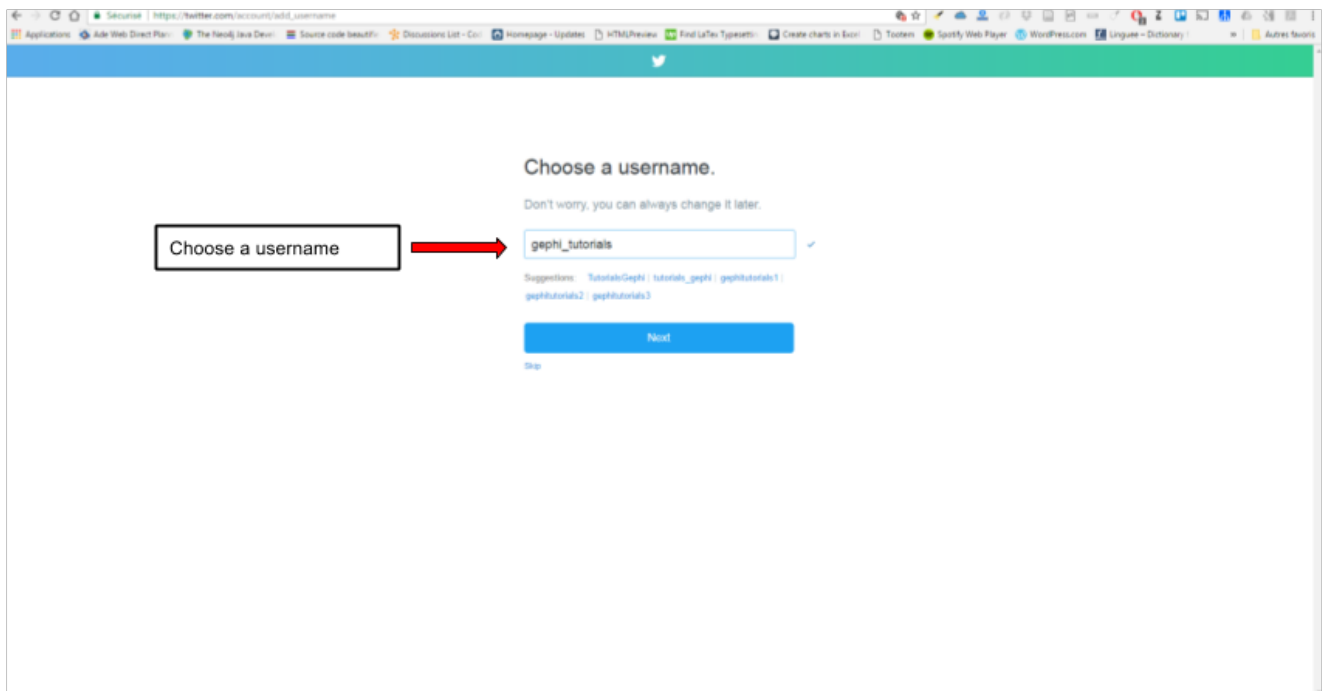


Figure 9. Choose a username

The next screens of the sign up for Twitter are not important for us. Just follow the steps until you get to the page showing your Twitter profile, meaning the setup is finished.

You now have a Twitter account. We need to create a Twitter app which will authorize us to collect tweets automatically via Gephi

Go to <https://apps.twitter.com>:

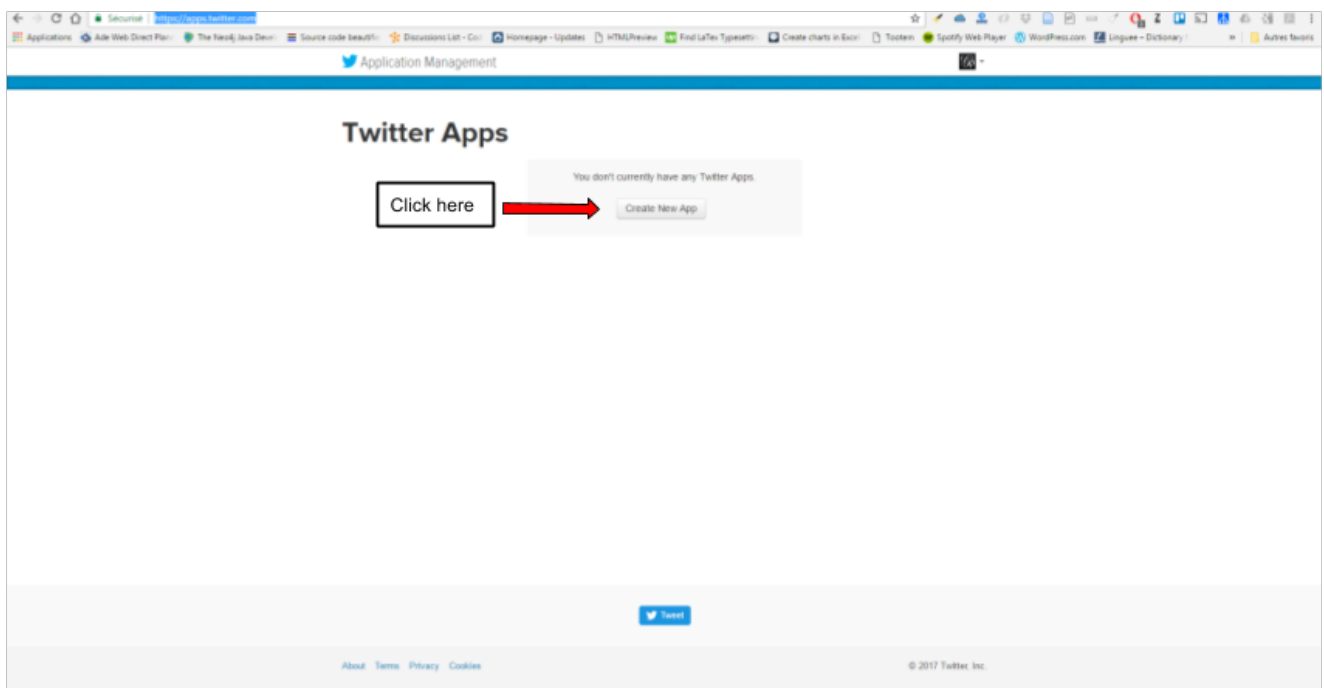


Figure 10. Create a new app

The screenshot shows the 'Create an application' page on the Twitter Developer Portal. The page is titled 'Create an application' and contains a form with the following sections:

- Application Details:**
 - Name:** A text input field. An annotation box says 'Choose a name, can be random' with a red arrow pointing to the field.
 - Description:** A text input field. An annotation box says 'Random description' with a red arrow pointing to the field.
 - Website:** A text input field. An annotation box says 'Here put: <http://www.example.com> (don't forget the "http://")' with a red arrow pointing to the field.
 - Callback URL:** A text input field. An annotation box says 'Leave this field empty' with a red arrow pointing to the field.
- Developer Agreement:**
 - A checkbox labeled 'Yes, I have read and agree to the [Twitter Developer Agreement](#)'.
 - An annotation box says 'Read the agreement carefully: publishing, sharing or selling Twitter data comes with strict conditions!' with a red arrow pointing to the checkbox.
- Create your Twitter application:** A button at the bottom right. An annotation box says 'Finally, click here' with a red arrow pointing to the button.

Figure 11. Fill in the fields

INFO: Almost there!!

The screenshot shows the 'Keys and Access Tokens' page for an application named 'gephi-tutorial-example'. The page has a green banner at the top that says 'Your application has been created. Please take a moment to review and adjust your application's settings.' Below the banner, there are tabs for 'Details', 'Settings', 'Keys and Access Tokens', and 'Permissions'. The 'Keys and Access Tokens' tab is selected. The page contains the following sections:

- Organization:**
 - Information about the organization or company associated with your application. This information is optional.
 - Organization: None
 - Organization website: None
- Application Settings:**
 - Your application's Consumer Key and Secret are used to authenticate requests to the Twitter Platform.
 - Access level: Read and write (modify app permissions)
 - Consumer Key (API Key): H25CjzuAvuR6L15KwHEDG (manage keys and access tokens)
 - Callback URL: None
 - Callback URL Locked: No
 - Sign in with Twitter: Yes
 - App-only authentication: <https://api.twitter.com/oauth2/token>
 - Request token URL: https://api.twitter.com/oauth/request_token
 - Authorize URL: <https://api.twitter.com/oauth/authorize>

An annotation box says 'Click on "Keys and Access Tokens"' with a red arrow pointing to the 'Keys and Access Tokens' tab.

Figure 12. Click on Keys and Access Tokens

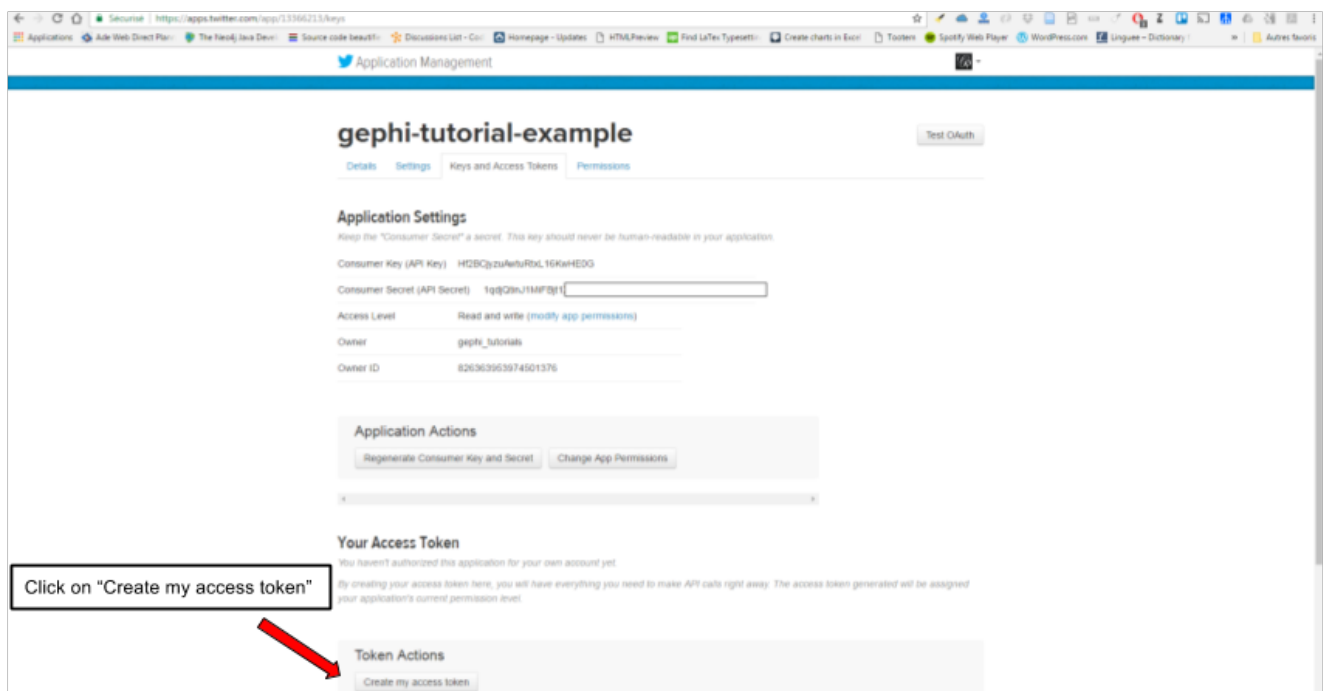


Figure 13. Click on Create my access token

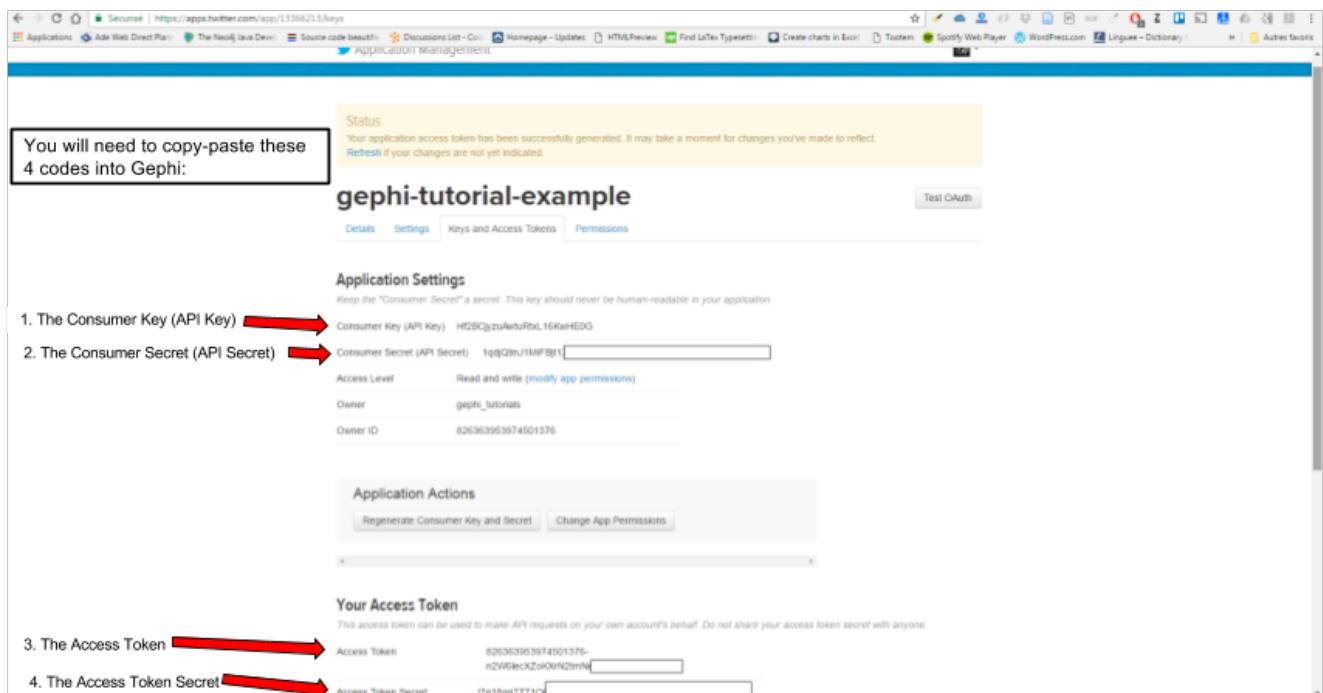


Figure 14. Copy paste these codes into Gephi

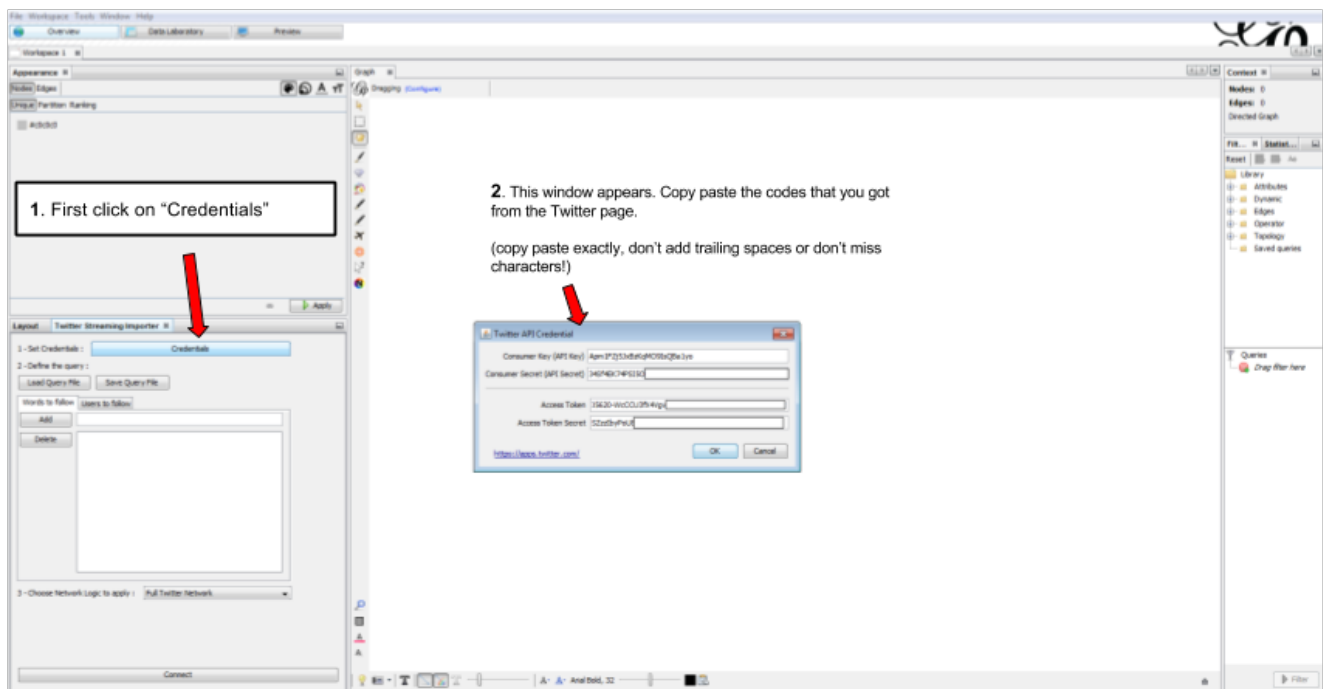


Figure 15. Where to copy paste the codes in Gephi

👍 Well done. This setup had just to be done once. Your credentials are saved and will be loaded at each run. Now we can start using the plugin.

Using the plugin

With the **Words to follow** tab, you will be able to follow one or multiple words. For **hashtags**, just enter the word without the hash in front of it. (e.g if you want to follow '#Gephi' just add 'Gephi')

With the **Users to follow** tab, you will be able to follow the activity of one or multiple users. Any tweet from this user or retweeting or mentioning the user will be captured.

You can combine the 2 tabs, the tweet collected will be matching either the Words to follow query **or** the User to follow query

The **Load Query File** and **Save Query File** buttons are here to save your search queries in a file or to load it from a file. It's convenient if you have a long list of words / users.

Network Logic

A **Network Logic** means: what should be done with an incoming tweet? How to transform it as a set of nodes and edges?



Figure 16. Selection of the network logic

There are for the moment 3 Network Logics to choose from:

- Full Twitter Network : This will represent **all** entities (User, Tweet, Hastags, URL, Media, Symbol etc...) as a graph.
- User Network : This will represent the interaction between users. Any mentions, retweets or quotes between 2 users, will be represented. The size of the edge represent the number of interactions between 2 users.
- Hashtag Network : This will create the network of hashtag.

In the following, we use the network logic "User Network":

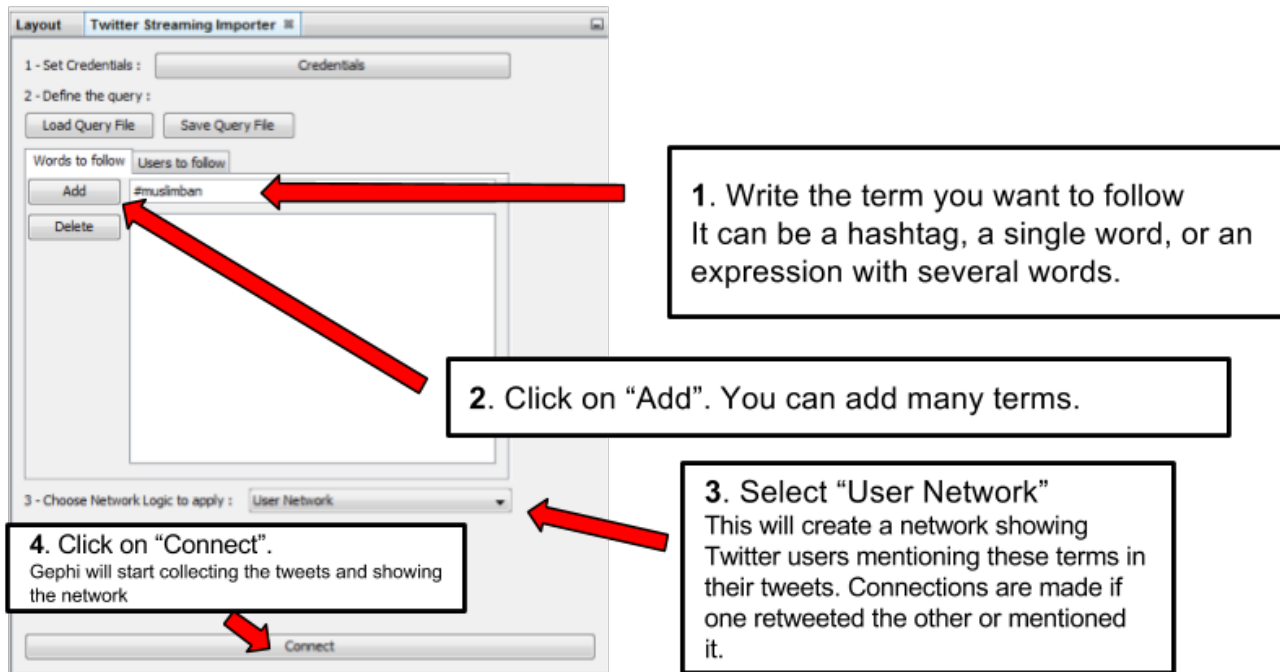


Figure 17. Adding terms and launching the collection of tweets

Be careful that if you choose very common terms, tweets will arrive fast and in large volumes.

If you don't have enough memory (RAM) on your computer, this could make it crash.

Click on "disconnect" to stop the collection of tweets.

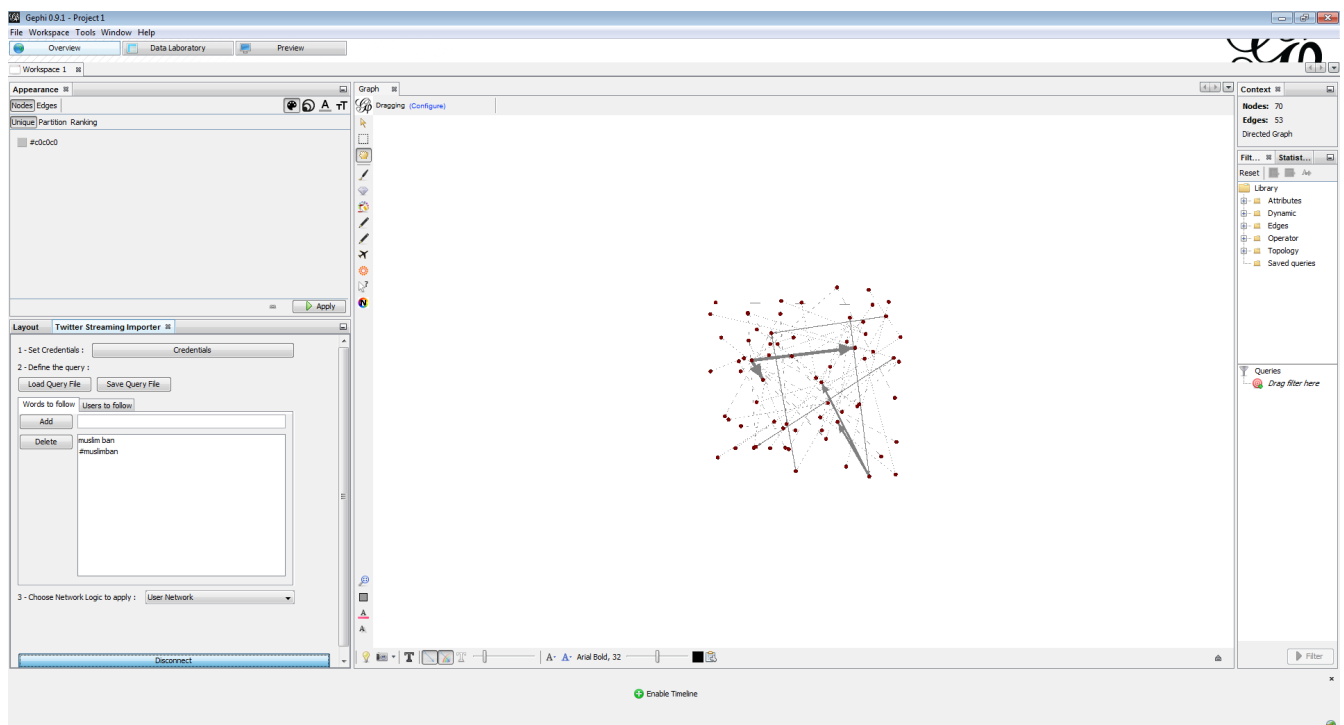


Figure 18. Users mentioned in or retweeting tweets citing the search terms

You can see the users organize spatially in real time, while the tweets are being collected.

Just run Force Atlas 2 in the "Layout" panel. This will not interrupt the collection of tweets.

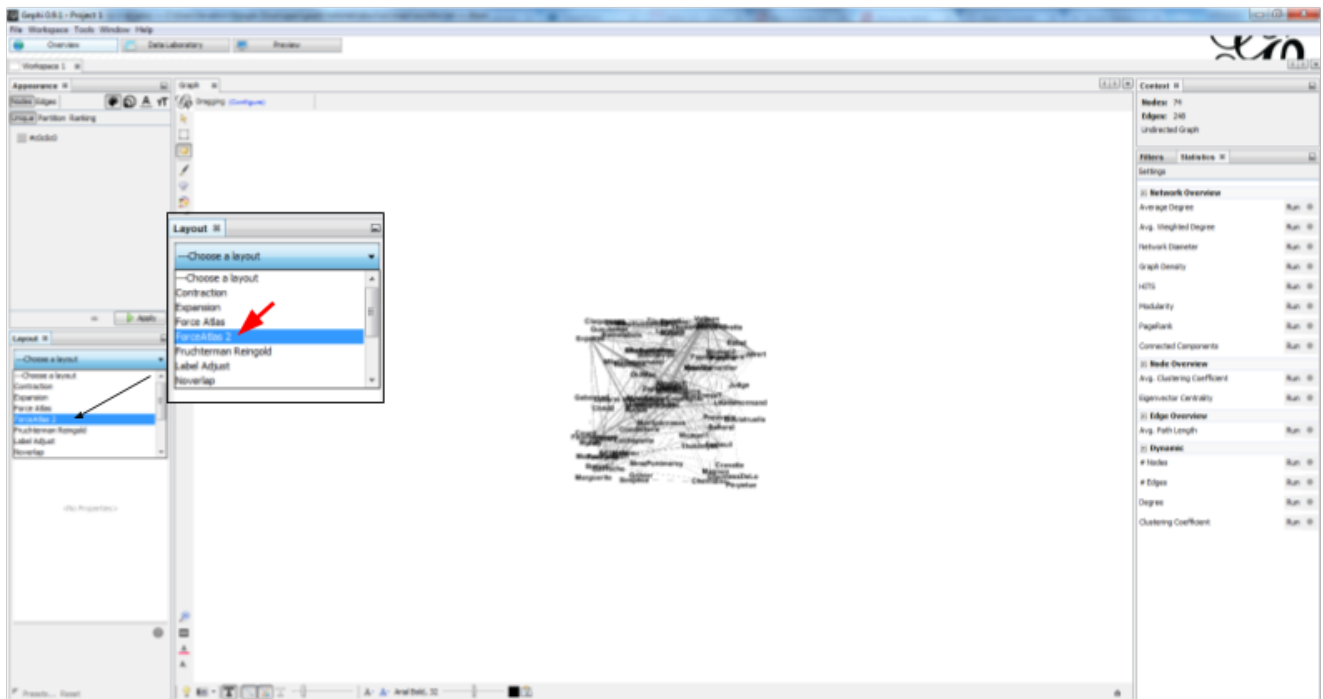


Figure 19. Running the Force Atlas layout while the tweets are arriving

Shift to the **data laboratory** to view the data collected, in a spreadsheet format:

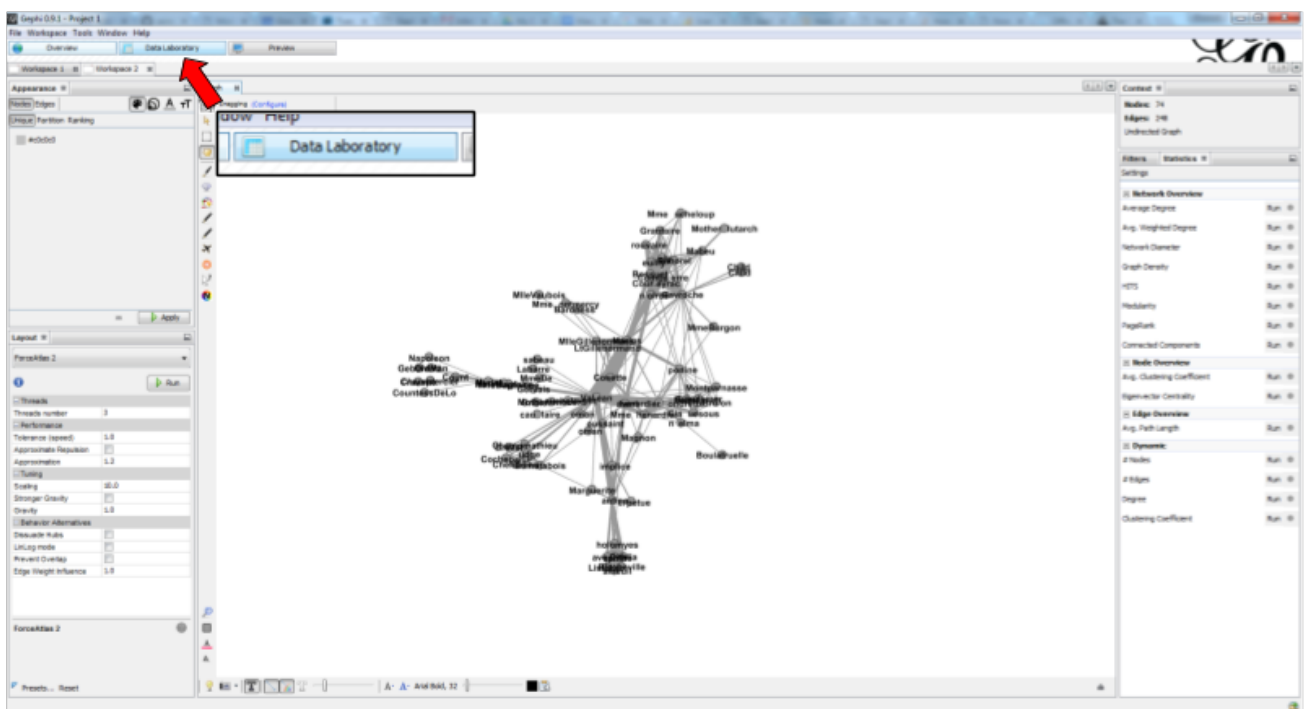


Figure 20. Switching to the data laboratory view

There, you can export nodes and relations ("edges") as csv files by clicking on "Export table".

Timeline

When you are finished with your stream, you can use the **timeline** feature to replay the stream of data and look at a particular time window.

This feature is still experimental and is highly subject to bug.

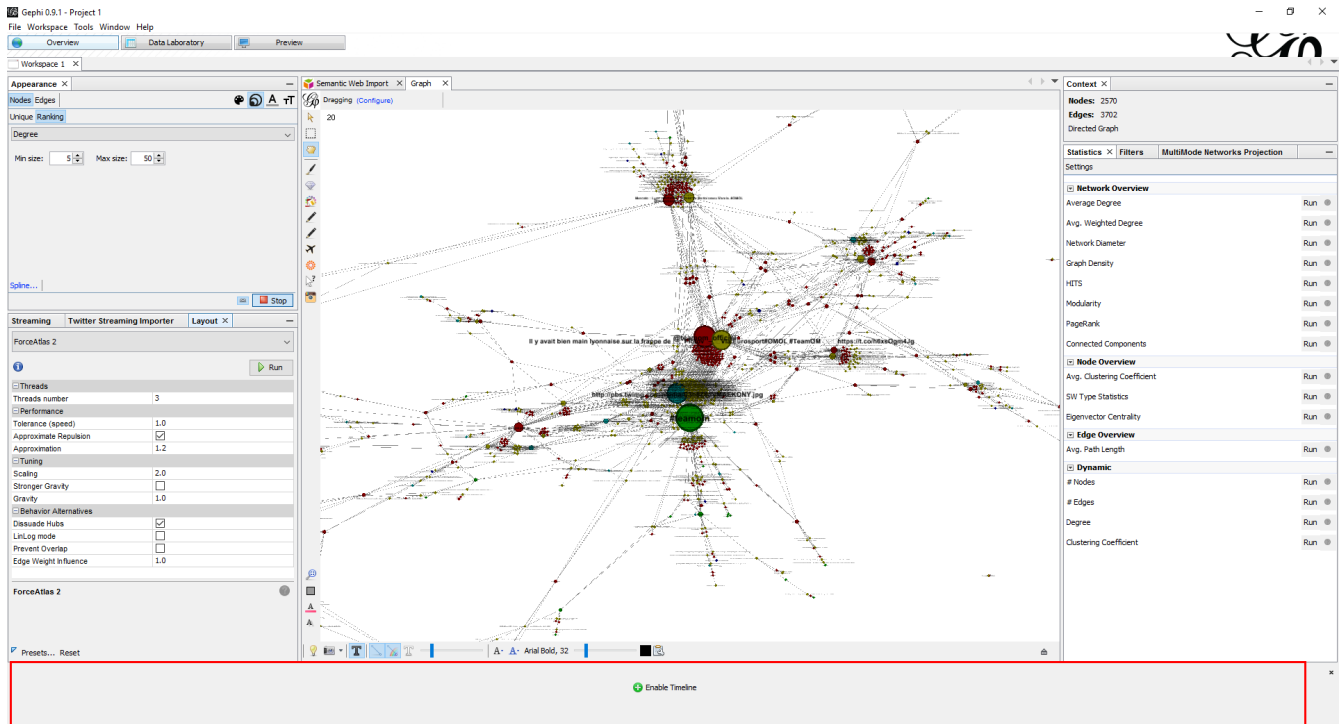


Figure 21. How to activate the Timeline

[timeline] | [en/twitter-streaming-importer/timeline.gif](https://en.twitter-streaming-importer/timeline.gif)

Figure 22. Example of Timeline

The end

Visit [the Gephi group on Facebook](#) to get help,

or visit [the website](#) for more tutorials