

# Twitter Streaming Importer

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[gephi logo 2010 transparent] | *gephi-logo-2010-transparent.png*

## 1. 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

## 2. 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!

[Choose the menu Tools then Plugins] | *Choose-the-menu-Tools-then-Plugins.png*

*Figure 1. Choose the menu Tools then Plugins*

[Click on the tab Available Plugins] | *Click-on-the-tab-Available-Plugins.png*

*Figure 2. Click on the tab Available Plugins*

[Install the plugin then restart Gephi] | *Install-the-plugin-then-restart-Gephi.png*

*Figure 3. Install the plugin then restart Gephi*

## 3. Initializing the plugin (to be done just once)

### a. Creating a Twitter account

[Open a new project in Gephi] | *Open-a-new-project-in-Gephi.png*

*Figure 4. Open a new project in Gephi*

[Display the plugin in Gephi] | *Display-the-plugin-in-Gephi.png*

*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](#).

[Creating a Twitter account] | *Creating-a-Twitter-account.png*

*Figure 6. Creating a Twitter account*

[Confirmation of the sign up] | *Confirmation-of-the-sign-up.png*

*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.

[Enter the verification code you received by sms] | *Enter-the-verification-code-you-received-by-*

*sms.png*

Figure 8. Enter the verification code you received by sms

[Choose a username] | *Choose-a-username.png*

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

## **b. Creating a Twitter app**

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

[Create a new app] | *Create-a-new-app.png*

Figure 10. Create a new app

[Fill in the fields] | *Fill-in-the-fields.png*

Figure 11. Fill in the fields

INFO: Almost there!!

[Click on Keys and Access Tokens] | *Click-on-Keys-and-Access-Tokens.png*

Figure 12. Click on Keys and Access Tokens

[Click on Create my access token] | *Click-on-Create-my-access-token.png*

Figure 13. Click on Create my access token

[Copy paste these codes into Gephi] | *Copy-paste-these-codes-into-Gephi.png*

Figure 14. Copy paste these codes into Gephi

[Where to copy paste the codes in Gephi] | *Where-to-copy-paste-the-codes-in-Gephi.png*

Figure 15. Where to copy paste the codes in Gephi

Done!

👍 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.

### 3. 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'). You can enter multiple words by separating them with a comma , . E.g **word1, word2** .

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 also import all users from a twitter list by giving the **user name** of the twitter account and the **list name** to import. You can enter multiple users by separating them with a comma , . E.g **totetmatt, gephi** .

[twitter user list] | *en/twitter-streaming-importer/twitter-user-list.jpg*

Figure 16. How to add user from a Twitter List

With the **Locations to follow** tab, you will be able to follow the activity of one or multiple locations. Any tweet that has been geotagged will be captured. You need to delimit the zone to track by its South West Point and the Nord East Point.

[geo params] | *en/twitter-streaming-importer/geo\_params.jpg*

Figure 17. How to add a Locations

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.

#### a. 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? It's equivalent to map projection in the cartography world.

[Selection of the network logic] | *Selection-of-the-network-logic.png*

Figure 18. Selection of the network logic

There are for the moment 4 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 Hashtags.
- Emoji Network : Same as Hashtag Network but focused on Emoji characters ( original idea from [Neel Shivdasani](#) / @DataNeel ).
- Bernardamus Projection (based on <https://twitter.com/Bernardamus/status/1131334028043411456>) : This network represents user network via hashtag present in tweets.

**Note for the Emoji Network** : By default, the **Label** of Emoji nodes use the UTF-8 character representation. On the **Overview** and the **Previsualisation** panel, the lable display might not work with the default settings (you will see some square instead). To make it work, you need to use a font that support emoji. The **Segoe Emoji** font should be the one available by default on Win 10.

For the moment, you **won't** be able to export the graph as **SVG** if you keep the UTF-8 character (PNG still works). But you can use the other emoji representation (html or alias) as label to export as SVG and apply post processing on it.

[emoji change font] | [en/twitter-streaming-importer/emoji-change-font.png](#)

*Figure 19. Change font for Emoji display*

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

[Adding terms and launching the collection of tweets] | *Adding-terms-and-launching-the-collection-*

*of-tweets.png*

*Figure 20. 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.

[result plugin 1 en] | *en/twitter-streaming-importer/result-plugin-1-en.png*

*Figure 21. Users mentioned in or retweeting tweets citing the search terms*

## **b. Applying a layout while the tweets arrive.**

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.

[Running the Force Atlas layout while the tweets are arriving] | *Running-the-Force-Atlas-layout-*

*while-the-tweets-are-arriving.png*

Figure 22. Running the Force Atlas layout while the tweets are arriving

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

[Switching to the data laboratory view] | *Switching-to-the-data-laboratory-view.png*

Figure 23. Switching to the data laboratory view

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

### c. 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.*

[timeline enable] | *en/twitter-streaming-importer/timeline-enable.png*

Figure 24. How to activate the Timeline

[Example of Timeline] | *Example-of-Timeline.png*

Figure 25. Example of Timeline

## Extra Scripts

- [https://github.com/Minyall/gephi\\_twitter\\_media\\_downloader](https://github.com/Minyall/gephi_twitter_media_downloader) : A small script designed to take either a .csv of Tweet ids, or the export from Gephi's TwitterStreamingImporter Plugin and download related Tweet media.

## They use it !

- Panteion University - Dept. of Communication, Media and Culture
- Storyful
- BBC Monitoring
- Paris II
- University Aberdeen

You can ping @totetmatt on twitter if you wish to expand the list ;)

# The end

Visit [the Gephi group on Facebook](#) to get help,  
or visit [the website for more tutorials](#)