

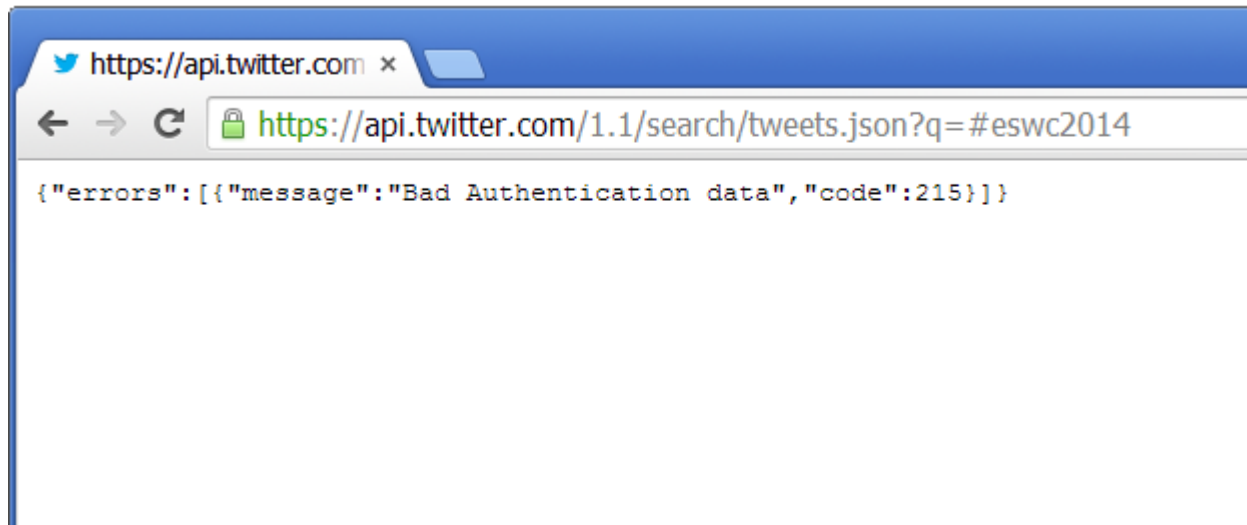
Social Web: Where are the Semantics?

ESWC 2014

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- Twitter needs authentication



A screenshot of a web browser window. The address bar shows the URL `https://api.twitter.com/1.1/search/tweets.json?q=#eswc2014`. The page content displays a JSON error response: `{"errors":[{"message":"Bad Authentication data","code":215}]}`. The browser's tab title is `https://api.twitter.com`.

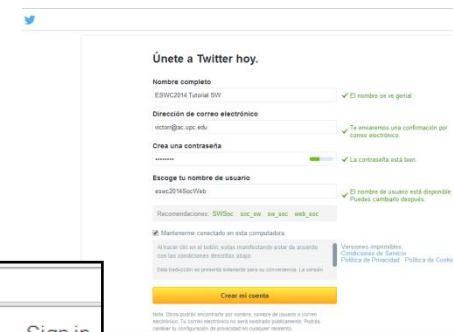
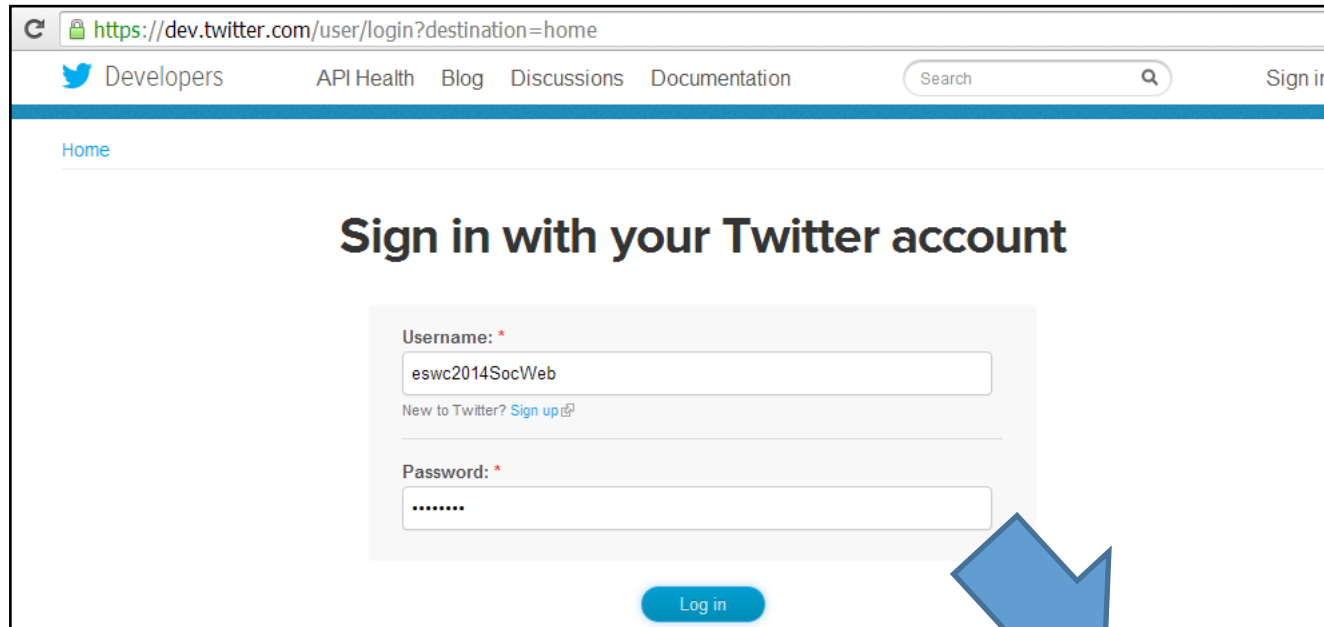
- Many SNS rely on OAuth to grant access to API features
- OAuth is a security protocol for Web applications.
 - Security for REST and XML-RPC services.
 - Signed HTTP Requests
 - Safe, Password-less Token Exchange
- Actors: User / ServiceProvider / Consumer



- General ideas
 - Limit on the requests, in a per 15-min basis
 - Each Tweet as an ID
 - Objects: Tweets, Users, Entities (hashtags, photos, urls...), Places
- Capabilities
 - Timelines (of user mentions, retweets, etc.)
 - Tweets (given ID, retweet, etc.)
 - Search (**shown this in this tutorial**)
 - Friends & Followers, Direct Messages, Favourites, Trends....
 - Places & Geo
 - Users
 - Streaming (the most powerful!)

1.- Obtain a Twitter account, register application

1. Register a new Twitter account (or use yours)
2. Register as a developer: <https://dev.twitter.com/>
3. Register your new application



Ads, measure their performance, and provide you with a better, faster, safer experience. By using our services, you agree to our [Cookie Use](#).

Twitter Apps

You don't currently have any Twitter Apps.

Create New App

2. – Obtain your credentials

4. See your API keys and generate a token

The screenshot shows the Twitter Application Management interface for an application named 'eswc2014TutorialDemo'. The 'API Keys' tab is selected and circled in red. The 'Application settings' section displays the following information:

API key	bGsJCBHpHf4mp39AovF9NZdYY
API secret	zAanbETQxFRdULmZYL4TCzpq4r4KYwKVQarDm2RoprD1WpdfD
Access level	Read-only (modify app permissions)
Owner	eswc2014SocWeb
Owner ID	2514733128

Below the settings, the 'Application actions' section contains two buttons: 'Regenerate API keys' and 'Change App Permissions'. A separate box on the right, titled 'Your access token', contains the text: 'You haven't authorized this application for your own account yet. By creating your access token here, you will have everything you need to make API calls right away. The access token generates your application's current permission level.' Below this text, the 'Token actions' section is circled in red and contains a button labeled 'Create my access token'.

To set up your project...you need two files

- `TwitterDataCollector.java` contains the code that you need to use the Twitter REST API
- `twitterCollector.properties`. This is the properties file that you need to set up. You need to add:
 - `consumerKey` = (the data obtained in the step before)
 - `consumerSecret` = (the data obtained in the step before)
 - `accessToken` = (the data obtained in the step before)
 - `accessTokenSecret` = (the data obtained in the step before)

TwitterDataCollector

- You can find the code:
 - In the code folder of the given USB
 - <https://gist.github.com/vroddon/9d5aac253afaa14c9471>
- Open a command line window
- Test 1
 - `java -jar TwitterDataCollector.jar`
 - And you will have searched for tweets containing the word "#eswc2014"
- Test 2
 - `java -jar TwitterDataCollector.jar twitterCollector.properties #obama`
 - And you will have used the given properties file looking for the hashtag #obama
- Output: a list of JSONs with Tweet info, one tweet per line

Sample output

- Hint: use <http://isonviewer.stack.hu/> to see the JSON

```
{
  contributors : null
  text : "#eswc2014 poster and demo: complete list of papers and pdfs at http://t.co/b0wy0vL1rh (broken links have been fixed)"
  geo : null
  retweeted : false
  in_reply_to_screen_name : null
  possibly_sensitive : false
  truncated : false
  lang : "en"
  entities : {
    symbols : []
    urls : []
    hashtags : []
    user_mentions : []
  }
  in_reply_to_status_id_str : null
  id : 469123810294505500
  source : "TweetDeck"
  in_reply_to_user_id_str : null
  favorited : false
  in_reply_to_status_id : null
  retweet_count : 0
  created_at : "Wed May 21 14:33:26 +0000 2014"
  in_reply_to_user_id : null
  favorite_count : 1
  id_str : "469123810294505472"
  place : null
  user : {
    coordinates : null
  }
  metadata : {
  }
}
```


Sample output (II)

The image shows a JSON API response for a user profile and its associated entities. The response is structured as follows:

```
user
  location: "Sophia Antipolis (FR)"
  default_profile: false
  profile_background_tile: true
  statuses_count: 5318
  lang: "en"
  profile_link_color: "0A5780"
  profile_banner_url: "https://pbs.twimg.com/profile_banners/39321347/1398266793"
  id: 39321347
  following: false
  protected: false
  favourites_count: 817
  profile_text_color: "634047"
  description: "Multimedia Semantics Researcher"
  verified: false
  contributors_enabled: false
  profile_sidebar_border_color: "D3D2CF"
  name: "Raphaël Troncy"
  profile_background_color: "EDECE9"
  created_at: "Mon May 11 19:32:01 +0000 2009"
  is_translation_enabled: false
  default_profile_image: false
  followers_count: 1439
  profile_image_url_https: "https://pbs.twimg.com/profile_images/458965276285878272/SZ7b6HyG_normal.jpeg"
  geo_enabled: true
  profile_background_image_url: "http://pbs.twimg.com/profile_background_images/96325898/twilk_background_4bd7583d99b0d.jpg"
  profile_background_image_url_https: "https://pbs.twimg.com/profile_background_images/96325898/twilk_background_4bd7583d99b0d.jpg"
  follow_request_sent: false

entities
  description
    urls
  url
    urls
      0
        expanded_url: "http://www.eurecom.fr/~troncy/"
        indices
          display_url: "eurecom.fr/~troncy/"
          url: "http://t.co/K5BtaZUOVe"
    url: "http://t.co/K5BtaZUOVe"
  utc_offset: 7200
  time_zone: "Paris"
  notifications: false
  profile_use_background_image: true
```

Key values are highlighted with red circles in the original image: "Sophia Antipolis (FR)", "Raphaël Troncy", and 1439.