

# Twitter Zeppelin

## Twitter

```
import org.apache.spark.streaming._
import org.apache.spark.streaming.twitter._
import org.apache.spark.storage.StorageLevel
import scala.io.Source
import scala.collection.mutable.HashMap
import java.io.File
import org.apache.log4j.Logger
import org.apache.log4j.Level
import sys.process.StringSeqToProcess
```

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Took 21 sec. Last updated by anonymous at January 26 2017, 8:11:22 PM.

```
/** Configures the OAuth Credentials for accessing Twitter */
def configureTwitterCredentials(apiKey: String, apiSecret: String, accessToken: String, accessTo
  val configs = new HashMap[String, String] += Seq(
    "apiKey" -> apiKey, "apiSecret" -> apiSecret, "accessToken" -> accessToken, "accessTokenSecret" -> accessTo
  println("Configuring Twitter OAuth")
  configs.foreach{ case(key, value) =>
    if (value.trim.isEmpty) {
      throw new Exception("Error setting authentication - value for " + key + " not set")
    }
    val fullKey = "twitter4j.oauth." + key.replace("api", "consumer")
    System.setProperty(fullKey, value.trim)
    println("\tProperty " + fullKey + " set as [" + value.trim + "]")
  }
  println()
}
```

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```
configureTwitterCredentials: (apiKey: String, apiSecret: String, accessToken: String, accessTokenSecret: String)Unit
```

Took 3 sec. Last updated by anonymous at January 26 2017, 8:11:45 PM.

```
// Configure Twitter credentials
val apiKey = "6ctIQcR86J01ZSKn0CnhlR0sU"
val apiSecret = "Er6kkJs9hTDDxIGaZqfqhRL1JKoKuzIEUFmyNMHCgBbnOCbuGK"
val accessToken = "4449882683-ixkwyThMpDggZvmoF3c4vyJ5GkMzuZDbj7r3CGG"
val accessTokenSecret = "SnBQUH9p0NnKMqyC2IEmGq3ngtcwNAzSDXVlQLEvvgeX"
```

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```

apiKey: String = 6ctIQcR86J01ZSKn0CnhlR0sU
apiSecret: String = Er6kkJs9hTDDxIGaZqfqhRLlJKoKuzIEUFmyNMHCgBbn0CbuGK
accessToken: String = 4449882683-ixkwyThMpDggZvmof3c4vyJ5GkMzuZDbj7r3CGG
accessTokenSecret: String = SnBQUH9p0NnKMqtyC2IEmGq3ngtcwNAzSDXVlQLEvvgeX
Configuring Twitter OAuth
    Property twitter4j.oauth.consumerKey set as [6ctIQcR86J01ZSKn0CnhlR0sU]
    Property twitter4j.oauth.accessToken set as [4449882683-ixkwyThMpDggZvmof3c4vyJ5GkMzuZ
Dbj7r3CGG]
    Property twitter4j.oauth.consumerSecret set as [Er6kkJs9hTDDxIGaZqfqhRLlJKoKuzIEUFmyNM
HCgBbn0CbuGK]
    Property twitter4j.oauth.accessTokenSecret set as [SnBQUH9p0NnKMqtyC2IEmGq3ngtcwNAzSDX
VlQLEvvgeX]

```

set. Last updated by anonymous at January 26 2017, 8:19:13 PM.

## Zeppelin

### Twitter

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```

import org.apache.spark.streaming.twitter._
val ssc = new StreamingContext(sc, Seconds(2))
val tweets = TwitterUtils.createStream(ssc, None)
val twt = tweets.window(Seconds(60))

```

```

import org.apache.spark.streaming.twitter._
ssc: org.apache.spark.streaming.StreamingContext = org.apache.spark.streaming.StreamingContext
@da9d0d5
tweets: org.apache.spark.streaming.dstream.ReceiverInputDStream[twitter4j.Status] = org.apach
e.spark.streaming.twitter.TwitterInputDStream@7bf3f3cf
twt: org.apache.spark.streaming.dstream.DStream[twitter4j.Status] = org.apache.spark.streamin
g.dstream.WindowedDStream@71f0c8d0

```

Took 3 sec. Last updated by anonymous at January 26 2017, 8:19:20 PM.

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```

case class Tweet(createdAt:Long, text:String)
twt.map(status=>
    Tweet(status.getCreatedAt().getTime()/1000, status.getText())
).foreachRDD(rdd=>
    // Below line works only in spark 1.3.0.
    // For spark 1.1.x and spark 1.2.x,
    // use rdd.registerTempTable("tweets") instead.
    rdd.toDF().registerTempTable("tweets")
)

twt.print

ssc.start()

```

...aigames.channel.or.jp/list/one\_main/tc/" rel="nofollow">ONE PIECE トレジャークルーズ</a>', isTruncated=false, inReplyToStatusId=-1, inReplyToUserId=-1, isFavorited=false, isRetweeted=false, favoriteCount=0, inReplyToScreenName='null', geoLocation=null, place=null, retweetCount=0, isPossiblySensitive=false, lang='ja', contributorsIDs=[], retweetedStatus=null, userMentionEntities=[], urlEntities=[URLEntityJSONImpl{url='https://t.co/FbbuVJ20bh', expandedURL='http://bnent.jp/optw/', displayURL='bnent.jp/optw/'}], hashtagEntities=[HashtagEntityJSONImpl{text='トレクル'}], mediaEntities=[MediaEntityJSONImpl{id=824788967346233344, url=https://t.co/SdgxiKUw9A, mediaURL=http://pbs.twimg.com/media/C3I9MiVVYAAsBI8.jpg, mediaURLHttps=https://pbs.twimg.com/media/C3I9MiVVYAAsBI8.jpg, expandedURL=https://twitter.com/chaosrose54/status/824788968835145728/photo/1, displayURL='pic.twitter.com/SdgxiKUw9A', sizes={0=Size{width=150, height=150, resize=101}, 1=Size{width=480, height=180, resize=100}, 2=Size{width=480, height=180, resize=100}, 3=Size{width=480, height=180, resize=100}}, type=photo}], symbolEntities=[], currentUserRetweetId=-1, user=UserJSONImpl{id=760890865392898048, name='반춘호', screenName='chaosrose54', location='null', description='null', isContributorsEnabled=false, profileImageUrl='http://abs.twimg.com/sticky/default\_profile\_images/default\_profile\_4\_normal.png', profileImageUrlHttps='https://abs.twimg.com/sticky/default\_profile\_images/default\_profile\_4\_normal.png', isDefaultProfileImage=true, url='null', isProtected=false, followersCount=...

Took 5 sec. Last updated by anonymous at January 26 2017, 8:19:46 PM.

%sql

select \* from tweets where text like '%Trump%' limit 10

createdAt

text

1,485,479,989

RT @PeterAlexander: NEW: Because of delay in Trump's return to WH, executive action callir

1,485,479,989

RT @weeklyresisters: But we already know Trump wants a turn-back-the-clock extremist. Ou

1,485,479,990





@br8veheart @Twitter @Support He's not retired, just an anti-Trump stalker.>>@AG2Pearl

Thanks for your service.1485479990 RT @cnalive: President Donald Trump restores ban on federal funding of NGOs that perform overseas abortions https://t.co/UU3FNoWXJj #ProLife148547991 Well done, @Jabadahub25! Now ppl will power up @GIMP\_Official making memes of @LaurenSouthern calling things anti-Trump... CC @thunderf00t1485479993 RT @ACLU: No, Stephen Bannon, the media should not "keep its mouth shut" and if the Trump administration tries, we'll see t he... 1485479994 @PhillyEaglez10 @DemsTalk @POTUS @WhiteHouse and replace "their" with "they'r e" - sorry, what were you saying about Trump's education ideas?1485479997 Some of us nev er did. Even though Trump's devotion should have us all rethinking it. Don't blame me:... http s://t.co/CmHslhtNcs1485480001 RT @VicenteFoxQue: @realDonaldTrump's ego monument real cost i s around 25 billion USD. I ask you, America, what would you prefer instead of...1485480001 RT @Ijeoma0luo: SEATTLE: stand with our immigrant friends & neighbors against the hatr ed & bigotry of the Trump administration:https://t.c...

Took 1 sec. Last updated by anonymous at January 26 2017, 8:20:32 PM.

http://localhost:8080/#/notebook/2C7H8C3UE




3/5

%sql select createdAt, count(1) from tweets group by createdAt order by createdAt FINISHED    



createdAt	count(1)
1,485,479,988	2
1,485,479,989	32
1,485,479,990	43
1,485,479,991	36
1,485,479,992	38
1,485,479,993	39
1,485,479,994	35
1,485,479,995	43
1,485,479,996	32

Took 5 sec. Last updated by anonymous at January 26 2017, 8:20:53 PM.

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```
def sentiment(s:String) : String = {
    val positive = Array("like", "love", "good", "great", "happy", "cool", "the", "one", "that")
    val negative = Array("hate", "bad", "stupid", "is")

    var st = 0;

    val words = s.split(" ")
    positive.foreach(p =>
        words.foreach(w =>
            if(p==w) st = st+1
        )
    )

    negative.foreach(p=>
        words.foreach(w=>
            if(p==w) st = st-1
        )
    )
    if(st>0)
        "positive"
    else if(st<0)
        "negative"
    else
        "neutral"
}

// Below line works only in spark 1.3.0.
// For spark 1.1.x and spark 1.2.x,
// use sqlc.registerFunction("sentiment", sentiment _) instead.
sqlc.udf.register("sentiment", sentiment _)
```

```
sentiment: (s: String)String
res11: org.apache.spark.sql.expressions.UserDefinedFunction = UserDefinedFunction(<function1>,
StringType,Some(List(StringType)))
```

Took 2 sec. Last updated by anonymous at January 26 2017, 8:21:12 PM.

%sql

select sentiment(text), count(1) from tweets where text like '%trump%' group by sentiment(text)

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UDF(text)	count(1)
neutral	3
negative	2
positivie	1

Took 2 sec. Last updated by anonymous at January 26 2017, 8:21:37 PM.

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