```
import org.apache.spark.streaming._
import org.apache.spark.streaming.twitter._
import org.apache.spark.storage.StorageLevel
import scala.io.Source
```

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```
import org.apache.log4j.Logger
import org.apache.log4j.Level
import sys.process.stringSeqToProcess

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
```

Took 24 sec. Last updated by anonymous at January 26 2017, 8:02:25 PM.

FINISHED

```
/** Configures the Oauth Credentials for accessing Twitter */
def configureTwitterCredentials(apiKey: String, apiSecret: String, accessToken: String, acces
  val configs = new HashMap[String, String] ++= Seq(
    "apiKey" -> apiKey, "apiSecret" -> apiSecret, "accessToken" -> accessToken, "accessTokenS
  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()
}

configureTwitterCredentials: (apiKey: String, apiSecret: String, accessToken: String, accessTo
kenSecret: String)Unit
```

Took 3 sec. Last updated by anonymous at January 26 2017, 8:02:31 PM.

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```
// Configure Twitter credentials
val apiKey = "bA2rMrmjxgdqI5CbwGEojAchA"
val apiSecret = "KlLXvQ3NSnyRYx7li2d96plRoMjYeyutu4uInUGzvcMLUrNAJV"
val accessToken = "823235947311595520-sIh2tqK2yIMmIz7K9hfu6R6zacoDmAl"
val accessTokenSecret = "rs4CPRUTwhOw25omXGvxnzSneE8emSbFnFoo0htdAdGig"
configureTwitterCredentials(apiKey, apiSecret, accessToken, accessTokenSecret)
```

```
apiKey: String = bA2rMrmjxgdqI5CbwGEojAchA
apiSecret: String = KlLXvQ3NSnyRYx7li2d96plRoMjYeyutu4uInUGzvcMLUrNAJV
accessToken: String = 823235947311595520-sIh2tqK2yIMmIz7K9hfu6R6zacoDmAl
accessTokenSecret: String = rs4CPRUTwhOw25omXGvxnzSneE8emSbFnFoo0htdAdGig
Configuring Twitter OAuth
        Property twitter4j.oauth.consumerKey set as [bA2rMrmjxgdqI5CbwGEojAchA]
        Property twitter4j.oauth.accessToken set as [823235947311595520-sIh2tqK2yIMmIz7K9hfu6R
6zacoDmAl]
        Property twitter4j.oauth.consumerSecret set as [KlLXvQ3NSnyRYx7li2d96plRoMjYeyutu4uInU
GzvcMLUrNAJV]
        Property twitter4j.oauth.accessTokenSecret set as [rs4CPRUTwhOw25omXGvxnzSneE8emSbFnFo
o0htdAdGig]
```

Zeppelin

sec. Last updated by anonymous at January 26 2017, 8:02:44 PM.

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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))

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()
```

```
-------------------------------------------
Time: 1485478994000 ms
-------------------------------------------
-------------------------------------------
Time: 1485478996000 ms
-------------------------------------------
```

StatusJSONImpl{createdAt=Thu Jan 26 20:03:12 EST 2017, id=824784791274938368, text='Trump is f
amiliar with all of them https://t.co/KXdrDMyAPw', source='<a href="http://twitter.com/downloa
d/iphone" rel="nofollow">Twitter for iPhone', isTruncated=false, inReplyToStatusId=-1, inR
eplyToUserId=-1, isFavorited=false, isRetweeted=false, favoriteCount=0, inReplyToScreenName='n
ull', geoLocation=null, place=null, retweetCount=0, isPossiblySensitive=false, lang='en', cont
ributorsIDs=[], retweetedStatus=null, userMentionEntities=[], urlEntities=[], hashtagEntities=
[], mediaEntities=[MediaEntityJSONImpl{id=824784782609440768, url=https://t.co/KXdrDMyAPw, med
iaURL=http://pbs.twimg.com/media/C3I5Y8-VYAANuWh.jpg, mediaURLHttps=https://pbs.twimg.com/medi
a/C3I5Y8-VYAANuWh.jpg, expandedURL=https://twitter.com/JennaGLit/status/824784791274938368/pho
to/1, displayURL='pic.twitter.com/KXdrDMyAPw', sizes={0=Size{width=150, height=150, resize=10
1}, 1=Size{width=481, height=680, resize=100}, 2=Size{width=495, height=700, resize=100}, 3=Si
ze{width=495, height=700, resize=100}}, type=photo}], symbolEntities=[], currentUserRetweetId=

Took 6 sec. Last updated by anonymous at January 26 2017, 8:03:13 PM.

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```
%sql select * from tweets where text like '%trump%' limit 10
```

createdAt	text
1,485,479,014	RT @mcleod: No one should be over it https://t.co/GepmBk4VUk @potus @realDonaldTru

Took 1 sec. Last updated by anonymous at January 26 2017, 8:04:05 PM.

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

createdAt
1,485,479,016
1,485,479,017
1,485,479,018
1,485,479,019
1,485,479,020
1,485,479,021
1,485,479,022
1,485,479,023
1.485.479.024

Took 4 sec. Last updated by anonymous at January 26 2017, 8:04:43 PM.

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```scala
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)
          "positivie"
      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.
```

sentiment: (s: String)String
res13: org.apache.spark.sql.expressions.UserDefinedFunction = UserDefinedFunction(<function1>,
StringType,Some(List(StringType)))

Took 2 sec. Last updated by anonymous at January 26 2017, 8:05:28 PM.

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

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UDF(text)	count
neutral	3

Took 3 sec. Last updated by anonymous at January 26 2017, 8:05:51 PM.

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