Untitled Note 1   ▷ ⌗ 📖 🧹 🗐 ⬇ 📄   🗑   🕐   ⌨ ⚙ 🔒 | default ▾

```scala
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


import org.apache.spark.streaming._
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import org.apache.log4j.Level
import sys.process.stringSeqToProcess
```

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

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```
        println("\tProperty " + fullKey + " set as [" + value.trim + "]")
    }
    println()
```

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

```
// Configure Twitter credentials
val apiKey = "b4nvT9YMxksAi2XVcaXCpArU7"
val apiSecret = "Z2dOixKJHmtgk5F55sbLG3VgovLdT0AUOmfF3aoWl0U9Lr2Q4j"
val accessToken = "631303286-OoSJ8xdl8BRWr7YuzND6zzCzT7qdZhb7M3CLzJ0n"
val accessTokenSecret = "zOc6zYLv9sAcNzWRHpdnhvlw5s5SfHAOnrqh8xLuDbSdS"
configureTwitterCredentials(apiKey, apiSecret, accessToken, accessTokenSecret)
```

```
apiKey: String = b4nvT9YMxksAi2XVcaXCpArU7
apiSecret: String = Z2dOixKJHmtgk5F55sbLG3VgovLdT0AUOmfF3aoWl0U9Lr2Q4j
accessToken: String = 631303286-OoSJ8xdl8BRWr7YuzND6zzCzT7qdZhb7M3CLzJ0n
accessTokenSecret: String = zOc6zYLv9sAcNzWRHpdnhvlw5s5SfHAOnrqh8xLuDbSdS
Configuring Twitter OAuth
        Property twitter4j.oauth.consumerKey set as [b4nvT9YMxksAi2XVcaXCpArU7]
        Property twitter4j.oauth.accessToken set as [631303286-OoSJ8xdl8BRWr7YuzND6zzCzT7qdZhb7M3CLzJ0n]
        Property twitter4j.oauth.consumerSecret set as [Z2dOixKJHmtgk5F55sbLG3VgovLdT0AUOmfF3aoWl0U9Lr2Q4j]
        Property twitter4j.oauth.accessTokenSecret set as [zOc6zYLv9sAcNzWRHpdnhvlw5s5SfHAOnrqh8xLuDbSdS]
```

```
import org.apache.spark.streaming.twitter._
val ssc = new StreamingContext(sc, Seconds(60))
val tweets = TwitterUtils.createStream(ssc, None)
val twt = tweets.window(Seconds(100))
```

```
import org.apache.spark.streaming.twitter._
ssc: org.apache.spark.streaming.StreamingContext = org.apache.spark.streaming.StreamingContext@52a6082f
tweets: org.apache.spark.streaming.dstream.ReceiverInputDStream[twitter4j.Status] = org.apache.spark.streaming.twitter.Twi
tterInputDStream@115372a1
twt: org.apache.spark.streaming.dstream.DStream[twitter4j.Status] = org.apache.spark.streaming.dstream.WindowedDStream@1a1
d4287
```

```
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.
```

defined class Tweet
warning: there was one deprecation warning; re-run with -deprecation for details

---

twt.print

---

ssc.start()

StatusJSONImpl{createdAt=Thu Jan 26 19:55:21 EST 2017, id=824782815787175937, text='RT @MartinaDomench: Peor va a ser tene
r 50 y seguir siendo virgen https://t.co/m6bMZlng60', source='Twitter for
Windows', isTruncated=false, inReplyToStatusId=-1, inReplyToUserId=-1, isFavorited=false, isRetweeted=false, favoriteC
ount=0, inReplyToScreenName='null', geoLocation=null, place=null, retweetCount=0, isPossiblySensitive=false, lang='es', co
ntributorsIDs=[], retweetedStatus=StatusJSONImpl{createdAt=Tue Jan 24 18:52:33 EST 2017, id=824042234844708866, text='Peor
va a ser tener 50 y seguir siendo virgen https://t.co/m6bMZlng60', source='<a href="http://twitter.com/download/iphone" re
l="nofollow">Twitter for iPhone', isTruncated=false, inReplyToStatusId=-1, inReplyToUserId=-1, isFavorited=false, isRe
tweeted=false, favoriteCount=13670, inReplyToScreenName='null', geoLocation=null, place=null, retweetCount=8589, isPossibl
ySensitive=false, lang='es', contributorsIDs=[], retweetedStatus=null, userMentionEntities=[], urlEntities=[], hashtagEnti
ties=[], mediaEntities=[MediaEntityJSONImpl{id=824042225420107776, url=https://t.co/m6bMZlng60, mediaURL=http://pbs.twimg.
com/media/C2-WCb4WgAA3ngd.jpg, mediaURLHttps=https://pbs.twimg.com/media/C2-WCb4WgAA3ngd.jpg, expandedURL=https://twitter.
com/MartinaDomench/status/824042234844708866/photo/1, displayURL='pic.twitter.com/m6bMZlng60', sizes={0=Size{width=150, he
ight=150, resize=101}, 1=Size{width=680, height=423, resize=100}, 2=Size{width=750, height=467, resize=100}, 3=Size{width=
750, height=467, resize=100}}, type=photo}], symbolEntities=[], currentUserRetweetId=-1, user=UserJSONImpl{id=537973435, n
ame='marti🙆', screenName='MartinaDomench', location='Ig y snap martinadomench', description='no atiendas si no te llaman
20/10 | 15S', isContributorsEnabled=false, profileImageUrl='http://pbs.twimg.com/profile_images/821001618229432320/TpdSnPn
f_normal.jpg', profileImageUrlHttps='https://pbs.twimg.com/profile_images/821001618229432320/TpdSnPnf_normal.jpg', isDefau
ltProfileImage=false, url='null', isProtected=false, followersCount=1428, status=null, profileBackgroundColor='FFFFFF', pr

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

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createdAt	text
1,485,478,472	RT @jyoungwhite: me @ white lower middle class & poor trump voters slowly realizing his policies are fucking them ove
1,485,478,473	RT @danieltosh: dear russians, please hack and release this weeks love letter from belichick to trump! i bet it's steamy l
1,485,478,487	RT @muaqueenica: yall totally ok when trump calls for violence & ppl beat minorites out of his rallies but when a nazi is

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

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createdAt	count
1,485,478,441	2
1,485,478,443	3
1,485,478,444	3
1,485,478,445	41
1,485,478,446	38
1,485,478,447	45
1,485,478,448	43
1,485,478,449	38
1,485,478,450	37

```scala
def sentiment(s:String) : String = {                                    FINISHED ▷ ⌖ 📖 ⚙
    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"
}

sentiment: (s: String)String
```

```
sqlc.udf.register("sentiment", sentiment _)                          FINISHED ▷ ⊁⊀ 🕮 ⚙
```

```
res14: org.apache.spark.sql.expressions.UserDefinedFunction = UserDefinedFunction(<function1>,StringType,Some(List(StringT
ype)))
```

```
%sql select sentiment(text), count(1) from tweets where text like '%trump%' group by sentiment(text)   FINISHED ▷ ⊁⊀ 🕮 ⚙
```

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