1 Spark Apps

This section explains the deployment of the two Spark apps, and how to check they are working.

1.1 Consumer App

First we can deploy the consumer so we can see it isn’t receiving date until the producer is started.

To deploy the consumer, we can use the next command that submit the app to Spark cluster and use the monitoring properties. Be sure to put your Spark Master IP.

```
$ ./bin/spark-submit --conf
spark.metrics.conf=conf/metrics.properties.prometheus --master
spark://172.16.8.234:7077   --executor-memory 2G   --total-executor-
cores 1 --repositories https://raw.github.com/banzaicloud/spark-
metrics/master/maven-repo/releases --packages com.banzaicloud:spark-
metrics_2.11:2.3-
1.0.0,io.prometheus:simpleclient:0.3.0,io.prometheus:simpleclient_drop
wizard:0.3.0,io.prometheus:simpleclient_pushgateway:0.3.0,io.dropwizar
d.metrics:metrics-core:3.1.2  /home/ikerlan/tfm-spark-
kafka/sparkkafkaconsumertfm-1.0-SNAPSHOT-jar-with-dependencies.jar
```

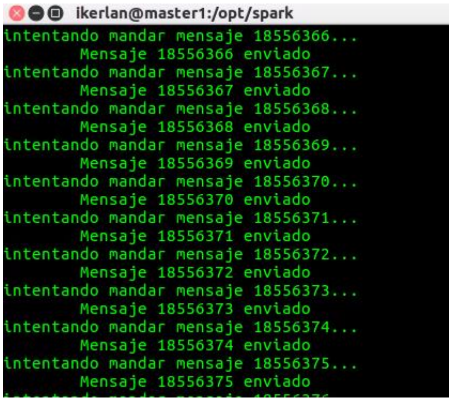
1.2 Producer App

Once the consumer is started, we can deploy the producer to start generating and sending messages.

To deploy the producer, we can use the next command that submit the app to Spark cluster and use the monitoring properties. Be sure to put your Spark Master IP.

```
$ ./bin/spark-submit --master spark://172.16.8.234:7077   --executor-
memory 2G   --total-executor-cores 1 /home/ikerlan/tfm-spark-
kafka/spark-kafka-producer-tfm-1.0-SNAPSHOT-jar-with-dependencies.jar
```

Once the producer app running, we can see in the command line, that it is sending data:



ikerlan@master1:/opt/spark

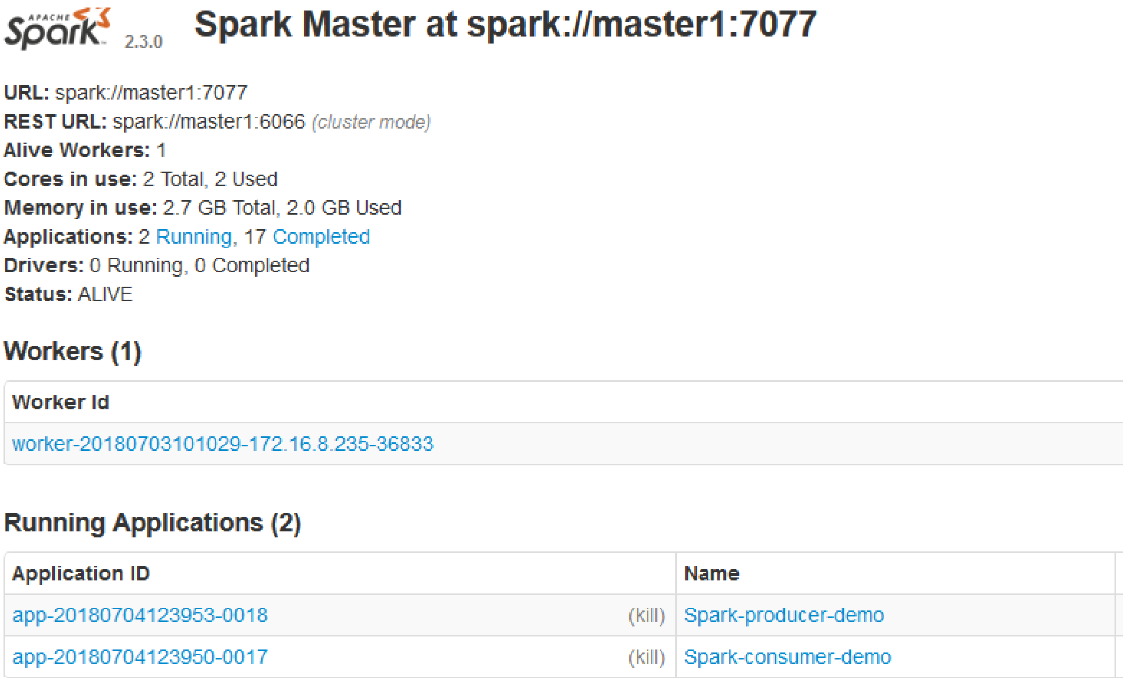
```
intentando mandar mensaje 18556366...
         Mensaje 18556366 enviado
intentando mandar mensaje 18556367...
         Mensaje 18556367 enviado
intentando mandar mensaje 18556368...
         Mensaje 18556368 enviado
intentando mandar mensaje 18556369...
         Mensaje 18556369 enviado
intentando mandar mensaje 18556370...
         Mensaje 18556370 enviado
intentando mandar mensaje 18556371...
         Mensaje 18556371 enviado
intentando mandar mensaje 18556372...
         Mensaje 18556372 enviado
intentando mandar mensaje 18556373...
         Mensaje 18556373 enviado
intentando mandar mensaje 18556374...
         Mensaje 18556374 enviado
intentando mandar mensaje 18556375...
         Mensaje 18556375 enviado
```

1.3 Spark UI

We can Access to the Spark UI using the next link (be sure to change the IP with your Spark Master IP)

Spark Master UI: http://172.16.8.234:9090/

In the UI we can see that both applications are running, like in the next picture:



Spark Master at spark://master1:7077

URL: spark://master1:7077
REST URL: spark://master1:6066 *(cluster mode)*
Alive Workers: 1
Cores in use: 2 Total, 2 Used
Memory in use: 2.7 GB Total, 2.0 GB Used
Applications: 2 Running, 17 Completed
Drivers: 0 Running, 0 Completed
Status: ALIVE

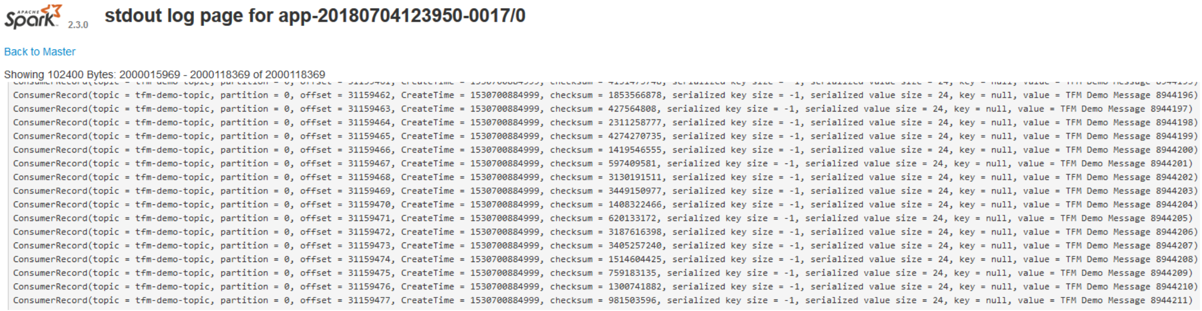
Workers (1)

Worker Id
worker-20180703101029-172.16.8.235-36833

Running Applications (2)

Application ID		Name
app-20180704123953-0018	(kill)	Spark-producer-demo
app-20180704123950-0017	(kill)	Spark-consumer-demo

Once the application running, we can access to the “Spark-consumer-demo” app, and there if we click the “stdout” file, we can see the outputs it is having, so we can check the data it is consuming, like in the next picture:



stdout log page for app-20180704123950-0017/0

Back to Master

Showing 102400 Bytes: 2000015969 - 2000118369 of 2000118369

```
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159462, CreateTime = 1530700884999, checksum = 1853566878, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944196)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159463, CreateTime = 1530700884999, checksum = 427564808, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944197)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159464, CreateTime = 1530700884999, checksum = 2311258777, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944198)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159465, CreateTime = 1530700884999, checksum = 4274270735, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944199)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159466, CreateTime = 1530700884999, checksum = 1419546555, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944200)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159467, CreateTime = 1530700884999, checksum = 597409581, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944201)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159468, CreateTime = 1530700884999, checksum = 3130191511, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944202)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159469, CreateTime = 1530700884999, checksum = 3449150977, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944203)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159470, CreateTime = 1530700884999, checksum = 1408322466, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944204)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159471, CreateTime = 1530700884999, checksum = 620133172, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944205)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159472, CreateTime = 1530700884999, checksum = 3187616398, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944206)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159473, CreateTime = 1530700884999, checksum = 3405257240, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944207)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159474, CreateTime = 1530700884999, checksum = 1514604425, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944208)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159475, CreateTime = 1530700884999, checksum = 759183135, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944209)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159476, CreateTime = 1530700884999, checksum = 1300741882, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944210)
ConsumerRecord(topic = tfm-demo-topic, partition = 0, offset = 31159477, CreateTime = 1530700884999, checksum = 981503596, serialized key size = -1, serialized value size = 24, key = null, value = TFM Demo Message 8944211)
```

In case the producer is not running, the consumer shows that there is no data:

```
There is not any new message for topic tfm-demo-topic
```