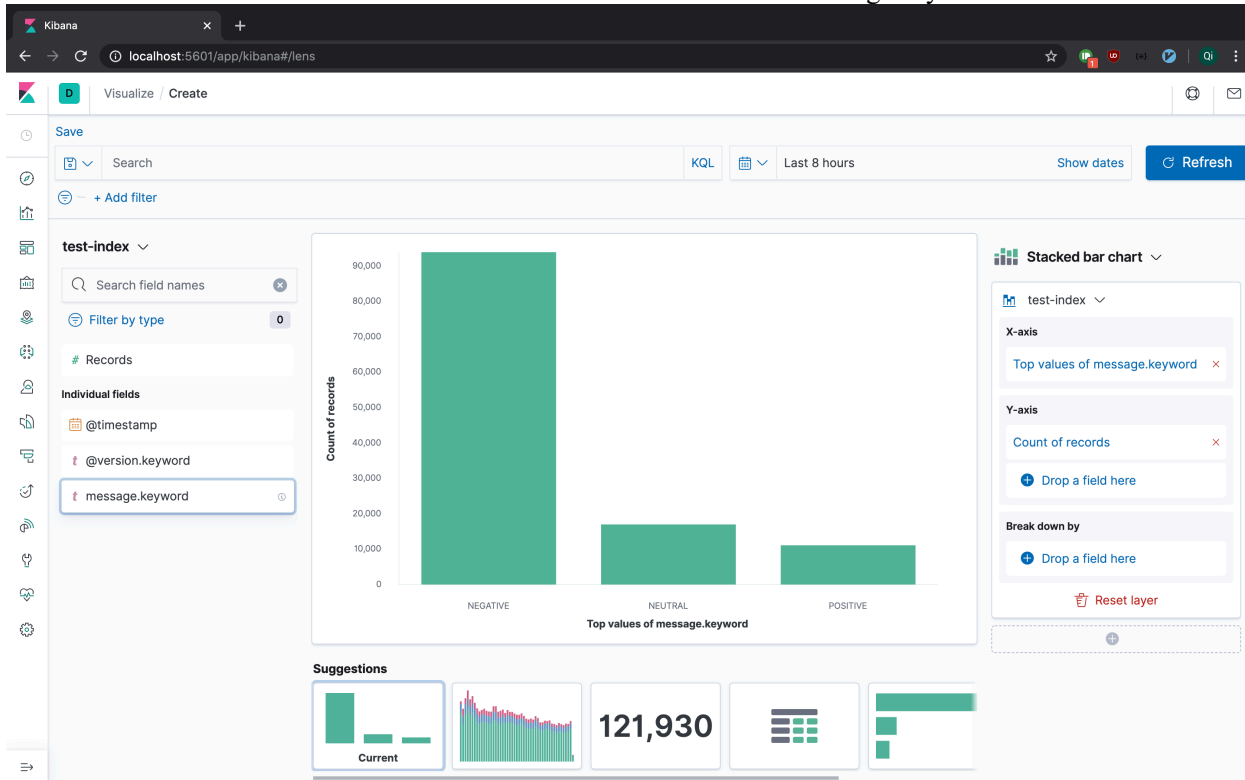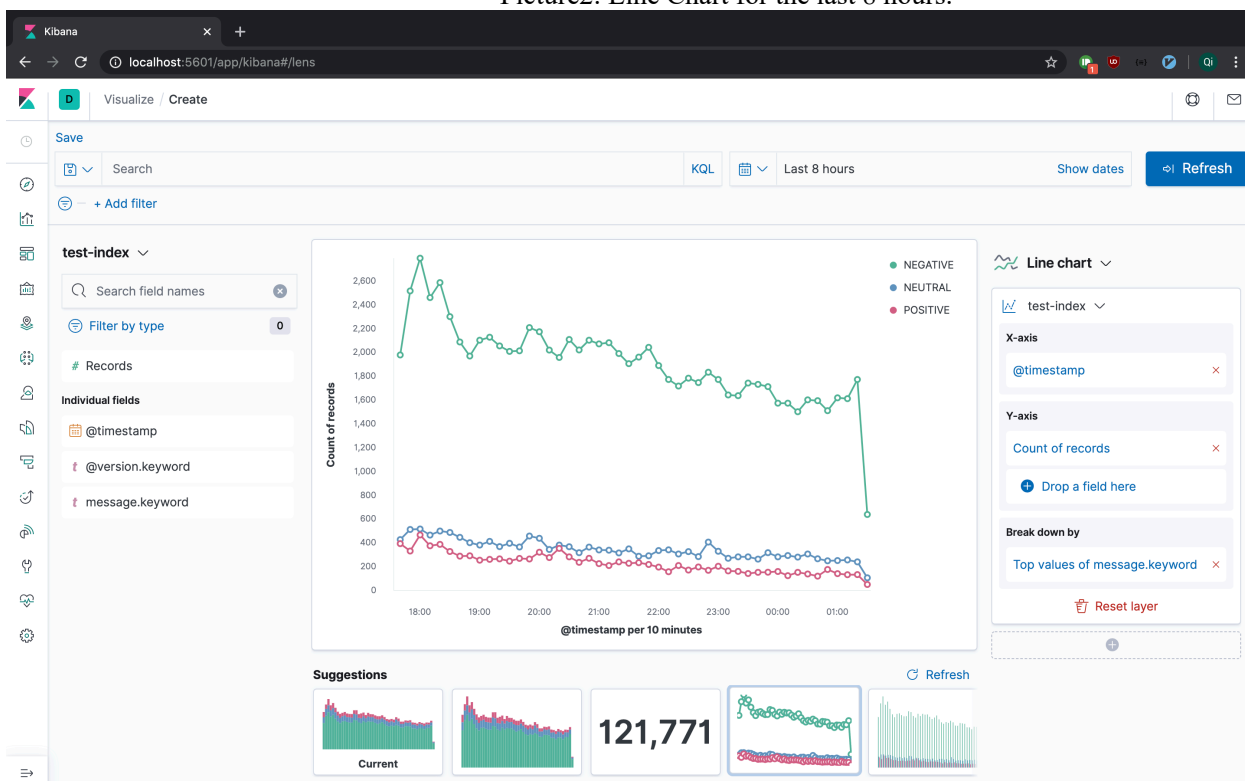# Part 1. Spark Streaming with Twitter and Kafka

Topic: test
Tracking time slot: 04/23/2020 5pm – 04/24/2020 1am
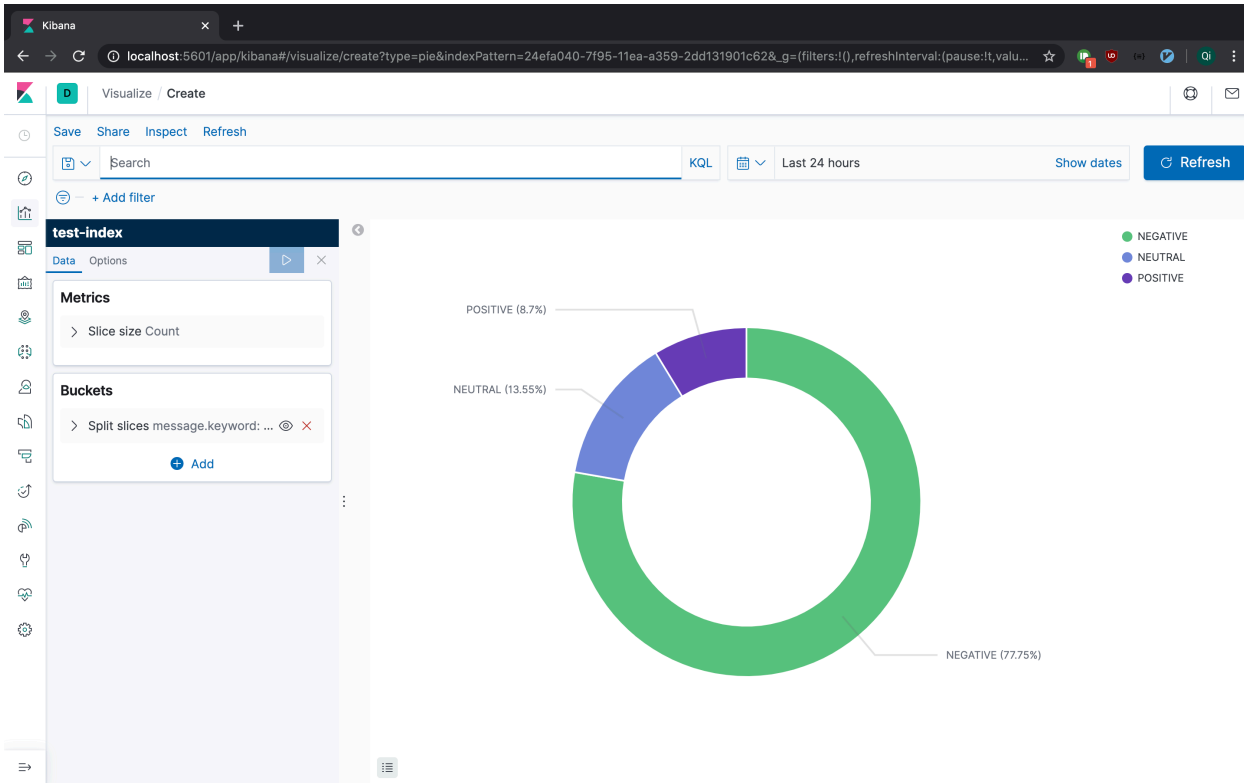**Tracking interval:** 8 hours
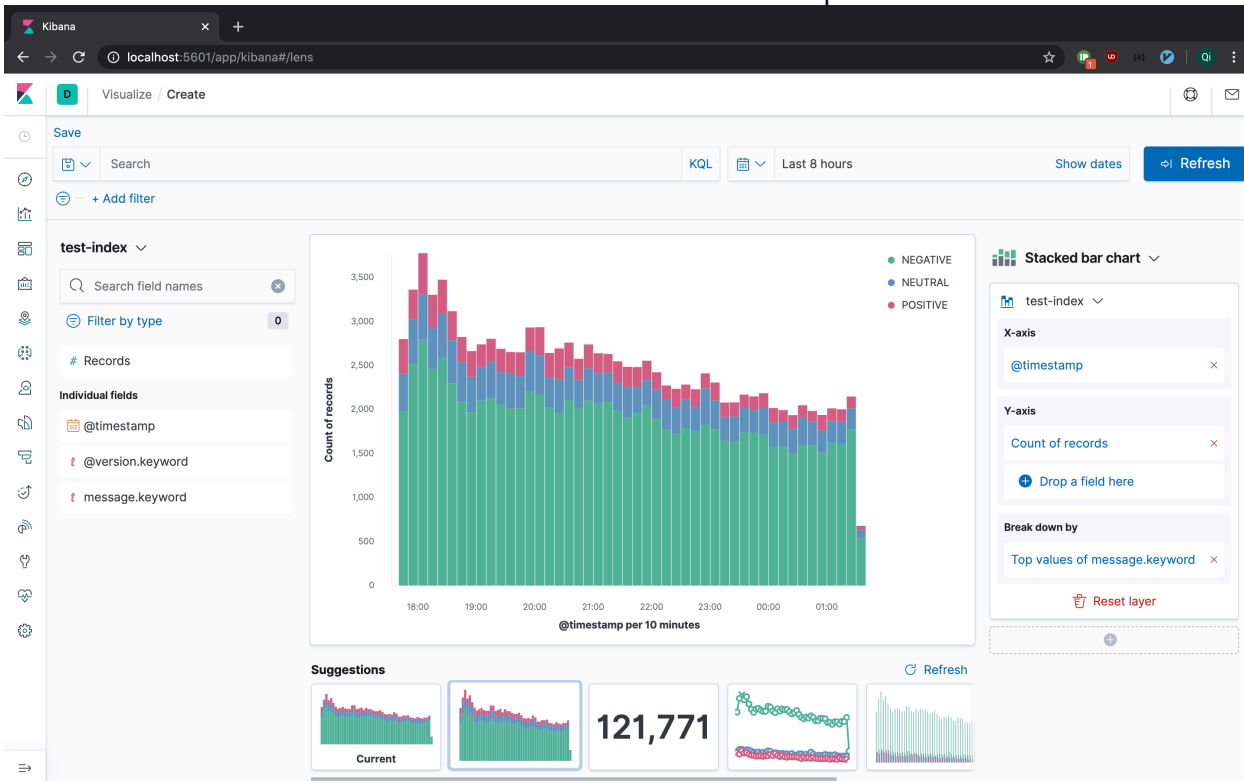
Picture 1: Total count for each message key ward

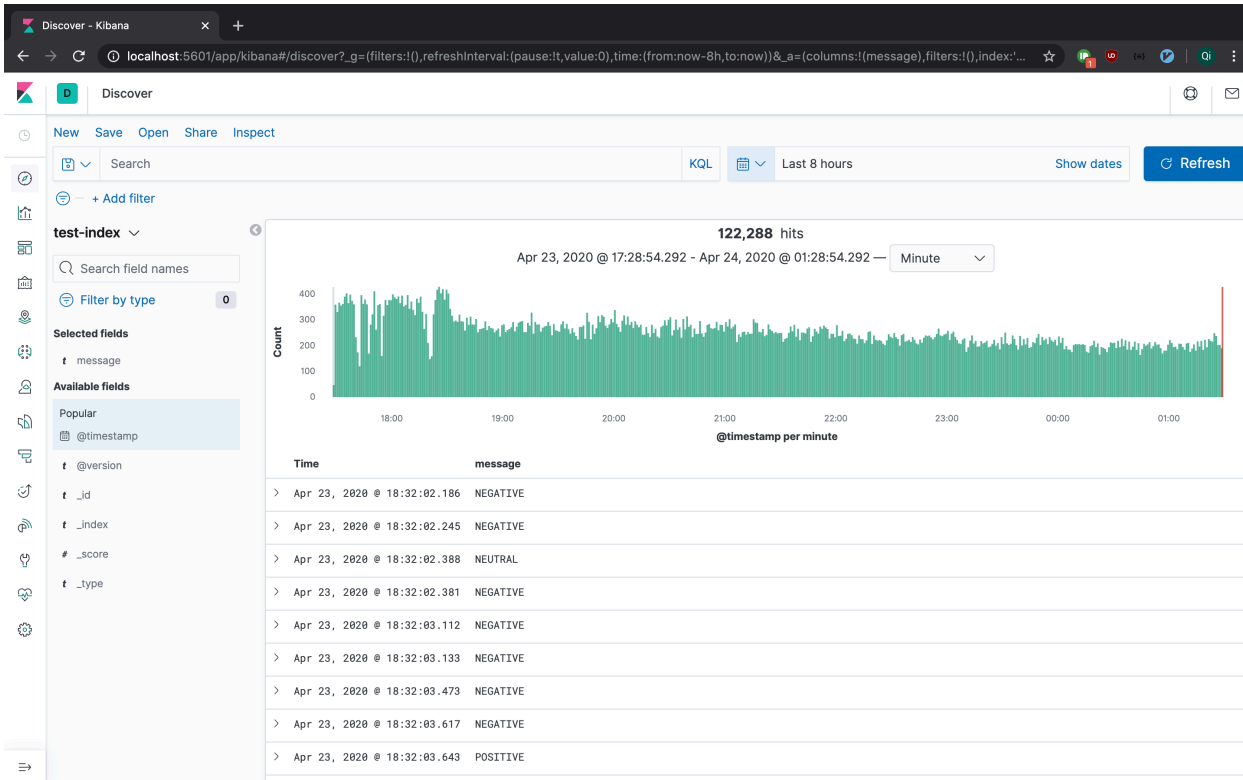Picture2: Line Chart for the last 8 hours.

Picture3: Pie chart for the last 8 hours.

Picture4: Timestamp.

Picture5: Total count.

Discussion:

As shown in the pie charts above, for the topic "test", during the 8-hours time interval, both POSITIVE (8.7%) and NEUTRAL (13.55%) sentiments have less tweets count compared to the NEGATIVE (77.75%) ones. This result is as expected. Due to the COVID-19 pandemic, people are tweeting about the testing for the disease. Since the situation is severe, there are more than 2 million confirmed test cases, it is normal for people to stressed out and express in the negative way when they are tweeting. The result agrees with the negative sentiments people have toward the test under the current situation.

We could also see clearly from the line chart and timestamp chart above that the total number of tweets people published at each timestamp are decreasing as it gets late. This may because that people tend to tweet in daytimes more and some people go to sleep at late night.