

## **Kafka test setup (kafkaDelay3Full)**

Technology: Kafka Streams

Producer Delay (Send next message): 3ms

Full data set (qty): 8760

Number of tests performed: 5

Start: Timestamp from Producer

End: Timestamp from Consumer

Unit: The results are given in seconds

## **Kafka median values**

End Subtract Start: 0.084600000000000001

## **Kafka standard deviation**

End Subtract Start: 0.22473290013803743

Lower Bound: -0.5498806410533817

UpperBound: 0.7985167597748429

Number of data in the std range: 8545

Number of data outside the std range: 215

## **Kafka interquartile range**

End Subtract Start: 0.0204

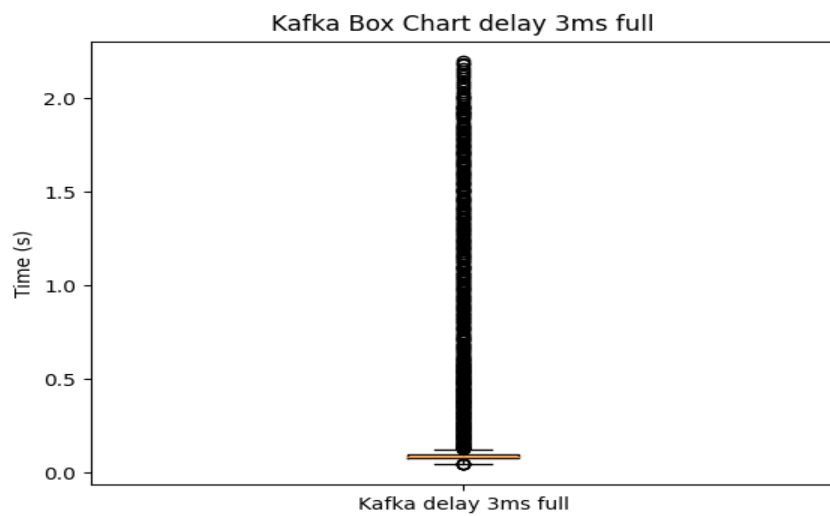
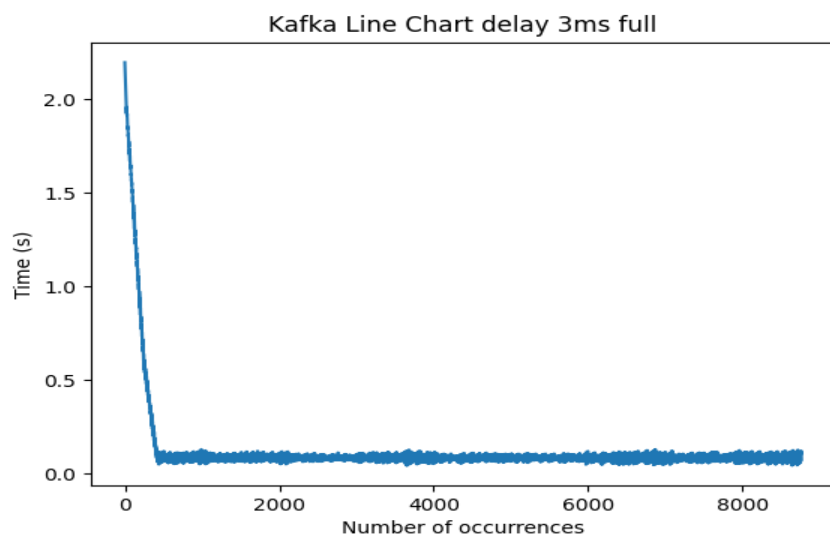
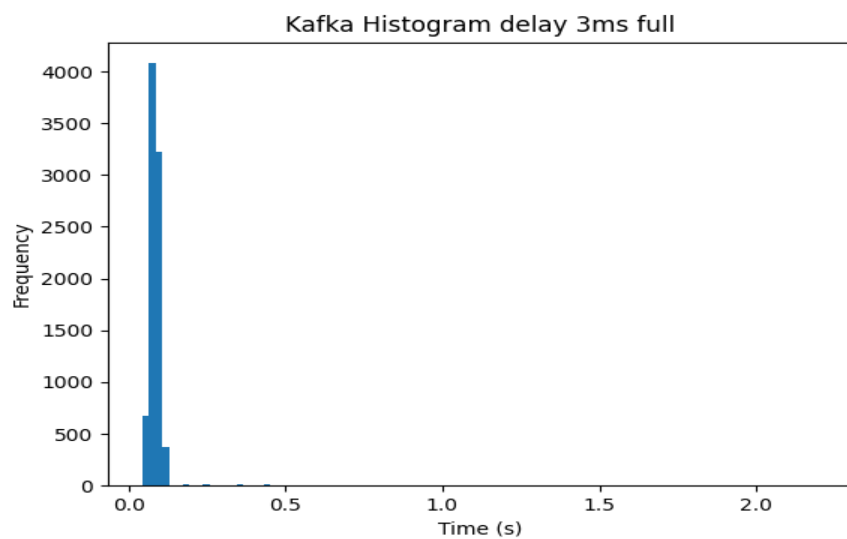
## **Kafka mean**

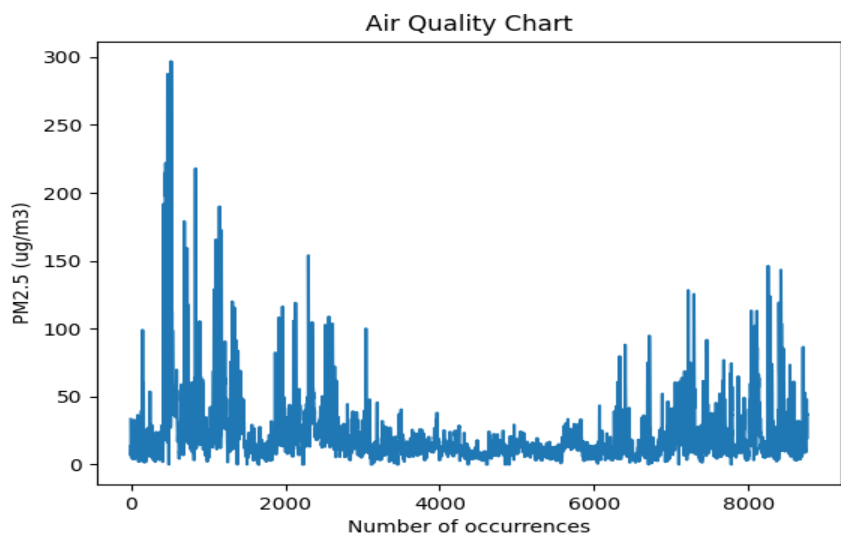
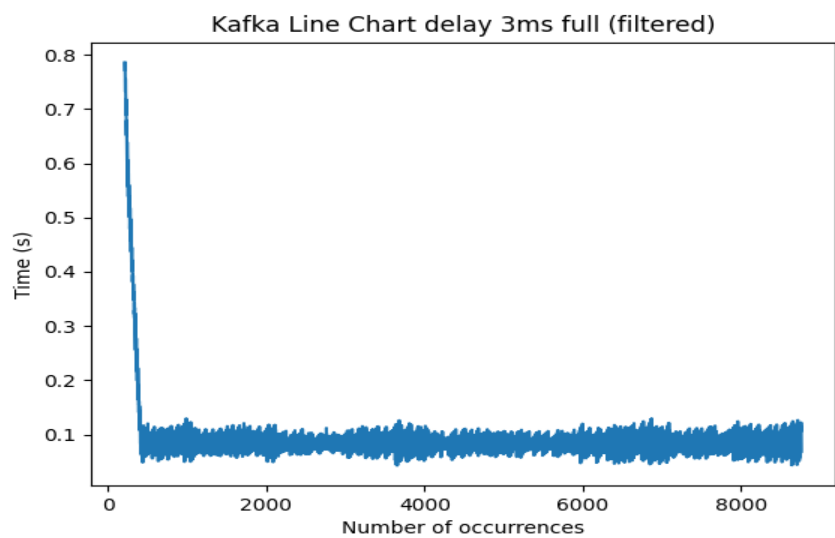
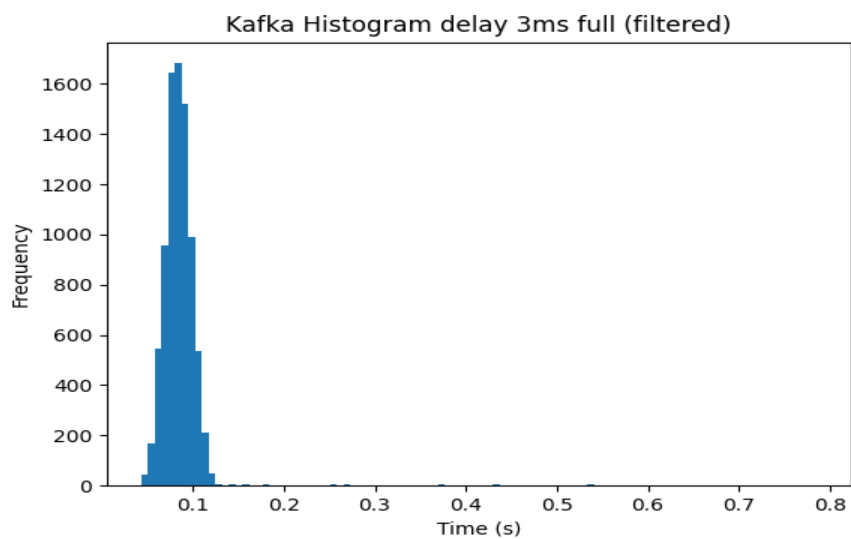
End Subtract Start: 0.12431805936073057

## **Average time for each sample**

0.08846518264840185   0.08297694063926941   0.0831502283105023

0.23180753424657535   0.1351904109589041





## **Kafka test setup (kafkaDelay0Full)**

Technology: Kafka Streams

Producer Delay (Send next message): 0ms

Full data set (qty): 8760

Number of tests performed: 5

Start: Timestamp from Producer

End: Timestamp from Consumer

Unit: The results are given in seconds

## **Kafka median values**

End Subtract Start: 2.3583

## **Kafka standard deviation**

End Subtract Start: 0.7615624821081167

Lower Bound: 0.03898762216880014

Upper Bound: 4.6083625148175

Number of data in the std range: 8760

Number of data outside the std range: 0

## **Kafka interquartile range**

End Subtract Start: 1.398

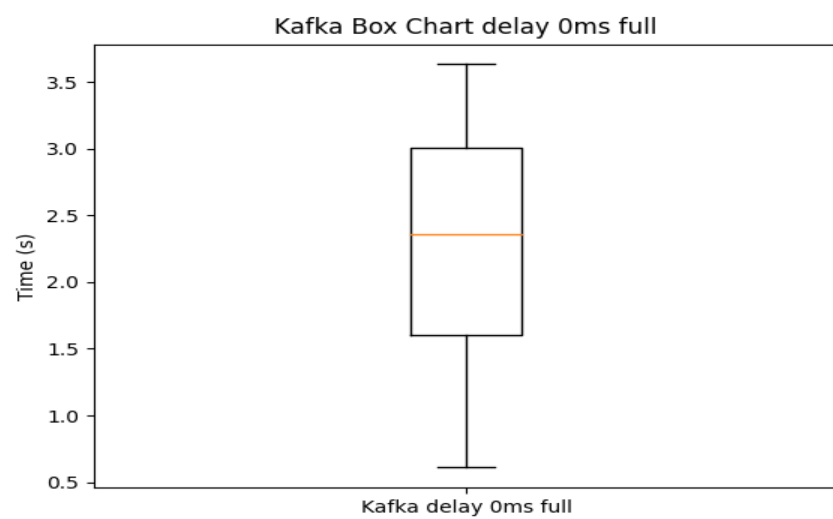
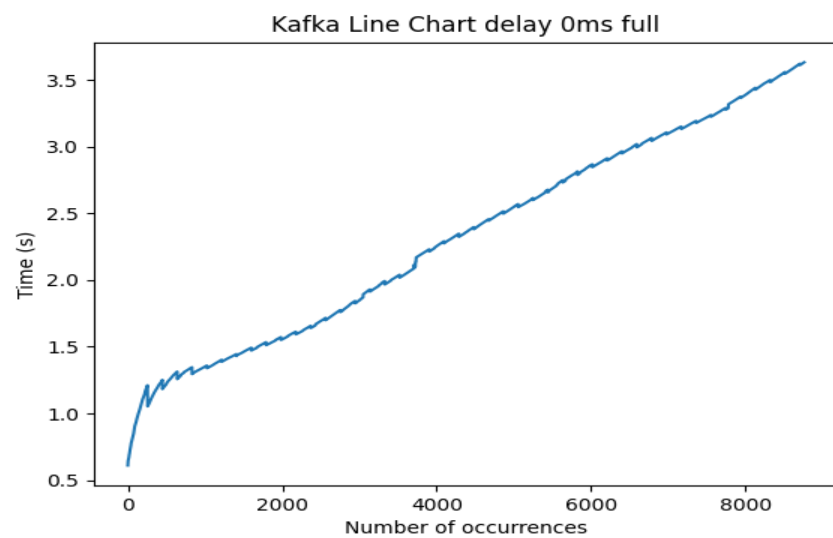
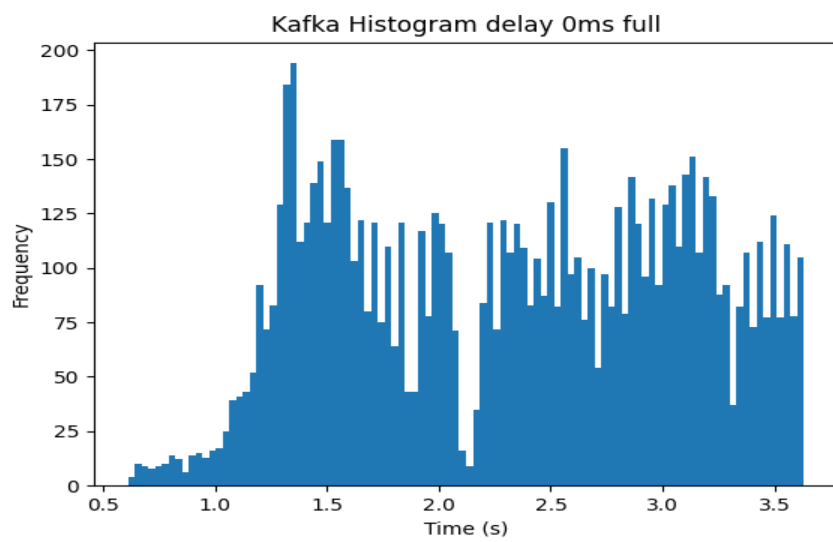
## **Kafka mean**

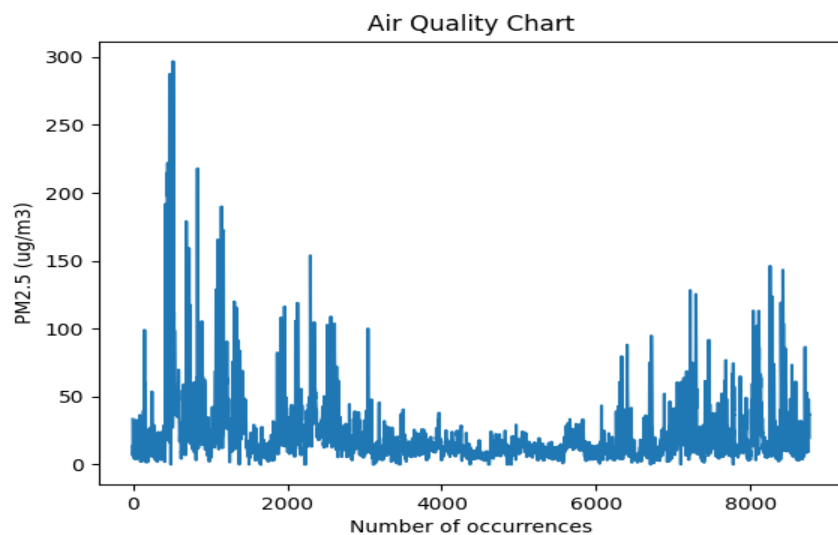
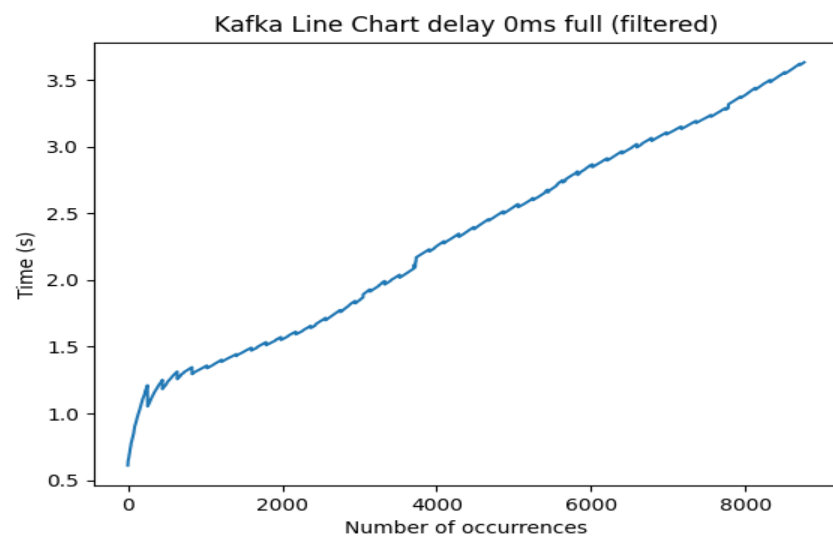
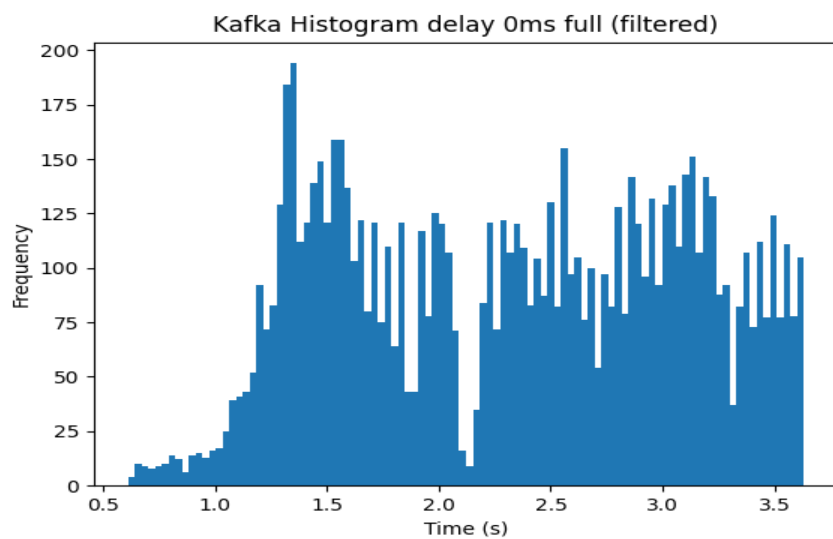
End Subtract Start: 2.3236750684931504

## **Average time for each sample**

2.5296270547945205   1.9596102739726025   2.0990082191780823

3.2746164383561642   1.7555133561643836





## **Kafka test setup (kafkaDelay0Half)**

Technology: Kafka Streams

Producer Delay (Send next message): 0ms

Full data set (qty): 4380

Number of tests performed: 5

Start: Timestamp from Producer

End: Timestamp from Consumer

Unit: The results are given in seconds

## **Kafka median values**

End Subtract Start: 5.342499999999999

## **Kafka standard deviation**

End Subtract Start: 0.4631643357872056

Lower Bound: 4.093240371633817

Upper Bound: 6.872226386357051

Number of data in the std range: 4380

Number of data outside the std range: 0

## **Kafka interquartile range**

End Subtract Start: 0.7993999999999994

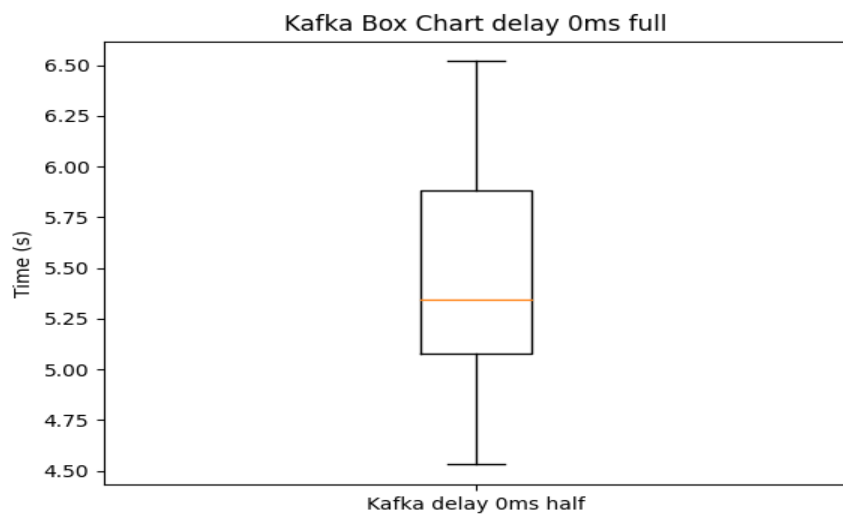
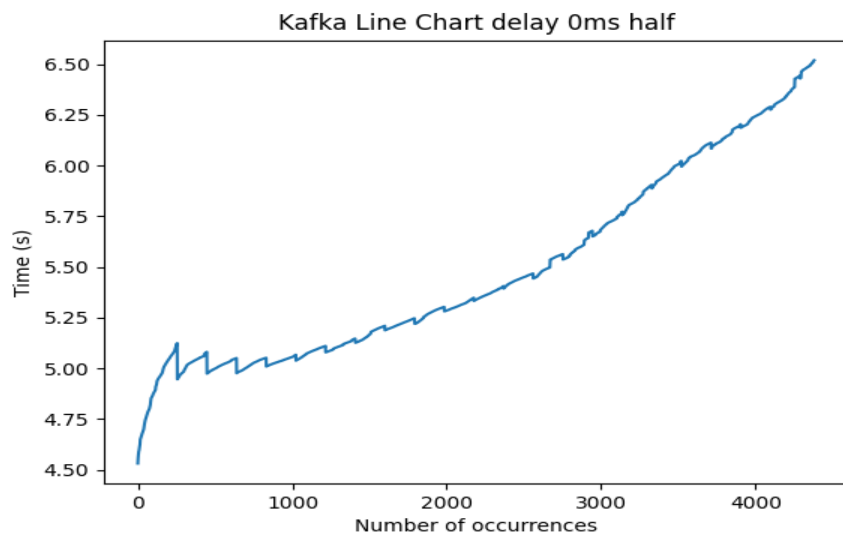
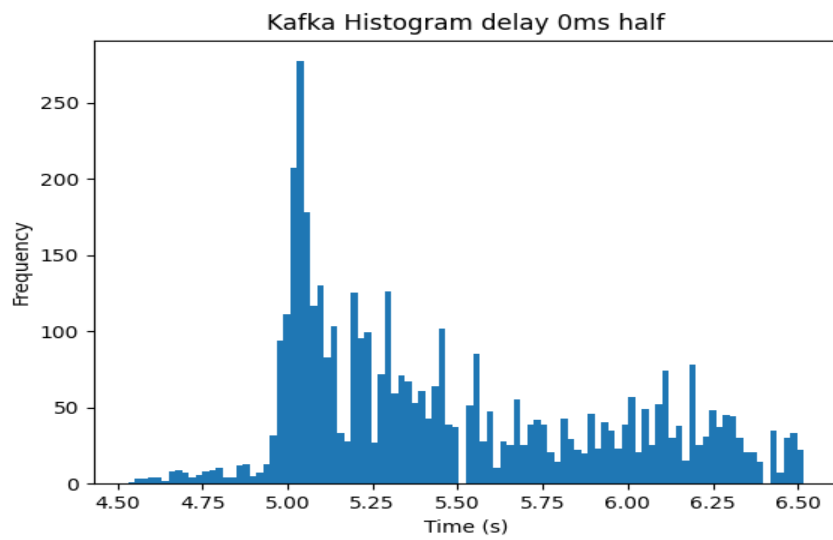
## **Kafka mean**

End Subtract Start: 5.482733378995434

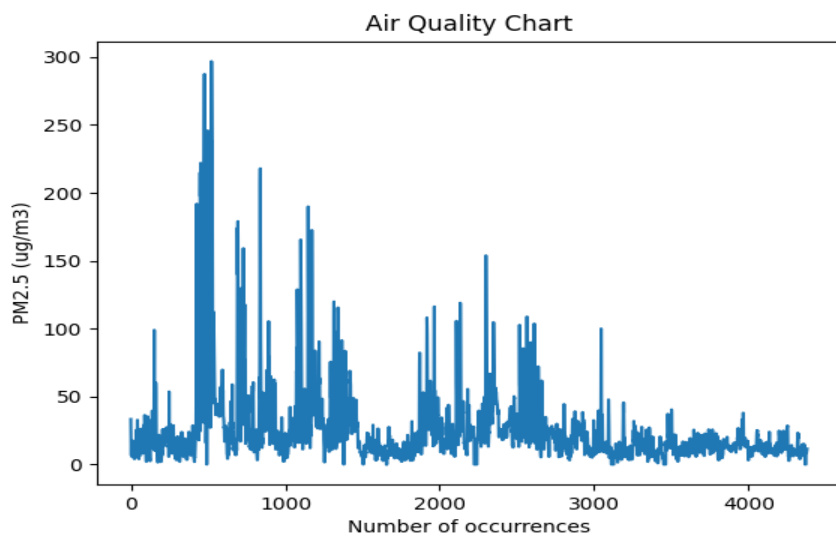
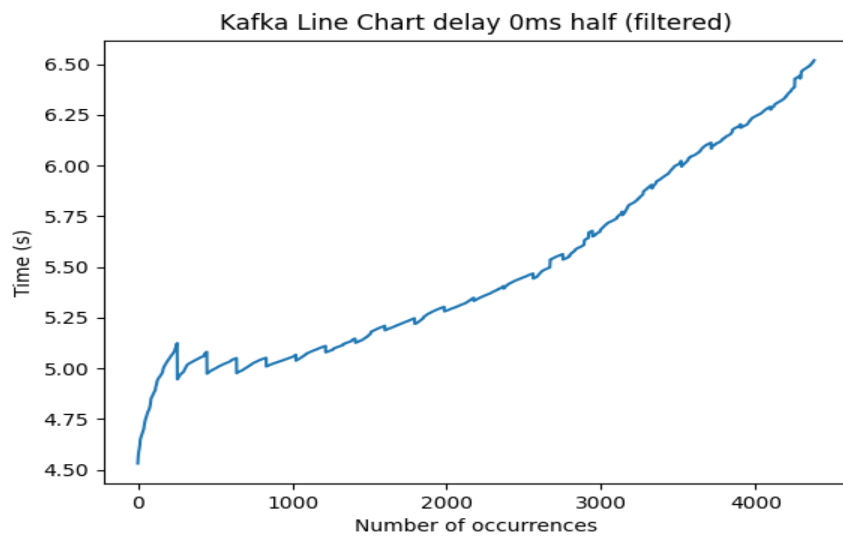
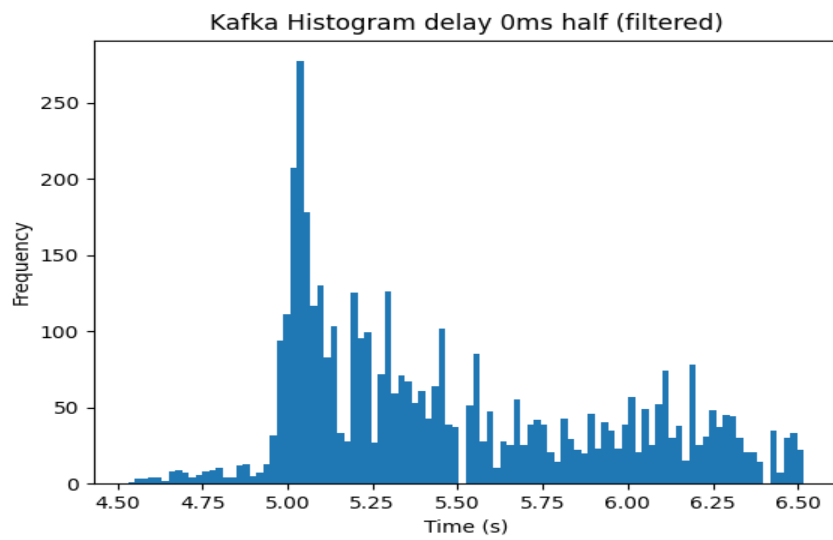
## **Average time for each sample**

2.8113625570776257   1.148457077625571   1.1442707762557078

15.065976940639267   7.243599543378996







## **Spark test setup (sparkDelay3Full)**

Technology: Spark Structured Streaming  
Producer Delay (Send next message): 3ms  
Full data set (qty): 8760  
Number of tests performed: 5  
Start: Timestamp from Producer  
End: Timestamp from Consumer  
Unit: The results are given in seconds

## **Spark median values**

End Subtract Start: 0.8321999999999999

## **Spark standard deviation**

End Subtract Start: 0.2711297165533159  
Lower Bound: 0.061306809244161875  
Upper Bound: 1.6880851085640574  
Number of data in the std range: 8620  
Number of data outside the std range: 140

## **Spark interquartile range**

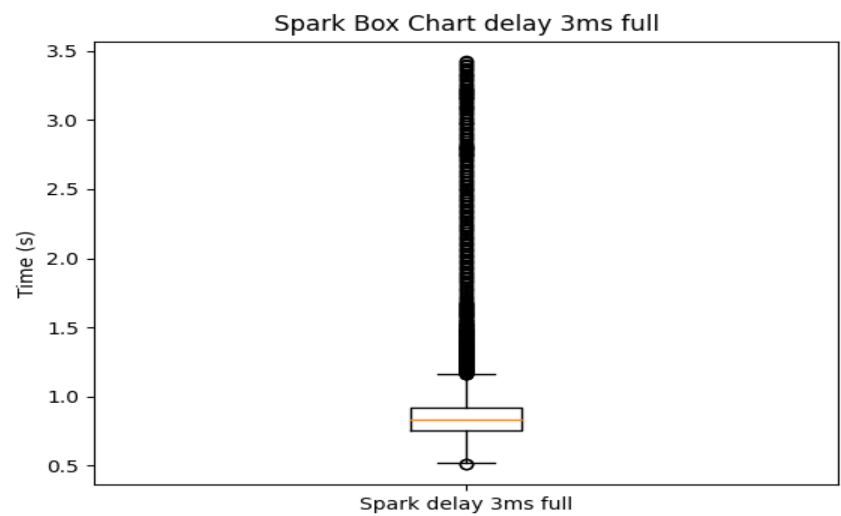
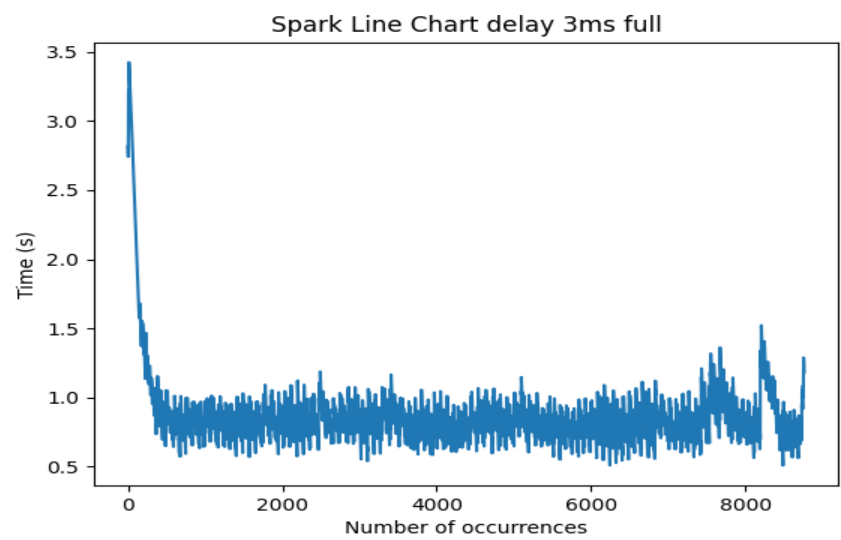
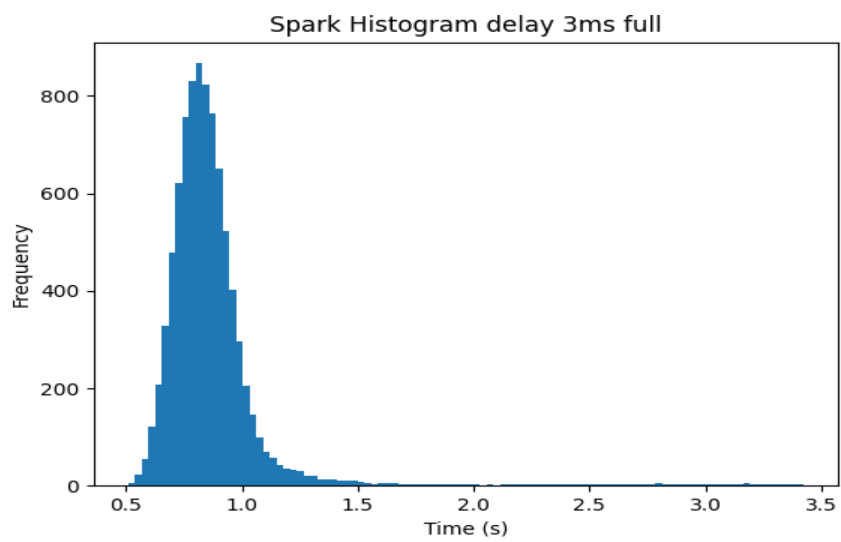
End Subtract Start: 0.16299999999999998

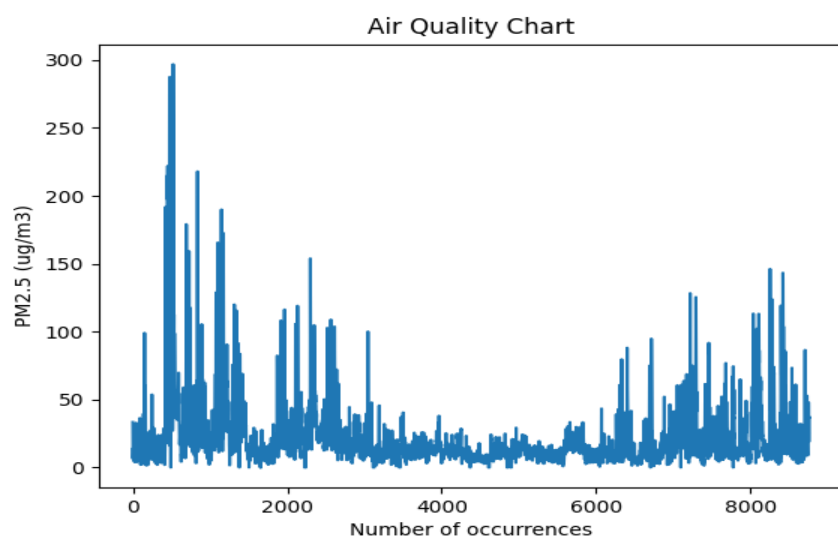
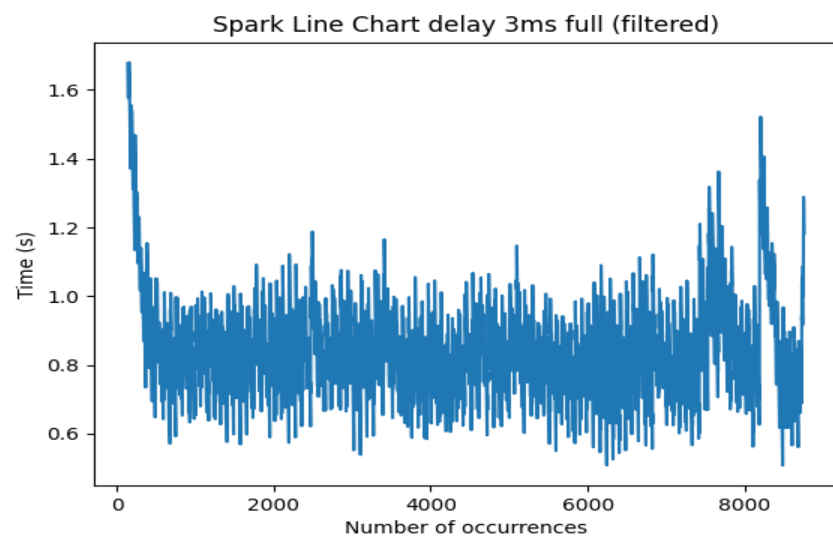
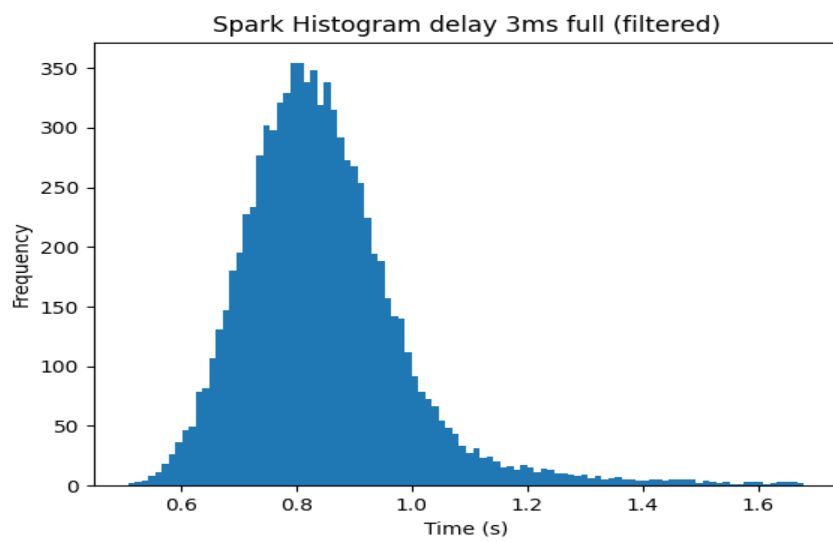
## **Spark mean**

End Subtract Start: 0.8746959589041096

## **Average time for each sample**

1.555434589041096   0.7010439497716896   0.7204858447488585  
0.7087466894977169   0.6877687214611873





## **Spark test setup (sparkDelay0Full)**

Technology: Spark Structured Streaming  
Producer Delay (Send next message): 0ms  
Full data set (qty): 8760  
Number of tests performed: 5  
Start: Timestamp from Producer  
End: Timestamp from Consumer  
Unit: The results are given in seconds

## **Spark median values**

End Subtract Start: 5.9833

## **Spark standard deviation**

End Subtract Start: 0.8714526953812832  
Lower Bound: 3.3426388316643703  
Upper Bound: 8.57135500395207  
Number of data in the std range: 8760  
Number of data outside the std range: 0

## **Spark interquartile range**

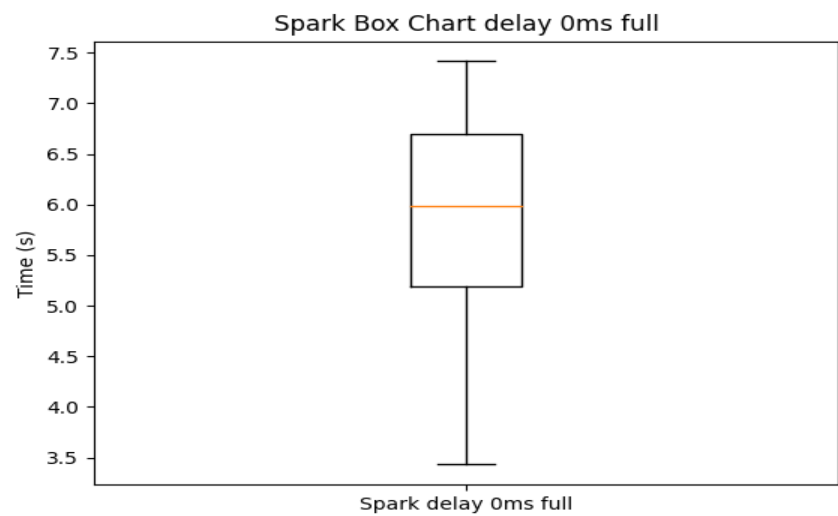
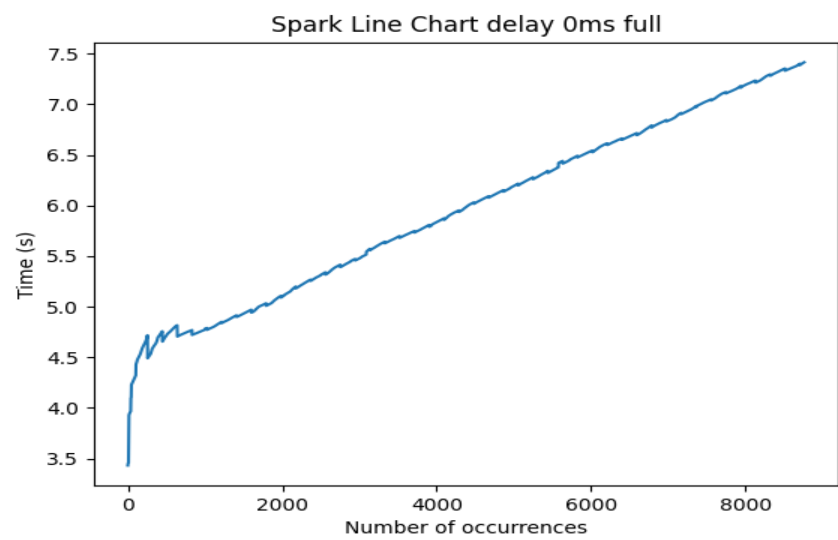
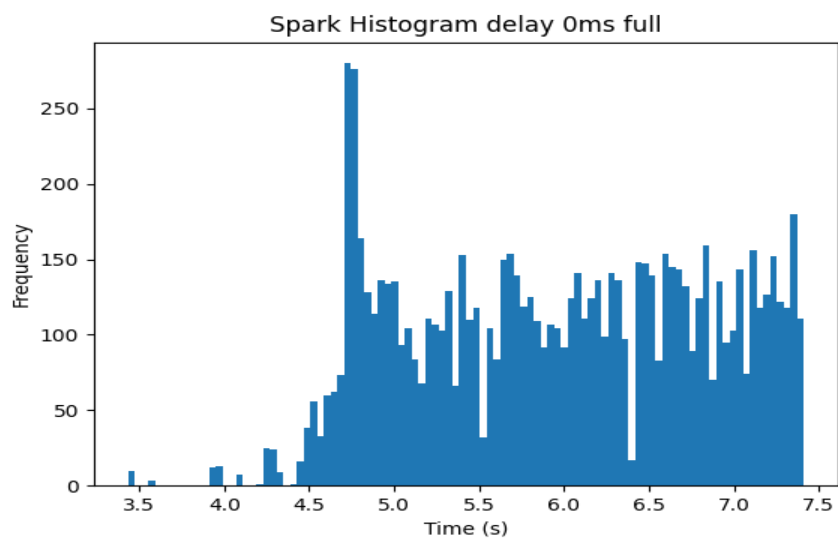
End Subtract Start: 1.5070999999999994

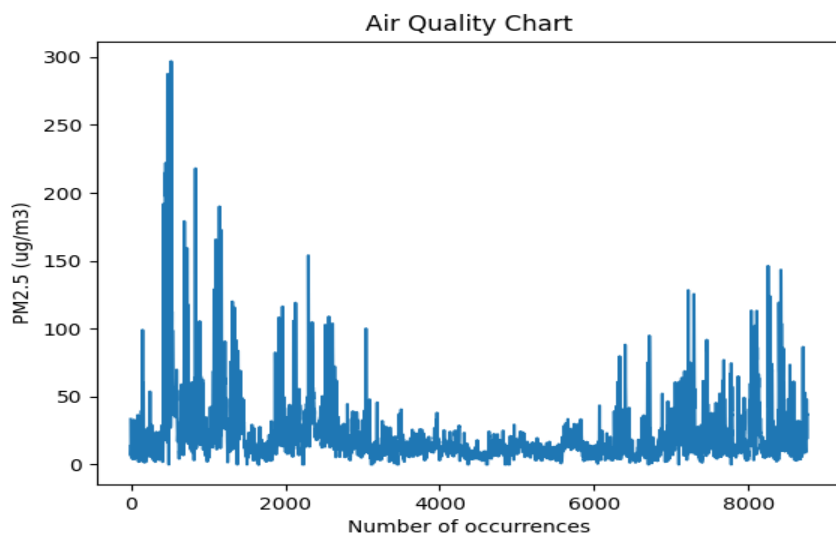
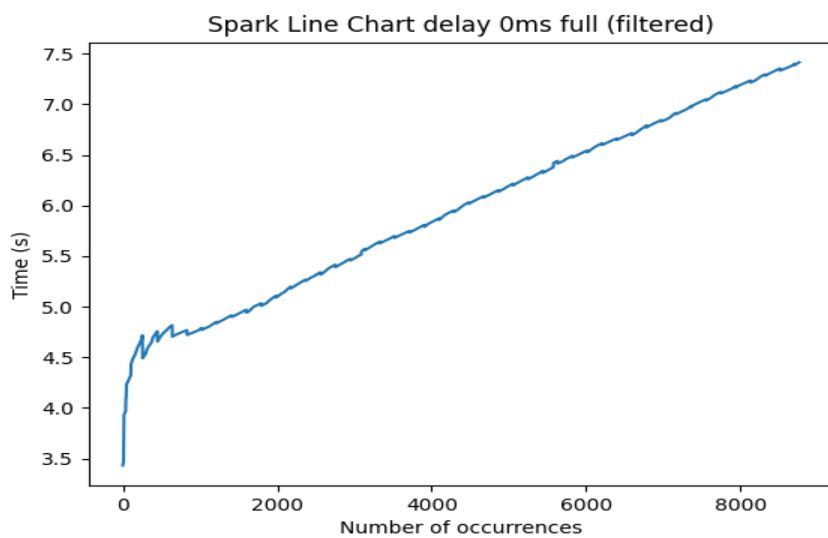
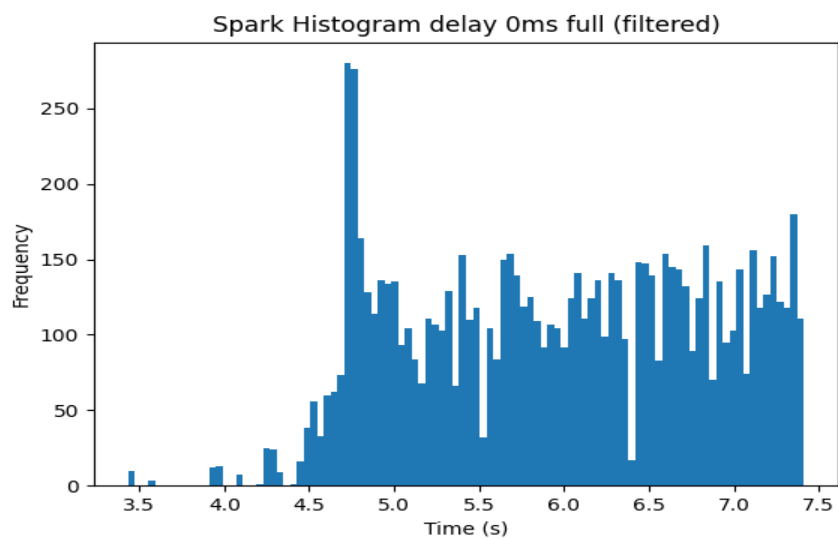
## **Spark mean**

End Subtract Start: 5.95699691780822

## **Average time for each sample**

10.360887557077625   4.505659589041097   4.92744189497717  
5.237693721461187   4.7533018264840186





## **Spark test setup (sparkDelay0Half)**

Technology: Spark Structured Streaming  
Producer Delay (Send next message): 0ms  
Full data set (qty): 4380  
Number of tests performed: 5  
Start: Timestamp from Producer  
End: Timestamp from Consumer  
Unit: The results are given in seconds

## **Spark median values**

End Subtract Start: 4.8353

## **Spark standard deviation**

End Subtract Start: 0.5512861461493102  
Lower Bound: 3.243264072967595  
Upper Bound: 6.550980949863456  
Number of data in the std range: 4371  
Number of data outside the std range: 9

## **Spark interquartile range**

End Subtract Start: 0.97445

## **Spark mean**

End Subtract Start: 4.8971225114155255

## **Average time for each sample**

8.790803196347033	3.7517568493150684	4.1874315068493155
3.809788812785388	3.9458321917808226	



