

Kafka monitoring





Somkiat Puisungnoen

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Intro

Software Craftsmanship

Software Practitioner at สยามชัมนาภิกิจ พ.ศ. 2556

Agile Practitioner and Technical at SPRINT3r

Post Photo/Video Live Video Life Event

What's on your mind?

Public Post

Somkiat Puisungnoen 15 mins · Bangkok · ⚙️

Java and Bigdata





Page

Messages

Notifications 3

Insights

Publishing Tools

Settings

Help ▾



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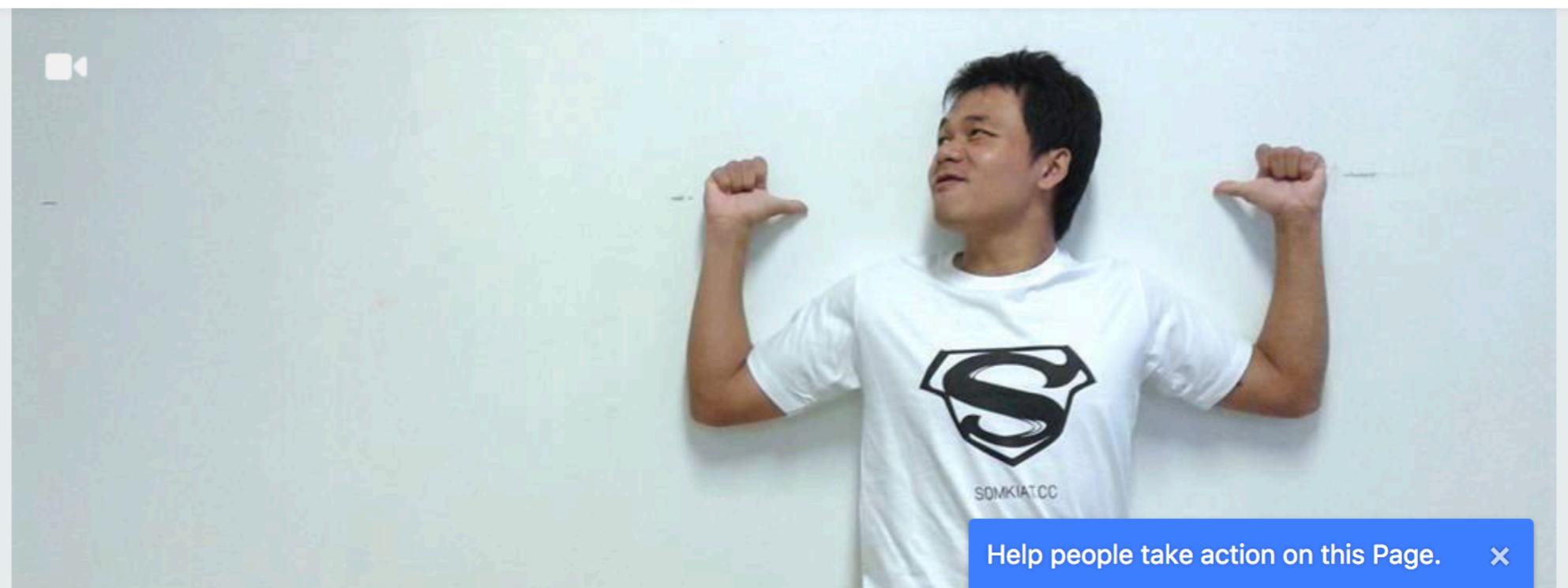
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Home

Posts

Videos

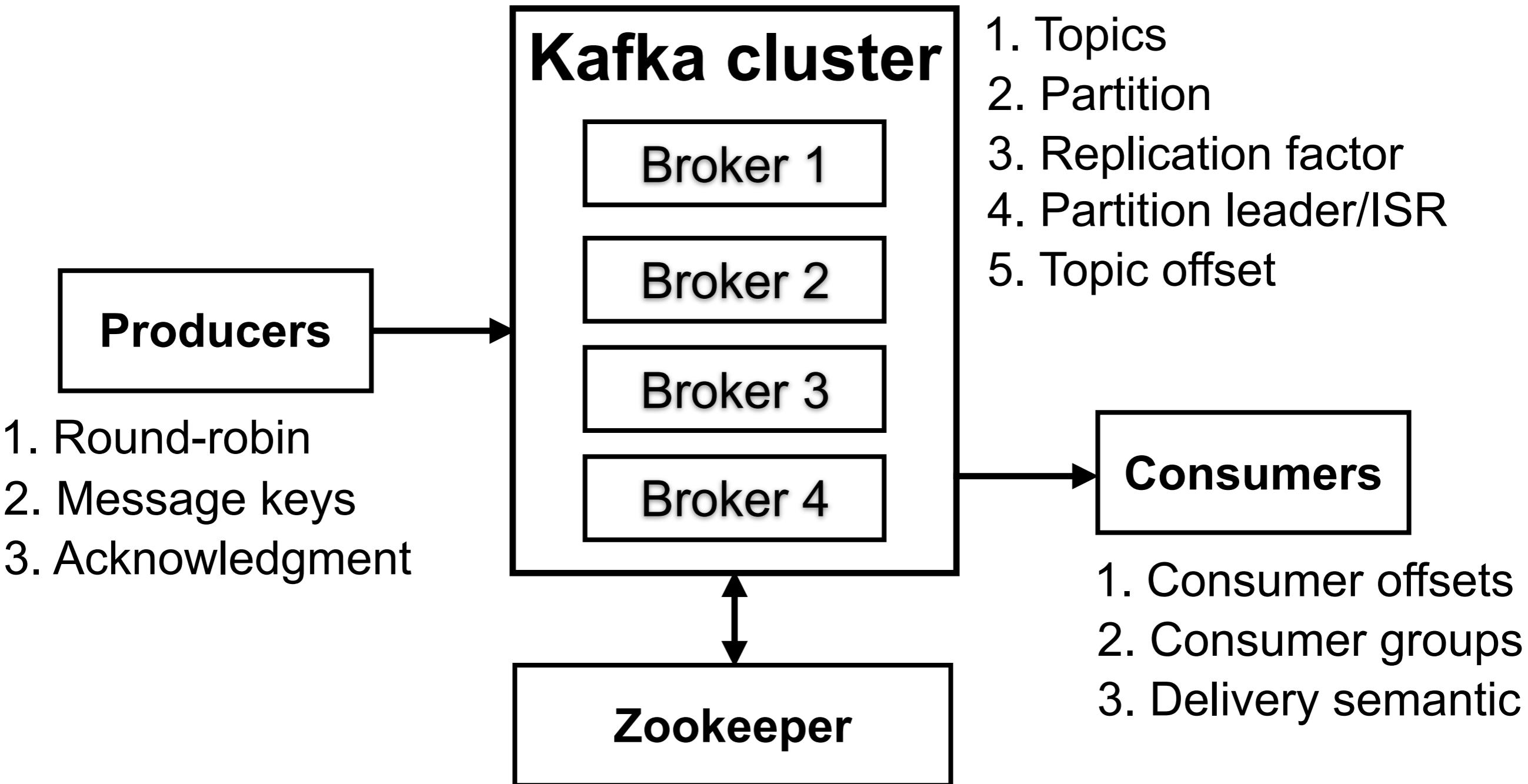
Photos



Summary of Kafka



Kafka concepts



Kafka monitoring



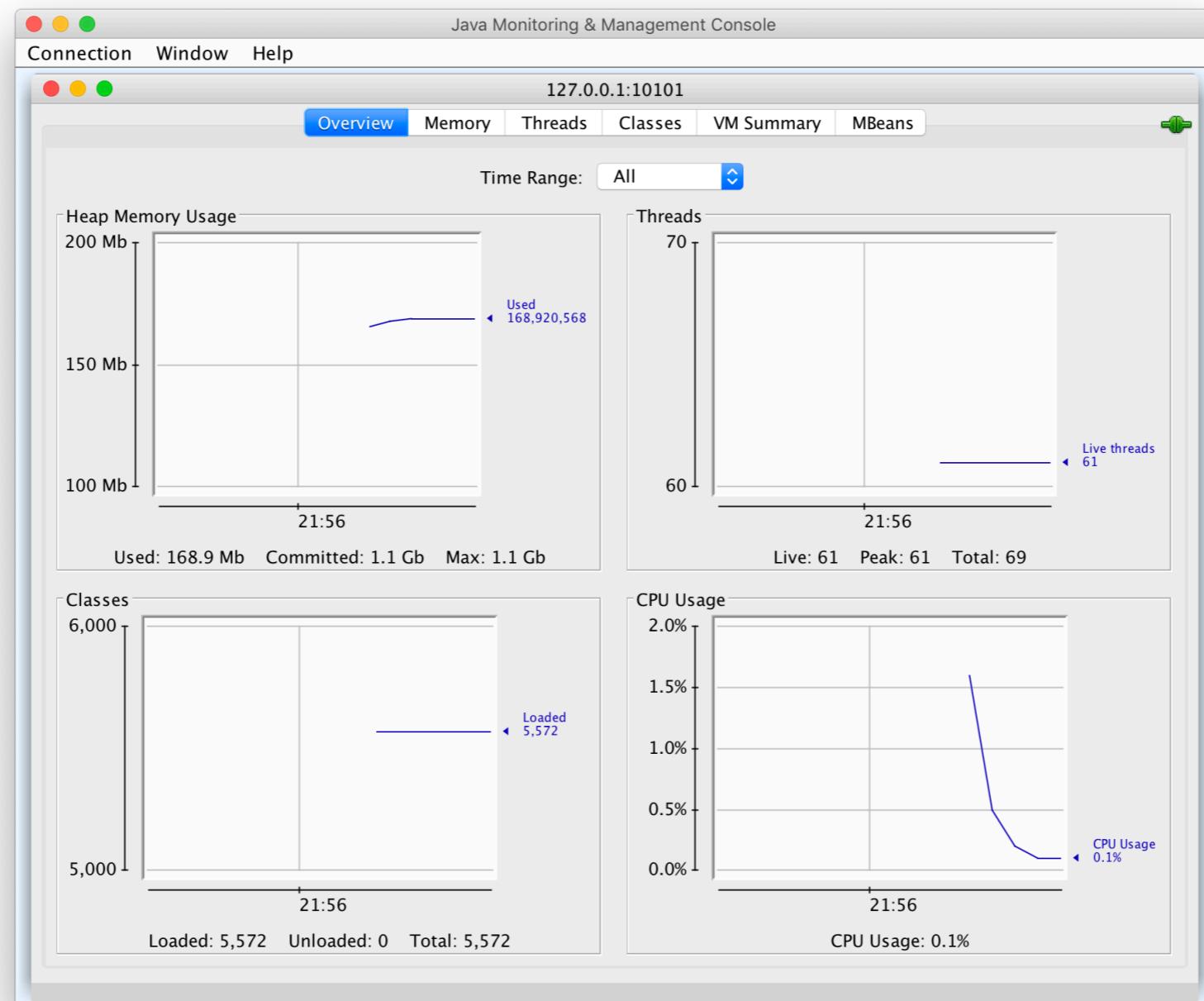
Monitoring

Server stats
Producer stats
Consumer stats
Zookeeper stats



Server stats

\$jconsole



Detail of MBeans

The screenshot shows the Java Monitoring & Management Console (JConsole) interface. The title bar reads "Java Monitoring & Management Console". The URL "127.0.0.1:10101" is displayed above the tabs. The tabs include Overview, Memory, Threads, Classes, VM Summary, and MBeans, with MBeans being the active tab. The left pane displays a tree view of MBeans:

- JMImplementation
- com.sun.management
- java.lang
- java.nio
- java.util.logging
- kafka
- kafka.cluster
- kafka.controller
- kafka.coordinator.group
- kafka.coordinator.transaction
- kafka.log
- kafka.network
- kafka.server** (selected)
- BrokerTopicMetrics
 - BytesInPerSec (selected)
 - Attributes
 - Operations
 - BytesOutPerSec
 - BytesRejectedPerSec
 - FailedFetchRequestsPerSec
 - FailedProduceRequestsPerSec
 - FetchMessageConversionsPerSec
 - MessagesInPerSec
 - ProduceMessageConversionsPerSec
 - ReplicationBytesInPerSec
 - ReplicationBytesOutPerSec
 - TotalFetchRequestsPerSec

The right pane shows the "Attribute values" for the selected MBean. The table lists the following attributes and their values:

Name	Value
Count	0
EventType	bytes
FifteenMinuteRate	0.0
FiveMinuteRate	0.0
MeanRate	0.0
OneMinuteRate	0.0
RateUnit	SECONDS

A "Refresh" button is located at the bottom right of the pane.



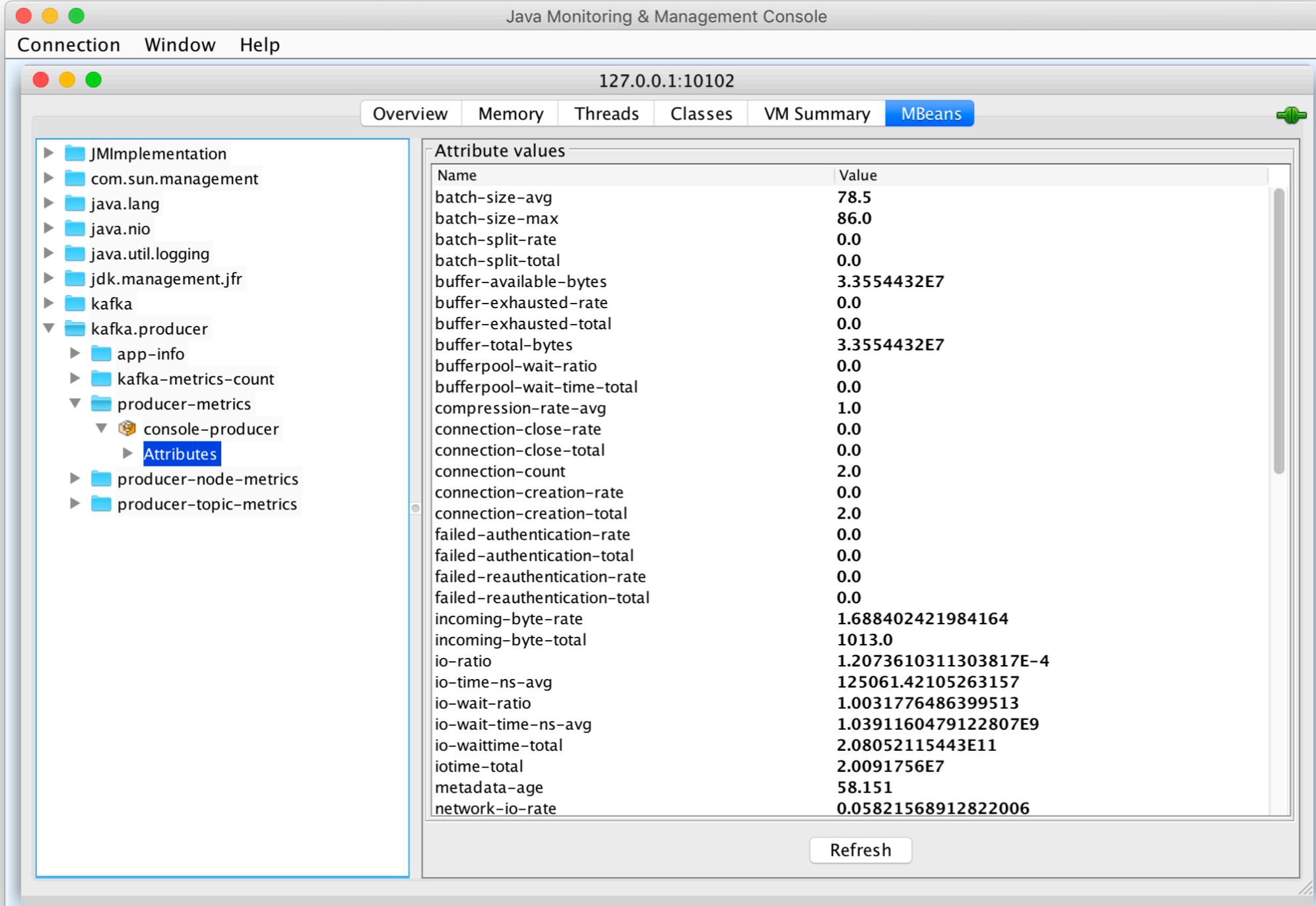
Producer stats

Java Monitoring & Management Console
Connection Window Help
127.0.0.1:10102
Overview Memory Threads Classes VM Summary MBeans

Attribute values

Name	Value
batch-size-avg	78.5
batch-size-max	86.0
batch-split-rate	0.0
batch-split-total	0.0
buffer-available-bytes	3.3554432E7
buffer-exhausted-rate	0.0
buffer-exhausted-total	0.0
buffer-total-bytes	3.3554432E7
bufferpool-wait-ratio	0.0
bufferpool-wait-time-total	0.0
compression-rate-avg	1.0
connection-close-rate	0.0
connection-close-total	0.0
connection-count	2.0
connection-creation-rate	0.0
connection-creation-total	2.0
failed-authentication-rate	0.0
failed-authentication-total	0.0
failed-reauthentication-rate	0.0
failed-reauthentication-total	0.0
incoming-byte-rate	1.688402421984164
incoming-byte-total	1013.0
io-ratio	1.2073610311303817E-4
io-time-ns-avg	125061.42105263157
io-wait-ratio	1.0031776486399513
io-wait-time-ns-avg	1.0391160479122807E9
io-waittime-total	2.08052115443E11
iotime-total	2.0091756E7
metadata-age	58.151
network-io-rate	0.05821568912822006

Refresh



Consumer stats

Java Monitoring & Management Console
Connection Window Help
127.0.0.1:10103

Overview Memory Threads Classes VM Summary MBeans

Attribute values

Name	Value
bytes-consumed-rate	1.145475372279496
bytes-consumed-total	136.0
fetch-size-avg	16.5
fetch-size-max	25.0
records-consumed-rate	0.10413412475268145
records-consumed-total	11.0
records-per-request-avg	1.5

Refresh

The screenshot shows the Java Monitoring & Management Console interface. The left pane displays a tree view of MBeans, with the path `kafka.consumer.kafka.consumer-1.demo01.0` selected. The right pane shows attribute values for this specific MBean. The selected attribute is `Attributes`, which has a value of `Attributes`. Other visible attributes include `Attributes` and `Attributes`.



Zookeeper stats

Java Monitoring & Management Console
Connection Window Help
127.0.0.1:10100

Overview Memory Threads Classes VM Summary MBeans

Attribute values

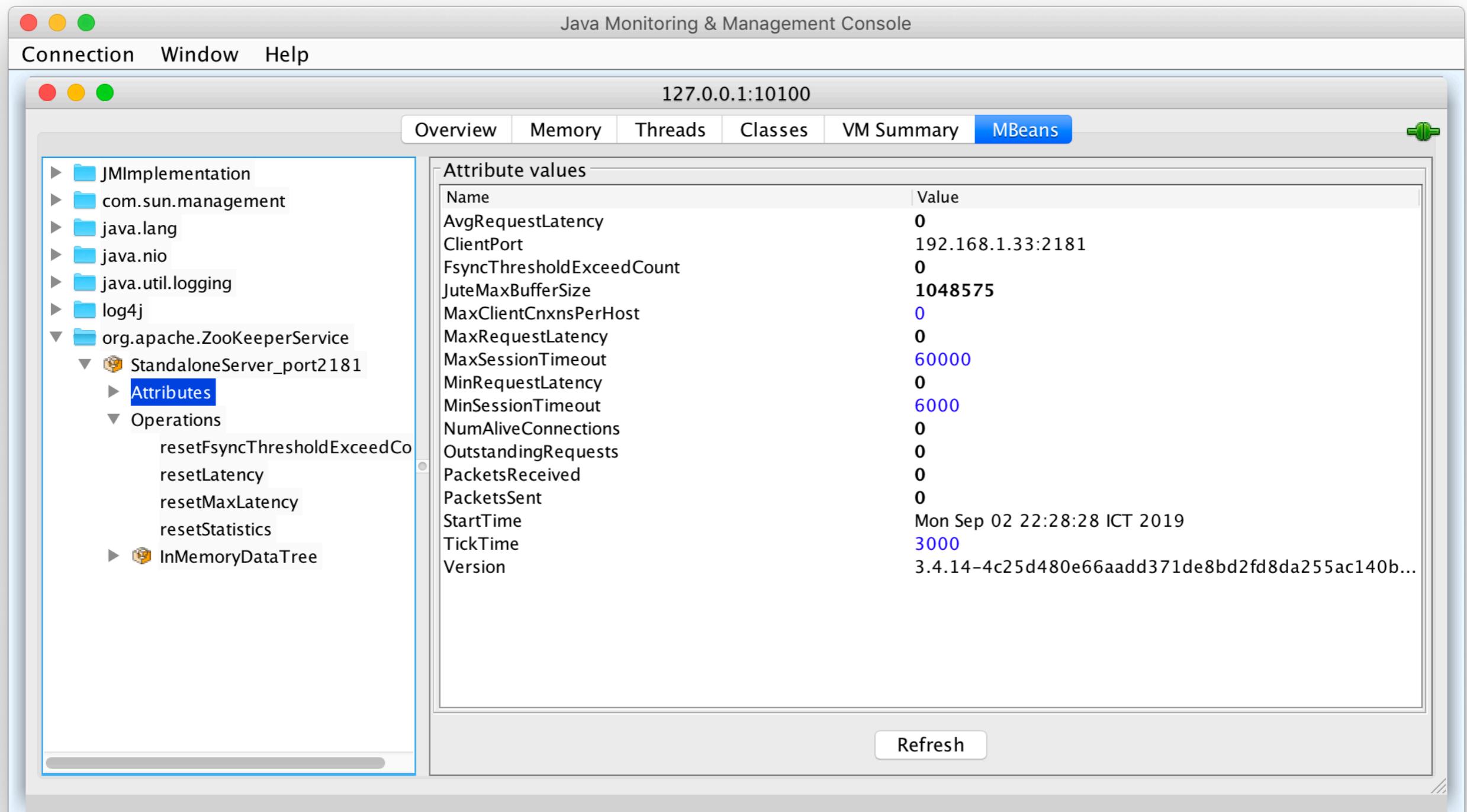
Name	Value
AvgRequestLatency	0
ClientPort	192.168.1.33:2181
FsyncThresholdExceedCount	0
JuteMaxBufferSize	1048575
MaxClientCnxnsPerHost	0
MaxRequestLatency	0
MaxSessionTimeout	60000
MinRequestLatency	0
MinSessionTimeout	6000
NumAliveConnections	0
OutstandingRequests	0
PacketsReceived	0
PacketsSent	0
StartTime	Mon Sep 02 22:28:28 ICT 2019
TickTime	3000
Version	3.4.14-4c25d480e66aadd371de8bd2fd8da255ac140b...

Attributes Operations

- resetFsyncThresholdExceedCo
- resetLatency
- resetMaxLatency
- resetStatistics

InMemoryDataTree

Refresh



Kafka monitoring



Structure

Zookeeper

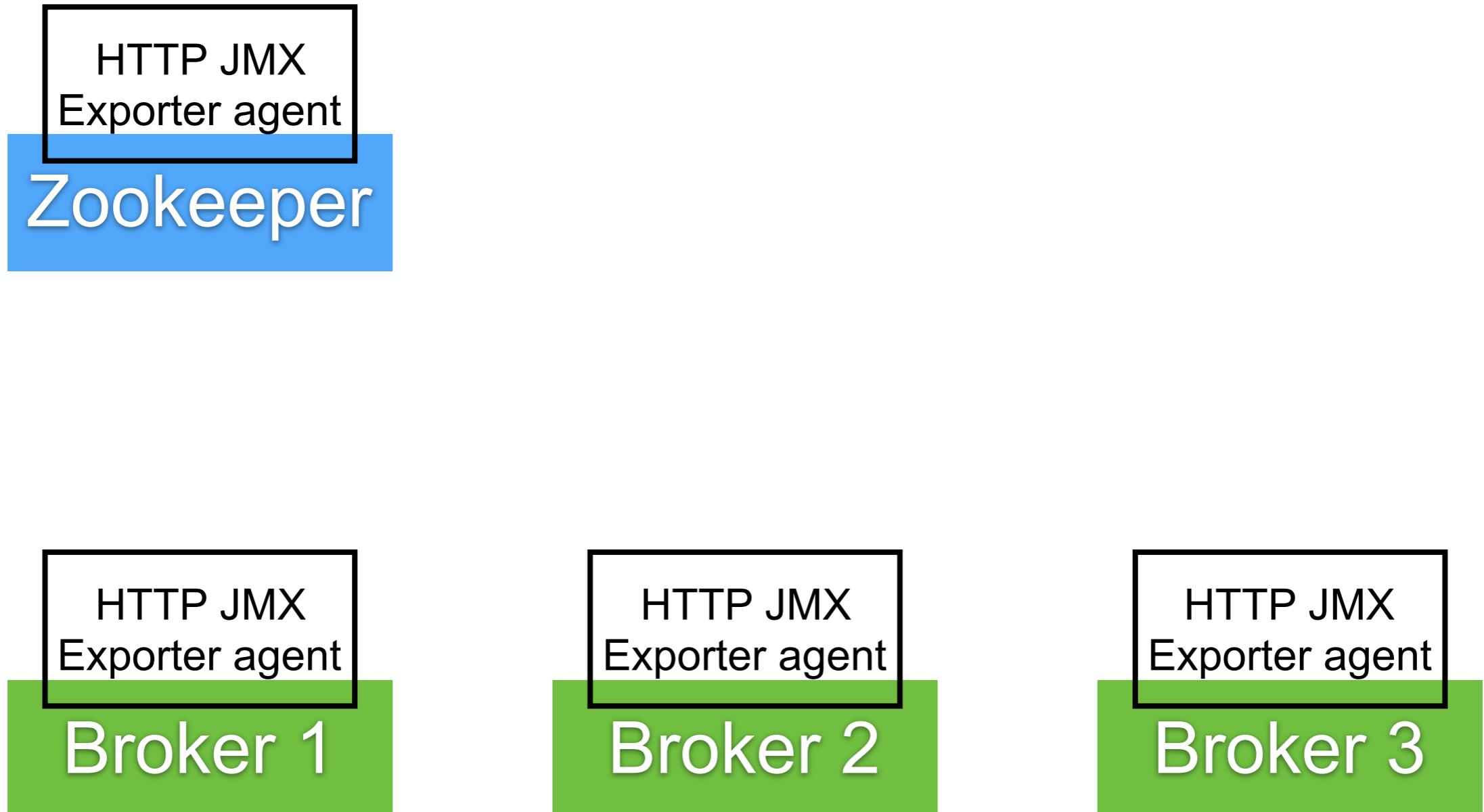
Broker 1

Broker 2

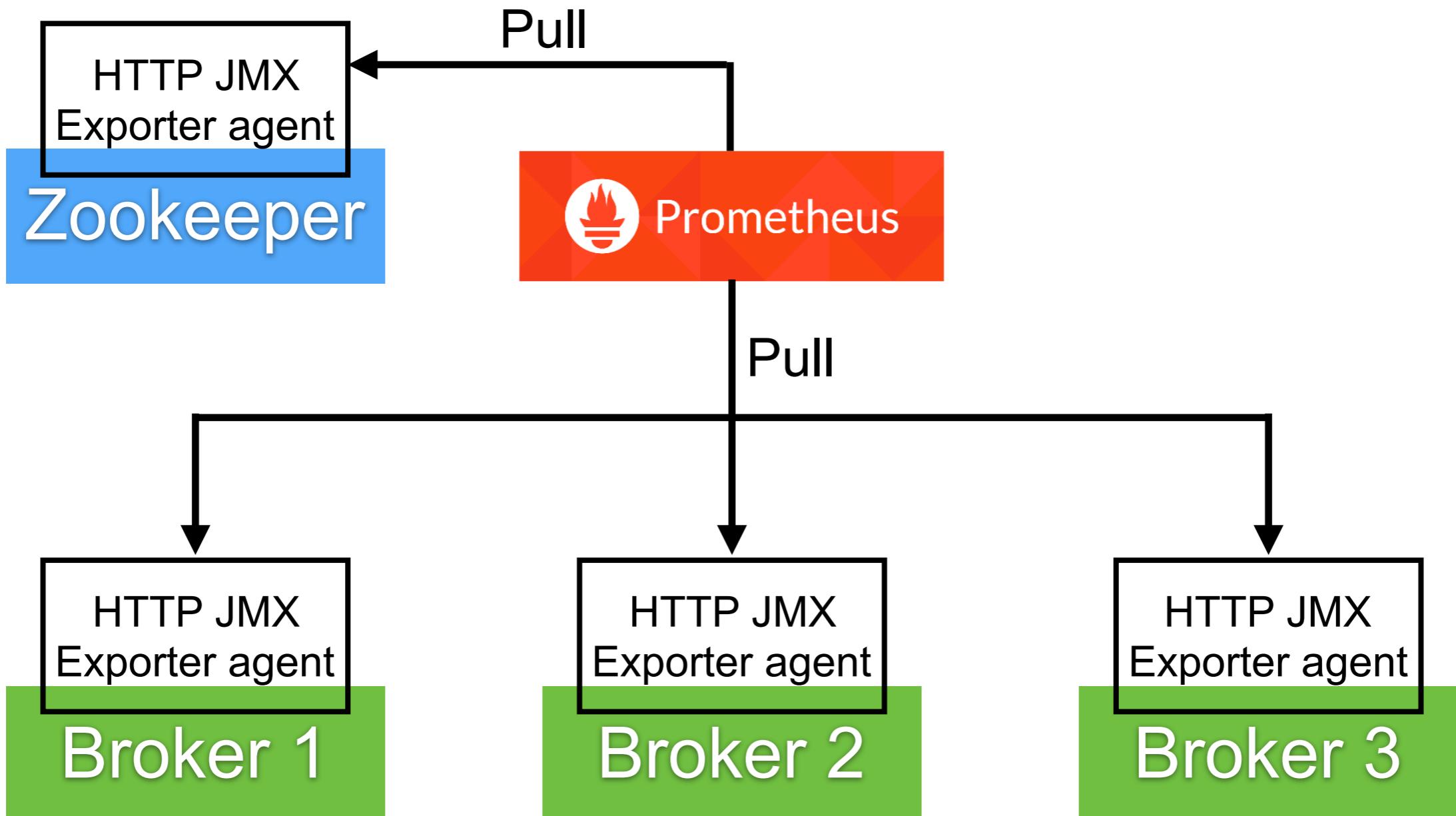
Broker 3



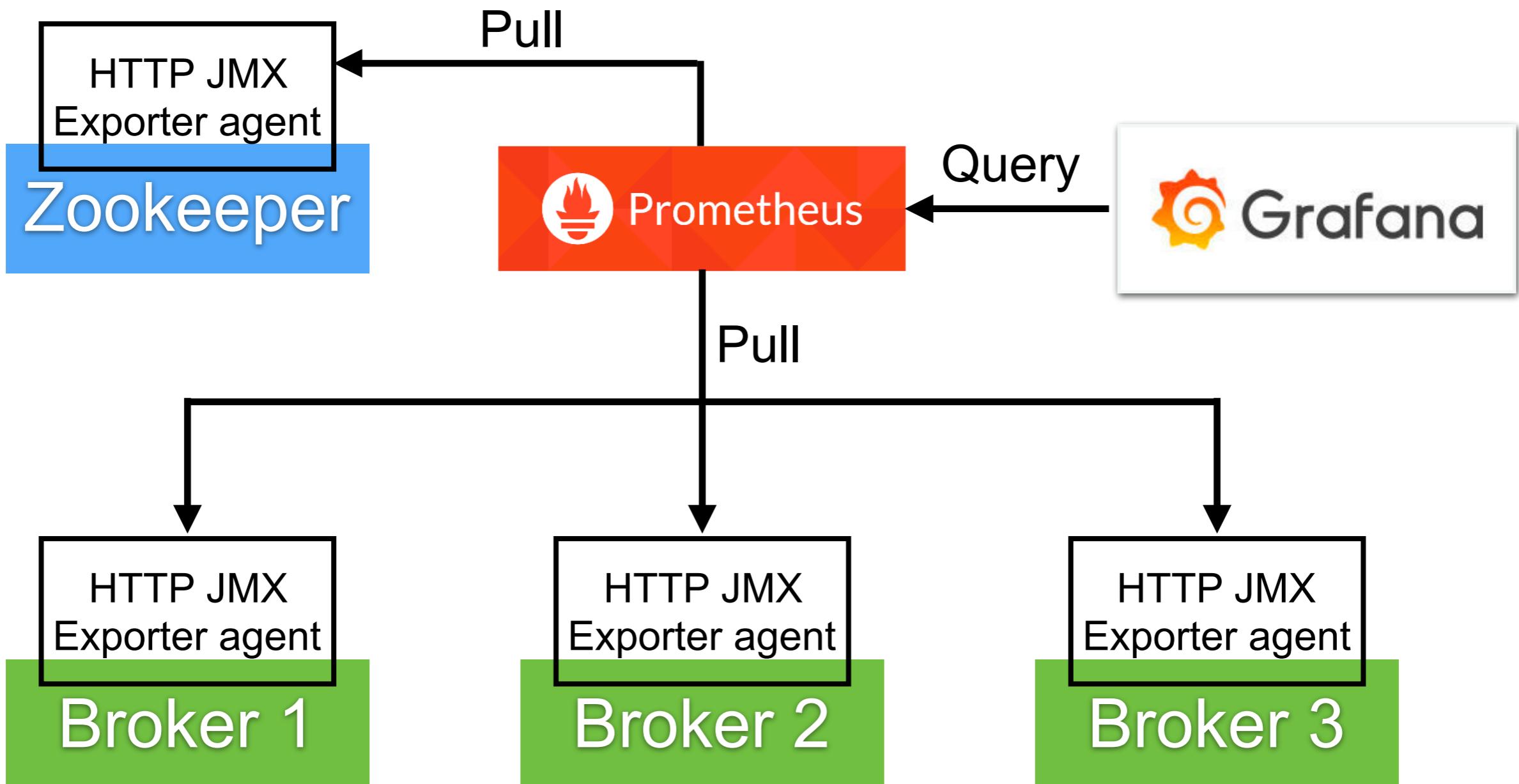
Structure



Structure



Structure



Prometheus

Prometheus Alerts Graph Status ▾ Help

Targets

All Unhealthy

kafka-consumer (1/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://127.0.0.1:7074/metrics	UP	instance="127.0.0.1:7074" job="kafka-consumer"	10.859s ago	50.48ms	

kafka-producer (1/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://127.0.0.1:7073/metrics	UP	instance="127.0.0.1:7073" job="kafka-producer"	13.932s ago	75.6ms	

kafka-server (1/1 up) show less

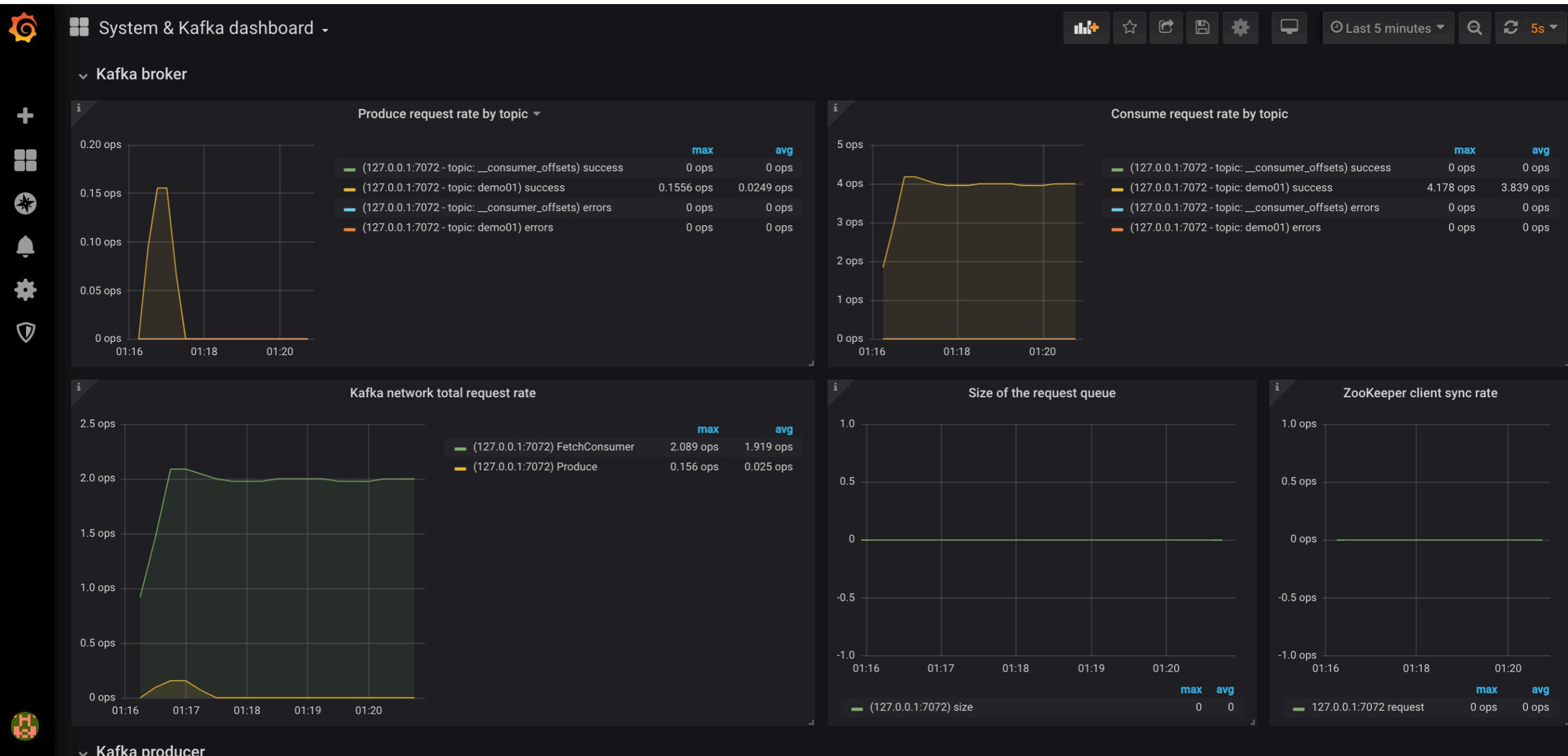
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://127.0.0.1:7072/metrics	UP	instance="127.0.0.1:7072" job="kafka-server"	3.693s ago	1.284s	

zookeeper-server (1/1 up) show less

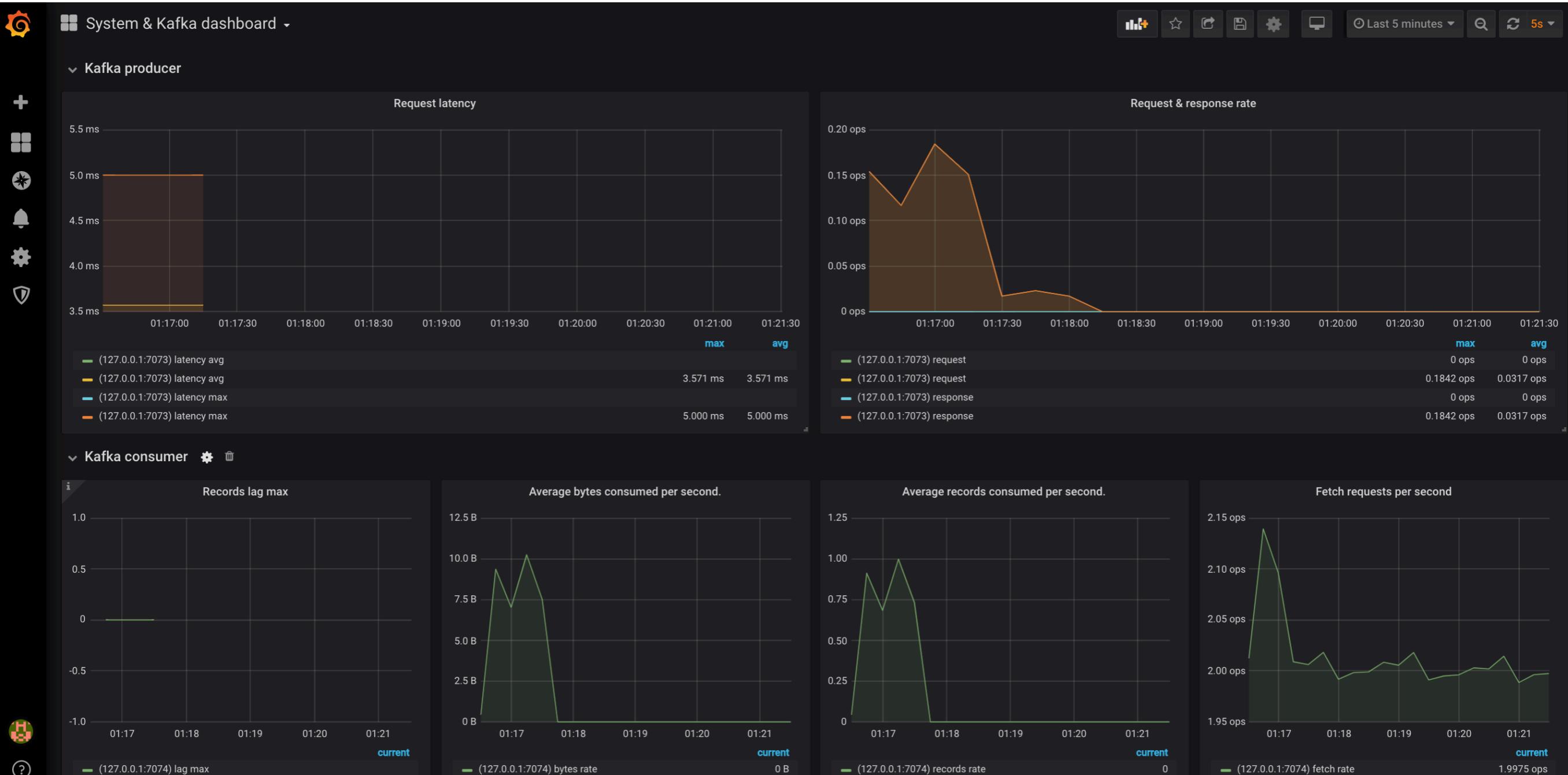
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://127.0.0.1:7071/metrics	UP	instance="127.0.0.1:7071" job="zookeeper-server"	13.567s ago	39.7ms	



Grafana



Grafana



Kafka metrics



Kafka Metrics (1)

Name	JMX
Network request rate	kafka.network: type=RequestMetrics, name=RequestsPerSec
Network error rate	kafka.network: type=RequestMetrics, name=ErrorsPerSec
Under replicated-partitions	kafka.server: type=ReplicaManager, name=UnderReplicatedPartitions
Offline partition count	kafka.controller: type=KafkaController, name=OfflinePartitionsCount
Total broker partitions	kafka.server:type=ReplicaManager,name=PartitionCount



Kafka Metrics (1)

Name	JMX
Log flush latency	kafka.log: type=LogFlushStats, name=LogFlushRateAndTimeMs
Consumer message rate	kafka.consumer: type=ConsumerTopicMetrics, name=MessagesPerSec
Consumer max lag	kafka.consumer: type=ConsumerFetcherManager, name=MaxLag
Fetcher lag	kafka.server:type=FetcherLagMetrics,name=ConsumerLag
Free memory and swap space usage	JVM

