Release H: Kafka Metrics

Introduction

Kafka metrics can be collected and displayed using different methods.

Prometheus

Prometheus can be used to collect monitoring data from Kafka.

To enable this you need to update your cluster configuration to include a metricsConfig section for both the cluster and zookeeper.

metricsConfig

```
    kafka:
      authorization:
        type: simple
        superUsers:
          - CN=kowl
          - CN=connect
...
     metricsConfig:
        type: jmxPrometheusExporter
        valueFrom:
          configMapKeyRef:
            name: kafka-metrics
            key: kafka-metrics-config.yml
...
    zookeeper:
      replicas: 1
      storage:
        deleteClaim: false
        size: 10Mi
        type: persistent-claim
      metricsConfig:
        type: jmxPrometheusExporter
        valueFrom:
          configMapKeyRef:
            name: kafka-metrics
            key: zookeeper-metrics-config.yml
```

This is the kafka-metrics.yaml for creating the config map: kafka-metrics.yaml

Then add kafka exporter component.

Kafka Exporter

```
    kafkaExporter:
      groupRegex: ".*"
      topicRegex: ".*"
      logging: debug
      enableSaramaLogging: true
      readinessProbe:
        initialDelaySeconds: 15
        timeoutSeconds: 5
      livenessProbe:
        initialDelaySeconds: 15
        timeoutSeconds: 5
```

When you start your cluster you should see an additional pod running for Kafka exporter.

You can create a service for this using this yaml file: kafka-exporter.yaml

Using minikube tunnel you can view the metrics using this link: localhost:9100/metrics

Next edit the scrape configs section in prometheus.yaml to include an entry for these metrics.

Prometheus

```
scrape_configs:
- job_name: prometheus
  static_configs:
  - targets:
    - localhost:9090
- job_name: kafka-exporter
  scrape_interval: 10s
  metrics_path: /metrics
  static_configs:
  - targets:
    - kafka-exporter.kafka:9100
```

Grafana

You can then setup the grafana dashboard to view your metrics : kafka-exporter-overview_rev5.json

These metrics can also be imported into telegraf by adding the following lines to your inputs:

Telegraf

```
[[inputs.prometheus]]
 urls = ["http://kafka-exporter.kafka:9100/metrics"]
 response_timeout = "10s"
```

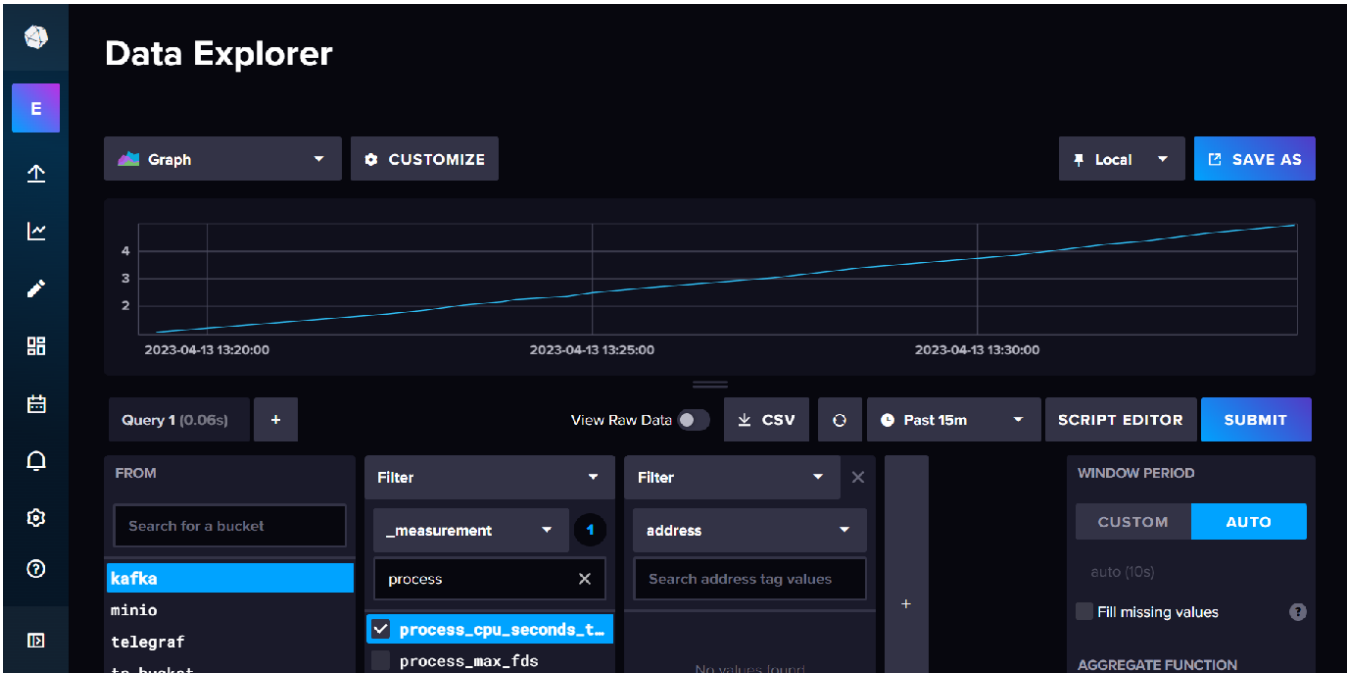
You can also include metrics from your Kafka bridge by adding the following line to the bridge spec: enableMetrics: true

Note: It is also possible to obtain JMX metrics using jolokia (GitHub - paksu/kafka-jolokia-telegraf-collector: Simple Kafka broker JMX metric collection with Telegraf) but this requires creating a custom a custom kafka cluster image if you are using Strimzi.

InfluxDB

To store these metrics in InfluxDB you need to do is setup up a bucket and a metrics scraper for the kafka-exporter metrics endpoint.

You can then view the metrics in data explorer.



Links

Grafana Dashboard for Kafka Exporter

Jolokia

Apache Kafka on Kubernetes with Strimzi – Part 3: Monitoring our Strimzi Kafka Cluster with Prometheus and Grafana

Using Prometheus with Strimzi

Strimzi Metrics Configmaps