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# Monitoring Event Streams

- Use various tools to monitor Event Streams health
- Monitor your Event Streams deployment health
- Monitor your Kafka cluster health
- Use the Grafana service that is provided in IBM Cloud Private
- Use Kibana to view log data

# Monitoring Event Streams health

There are several tools available for monitoring the health of your Event Streams cluster and applications

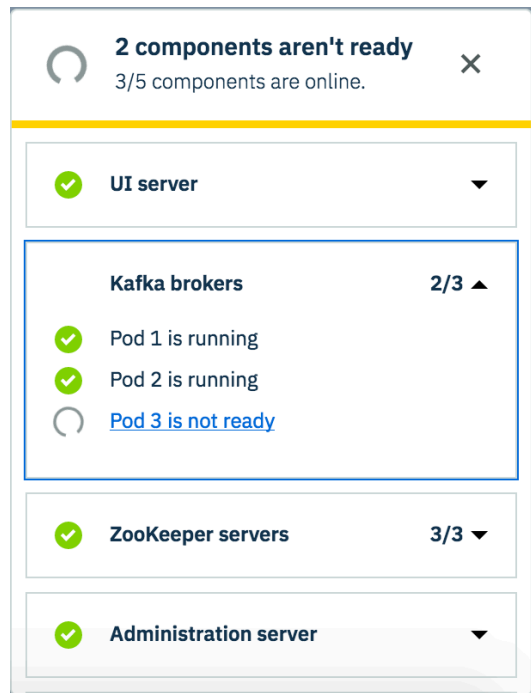
The Event Streams console provides monitoring capabilities from a Kafka perspective

IBM Cloud Private includes the ELK (Elasticsearch, Logstash, and Kibana) stack, which provides an extensive monitoring and logging framework

You can also use external monitoring tools to read Kafka metrics



# Monitoring your deployment in the UI



In the Event Streams console, in the bottom right corner, you can tell at a glance whether components are running

If any of the IBM Event Streams resources experience problems, the message states **component isn't ready**

Click the message to expand it, and then click the **Pod is not ready** link to open more details about the problem

The link opens the IBM Cloud Private console

# Monitoring your deployment with the CLI

Make sure you installed `kubectl` and configured access to your cluster

- To check the status and readiness of the pods, run the following command, where `<namespace>` is the space used for your IBM Event Streams installation:

```
kubectl -n <namespace> get pods
```

- To retrieve further details about the pods, including events affecting them, use the following command:

```
kubectl -n <namespace> describe pod  
<pod-name>
```

- To retrieve detailed log data for a pod to help analyze problems, use the following command:

```
kubectl -n <namespace> logs <pod-  
name> -c <container_name>
```

# Monitoring cluster health

Event Streams collects metrics from all of the Kafka brokers and exports them to a [Prometheus](#)-based monitoring platform

You can view a selection of metrics in the Event Streams console on the **Monitor** tab

Or, you can use the Grafana service that is provided in IBM Cloud Private

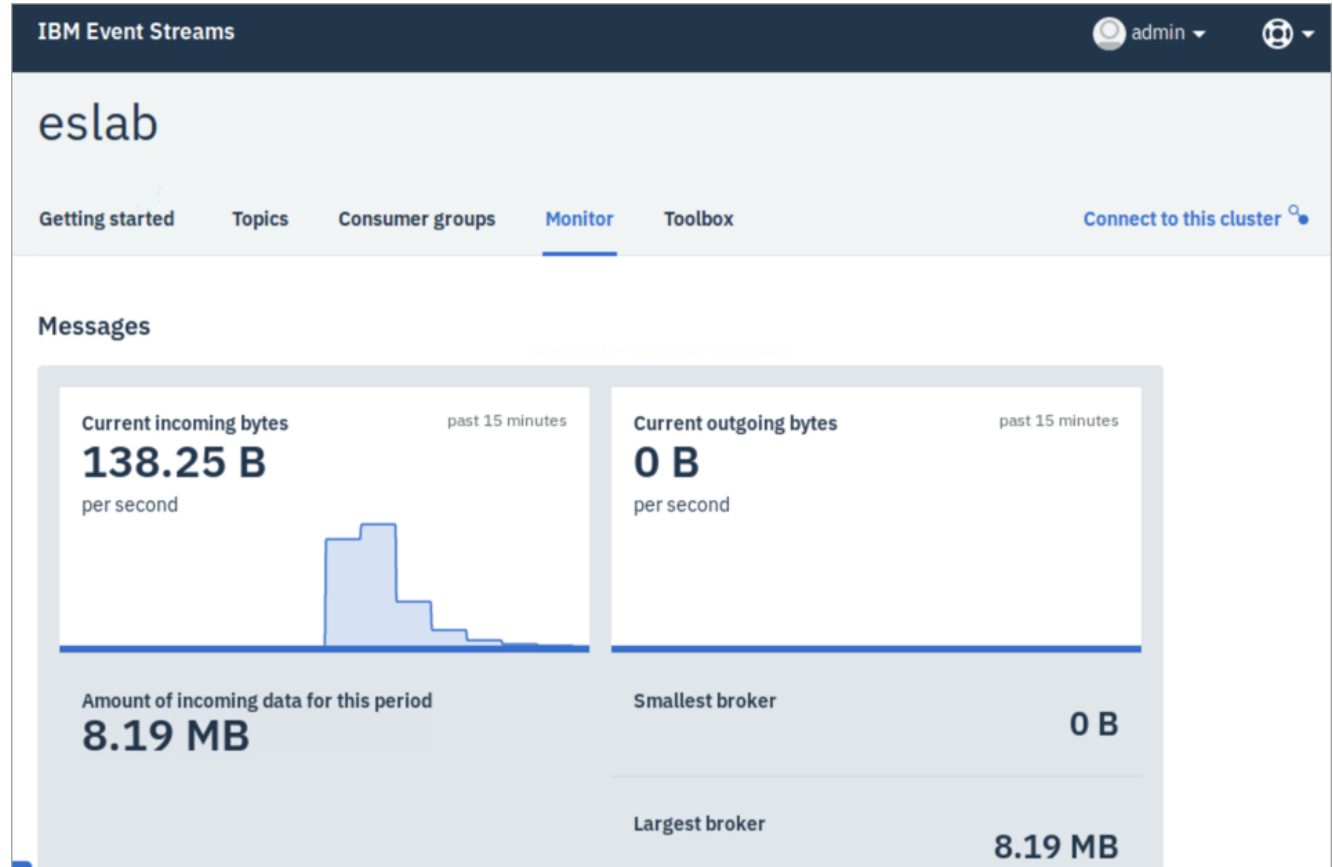


# Event Streams Monitor tab

Displays overview charts for messages, partitions, and replicas

Click a chart to drill down into more detail

Click **1 hour**, **1 day**, **1 week**, or **1 month** to view data for different time periods

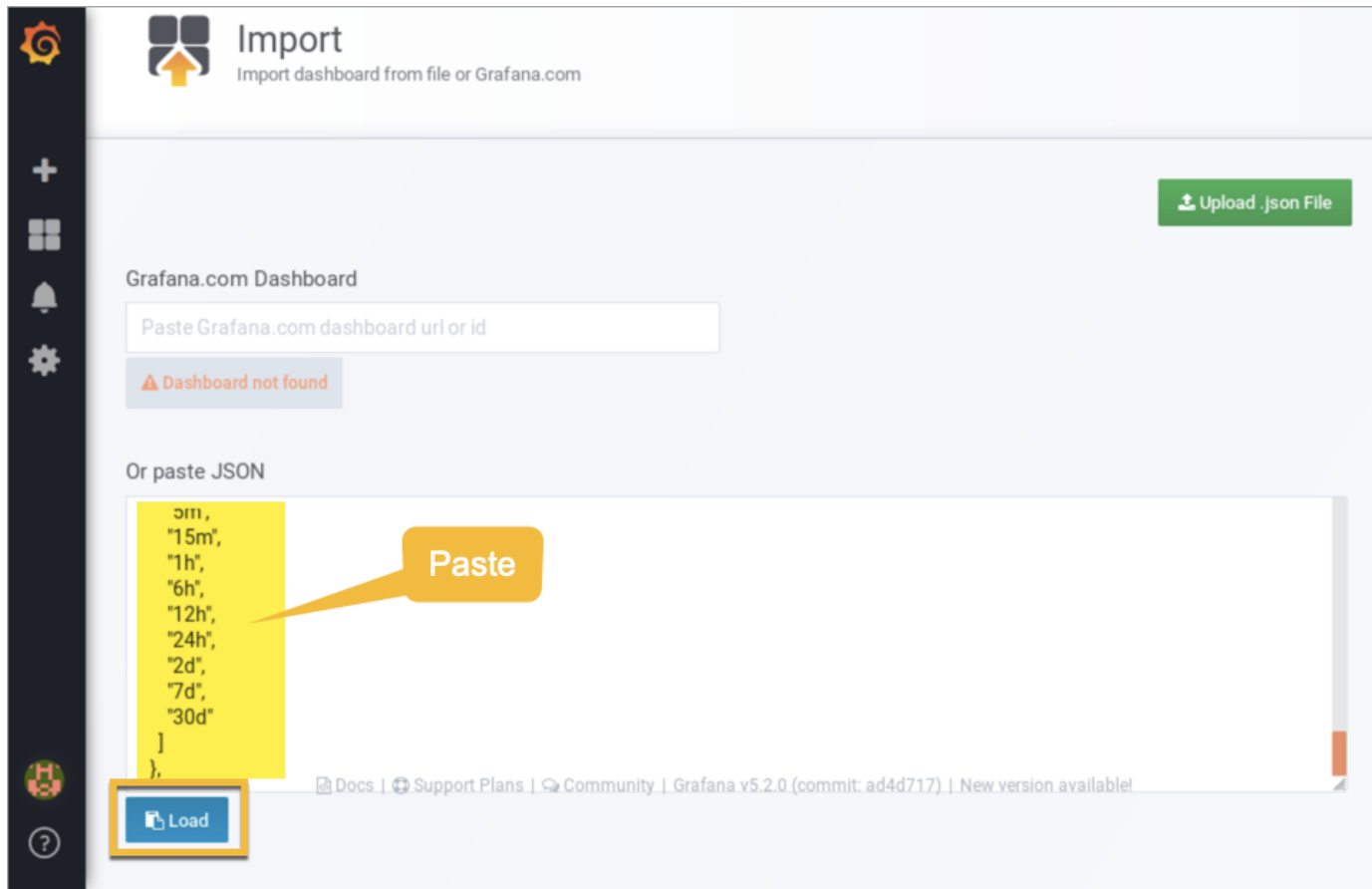




# Using Grafana

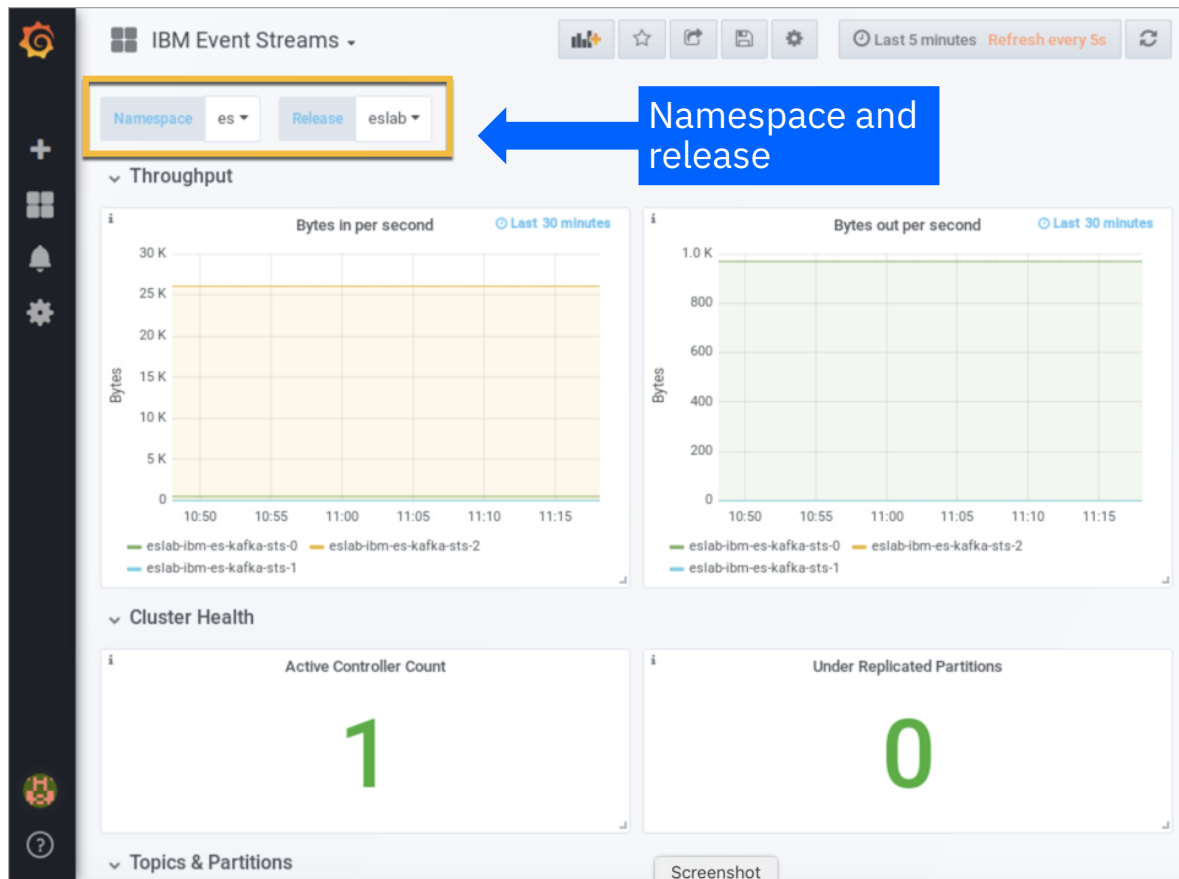
You can create a dashboard for Event Streams in the Grafana service

An example Grafana dashboard for Event Streams is included in the Event Streams helm chart



# Event Streams dashboard


You can customize the information that you see in this dashboard



# Setting up alerts

Metrics that meet predefined criteria can be used to send notifications to emails, Slack, PagerDuty, and so on

Today



**IBM Event Streams**

APP

4:18 PM

**[FIRING:1] @ Partition count**


There are 51 partition(s) reported by broker 1

4:23 PM

**[RESOLVED]**

**Alerts Resolved:**

- Partition count: There are 51 partition(s) reported by broker 1



+

Message #general

@

😊

# Viewing logs in Kibana

Kibana is an open source data visualization plugin for Elasticsearch, and is included in IBM Cloud Private

You can use it to view log data in various graphical forms

You can filter log output, and customize your own queries



The screenshot displays the Kibana log viewer interface. At the top, a log entry is shown with a timestamp of May 21st 2019, 12:15:35.401. A yellow box highlights the timestamp, and a yellow arrow points to it. The log message is: [2019-05-21 19:15:35,401] INFO [GroupMetadataManager brokerId=1] Removed 0 expired offsets in 1 milliseconds. (kafka.coordinator.group.GroupMetadataManager) The log entry is associated with the pod eslab-ibm-es-kafka-sts-1 in the namespace es. The log source is /var/log/containers/kafka-logstash-2019.05.21.log.

Below the log entry, there is a table view showing the log's metadata. The table has columns for the field name and the field value. The fields are: @timestamp, @version, \_id, \_index, \_score, \_type, beat.hostname, beat.name, beat.version, input\_type, kubernetes.container\_id, kubernetes.container\_name, kubernetes.namespace, kubernetes.pod, and log. The values are: May 21st 2019, 12:15:35.401, 1, AWrb0kVwZ0nJS00xdMqD, logstash-2019.05.21, -, kube-logs, logging-elk-filebeat-ds-5vn5f, logging-elk-filebeat-ds-5vn5f, 5.5.1, log, 3feee2303f7bfc23f5114c06ef5033afbabfb8e15247c5587a6e964ffec2fab5, kafka, es, eslab-ibm-es-kafka-sts-1, and [2019-05-21 19:15:35,401] INFO [GroupMetadataManager brokerId=1] Removed 0 expired offsets in 1 milliseconds. (kafka.coordinator.group.GroupMetadataManager). A yellow box highlights the log field, and a yellow arrow points to it.

Field	Value
@timestamp	May 21st 2019, 12:15:35.401
@version	1
_id	AWrb0kVwZ0nJS00xdMqD
_index	logstash-2019.05.21
_score	-
_type	kube-logs
beat.hostname	logging-elk-filebeat-ds-5vn5f
beat.name	logging-elk-filebeat-ds-5vn5f
beat.version	5.5.1
input_type	log
kubernetes.container_id	3feee2303f7bfc23f5114c06ef5033afbabfb8e15247c5587a6e964ffec2fab5
kubernetes.container_name	kafka
kubernetes.namespace	es
kubernetes.pod	eslab-ibm-es-kafka-sts-1
log	[2019-05-21 19:15:35,401] INFO [GroupMetadataManager brokerId=1] Removed 0 expired offsets in 1 milliseconds. (kafka.coordinator.group.GroupMetadataManager)

# Monitoring topic health

To access the  
Producers dashboard:

In the Event Streams  
console, click **Topics** >  
topic name  
> **Producers**

