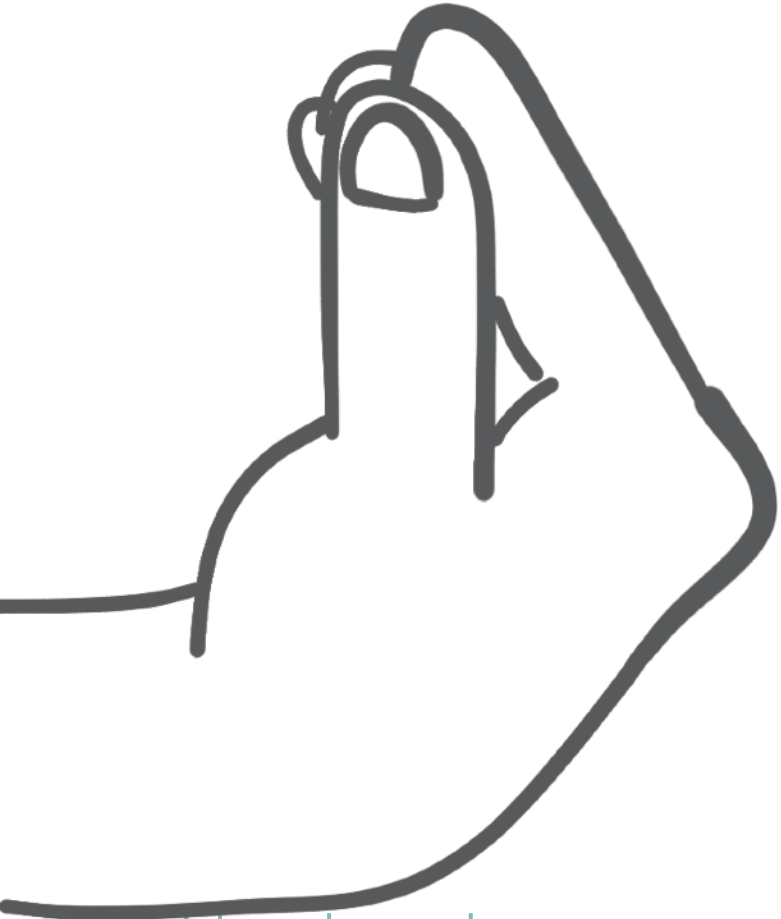
aiven

Get to Know Apache Kafka with Jupyter Notebooks

Francesco Tisiot - @ftisiot - Developer Advocate



Why Jupyter Notebooks

Kafka Producer

Markdown Text

Now we can create a Kafka Producer

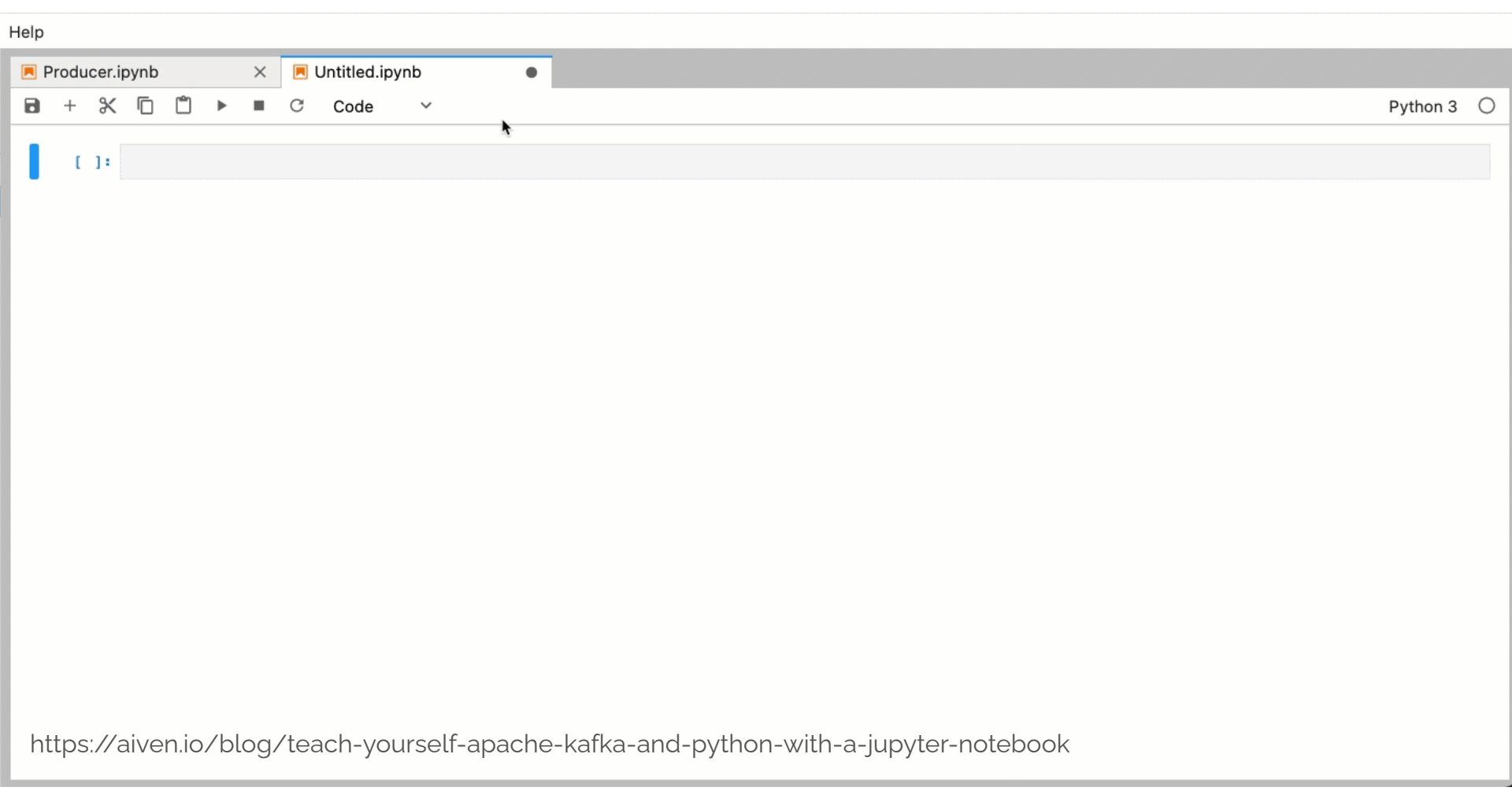
Images

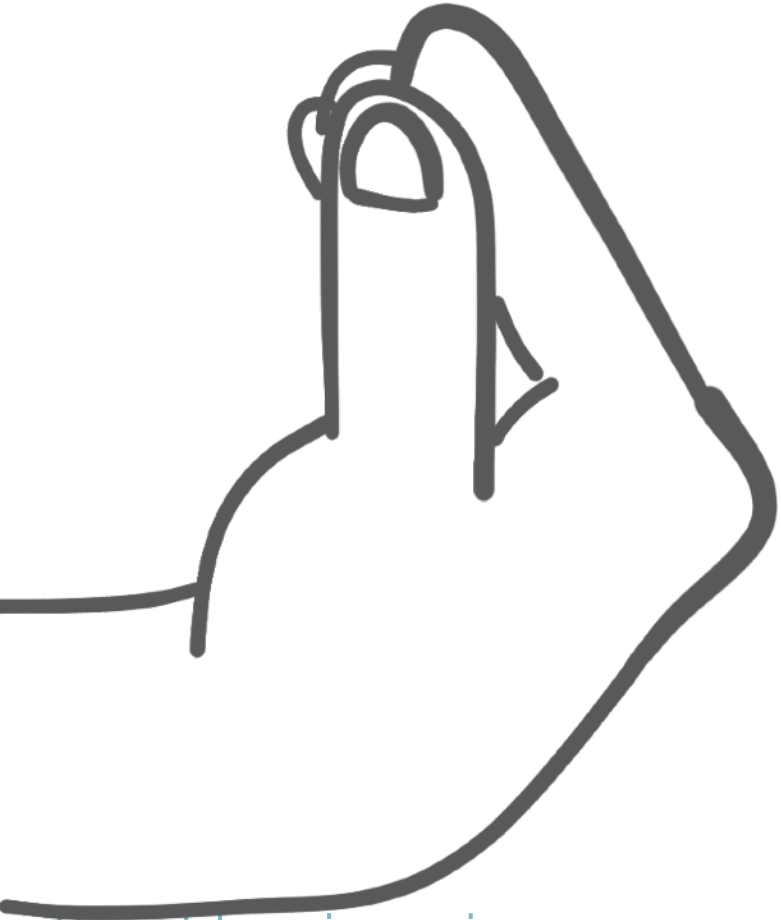
we need to have an Apache Kafka instance already available, if not you can easily create one on Aiven.io

[2]:

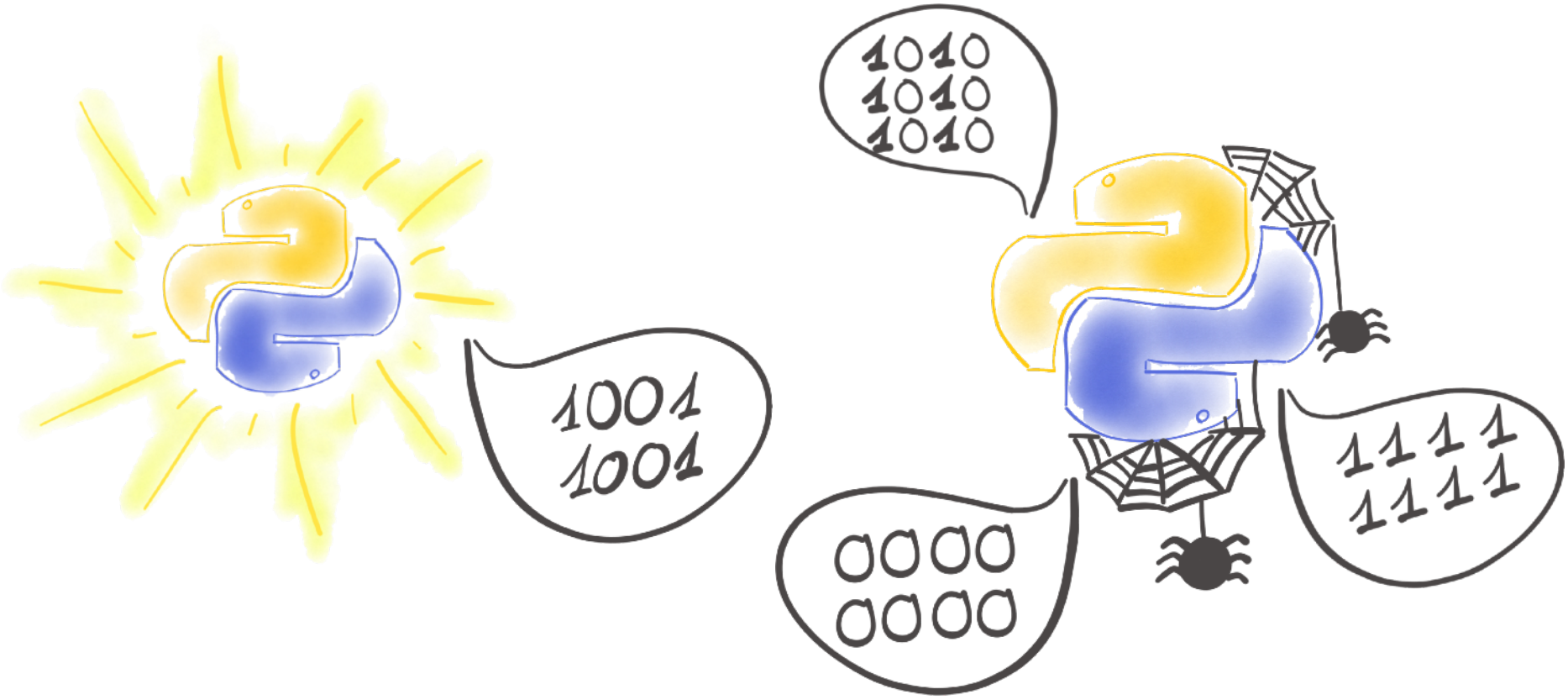
```
from kafka import KafkaProducer
import json
from config.kafka_config import *

producer = KafkaProducer(
 bootstrap_servers=hostname+":"+str(port),
 security_protocol="SSL",
 ssl_cafile=cert_folder+"/ca.pem",
 ssl_certfile=cert_folder+"/service.cert",
```

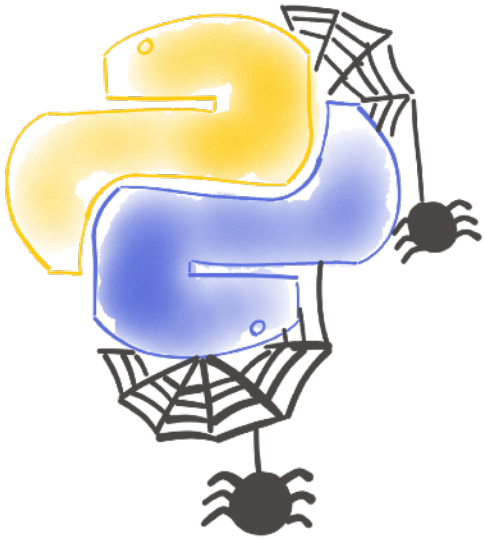
Executable Code

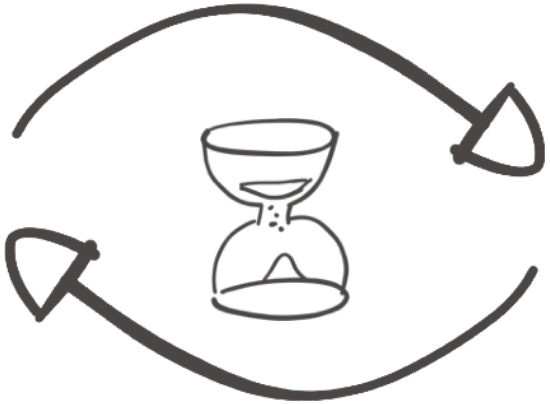

Help
Producer.ipynb
Untitled.ipynb
Code
Python 3
[ ]:
https://aiven.io/blog/teach-yourself-apache-kafka-and-python-with-a-jupyter-notebook



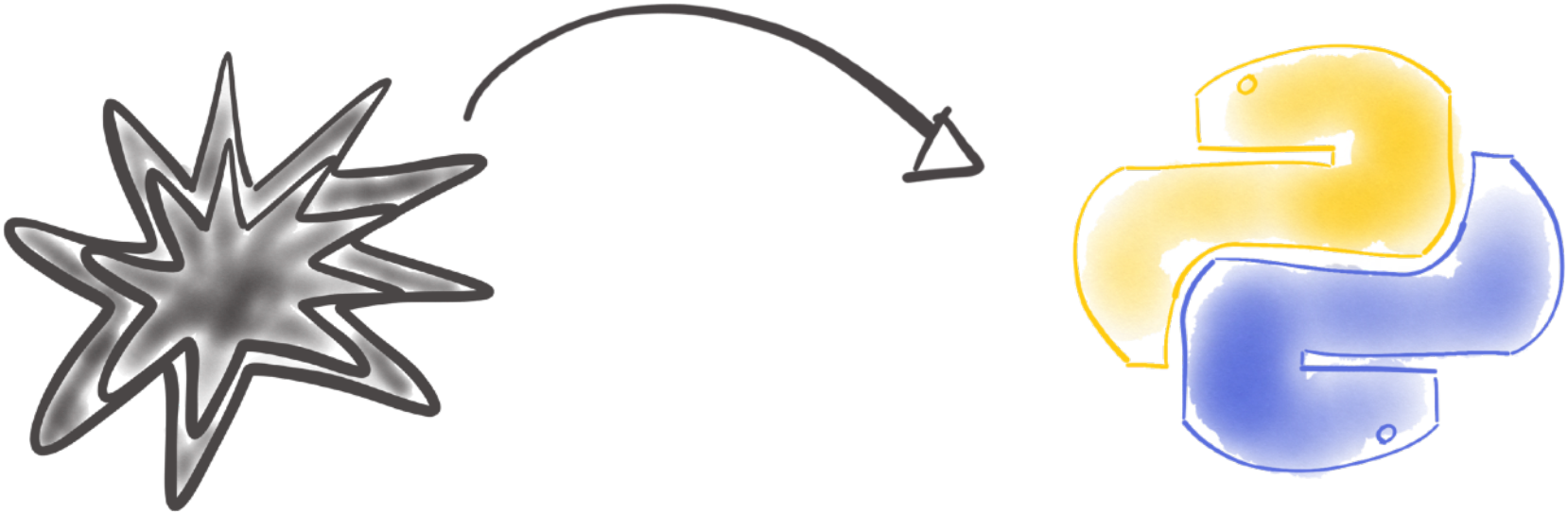
Why Apache Kafka


1001
1001
1010
1010
1010
0000
0000
1111
1111

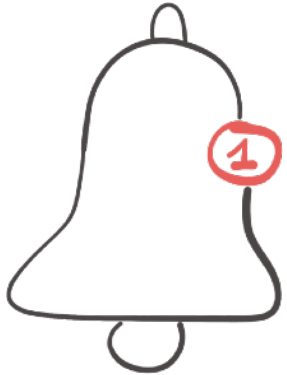




Event-Driven Applications

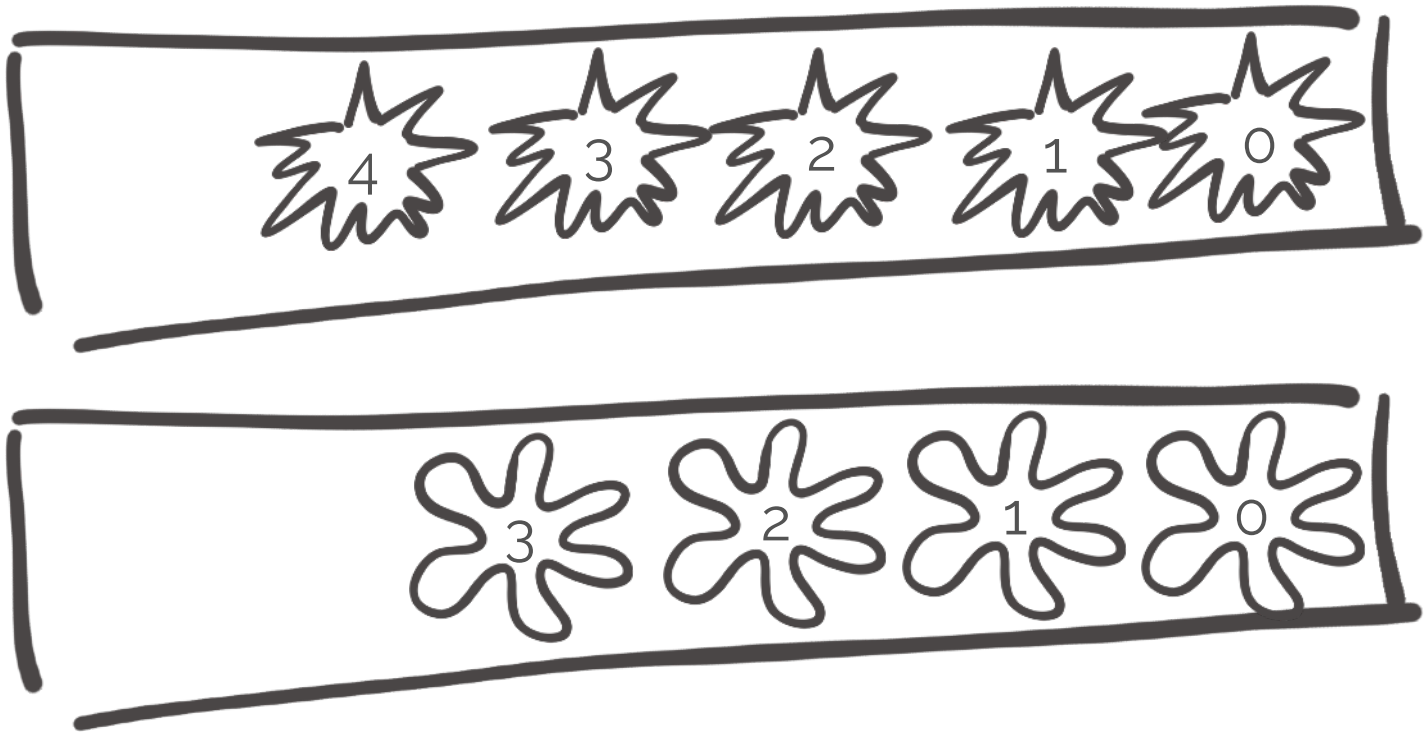


What is an Event

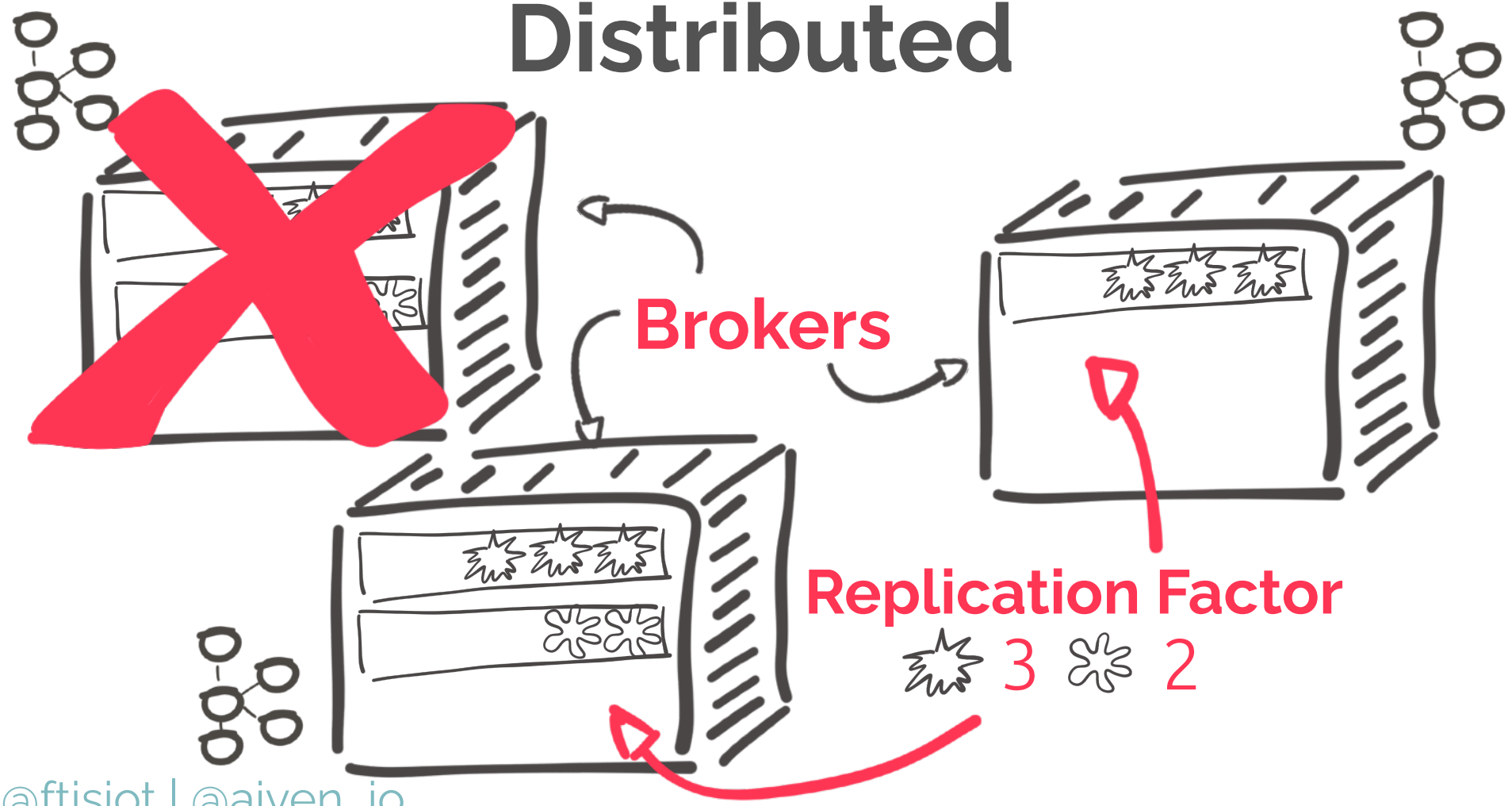


Why Event Driven?

What is Kafka



Distributed



What's a Kafka Event?

<K, V>

<"temp_max", 35.3>

<

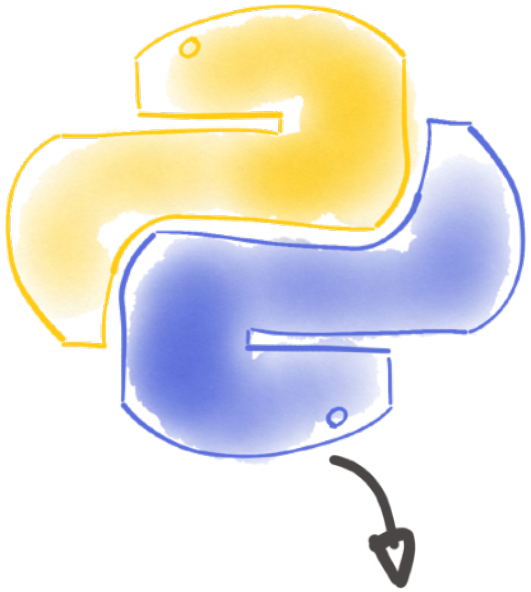
```
{
  shop: "Mario's Pizza",
  phone_line: 3
}
```

,

```
{
  orderId: 123456
  name: "Andrea Pirlo",
  pizzas: [
    {
      pizza: "Margherita",
      additionalToppings: ["Tuna","Onions","Ham"]
    },
    ...
    ]
}
```

>

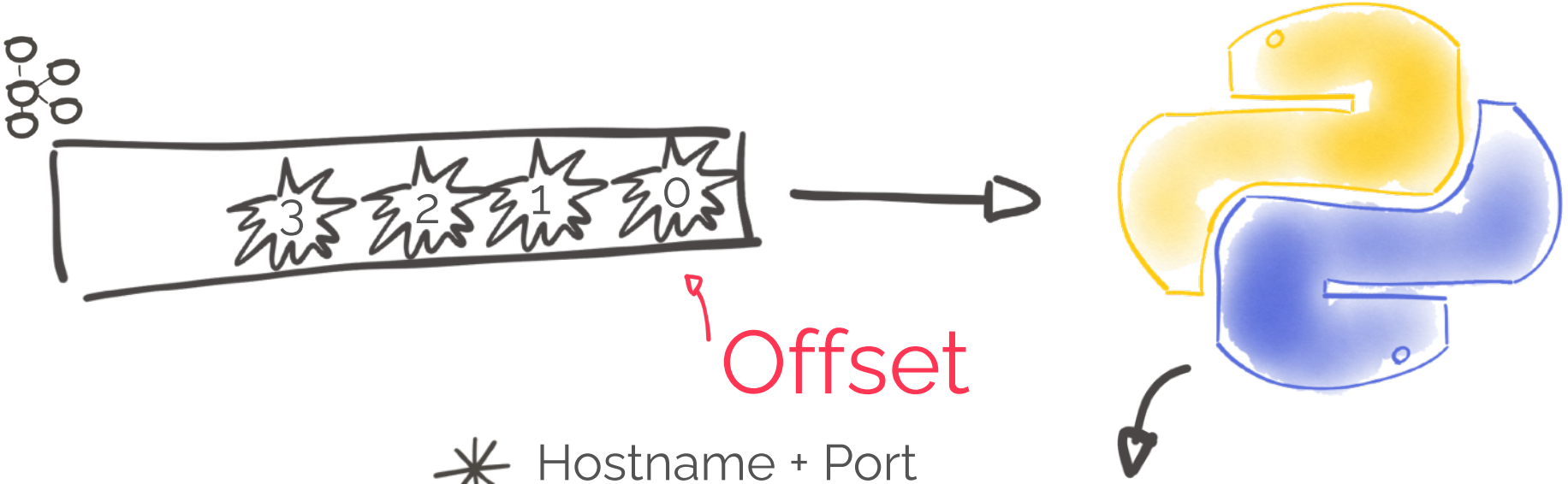
Write to Kafka



Producer

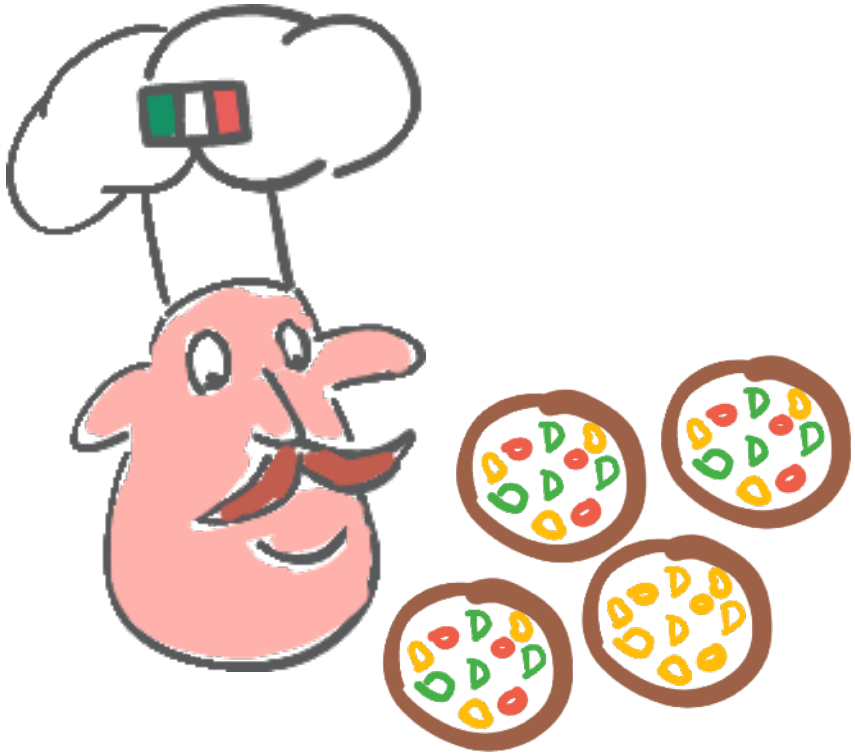
- Hostname + Port
- Authentication
- Encoding

Read from Kafka

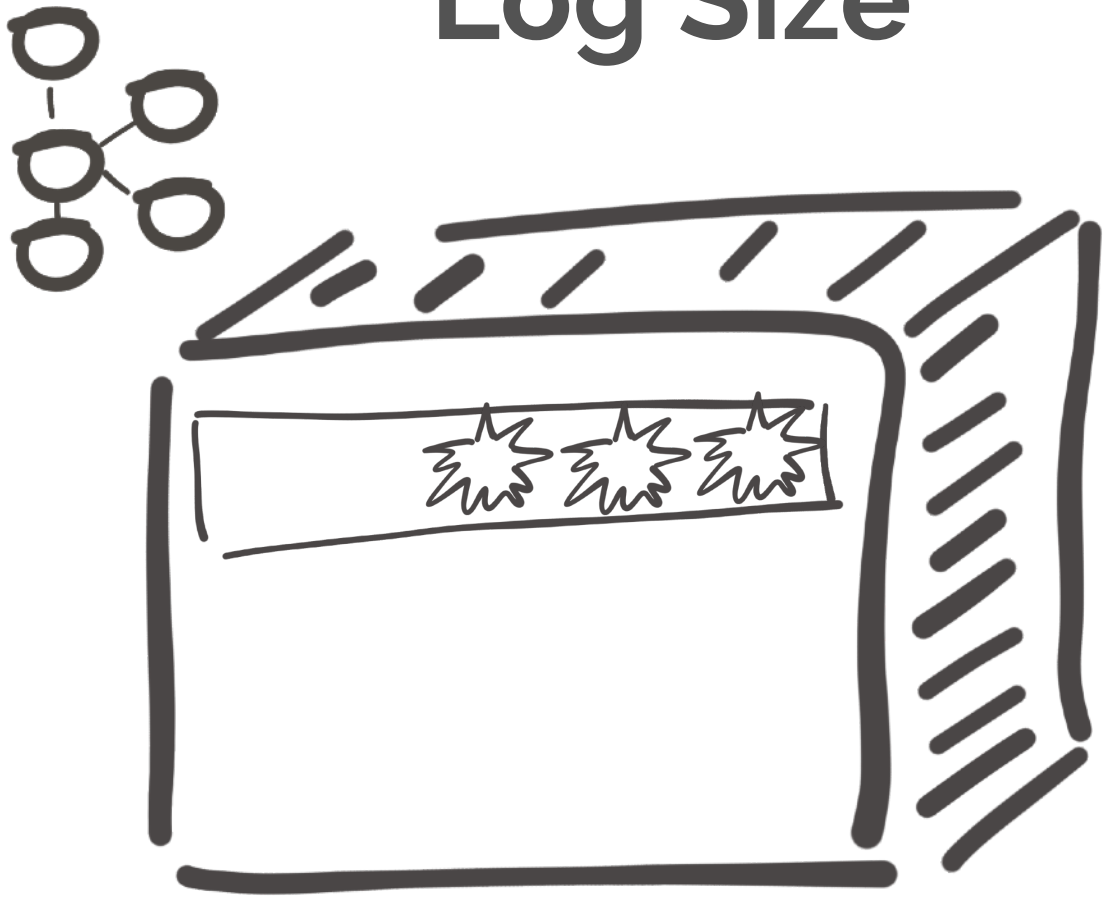


- Hostname + Port
- Authentication
- Decoding
- Topic Name(s)

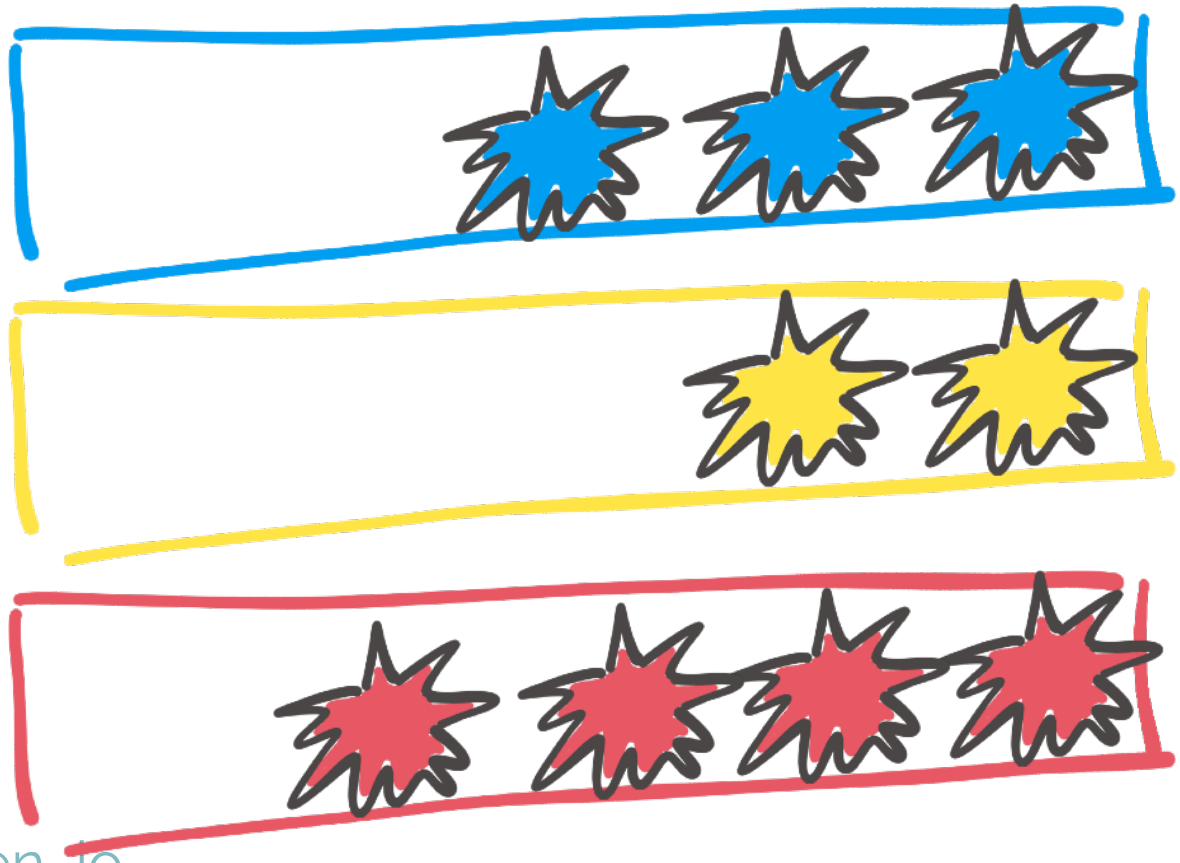
Pizza Demo!

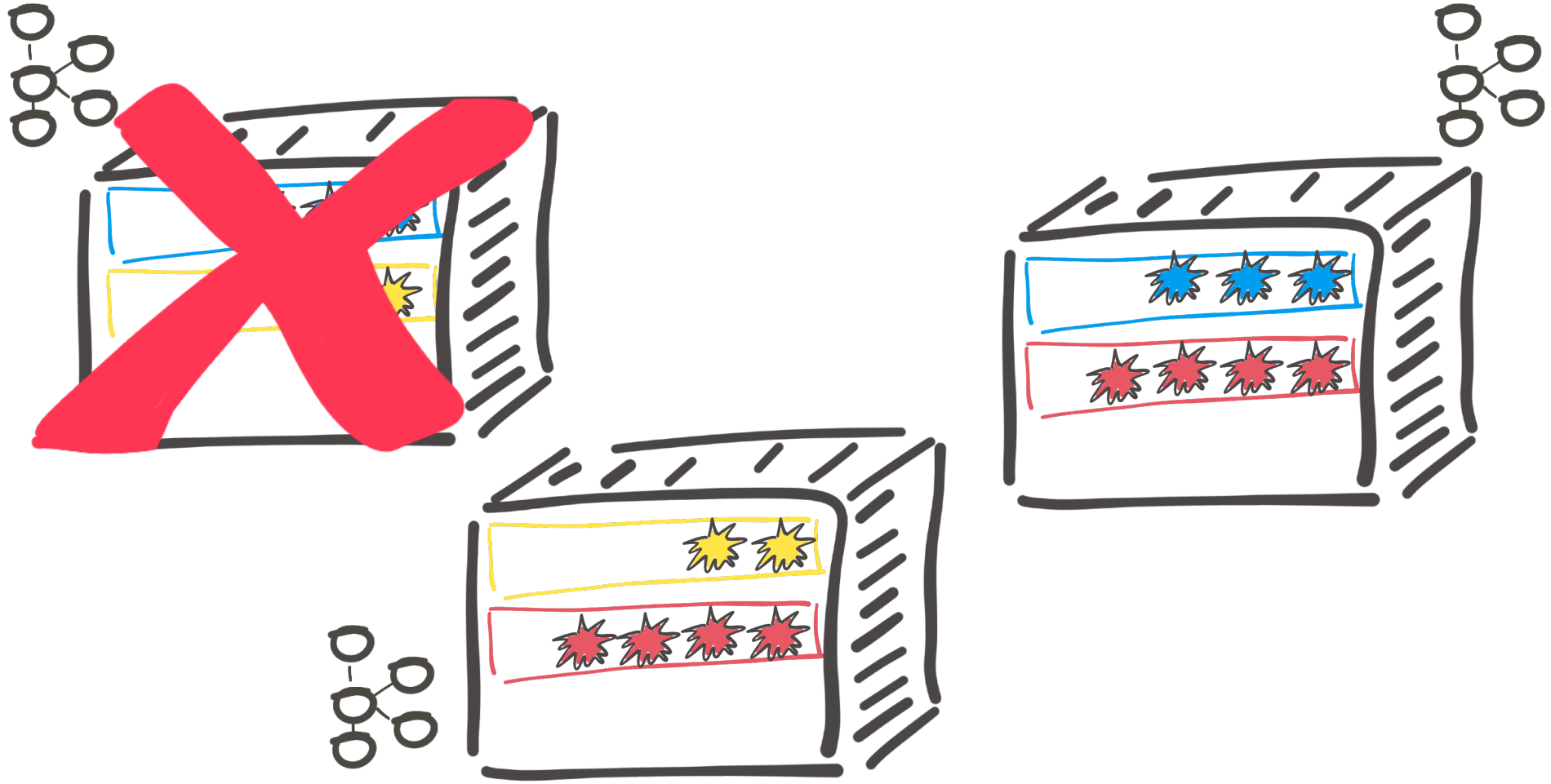


Log Size



Topic Partitions



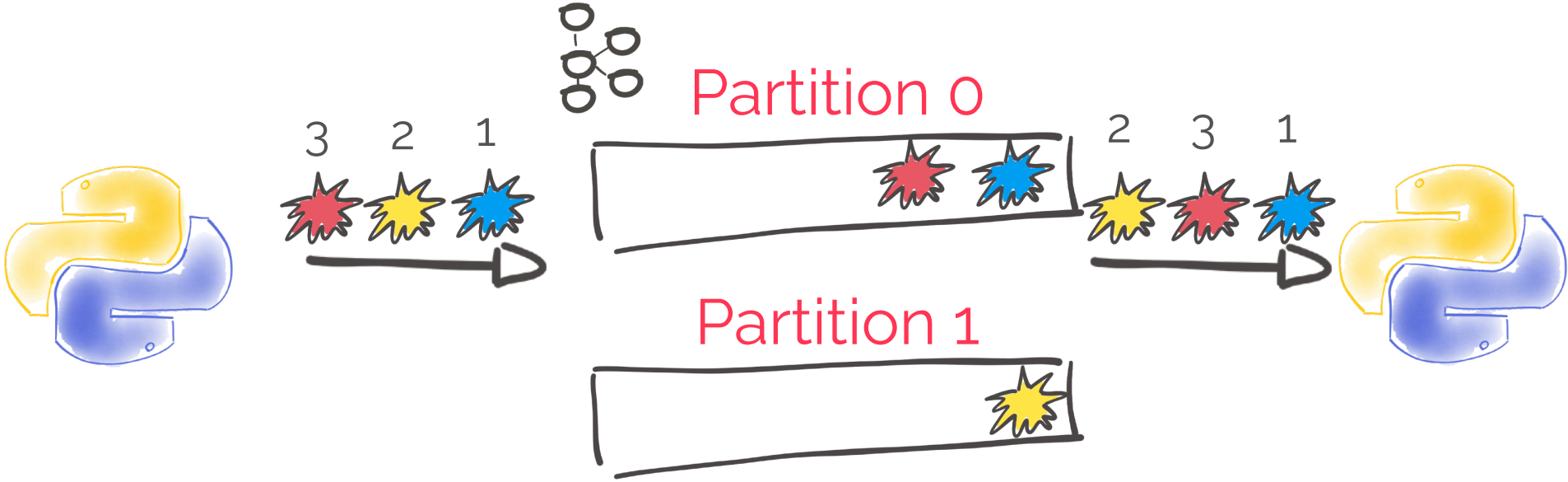


Selecting the Partition

<K, V>

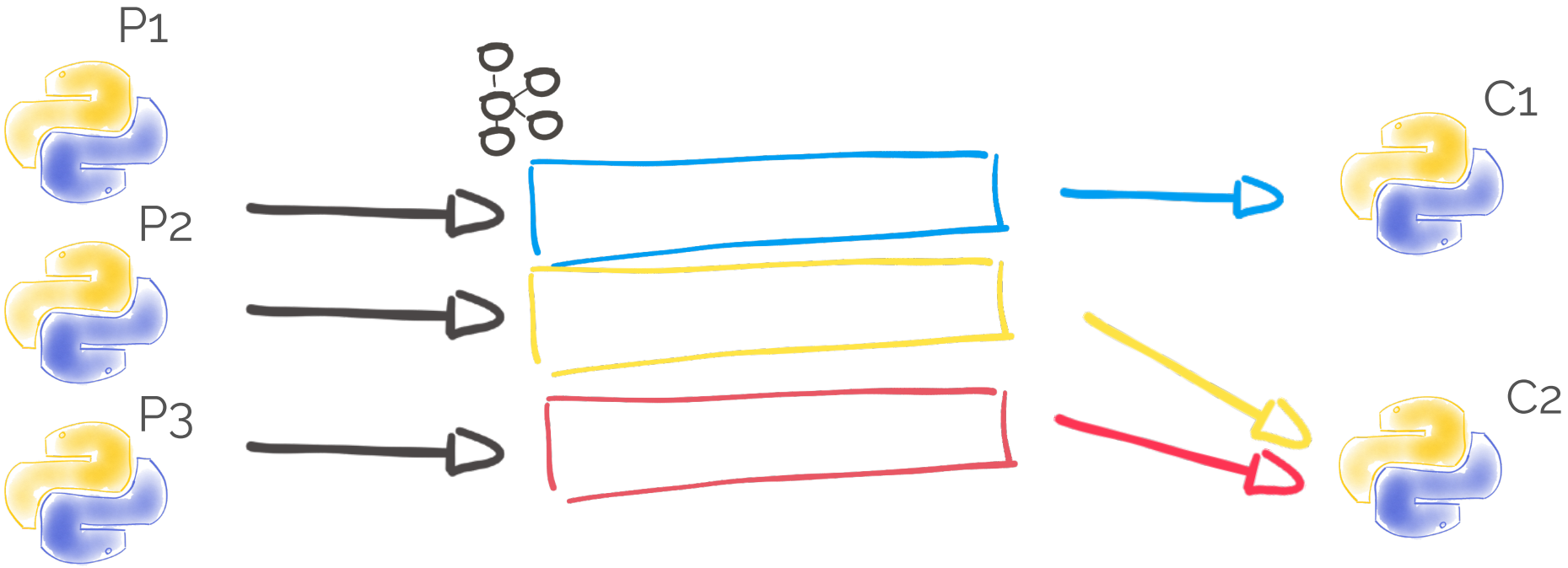
Same Key → Same Partition

Topic Partitions

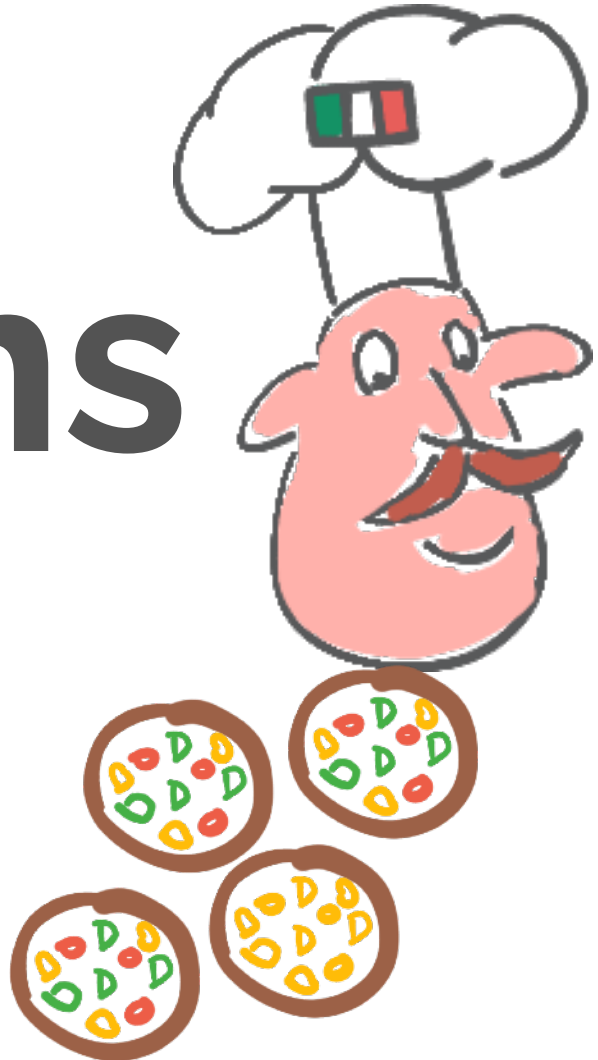


Guaranteed per Partition

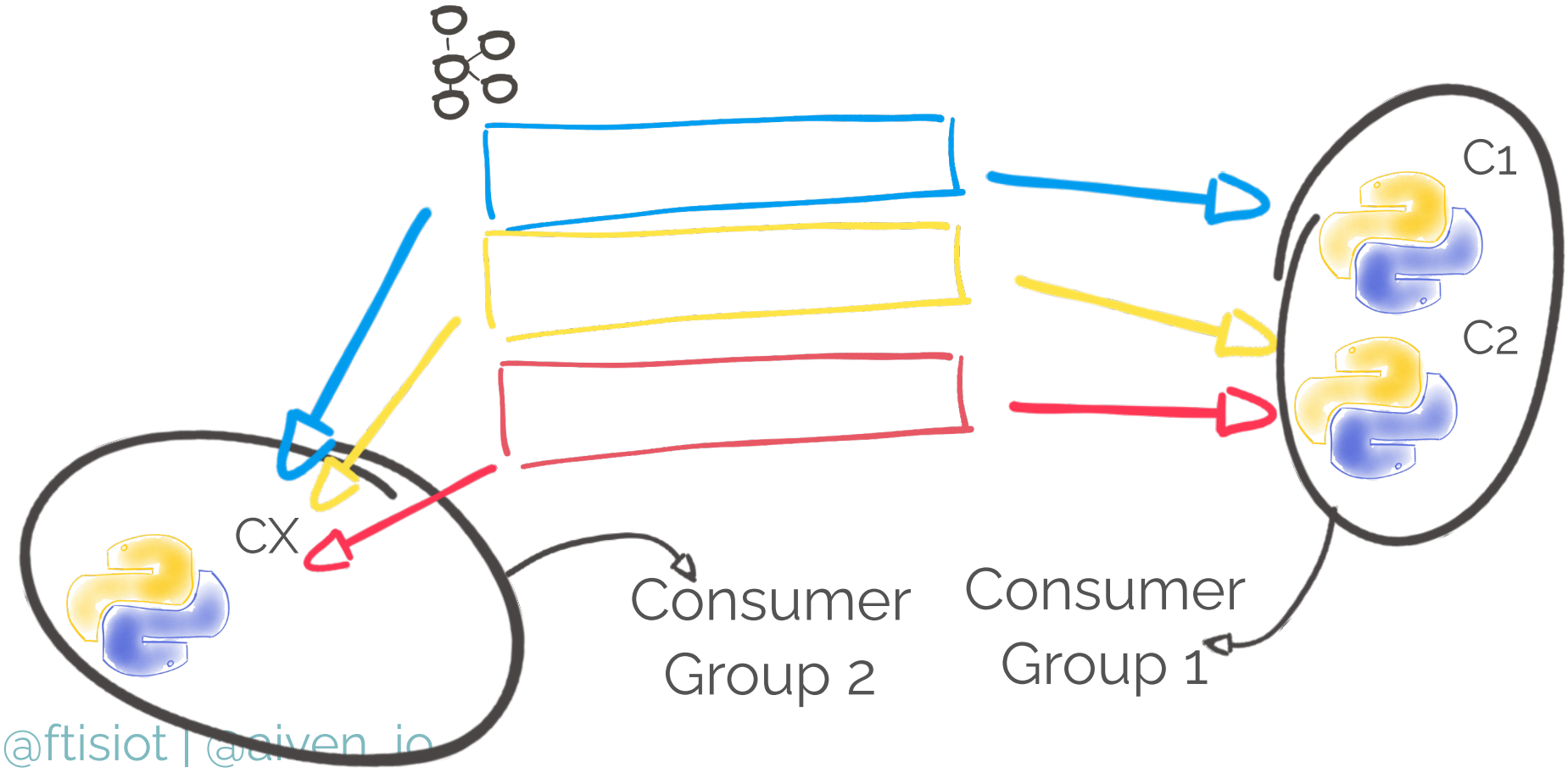
Scaling Out



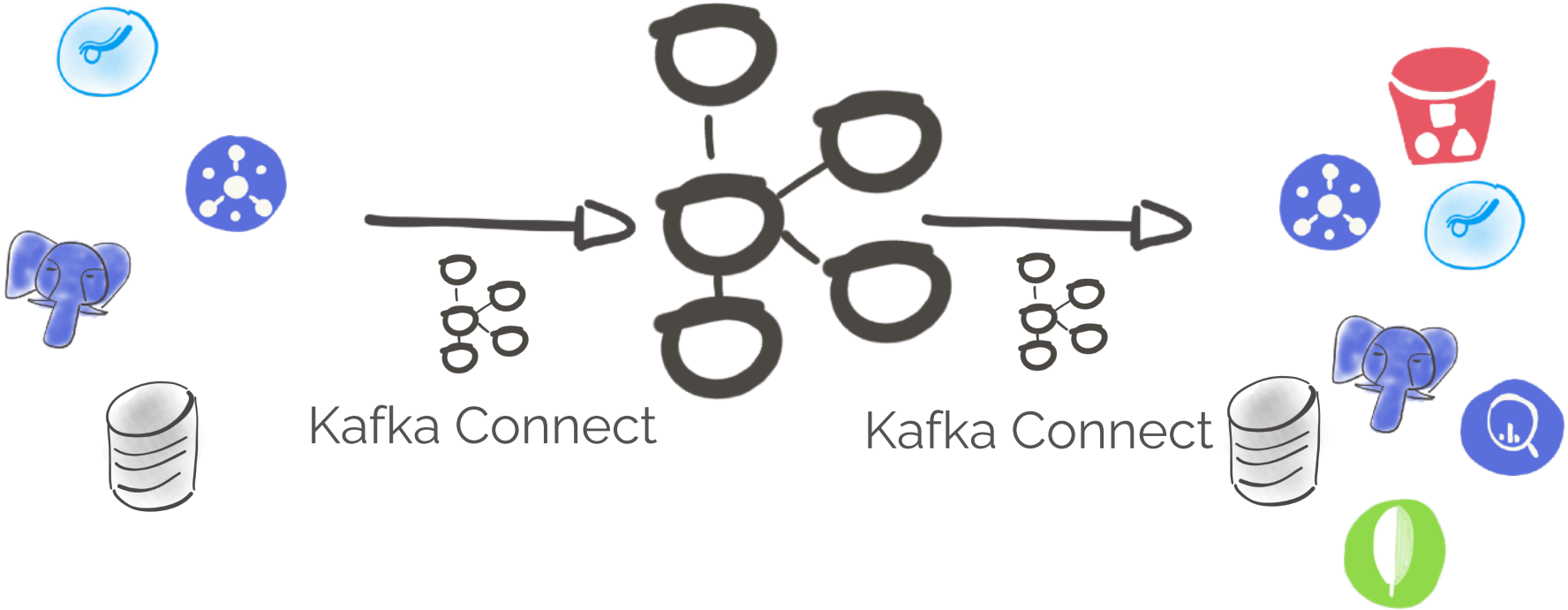
Partitions Demo!



Multiple Applications



Kafka Connect



References

https://github.com/aiven/python-notebooks-for-apache-kafka

https://github.com/aiven/kafka-python-fake-data-producer

https://aiven.io