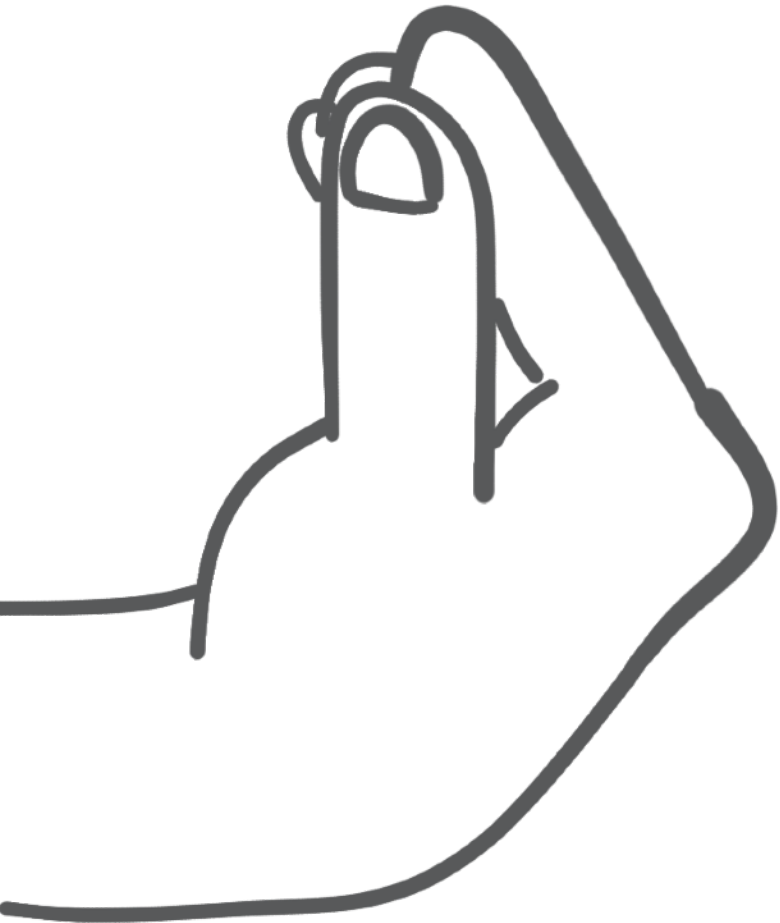


Event-Driven Applications: Apache Kafka and Python

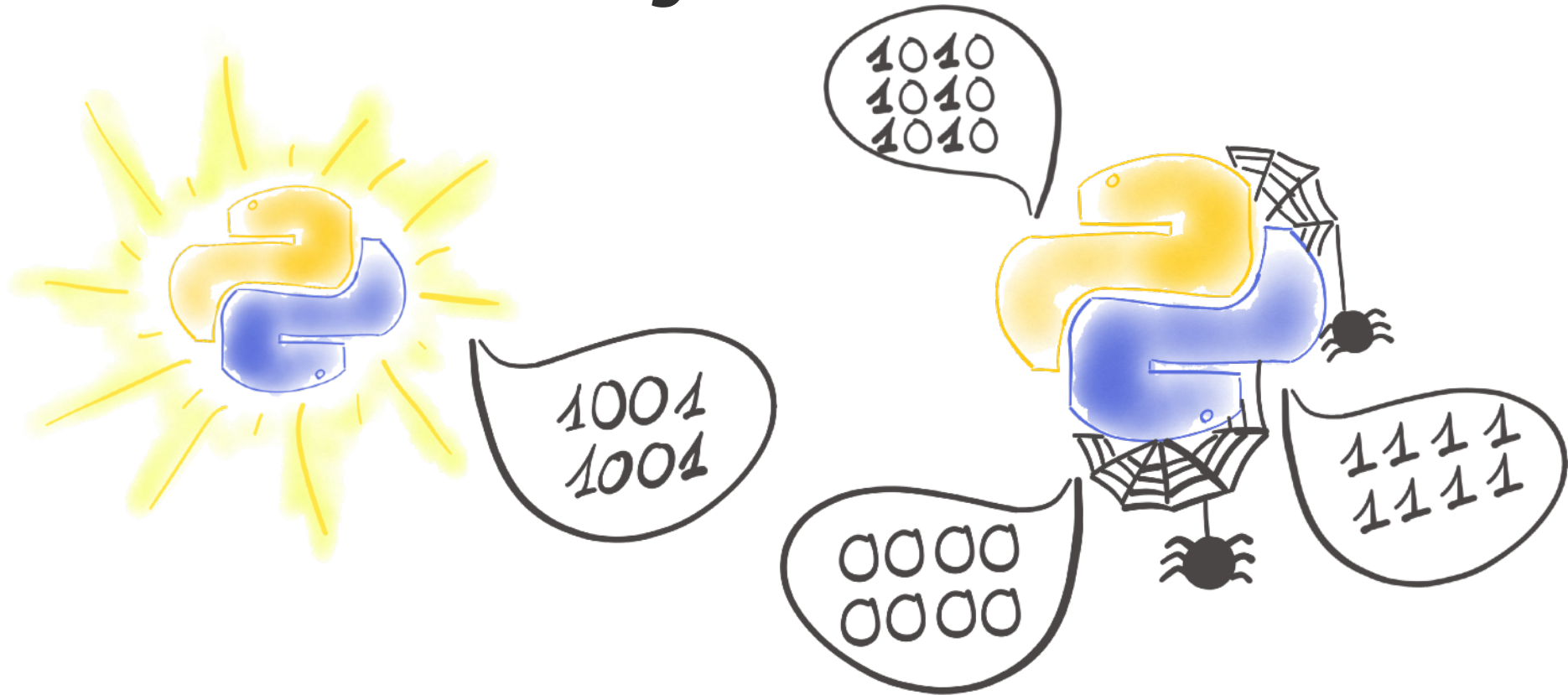
Francesco Tisiot - Developer Advocate
 @ftisiot



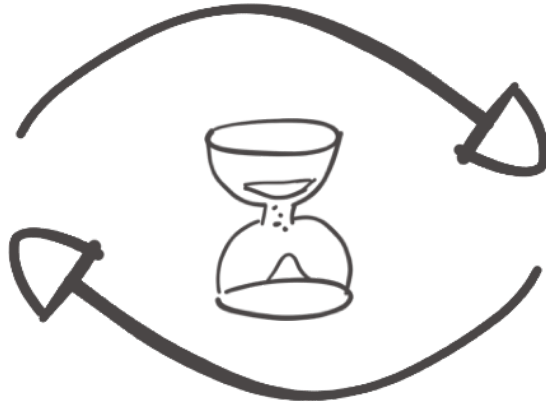
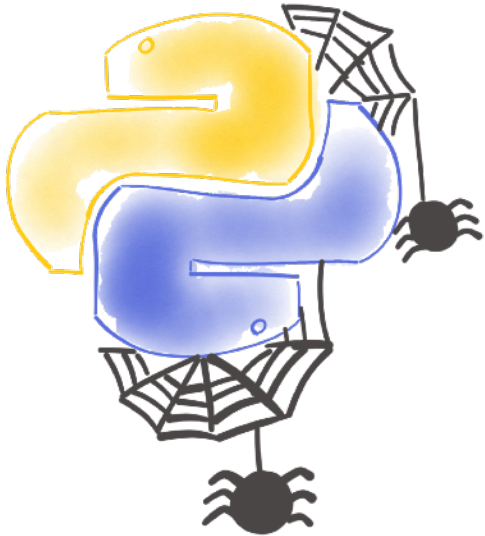
Why Kafka?



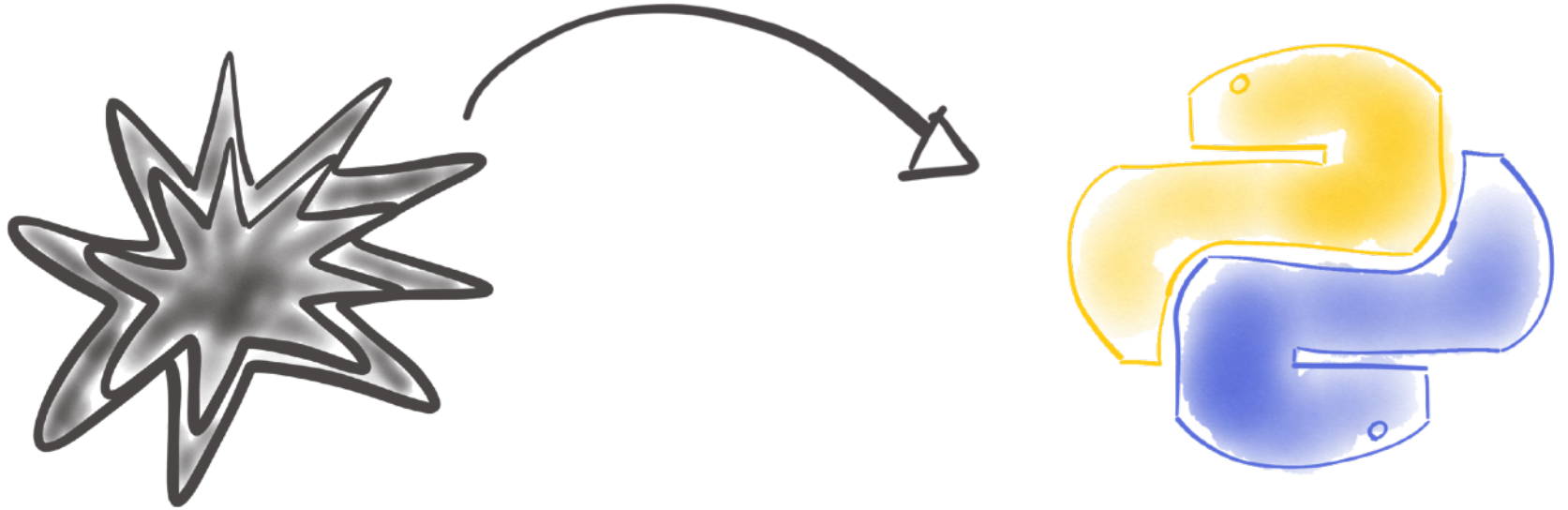
Why Kafka?



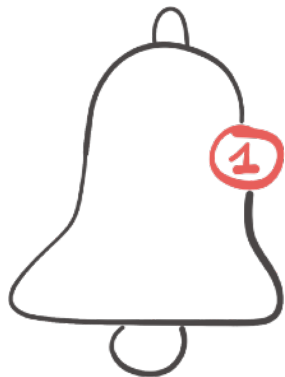
Why Kafka?



Event-Driven Applications



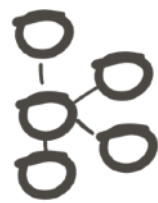
What is an Event?



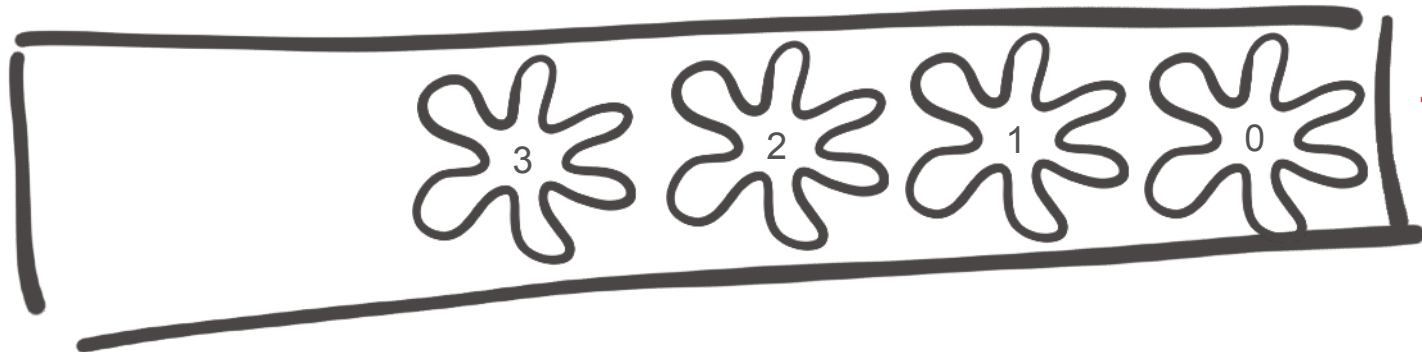
Why Event-Driven?



What is Kafka?

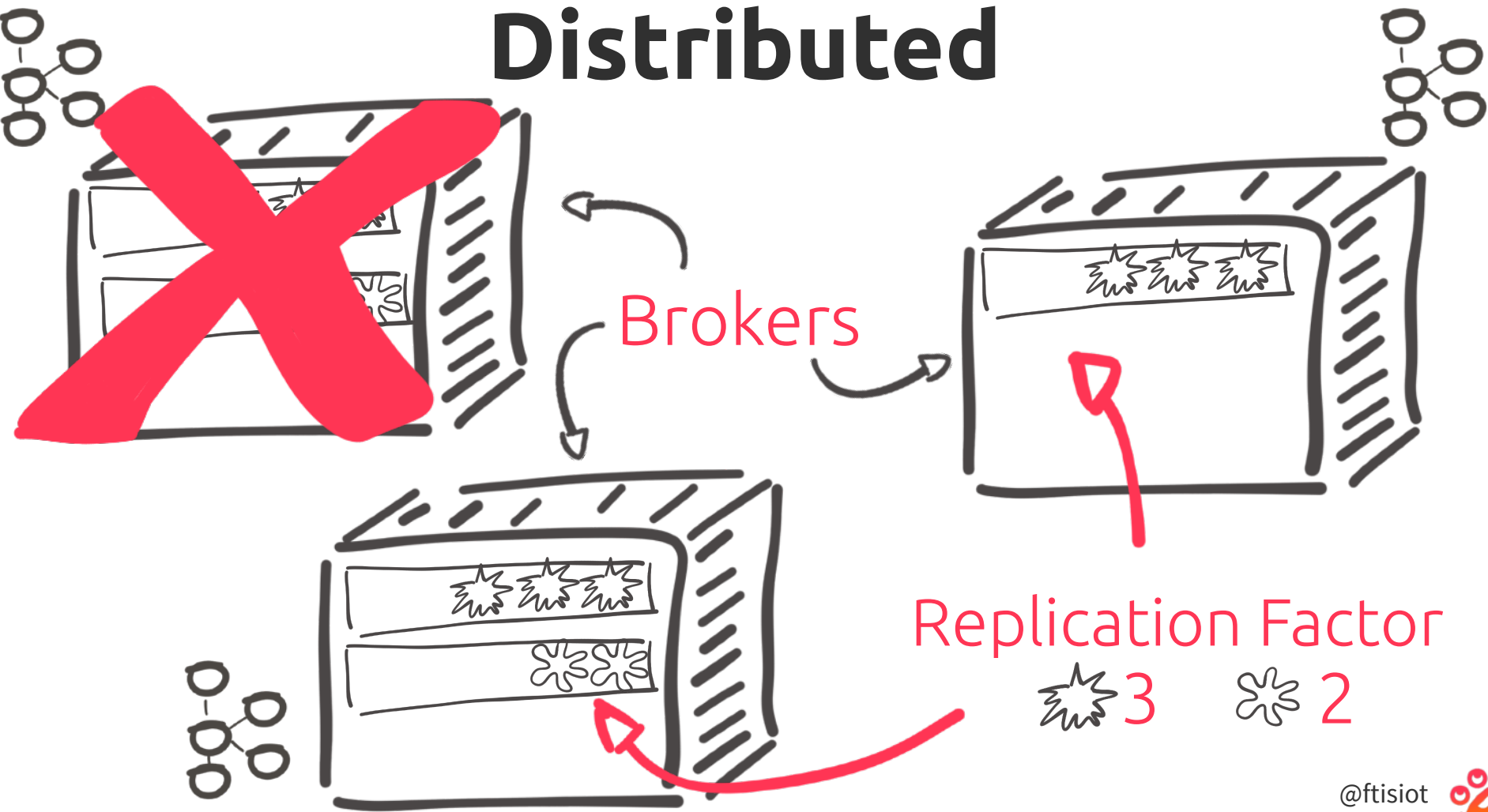


Topic A



Topic B

Distributed



Replication Factor

★ 3

★ 2



What is a Kafka Event?



<K, V>

<"temp_max", 35.3>



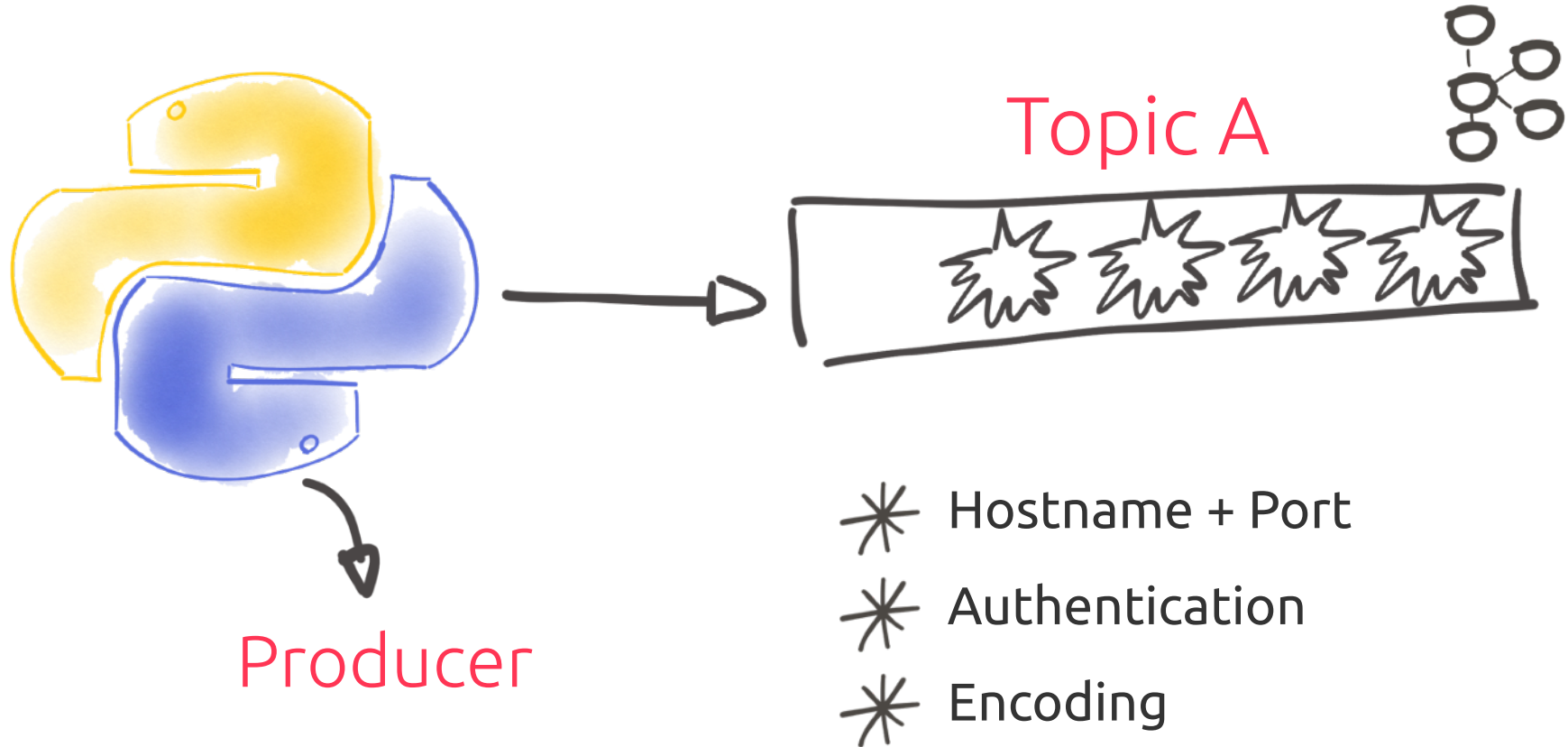
```
{
  shop: "Mario's Pizza",
  phone_line: 3
}
```



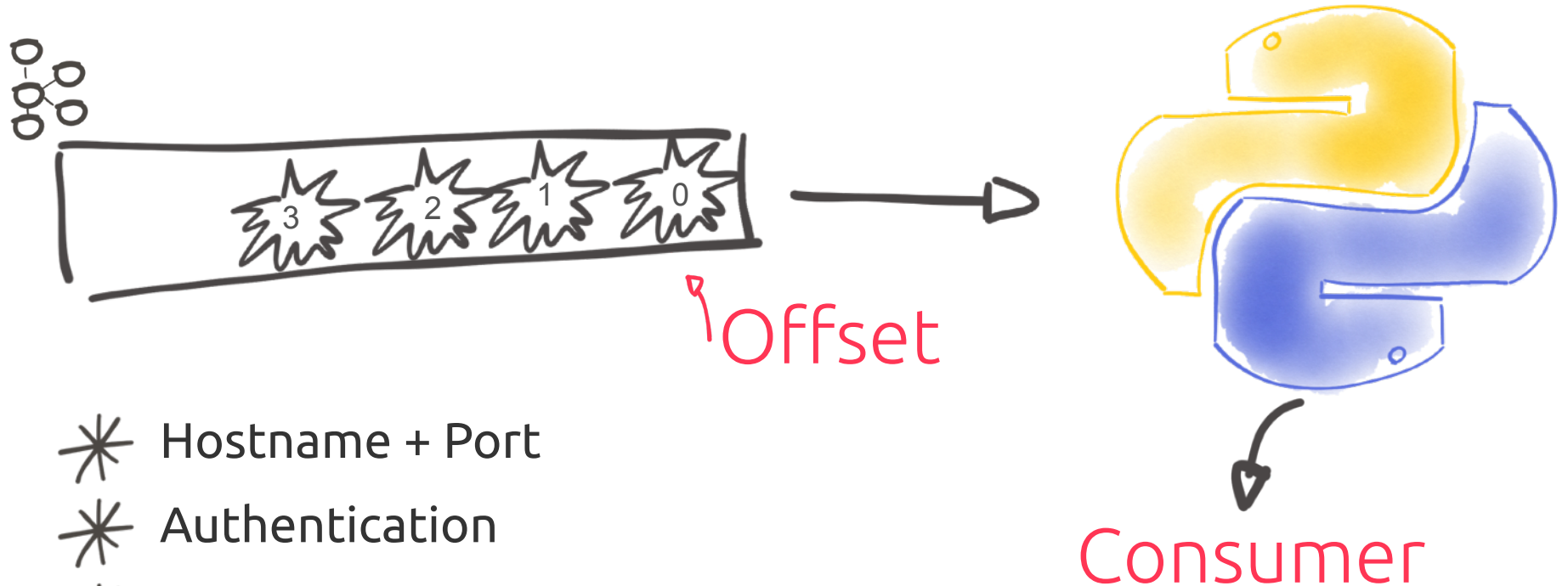
```
{
  orderId: 123456
  name: "Andrea Pirlo",
  pizzas: [
    {
      pizza: "Margherita",
      additionalToppings: ["Tuna", "Onions", "Ham"]
    },
    ...
  ]
}
```



Write to Kafka



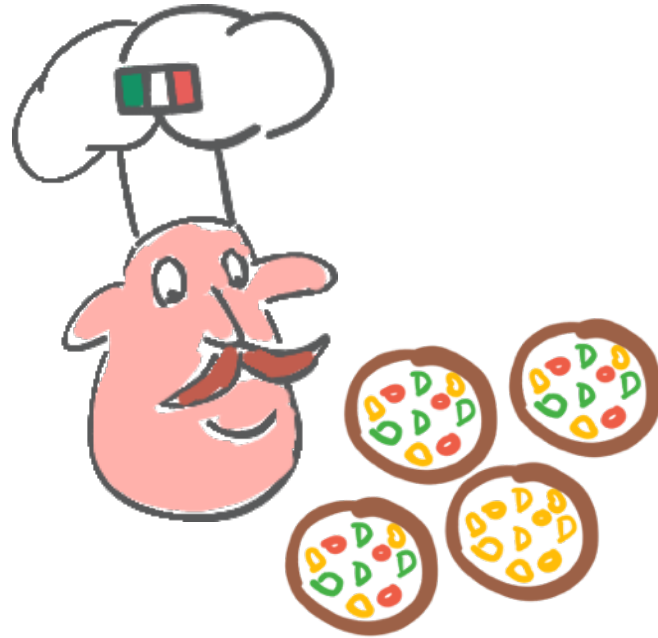
Read from Kafka



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



Pizza Demo!



Topic Retention Policies

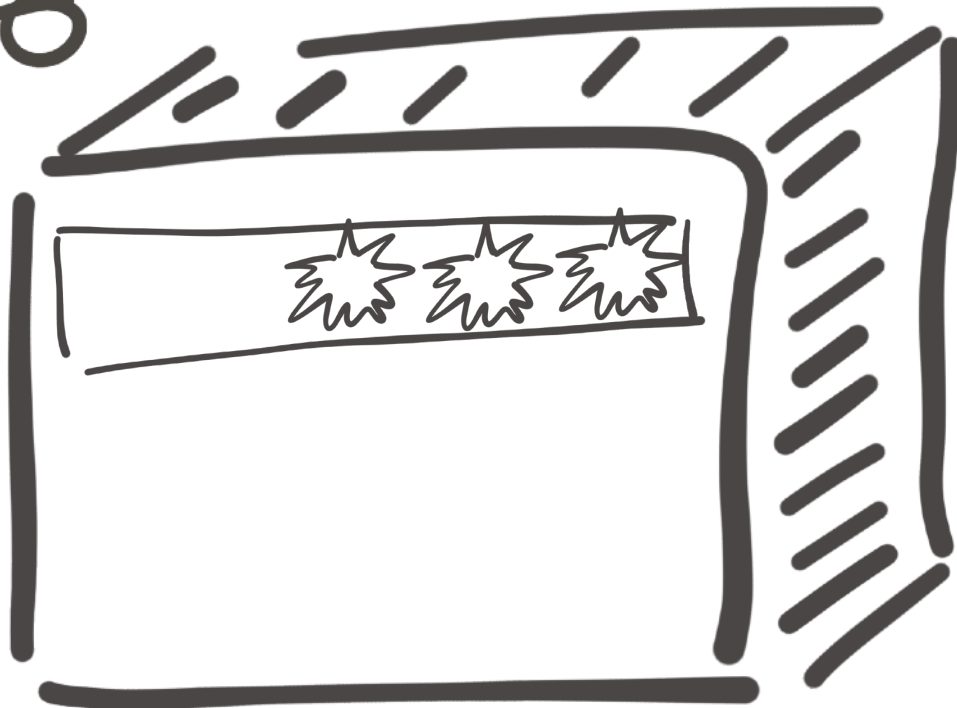
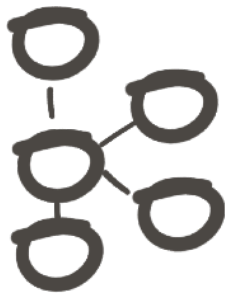


Time



Size

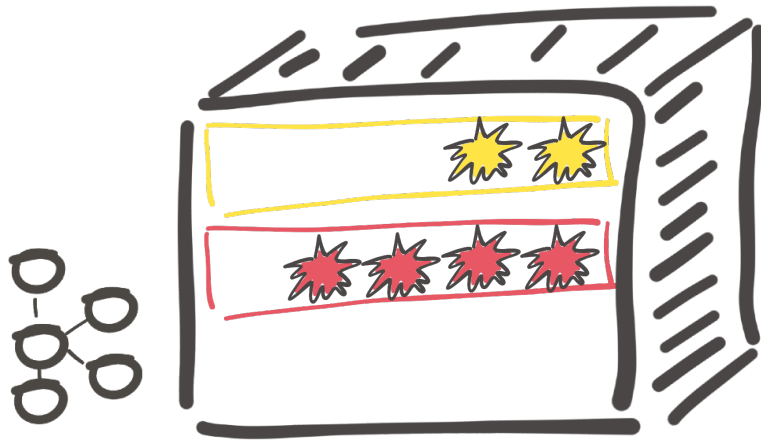
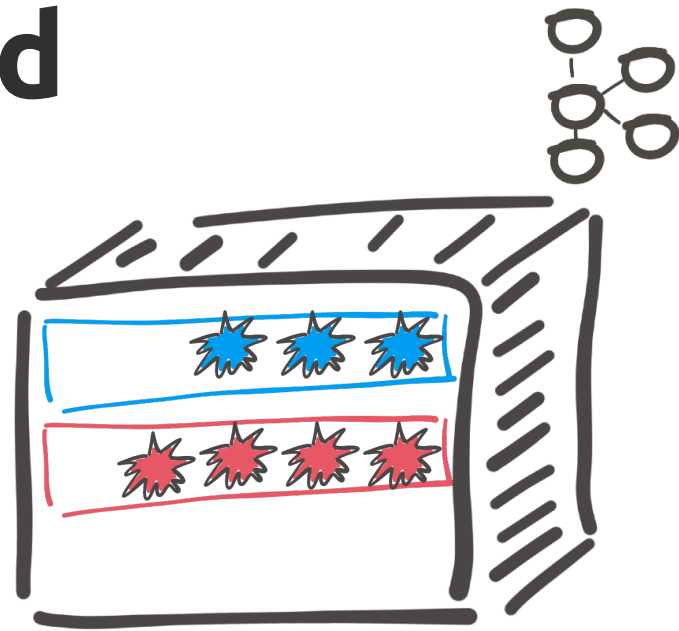
Log Size



Topic Partitions



Distributed



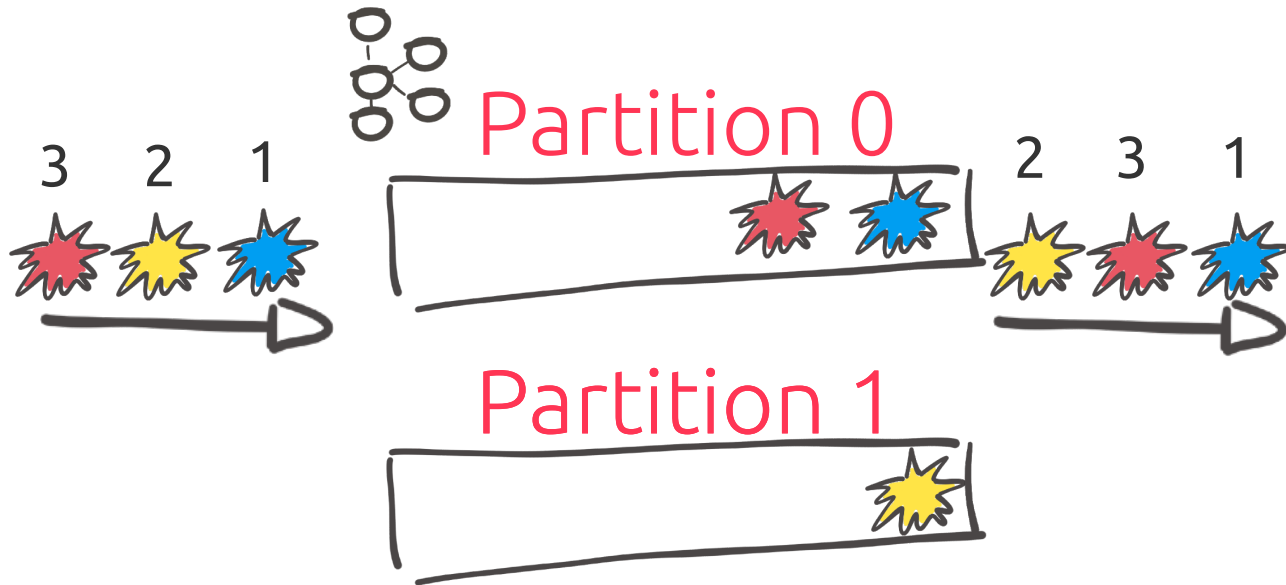
Selecting a Partition

<K, V>



Same Key  Same Partition

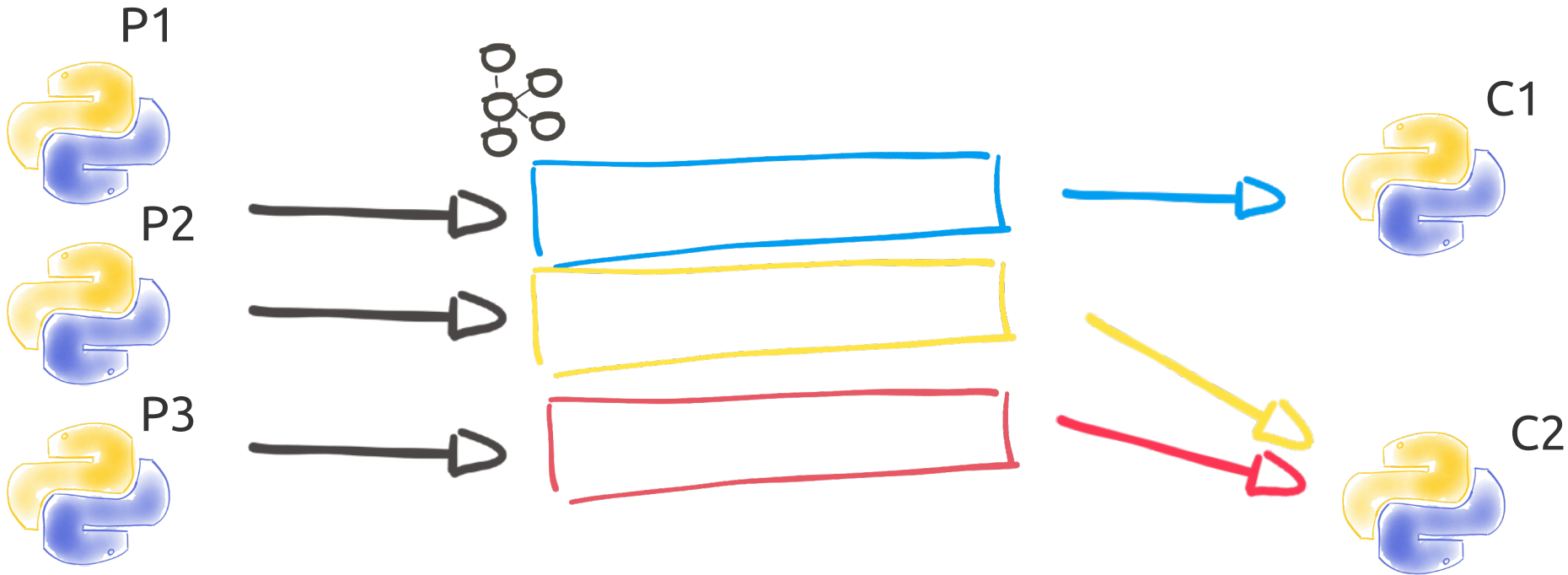
Ordering



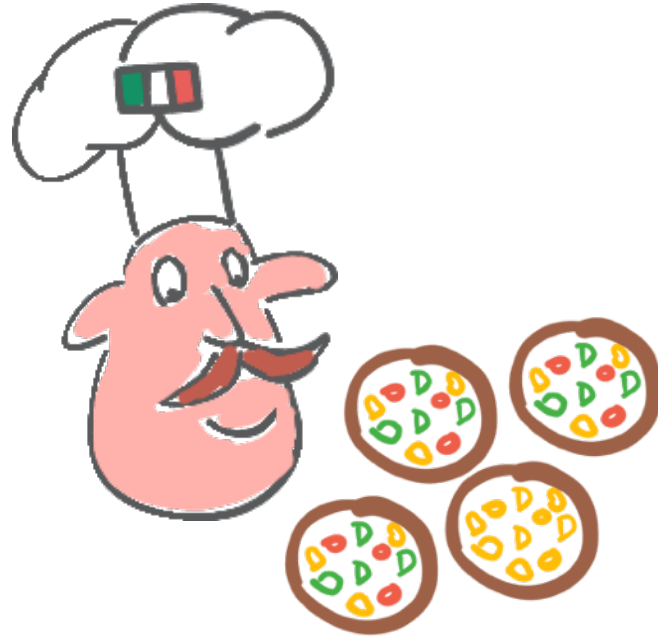
Guaranteed **per Partition**



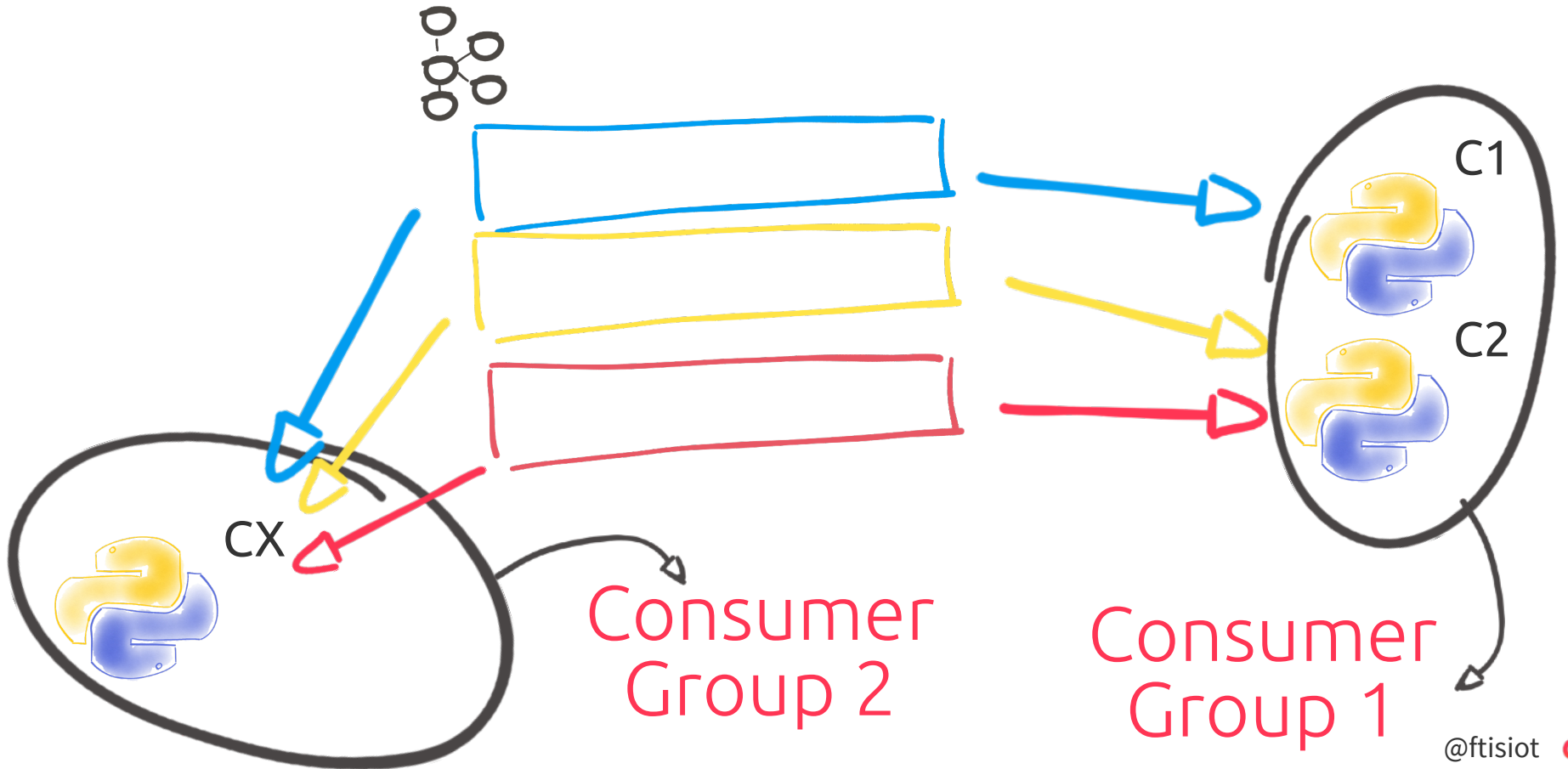
Scaling Out



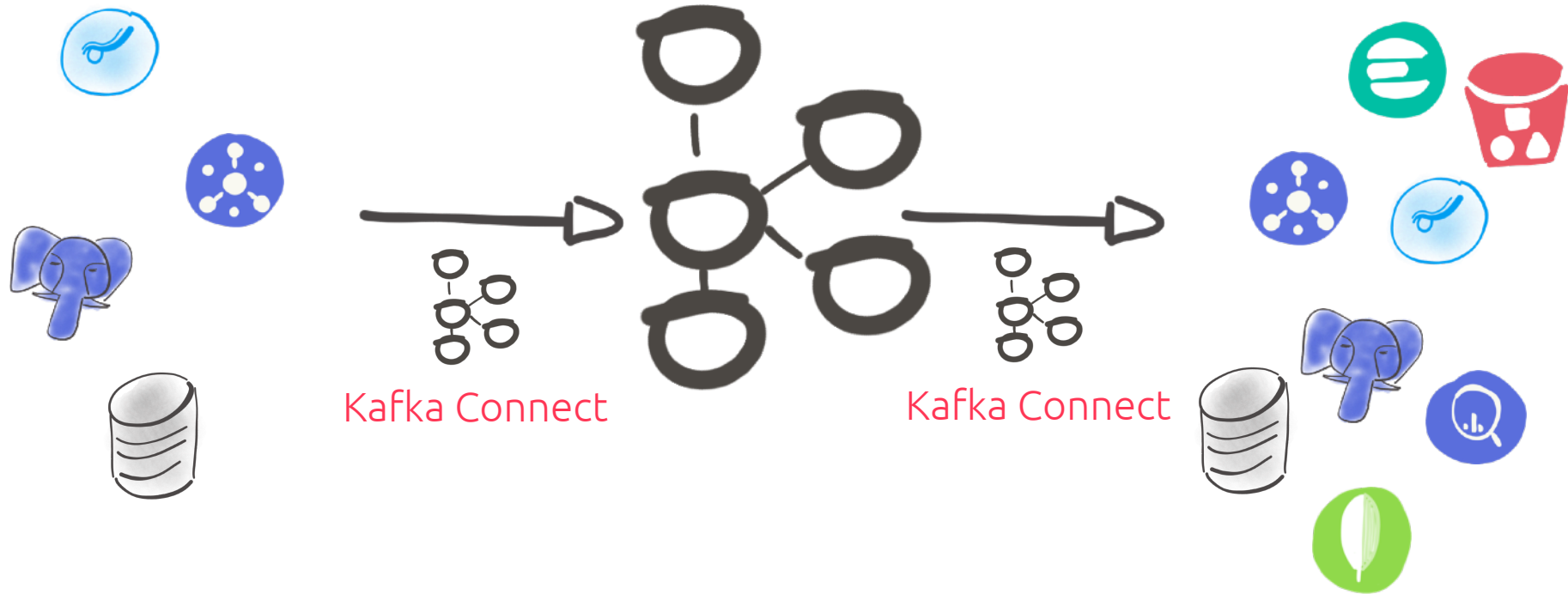
Partitions Demo!



Multiple Applications



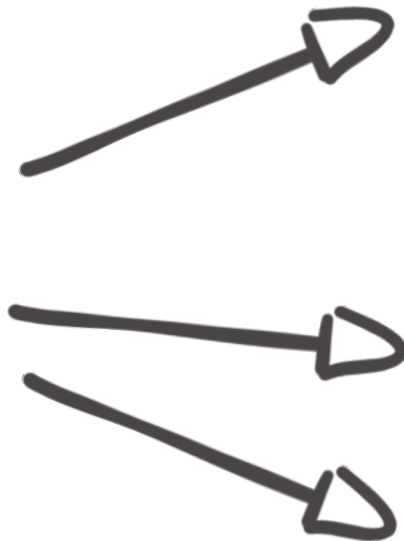
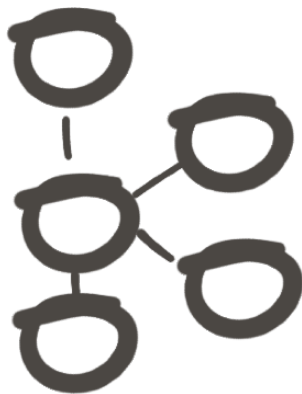
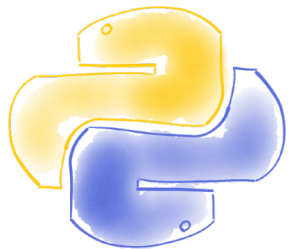
Kafka Connect



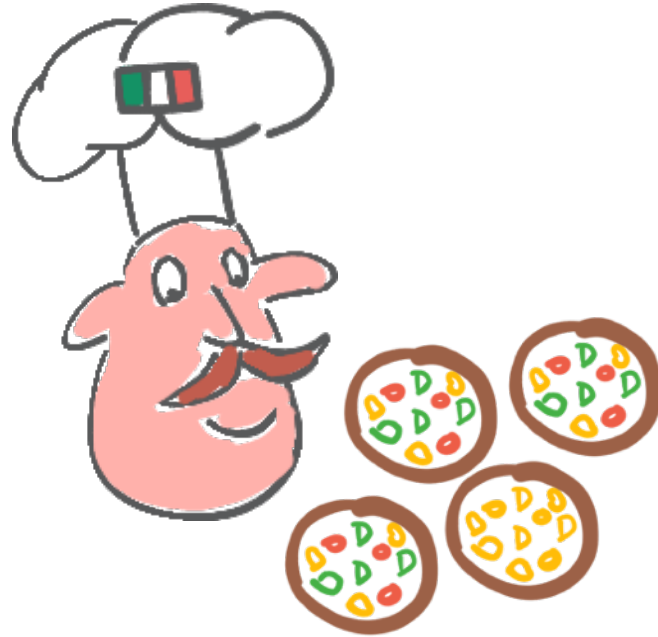
Evolve Existing Applications



Distribute Events



Kafka Connect Demo!



Resources



@ftisiot



<https://github.com/aiven/kafka-python-notebooks>



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



<https://aiven.io/>



Ask me Anything

