

Building a Streaming Application with KSQL



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KSQL

Why?



KSQL

```
CREATE STREAM pineapple_pizza AS  
  SELECT crust, size, toppings  
  FROM pizza  
  WHERE type = 'pineapple';
```



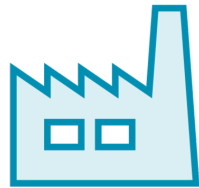
Developer API's Pyramid



KSQL



Streams API



Producer API



Consumer API

Developer
friendly

Capabilities



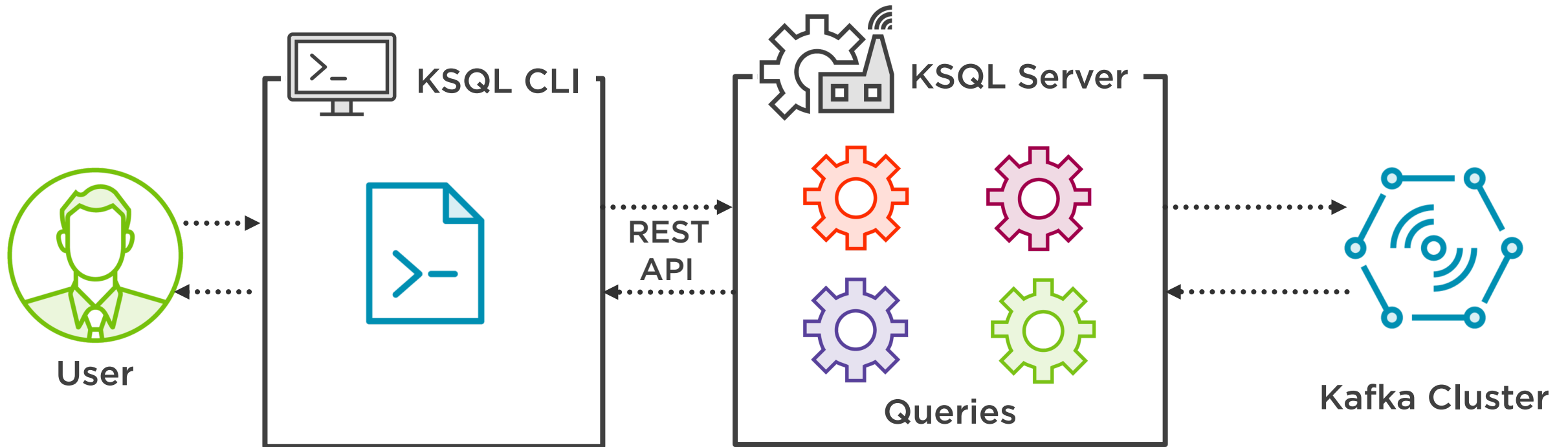
KSQL

Why?

How?



KSQL Architecture



```
CREATE STREAM pineapple_pizza AS  
  SELECT crust, size, toppings  
  
  FROM pizza  
  
  WHERE type = 'pineapple';
```

```
◀ .to("pineapple_pizza")  
  
◀ .mapValues( pizza ->  
    pizza.getCrust() + "," +  
    pizza.getSize() + "," +  
    pizza.getToppings() )  
  
◀ .stream("pizza")  
  
◀ .filter(pizza ->  
    pizza.getType().equals("pineapple")  
    )
```



```
CREATE STREAM pineapple_pizza AS  
  SELECT crust, size, toppings  
  
  FROM pizza  
  
  WHERE type = 'pineapple';
```

```
.stream("pizza")  
  
.filter(pizza ->  
    pizza.getType().equals("pineapple"))  
  
.mapValues( pizza ->  
    pizza.getCrust() + "," +  
    pizza.getSize() + "," +  
    pizza.getToppings() )  
  
.to("pineapple_pizzas")
```

KSQL

Why?

How?

When?



KSQL Use Cases



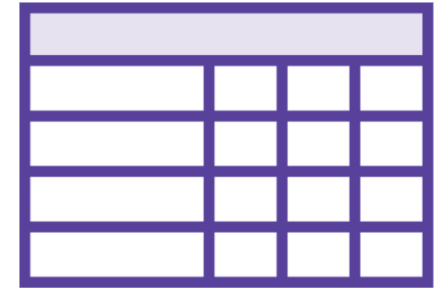
Streaming Operations

Data analytics,
Monitoring, IOT, etc.



Viewing Data

Show the content
of a topic

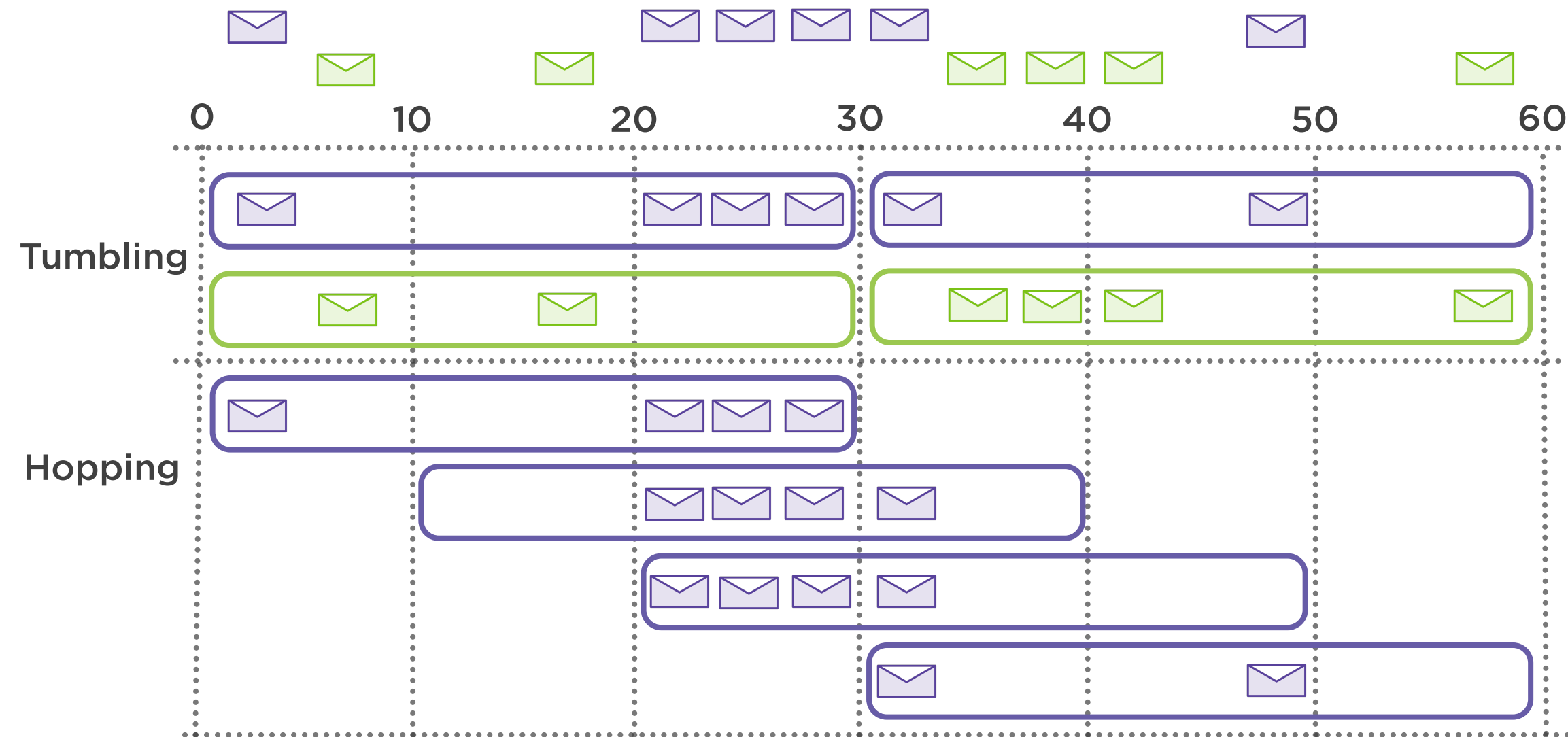


Manipulating Data

Enhance information
stored in a topic



Windowing



KSQL Statements

Data Definition Language (DDL)

CREATE STREAM

CREATE TABLE

DROP STREAM

DROP TABLE

CREATE STREAM AS SELECT

CREATE TABLE AS SELECT

Data Manipulation Language (DML)

SELECT

INSERT

CREATE STREAM AS SELECT

CREATE TABLE AS SELECT



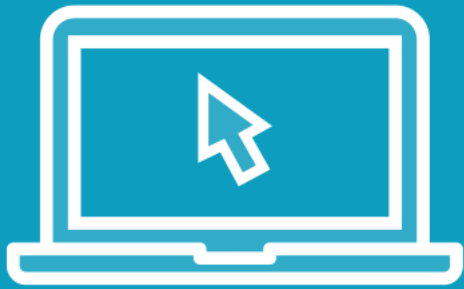
Alerting System

“payments” -> “warnings”

Transactions > 5/10



Demo



Set up KSQL

Alerting application with KSQL



Summary



Simplicity of KSQL

Windowing

Alerting with KSQL

