Writing and Deploying KsqlDB Queries

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Overview

SQL + streaming features

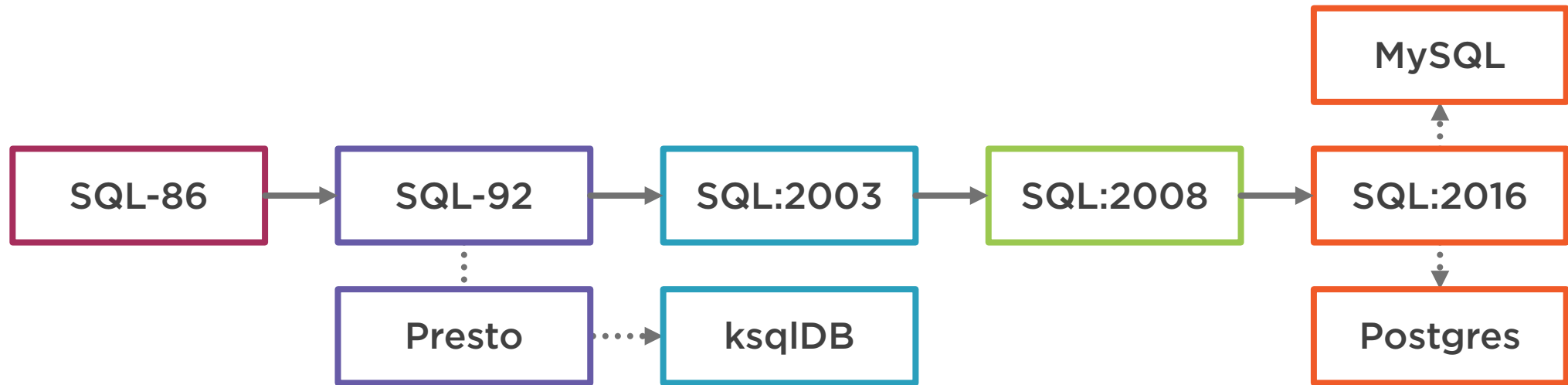**Creating a query**

Deployment options
- CLI
- Web server
- Headless deployment

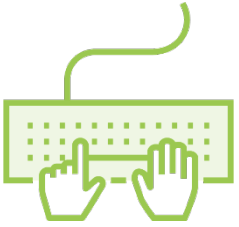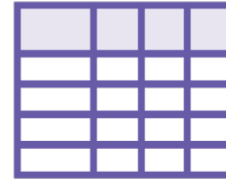# KsqlDB queries are ANSI SQL plus extra features.
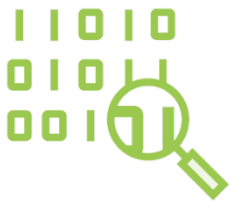
SQL Family Tree

Key Differences

Table

Modify
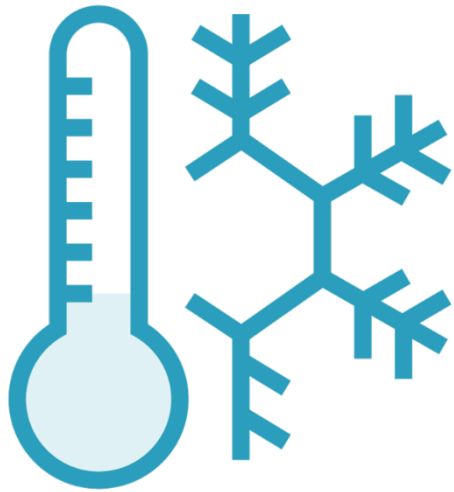
Pull Query

Stream

Append

Push Query

Creating Your First KsqlDB Query

Weather Analysis

Hundreds of weather sensors

Thousands of readings

Stored in Kafka

Analysis with ksqlDB

Types of Queries

Push Query

Pull Query

Joins

Push Query

Pull Query

Join Query

KsqlDB let's us modify and summarize data.

Interactive versus Headless Deployments

Headless just means
no front-end.

Deployment Modes

Kafka Streams

Headless

Interactive

Comparison Recap

Headless	Interactive
File-based	Query-based
Predictable workloads	User-defined workloads
Production environment	Development environment

Demo

Running the ksqlDB CLI

Creating a push query

Creating a pull query

Joining the results

Deploying a Streaming ETL Pipeline
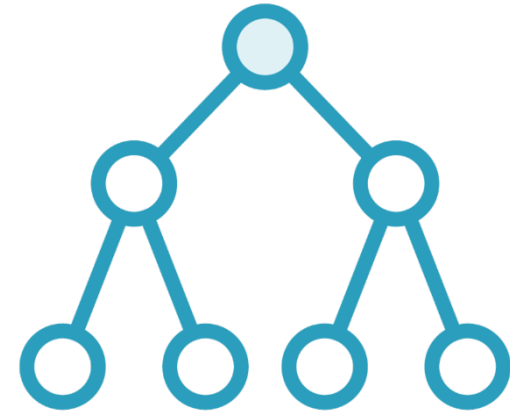in Headless Mode
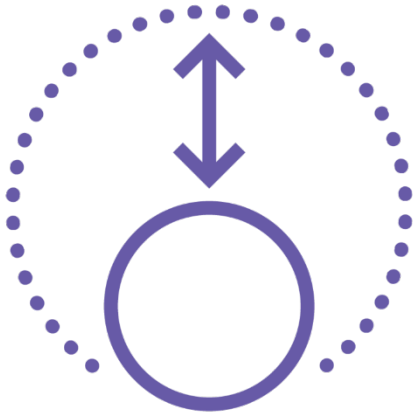
Streaming data terms
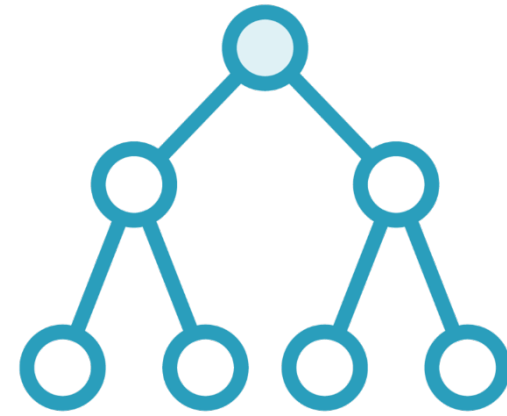are confusing.

Streaming Applications

Streaming ETL Pipeline

Event-driven Microservice
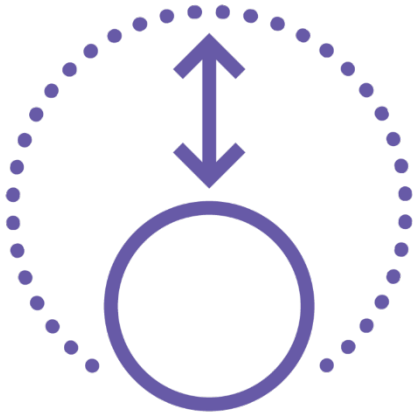
Streaming Applications

Transforms Data

Event-driven Microservice

Streaming Applications

Transforms Data

Triggers Side-effects

Deploying in Headless Mode

Kafka Connect

Queries File

Command Line Parameter (--queries-file)

Kafka Client

Additional Resources

Kafka Connect Fundamentals

By Bogdan Sucaciu

Streaming ETL tutorial

https://docs.ksqldb.io/en/latest/tutorials/etl/

Summary

Flavor of SQL

Types of queries
- Push query
- Pull query

Types of deployments
- Interactive
- Headless