Confluent Platform includes ksqlDB, the event streaming database purpose-built for developing event streaming applications that can view and transform data in real-time on Apache Kafka®.

Why an event streaming database?

More than ever, businesses are being compelled to become more event-driven, automating in software entire business processes that were previously human-centric, and creating new real-time customer experiences. A critical aspect of this transformation is building event streaming applications, a new category of applications built on top of Kafka that leverage real-time event data and stream processing.

Traditionally, event streaming applications required a heavyweight architecture that integrated several distributed systems. The parts didn’t fit together as well as you’d hope; these systems were complex and each integration was a small project on its own. It was like trying to build a car out of parts, but the parts came from different manufacturers who didn’t talk to each other.

Confluent Platform delivers ksqlDB to drastically reduce the operational complexity required to build event streaming applications, allowing more developers and enterprises to more easily offer real-time experiences to end users.

Features

ksqlDB

ksqlDB is an event streaming database that enables you to build event streaming applications with the same ease and familiarity of building traditional applications on a relational database. It dramatically simplifies stream processing architectures on which event streaming applications are built; ksqlDB is capable of enriching events through stream processing, running pre-built Kafka connectors directly inside its servers, and serving several types of queries. As a result, ksqlDB provides one solution for everything you need to build a complete event streaming application with just a few SQL statements.
Solution

Easily build event streaming applications

Lightweight SQL syntax
Build an event streaming application with the same ease and familiarity as building traditional apps on a relational database. ksqlDB provides all the functionality of other stream processing frameworks through a familiar, lightweight SQL syntax.

One mental model
Work across the entire stack with one mental model, using a small set of SQL statements to build a complete event streaming application.

Control Center integration
Create and run ksqlDB queries directly in Confluent Control Center rather than having to work out of the CLI. The integration also includes ksqlDB Flow View, which allows you to easily visualize a ksqlDB application end-to-end.

ksqlDB Flow View

ksqlDB offers stream processing, embedded connector support, and several types of queries

Push and Pull queries
Query tables and streams by either continuously subscribing to changing query results as new events occur (push queries) or looking up results at a point in time (pull queries), removing the need to integrate separate systems to serve each.

Embedded connectors
Easily move event data from existing data systems in and out of ksqlDB. Rather than needing to run a separate Kafka Connect cluster for capturing events, ksqlDB can run pre-built connectors directly in its servers.

Kafka native
 Seamlessly integrate ksqlDB into its one and only dependency, Apache Kafka, without the integration challenges presented by other solutions. With ksqlDB handling event capture, stream processing, and query serving, you can build event streaming applications with fewer moving parts in the underlying infrastructure.

“At Bolt, one of the leading ride-hailing apps in Europe and Africa, we use ksqlDB in our data warehouse stream processing pipeline to power every decision we make... Half a year ago, we migrated all replication dataflows to ksqlDB and never regretted having done it. As of the time of this writing, we are replicating over 500 topics to our warehouse, and this number is growing every day.”

Ruslan Gibaiev | Software Engineer, Bolt

Confluent Platform. Enterprise event streaming platform built by the original creators of Apache Kafka. For more information, please visit confluent.io. To contact us, visit confluent.io/contact. For detailed product specifications, please refer to our documentation.