

What is KSQL?

Confluent KSQL is a streaming SQL engine for Kafka.

KSQL is very similar to Kafka Streams. It allows you to perform stream processing operations using SQL-like queries.

Although not compliant with ANSI SQL, its syntax is inspired by and similar to ANSI SQL.

What is KSQL?

With KSQL, you can do almost anything that you can do with Kafka Streams, such as:

- Data transformations
- Aggregations
- Joins
- Windowing
- Modeling data with streams and tables

KSQL Architecture

KSQL runs as a separate service from Kafka. You can run multiple KSQL servers in a KSQL cluster.

Clients make requests to the KSQL server, and the server communicates with the Kafka cluster.

Confluent comes with a command-line KSQL client that you can access using the `ksql` command.

Using KSQL

KSQL queries look similar to SQL queries, but they query data from Kafka streams and tables.

List topics:

```
SHOW TOPICS;
```

Print records in a topic:

```
PRINT '<topic name>';
```

Create a stream:

```
CREATE STREAM <name> (<fields>)  
WITH (kafka_topic='<topic>',  
value_format='<format>');
```

Create a table:

```
CREATE TABLE <name> (<fields>) WITH  
(kafka_topic='<topic>',  
value_format='<format>',  
key='<key>');
```

