

# (Constructs K.T. Part 1)

## (Debezium)

### (Supported Databases)

- \* MySQL
  - \* PostgreSQL
  - \* Oracle DB
  - \* SQL Server
  - \* DB2
  - \* Vitess
  - \* MongoDB
  - \* Cassandra3
  - \* Cassandra4
- ⇒ SQL
- ⇒ NoSQL.

## (Kafka Connect)

Kafka Connect helps to quickly transfer data between Kafka and other systems or vice-versa.

Kafka connect operates as a separate service beside the Kafka broker.

[Kafka Connect can pull or push data from Kafka.]



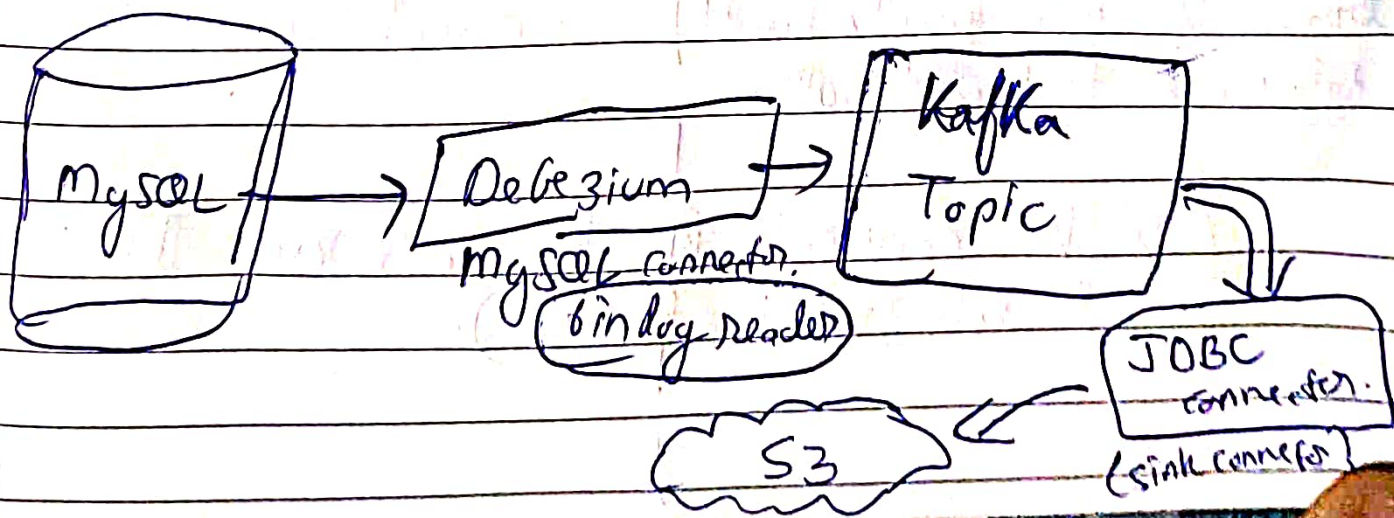
Kafka connect runs with streaming as well as batch oriented fashion.

## Type of Connectors.

- Source Connectors → { From databases which is the actual transactional databases to Kafka Topics }.
- Sink Connectors → { take data from Kafka topics and dumps into S3, delta lake or HDFS }.

Where does Debezium sits in?

Its a source connector which connects the transactional database to Kafka Topics.





Getting more insights b/w Debezium and Kafka Connect.

Kafka Connect → It's a connector runtime framework which ~~manages~~ runs the process.

(Think of it like Tomcat & Docker).

~~Now~~ Debezium → Contains the CDC logic and gets loaded by Kafka Connect.

Kafka Connect

Debezium MySQL

\* Connector runtime / framework



contains the CDC logic

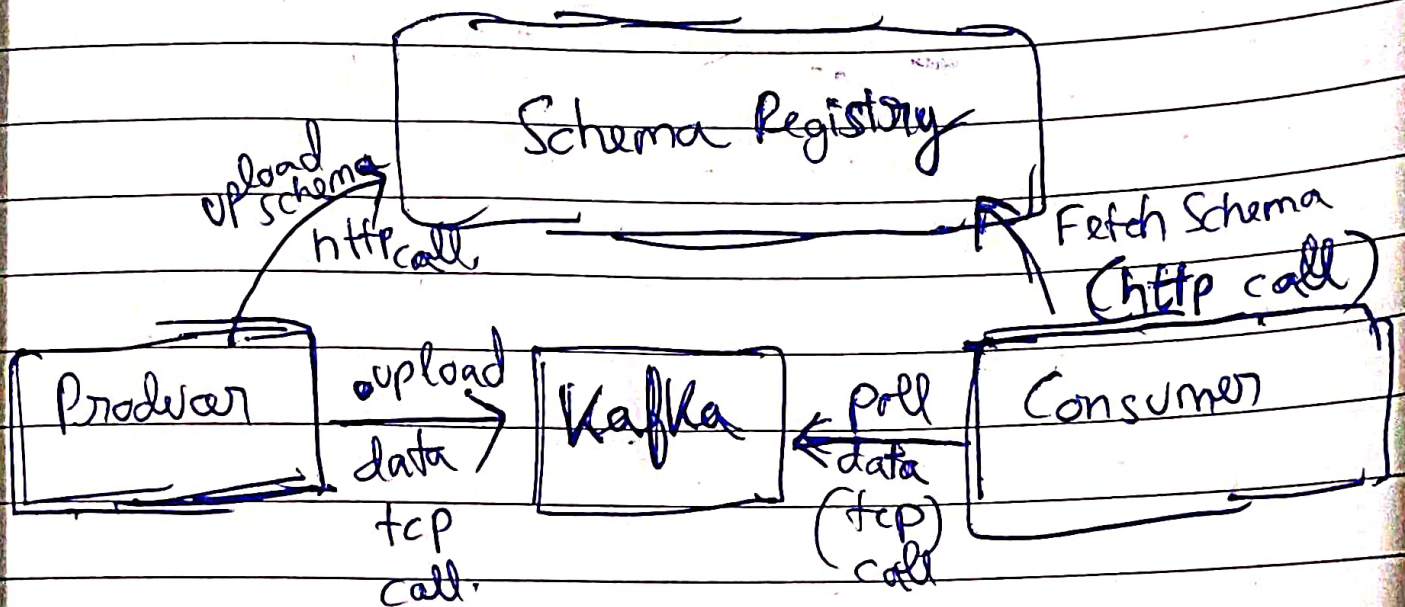
\* Provides functionalities like offset management, fault tolerance, task distribution.

\* Implements Source Connector interfaces.

(Kafka Connect loads and runs the Debezium classes).



## ~~Constructs~~ ~~WT~~ Part 2)



Note, how uploading schema to the Schema Registry is http call. Well, its because

- 1). It does not happen often, i.e. Schema does not change much ~~during the run~~.
- 2). Consumer ~~downloads~~ caches the schema to avoid network call for each batch from Kafka fetch.