Streaming Like a Grandmaster: Learning Confluent Cloud Flink Through Chess

Intro & Setup

Just like setting up a chessboard, we begin by preparing our Confluent Cloud environment. Create a Kafka topic named 'moves' and set up a Flink SQL application.

What is Flink?

Flink is your real-time processing engine. Like a chess opening, your Flink logic sets the stage for smart data stream reactions.

Sources & Sinks

Think of sources as pieces entering the board and sinks as pieces exiting. Kafka topics serve as your board where data (moves) are processed.

Writing Your First Flink SQL

Your first SQL is like moving a pawn to E4. Start with:
SELECT * FROM moves;
Add WHERE clauses for filtering:
SELECT * FROM moves WHERE player = 'white';

Filters, Joins & Windows

Filters = removing weak pieces. Joins = combining strategies. Windows = playing in a time-boxed round.
Example:
SELECT player, COUNT(*) as move_count
FROM moves
WINDOW TUMBLING (SIZE 1 MINUTE)
GROUP BY player;

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Demo + Challenge

Process a stream to count moves with 'checkmate'. Bonus: Use REGEX for more advanced matching.

Wrap-up & Resources

We've covered core Flink ideas using chess:

- Flink = real-time strategy

- Kafka = board

- SQL = your moves

Resources:

https://docs.confluent.io/cloud/current/flink/

https://www.confluent.io/flink-kafka-sql/