Streams Code Examples

You can find Streams code examples in the Apache Kafka® and Confluent GitHub repositories.

The Confluent Streams examples are locatedhere. These examples demonstrate the use of Java 8 lambda expressions (which simplify the code significantly), show how to read/write Avro data, and how to implement end-to-end integration tests using embedded Kafka clusters.

The Kafka Streams examples are located athttps://github.com/apache/kafka/streams/examples/. These examples demonstrate the use of the Kafka Streams DSL and the low-level Processor API, including typed and untyped examples.

Getting started examples

Java

With lambda expressions for Java 8+:

- WordCountLambdaExample
- AnomalyDetectionLambdaExample
- GlobalKTablesExample
- MapFunctionLambdaExample
- PageViewRegionLambdaExample
- UserRegionLambdaExample
- WikipediaFeedAvroLambdaExample
- ApplicationResetExample
- SessionWindowsExample
- SumLambdaExample
- TopArticlesLambdaExample

Without lambda expressions for Java 7+:

- PageViewRegionExample
- WikipediaFeedAvroExample

Scala

- MapFunctionScalaExample

Security examples

Java programming language

Without lambda expressions for Java 7:

- SecureKafkaStreamsExample

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Interactive Queries examples

Since Confluent Platform 3.1+ and Kafka 0.10.1+, it is possible to query state stores created via the Kafka Streams DSL and the Processor API. Please refer to Interactive Queries for further information.

Java

With lambda expressions for Java 8+:

- WordCountInteractiveQueriesExample
- KafkaMusicExample

End-to-end application examples

These demo applications use embedded instances of Kafka, ZooKeeper, and Confluent Schema Registry. They are implemented as integration tests.

Java

With lambda expressions for Java 8+:

- WordCountLambdaIntegrationTest
- FanoutLambdaIntegrationTest
- GenericAvroIntegrationTest
- GlobalKTablesExampleTest
- HandlingCorruptedInputRecordsIntegrationTest
- MapFunctionLambdaIntegrationTest
- MixAndMatchLambdaIntegrationTest -- how to mix the DSL and the Processor API
- SpecificAvroIntegrationTest
- StateStoresInTheDSLIntegrationTest -- how to use state stores in the DSL
- StreamToStreamJoinIntegrationTest
- StreamToTableJoinIntegrationTest
- TableToTableJoinIntegrationTest
- UserCountsPerRegionLambdaIntegrationTest
- ApplicationResetIntegrationTest
- EventDeduplicationLambdaIntegrationTest
- SumLambdaIntegrationTest
- TopArticlesLambdaExampleTest

Without lambda expressions for Java 7:

- PassThroughIntegrationTest

Scala

- StreamToTableJoinScalaIntegrationTest
- ProbabilisticCountingScalaIntegrationTest - demonstrates how to probabilistically count items in an input stream by implementing a custom state store that is backed by a Count-Min Sketch data structure
- GenericAvroScalaIntegrationTest

- SpecificAvroScalaIntegrationTest
- WordCountScalaIntegrationTest

Event-Driven Microservice example

Java

The Event-Driven Microservice example implements an Orders Service that provides a REST interface to POST and GET orders. Posting an order creates an event in Kafka, which is picked up by three different validation engines: a Fraud Service, an Inventory Service, and an Order Details Service. These services validate the order in parallel, emitting a PASS or FAIL based on whether each validation succeeds.

- Microservices example
- Microservices test

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