

Report

Practical Assignment 2 (KAFKA)

(Used operating system: Windows)

Correct implementations

UC1:

- ✓ Kafka cluster (3 brokers & 3 partitions);
- ✓ 1 to 3 Kafka producers;
- ✓ All modes required in the PProducer side:
 - Fire and forget;
 - Asynchronous;
 - Synchronous;
- ✓ Added some configurations options to producer process;
- ✓ GUI implementation:
 - PProducer:
 - Button to start;
 - Combo box to define sending mode;
 - Combo box to define the number of Producers;
 - Components to define the values of several Producers' properties;
 - Display sent records;
 - Display total time to send all records;
 - PConsumer:
 - Display received records;

UC2:

- ✓ Kafka cluster (3 brokers & 1 partition);
- ✓ All modes required in the PProducer side:
 - Fire and forget;
 - Asynchronous;
 - Synchronous;
- ✓ GUI implementation:
 - PProducer:
 - Button to start;
 - Combo box to define sending mode;
 - Display sent records;
 - PConsumer:
 - Display received records and total number;



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UC3:

- ✓ Kafka cluster (3 brokers & 3 partitions);
- ✓ 3 Kafka producers;
- ✓ 3 Kafka consumers;
- ✓ All modes required in the PProducer side:
 - Fire and forget;
 - Asynchronous;
 - Synchronous;
- ✓ Partitioner policies considered:
 - Range Assignor;
 - RoundRobin Assignor;
 - Sticky Assignor;
- ✓ GUI implementation:
 - PProducer:
 - Button to start;
 - Combo box to define sending mode;
 - Combo box to define the partitioner policy;
 - Display sent records by Producer;
 - PConsumer:
 - For each Kafka Consumer, display received records and total number;

UC4:

- ✓ Kafka cluster (3 brokers & 3 partitions);
- ✓ One consumer group with 1 to 3 Kafka consumers;
- ✓ GUI implementation:
 - PProducer:
 - Button to start;
 - Display records by producer and total number;
 - PConsumer:
 - Combo box to define the number of Consumers;
 - Commit mode considered:
 - Auto-commit;
 - Throttled;
 - Ignore;
 - Latest;
 - Use or not use of Group Rebalance;
 - For each Kafka consumer: display the received records and the total number;
 - For each Kafka consumer: button to kill a Consumer;
 - For each Kafka consumer: display total time to receive all records from the first one;



Incorrect implementations

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Students contribution

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2. Luís Miguel Gomes Batista (nº 115279): 55% *

* extra GUI implementations