Iniciando o ambiente do Kafka em Docker Desktop

```
PS E:\projetos> cd docker-kafka
PS E:\projetos\docker-kafka> docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
PS E:\projetos\docker-kafka> docker-compose up -d
Docker Compose is now in the Docker CLI, try `docker compose up`

Starting zookeeper ... done
Starting broker    ... done
Starting schema-registry ... done
Starting connect         ... done
Starting rest-proxy      ... done
Starting ksqldb-server   ... done
Starting ksql-datagen    ... done
Starting control-center  ... done
Starting ksqldb-cli      ... done
```

Criar o tópico msg-usuario-csv

```
PS E:\projetos\docker-kafka> docker exec -it broker bash
root@broker:/# kafka-topics --bootstrap-server localhost:9092 --topic msg-usuario-csv --create --partitions 3 --replication-factor 1
Created topic msg-usuario-csv.
root@broker:/# kafka-topics --bootstrap-server localhost:9092 --topic msg-usuario-csv --describe
Topic: msg-usuario-csv  PartitionCount: 3       ReplicationFactor: 1    Configs:
        Topic: msg-usuario-csv  Partition: 0    Leader: 1       Replicas: 1     Isr: 1  Offline:
        Topic: msg-usuario-csv  Partition: 1    Leader: 1       Replicas: 1     Isr: 1  Offline:
        Topic: msg-usuario-csv  Partition: 2    Leader: 1       Replicas: 1     Isr: 1  Offline:
root@broker:/#
```

Criar um produtor para enviar 3 mensagens contendo id e nome separados por vírgula para o tópico msg-usuário-csv

```
root@broker:/# kafka-console-producer --broker-list localhost:9092 --topic msg-usuario-csv
>1,Marcelo
>2,Goulart
>3,Feliciani
>
```

Visualizar as partições e a quantidade de réplicas do tópico msg-usuario-csv

```
root@broker:/# kafka-topics --bootstrap-server localhost:9092 --topic msg-usuario-csv --list
msg-usuario-csv
root@broker:/# kafka-topics --bootstrap-server localhost:9092 --topic msg-usuario-csv --describe
Topic: msg-usuario-csv  PartitionCount: 3       ReplicationFactor: 1    Configs:
        Topic: msg-usuario-csv  Partition: 0    Leader: 1       Replicas: 1     Isr: 1  Offline:
        Topic: msg-usuario-csv  Partition: 1    Leader: 1       Replicas: 1     Isr: 1  Offline:
        Topic: msg-usuario-csv  Partition: 2    Leader: 1       Replicas: 1     Isr: 1  Offline:
root@broker:/#
```

Visualizar todos os Tópicos do Broker

```
root@broker:/# kafka-topics --bootstrap-server localhost:9092 --list
__confluent.support.metrics
__consumer_offsets
__transaction_state
_confluent-command
_confluent-controlcenter-5-5-2-1-AlertHistoryStore-changelog
_confluent-controlcenter-5-5-2-1-AlertHistoryStore-repartition
_confluent-controlcenter-5-5-2-1-Group-ONE_MINUTE-changelog
_confluent-controlcenter-5-5-2-1-Group-ONE_MINUTE-repartition
_confluent-controlcenter-5-5-2-1-Group-THREE_HOURS-changelog
_confluent-controlcenter-5-5-2-1-Group-THREE_HOURS-repartition
_confluent-controlcenter-5-5-2-1-KSTREAM-OUTEROTHER-0000000106-store-changelog
_confluent-controlcenter-5-5-2-1-KSTREAM-OUTEROTHER-0000000106-store-repartition
_confluent-controlcenter-5-5-2-1-KSTREAM-OUTERTHIS-0000000105-store-changelog
_confluent-controlcenter-5-5-2-1-KSTREAM-OUTERTHIS-0000000105-store-repartition
_confluent-controlcenter-5-5-2-1-MetricsAggregateStore-changelog
_confluent-controlcenter-5-5-2-1-MetricsAggregateStore-repartition
_confluent-controlcenter-5-5-2-1-MonitoringMessageAggregatorWindows-ONE_MINUTE-changelog
_confluent-controlcenter-5-5-2-1-MonitoringMessageAggregatorWindows-ONE_MINUTE-repartition
_confluent-controlcenter-5-5-2-1-MonitoringMessageAggregatorWindows-THREE_HOURS-changelog
_confluent-controlcenter-5-5-2-1-MonitoringMessageAggregatorWindows-THREE_HOURS-repartition
_confluent-controlcenter-5-5-2-1-MonitoringStream-ONE_MINUTE-changelog
_confluent-controlcenter-5-5-2-1-MonitoringStream-ONE_MINUTE-repartition
_confluent-controlcenter-5-5-2-1-MonitoringStream-THREE_HOURS-changelog
_confluent-controlcenter-5-5-2-1-MonitoringStream-THREE_HOURS-repartition
_confluent-controlcenter-5-5-2-1-MonitoringTriggerStore-changelog
_confluent-controlcenter-5-5-2-1-MonitoringTriggerStore-repartition
_confluent-controlcenter-5-5-2-1-MonitoringVerifierStore-changelog
_confluent-controlcenter-5-5-2-1-MonitoringVerifierStore-repartition
```

```
_confluent-controlcenter-5-5-2-1-TriggerActionsStore-repartition
_confluent-controlcenter-5-5-2-1-TriggerEventsStore-changelog
_confluent-controlcenter-5-5-2-1-TriggerEventsStore-repartition
_confluent-controlcenter-5-5-2-1-actual-group-consumption-rekey
_confluent-controlcenter-5-5-2-1-aggregate-topic-partition-store-changelog
_confluent-controlcenter-5-5-2-1-aggregate-topic-partition-store-repartition
_confluent-controlcenter-5-5-2-1-aggregatedTopicPartitionTableWindows-ONE_MINUTE-changelog
_confluent-controlcenter-5-5-2-1-aggregatedTopicPartitionTableWindows-ONE_MINUTE-repartition
_confluent-controlcenter-5-5-2-1-aggregatedTopicPartitionTableWindows-THREE_HOURS-changelog
_confluent-controlcenter-5-5-2-1-aggregatedTopicPartitionTableWindows-THREE_HOURS-repartition
_confluent-controlcenter-5-5-2-1-cluster-rekey
_confluent-controlcenter-5-5-2-1-expected-group-consumption-rekey
_confluent-controlcenter-5-5-2-1-group-aggregate-store-ONE_MINUTE-changelog
_confluent-controlcenter-5-5-2-1-group-aggregate-store-ONE_MINUTE-repartition
_confluent-controlcenter-5-5-2-1-group-aggregate-store-THREE_HOURS-changelog
_confluent-controlcenter-5-5-2-1-group-aggregate-store-THREE_HOURS-repartition
_confluent-controlcenter-5-5-2-1-group-stream-extension-rekey
_confluent-controlcenter-5-5-2-1-metrics-trigger-measurement-rekey
_confluent-controlcenter-5-5-2-1-monitoring-aggregate-rekey-store-changelog
_confluent-controlcenter-5-5-2-1-monitoring-aggregate-rekey-store-repartition
_confluent-controlcenter-5-5-2-1-monitoring-message-rekey-store
_confluent-controlcenter-5-5-2-1-monitoring-trigger-event-rekey
_confluent-ksql-default__command_topic
_confluent-license
_confluent-metrics
_confluent-monitoring
_schemas
default_ksql_processing_log
docker-connect-configs
docker-connect-offsets
docker-connect-status
msg-cli
msg-rapida
msg-usuario-csv
teste
root@broker:/#
```

Visualizar os dados do Tópico msg-usuario-csv

```
ksql> print "msg-usuario-csv" from beginning limit 10;
Key format: SESSION(AVRO) or HOPPING(AVRO) or TUMBLING(AVRO) or AVRO or SESSION(PROTOBUF) or HOPPING(PROTOBUF) or TUMBLING(PROTOBUF) or PROTOBUF or SESSION(JSON) or HOPPING(JSON) or TUMBLING(J
SON) or JSON or SESSION(JSON_SR) or HOPPING(JSON_SR) or TUMBLING(JSON_SR) or JSON_SR or SESSION(KAFKA_INT) or HOPPING(KAFKA_INT) or TUMBLING(KAFKA_INT) or KAFKA_INT or SESSION(KAFKA_BIGINT) or
 HOPPING(KAFKA_BIGINT) or TUMBLING(KAFKA_BIGINT) or KAFKA_BIGINT or SESSION(KAFKA_DOUBLE) or HOPPING(KAFKA_DOUBLE) or TUMBLING(KAFKA_DOUBLE) or KAFKA_DOUBLE or SESSION(KAFKA_STRING) or HOPPING
(KAFKA_STRING) or TUMBLING(KAFKA_STRING) or KAFKA_STRING
Value format: KAFKA_STRING
rowtime: 5/27/21 5:52:56 PM UTC, key: <null>, value: 2,Goulart
rowtime: 5/27/21 5:52:47 PM UTC, key: <null>, value: 1,Marcelo
rowtime: 5/27/21 5:53:04 PM UTC, key: <null>, value: 3,Feliciani
^CTopic printing ceased
ksql>
```

Criar o Stream usuario_csv para ler os dados do tópico msg-usuario-csv

```
PS C:\Users\marce> docker exec -it ksqldb-server ksql http://ksqldb-server:8088

                  ===========================================
                  =       _              _ ____  ____       =
                  =      | | _____  __ _| |  _ \|  _ \      =
                  =      | |/ / __|/ _` | | | | | |_) |     =
                  =      |   <\__ \ (_| | | |_| |  _ <      =
                  =      |_|\_\___/\__, |_|____/|____/      =
                  =                   |_|                   =
                  =  Event Streaming Database purpose-built =
                  =        for stream processing apps       =
                  ===========================================

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CLI v5.5.2, Server v5.5.2 located at http://ksqldb-server:8088

Having trouble? Type 'help' (case-insensitive) for a rundown of how things work!

ksql> list streams;

 Stream Name         | Kafka Topic                 | Format
-----------------------------------------------------------
 KSQL_PROCESSING_LOG | default_ksql_processing_log | JSON
-----------------------------------------------------------
ksql>
```

```
ksql> create stream usuario_csv (id int, nome varchar) with (kafka_topic='msg-usuario-csv',value_format='delimited');

 Message
----------------
 Stream created
----------------
ksql> list streams;

 Stream Name         | Kafka Topic                 | Format
-----------------------------------------------------------------
 KSQL_PROCESSING_LOG | default_ksql_processing_log | JSON
 USUARIO_CSV         | msg-usuario-csv             | DELIMITED
-----------------------------------------------------------------
ksql>
```

Visualizar o Stream usuario_csv

```
ksql> list streams;

 Stream Name         | Kafka Topic                 | Format
-----------------------------------------------------------------
 KSQL_PROCESSING_LOG | default_ksql_processing_log | JSON
 USUARIO_CSV         | msg-usuario-csv             | DELIMITED
-----------------------------------------------------------------
ksql> describe usuario_csv;

Name                 : USUARIO_CSV
 Field   | Type
-----------------------------------
 ROWTIME | BIGINT           (system)
 ROWKEY  | VARCHAR(STRING)  (system)
 ID      | INTEGER
 NOME    | VARCHAR(STRING)
-----------------------------------
For runtime statistics and query details run: DESCRIBE EXTENDED <Stream,Table>;
ksql>
```

```
ksql> list streams;

 Stream Name         | Kafka Topic                 | Format
-----------------------------------------------------------------
 KSQL_PROCESSING_LOG | default_ksql_processing_log | JSON
 USUARIO_CSV         | msg-usuario-csv             | DELIMITED
-----------------------------------------------------------------
ksql> SET 'auto.offset.reset'='earliest';
Successfully changed local property 'auto.offset.reset' from 'earliest' to 'earliest'.
ksql> SELECT id,nome FROM USUARIO_CSV EMIT CHANGES LIMIT 10;
+-----------------------------------------------------------------------+-----------------------------------------------------------------------+
|ID                                                                     |NOME                                                                   |
+-----------------------------------------------------------------------+-----------------------------------------------------------------------+
|1                                                                      |Marcelo                                                                |
|2                                                                      |Goulart                                                                |
|3                                                                      |Feliciani                                                              |
^CQuery terminated
ksql>
```

Visualizar apenas o nome do Stream usuario_csv

```
ksql> list streams;

 Stream Name         | Kafka Topic                 | Format
-----------------------------------------------------------------
 KSQL_PROCESSING_LOG | default_ksql_processing_log | JSON
 USUARIO_CSV         | msg-usuario-csv             | DELIMITED
-----------------------------------------------------------------
ksql>
```