5. Problem Statement

Task 1:

Create a kafka topic named KeyLessTopic.

Inside KeyLessTopic insert following data:

{"name":"John", "exp":16}

{"name":"Finn", "exp":20}

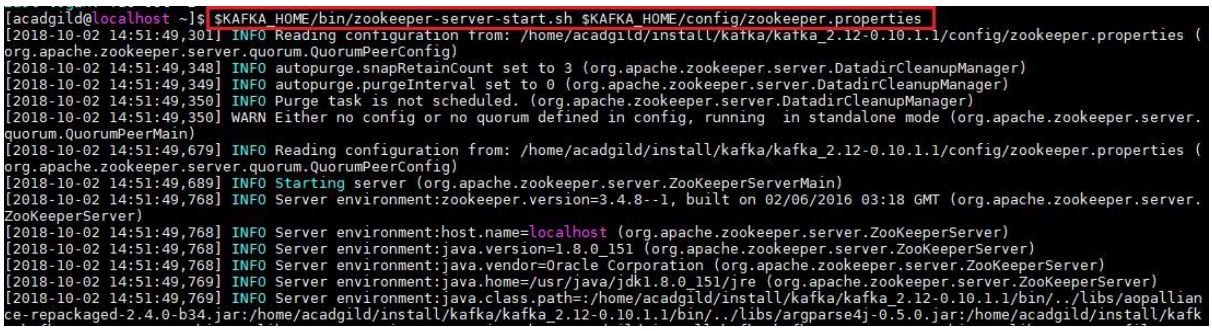
{"name":"Cylin", "exp":18}

{"name":"Mark", "exp":2}

{"name":"Akshay", "exp":14}

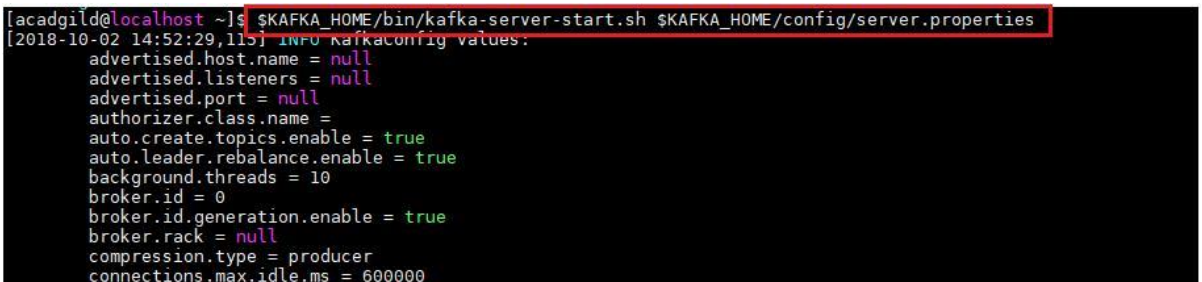
First we have started Zookeeper by using below command:

$KAFKA_HOME/bin/zookeeper-server-start.sh $KAFKA_HOME/config/zookeeper.properties



Then we have started Kafka broker with default properties by using below command:

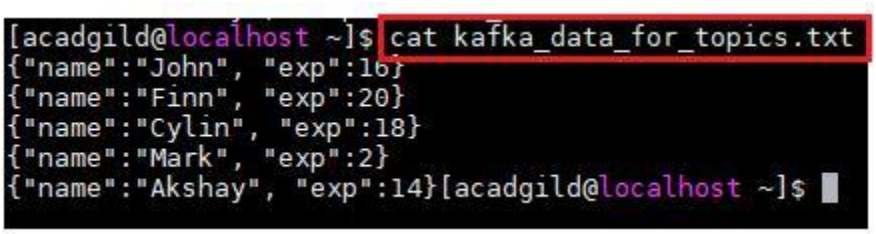
$KAFKA_HOME/bin/kafka-server-start.sh $KAFKA_HOME/config/server.properties



We have copied all messages into ‘kafka_data_for_topics’ text file. This will help us to write or read all lines at once from this file.

We could see content of this file by using below command:

cat kafka_data_for_topics.txt

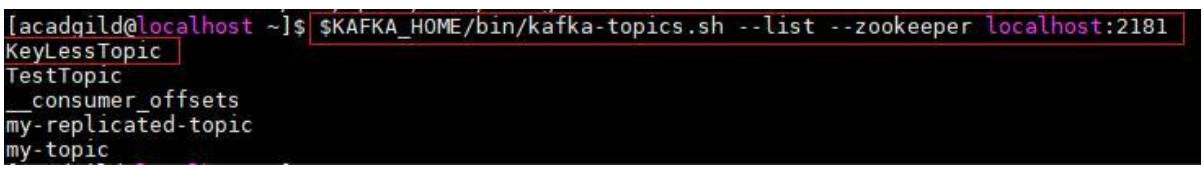


Then we have created Topic named as ‘KeyLessTopic’ by using below command:

$KAFKA_HOME/bin/kafka-topics.sh --create --topic KeyLessTopic --zookeeper localhost:2181 -- partitions 1 --replication-factor 1

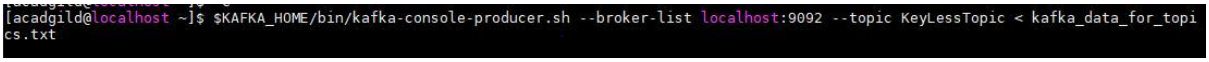
Then we have verified **‘KeyLssTopic’** topic is created by using below List topic command which shows list of all topics created:

$KAFKA_HOME/bin/kafka-topics.sh --list --zookeeper localhost:2181



We have created Kafka producer (publisher) to publish the messages on the KeyLessTopic and messages are provided by kafka_data_for_topics.txt file.

$KAFKA_HOME/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyLessTopic < kafka_data_for_topics.txt

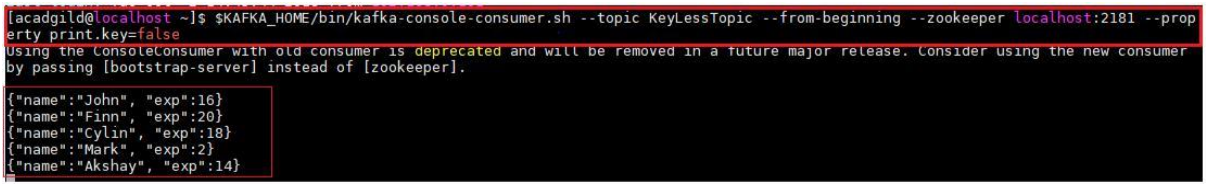


Task 2:

Create a console consumer that reads KeyLessTopic from beginning

We have created console consumer for the KeyLessTopic topic to receive the messages from the beginning. Here we have set print.key option to false as we are not using keys in this case.

$KAFKA_HOME/bin/kafka-console-consumer.sh --topic KeyLessTopic --from-beginning -
- zookeeper localhost:2181 --property print.key=false



We could see that all messages from producer are delivered to consumer.

Task 3:

Create a kafka topic named KeyedTopic. Inside KeyedTopic insert following data:

The part before comma(,) should be treated as key and after comma(,) should be treated as value

{"name":"John"},{"exp":16}

{"name":"Finn"},{"exp":20}

{"name":"Cylin"},{"exp":18}

{"name":"Mark"},{"exp":2}

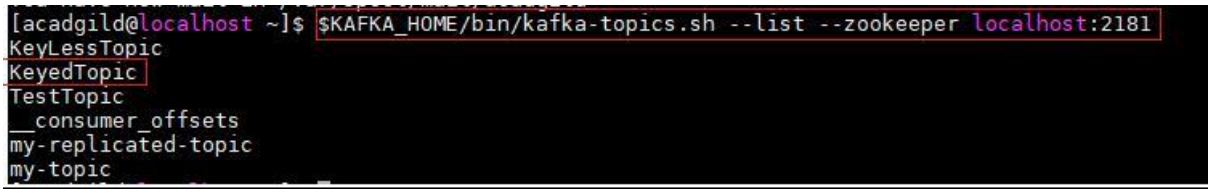
{"name":"Akshay"},{"exp":14}

Here we have created Topic named as **'KeyedTopic'** by using below command:

$KAFKA_HOME/bin/kafka-topics.sh --create --topic KeyedTopic --zookeeper localhost:2181 --partitions 1 --replication-factor 1

Then we have verified **'KeyedTopic'** topic is created by using below List topic command which shows list of all topics created:

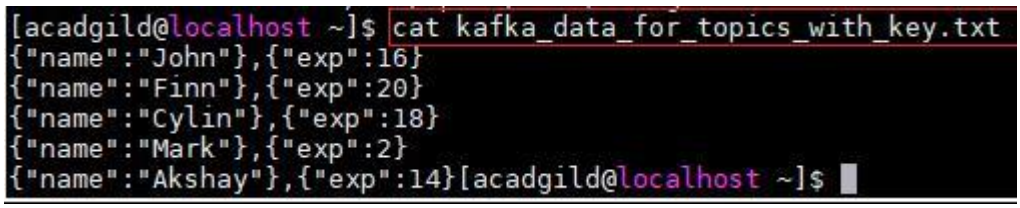
$KAFKA_HOME/bin/kafka-topics.sh --list --zookeeper localhost:2181



We have copied all messages into a new text file : ‘kafka_data_for_topics_with_key’. This will help us to write or read all lines at once from this file.

We could see content of this file by using below command:

cat kafka_data_for_topics_with_key.txt



We have created Kafka producer (publisher) to publish the messages on the KeyedTopic and messages are provided by kafka_data_for_topics_with_key.txt file.

We also provide extra options to the command to send messages as key/value pair and to use “,” as the separator between key and value.

$KAFKA_HOME/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyedTopic --property "parse.key"=true --property "key.separator=," < kafka_data_for_topics_with_key.txt

```
[acadgild@localhost ~]$ $KAFKA_HOME/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyedTopic --property "parse.key"=
true --property "key.separator=," < kafka_data_for_topics_with_key.txt
```

Task 4:

Create a console consumer that reads KeyedTopic from beginning

The key and value should be separated by '-'

We have created console consumer for the KeyedTopic topic to receive the messages from the beginning. Here we have set print.key option to true as we are expecting both keys and values.

Since we are expecting to receive messages in the form of Key/Value pair, we provide extra options to the command to print the key and the value and use key.separator as ‘-‘.

$KAFKA_HOME/bin/kafka-console-consumer.sh --topic KeyedTopic --from-beginning --zookeeper localhost:2181 --property "print.key=true" --property "parse.key=true" --property "key.separator=-"

```
[acadgild@localhost ~]$ $KAFKA_HOME/bin/kafka-console-consumer.sh --topic KeyedTopic --from-beginning --zookeeper localhost:2181 --proper
ty "print.key=true" --property "parse.key=true" --property "key.separator=-"
Using the ConsoleConsumer with old consumer is deprecated and will be removed in a future major release. Consider using the new consumer
by passing [bootstrap-server] instead of [zookeeper].
{"name":"John"}-{"exp":16}
{"name":"Finn"}-{"exp":20}
{"name":"Cylin"}-{"exp":18}
{"name":"Mark"}-{"exp":2}
{"name":"Akshay"}-{"exp":14}
```

We could see that keys and values are separated and printed using “-“ as the separator.

e.g. For the key : {"name":"John"}, it’s value is {"exp":16}.