

Task No: 7

Implementing Producer and Consumer problem in kafka.

CO3

Date: 17/09/2025

Tools: Apache kafka

### AIM:

To install and configure the apache kafka in windows operating system, and to perform the Producer and Consumer problem.

### PROCEDURE:

1. Install Java Development Kit (JDK) version 8 or higher.
2. Install ZooKeeper: Kafka relies on ZooKeeper for distributed coordination. Kafka comes with an inbuilt Zookeeper
3. Visit the Apache Kafka website (<https://kafka.apache.org/downloads>) and download the latest version of Kafka for Windows.
4. Extract the contents of the Apache Kafka ZIP file to a required directory
5. Configure Environment Variables and path in System and User settings.
6. Start zookeeper by execute the zookeeper-server-start.bat script and pass the zookeeper configuration file path

```
cd C:\bigdata\kafka2.5
```

```
start cmd /k bin\windows\zookeeper-server-start.bat config\zookeeper.properties
```

7. Start Kafka by executing the kafka-server-start.bat script and pass broker configuration file path.

```
cd C:\bigdata\kafka2.5
```

```
start cmd /k bin\windows\kafka-server-start.bat config\server.properties
```

8. Open a new command prompt, and create new Kafka topic.

```
bin\windows\kafka-topics.bat --create --bootstrap-server localhost:9092 --replication-factor 1 --partitions 1 --topic test
```

Created topic test.

9. List all the topics to verify the created topic is present in this Topics list

```
bin\windows\kafka-topics.bat --list --bootstrap-server localhost:9092
```

test

10. Produce some messages and submit to test topic. I added two messages i.e. "Hello" and "Kafka".

```
bin\windows\kafka-console-producer.bat --bootstrap-server localhost:9092 --topic test
```

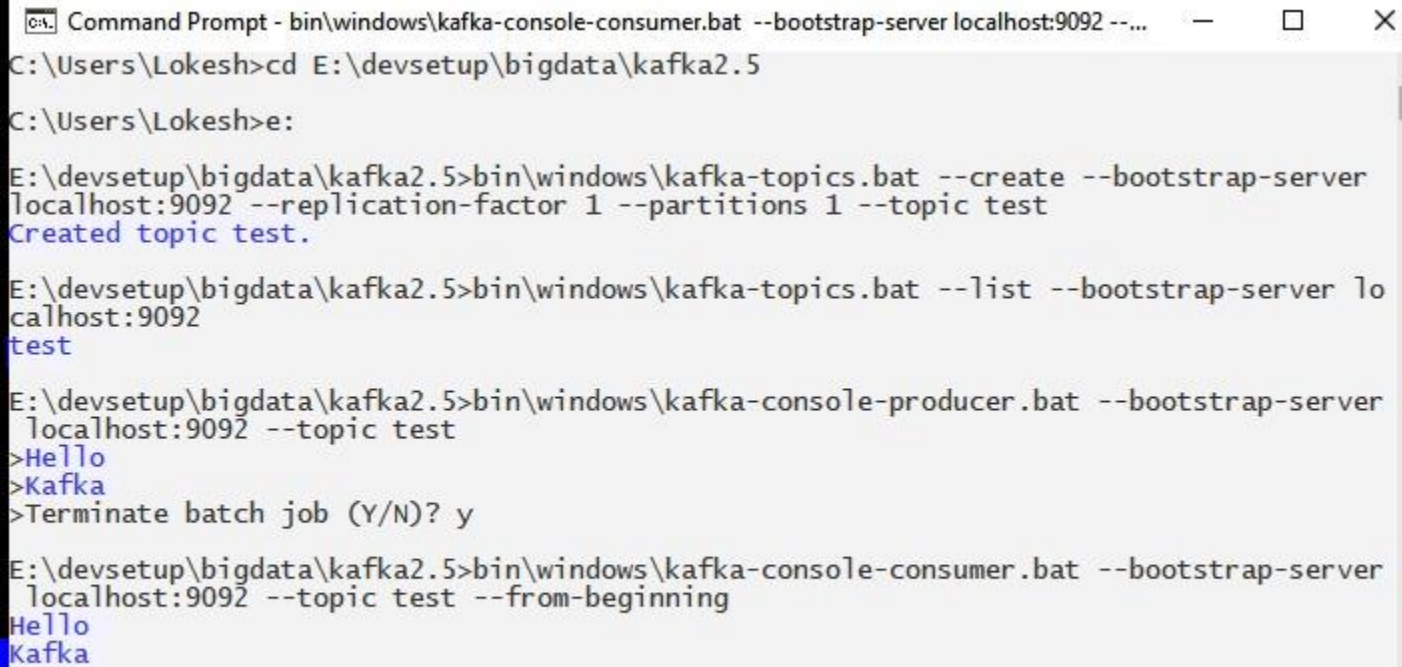
11. Consume the messages and submit to test topic.

```
bin\windows\kafka-console-consumer.bat --bootstrap-server localhost:9092 --topic test --from-beginning
```

Hello

Kafka

## Output:



```
C:\Users\Lokesh>cd E:\devsetup\bigdata\kafka2.5
C:\Users\Lokesh>e:
E:\devsetup\bigdata\kafka2.5>bin\windows\kafka-topics.bat --create --bootstrap-server localhost:9092 --replication-factor 1 --partitions 1 --topic test
Created topic test.
E:\devsetup\bigdata\kafka2.5>bin\windows\kafka-topics.bat --list --bootstrap-server localhost:9092
test
E:\devsetup\bigdata\kafka2.5>bin\windows\kafka-console-producer.bat --bootstrap-server localhost:9092 --topic test
>Hello
>Kafka
>Terminate batch job (Y/N)? y
E:\devsetup\bigdata\kafka2.5>bin\windows\kafka-console-consumer.bat --bootstrap-server localhost:9092 --topic test --from-beginning
Hello
Kafka
```

## Result:

Thus the installation and configuration of Apache Kafka and perform the Producer and Consumer problem are executed successfully.