

Compiling instructions:

Open the project folder with IntelliJ or Eclipse and run the project (press on the play icon).

How to run the client program:

1. Open Cmd.
2. Navigate to the folder of the Client program.
3. Configure the kafka-broker-config.properties file, and locate it in the same folder as the jar.
4. To run the Client program: run the command "java -jar Client.java".

Client User interface and how it works:

Choose an option between 1 and 7:

- 1 – Login – in
- 2 – Register – r.
- 3 – Leave – l.
- 4 – Send – s.
- 5 – Refresh – f.
- 6 – Disconnect – d.
- 7 – Quit – q.

To connect to a server, enter "1" **or** "login" **or** "in", and press enter. Next you need to enter your name and press enter again. If you are already connected you will get a message about that.

To register to a **new** topic, enter "2" **or** "register" **or** "r", and press enter. After that enter the name of the topic you want to register to, and press enter. If you are already registered to this topic, you will get an error.

To leave a topic **that you are registered to**, enter "3" **or** "leave" **or** "l", and press enter. After that enter the name of the topic you want to leave, and press enter. If you are **not registered** to this topic, you will get an error.

To send a message to a specific topic, enter "4" **or** "send" **or** "s", and press enter. After that enter the topic you want to send a message to, and press enter. After that enter the message you want to send.

To refresh kafka consumers enter "5" **or** "refresh" **or** "f", and press enter.

To disconnect from the server, enter "6" **or** "disconnect" **or** "d". After that press enter.

To close the program, enter "7" **or** "quit" **or** "q". After that press enter.

After you execute a command (except quit), you can keep executing commands until you decide to quit the program.

Client configuration files:

We used property file, which used to store the configurable parameters of an application in list of key-value pairs.

In the configuration file of the Client program we have two pairs:

key: "ip", value: the ip address of the kafka broker.

key: "port", value: the port of the kafka broker.

The configuration file is stored in the same directory of the jar.

Client tool –

- Directory name: Client_jar
- Tool name: Client.jar
- Configuration file name: kafka-broker-config.properties

The Configuration file must be in the same location of the tool. For example, if you run the client tool at C:\Users\kuku, the configuration file kafka-broker-config.properties must be in the same location. In addition, you can edit the configuration file at run time, before the connection.

Instructions for using kafka scripts:

- ZS script:

In the zookeeper configuration file we configured:

- dataDir=/tmp/zookeeper
- clientPort=2181

to start the zookeeper run from the folder kafka_2.12-2.1.0\bin\windows the command: zookeeper-server-start.bat ../../config/ZS.properties

- KB0 script:

In the kafka broker KB0 configuration file we configured:

- broker.id=0
- listeners = PLAINTEXT:// 10.0.0.1:9092
- zookeeper.connect= 10.0.0.10:2181
- log.dirs=/tmp/kafka/broker-0

to start the zookeeper run from the folder kafka_2.12-2.1.0\bin\windows the command: kafka-server-stop.bat ../../config/KB0.properties

- KB1 script:

In the kafka broker KB1 configuration file we configured:

- broker.id=1
- listeners = PLAINTEXT:// 10.0.0.2:9092
- zookeeper.connect=10.0.0.10:2181
- log.dirs=/tmp/kafka/broker-1

to start the zookeeper run from the folder kafka_2.12-2.1.0\bin\windows the command: kafka-server-stop.bat ../../config/KB1.properties

- KB2 script:

In the kafka broker KB2 configuration file we configured:

- broker.id=2
- listeners = PLAINTEXT:// 10.0.0.3:9092
- zookeeper.connect=10.0.0.10:2181
- log.dirs=/tmp/kafka/broker-2

to start the zookeeper run from the folder kafka_2.12-2.1.0\bin\windows the command: kafka-server-stop.bat ../../config/KB2.properties

- KB3 script:

In the kafka broker KB3 configuration file we configured:

- broker.id=3
- listeners = PLAINTEXT:// 10.0.0.4:9092
- zookeeper.connect=10.0.0.10:2181
- log.dirs=/tmp/kafka/broker-3

to start the zookeeper run from the folder kafka_2.12-2.1.0\bin\windows the command: kafka-server-stop.bat ..\..\config\KB3.properties