## **Kafka Installation on windows**

1. Install Java 1.8
2. Download and configure Kafka
3. Start and Test Kafka

## **Installing JDK 1.8**

Download Oracle JDK 1.8 latest update from Oracle tech network website. You may have to accept the license agreement and download an appropriate installer for your system type.

Once you download the appropriate JDK 1.8 installer. Execute the Installer and follow the on-screen instructions. The installation process should be relatively straightforward. Installation wizard allows you to select the JDK installation location. You can keep the default value for the JDK installation location. However, remember the place because that is going to be your Java Home.   
Once the JDK installation is complete, you must configure your PATH and JAVA\_HOME environment variables. You can set up your environment variables using the following steps.

1. Start system settings in the control panel. You can directly start it by pressing Win + Pause/Break key.
2. Click on Advanced System Settings.
3. In the advanced tab, click the environment variable button.
4. In the user variables section, add new JAVA\_HOME environment variable as your Java installation directory. In a typical case, your Java installation directory should be something like C:\Program Files\Java\jdk1.8.0\_191. However, if you have installed JDK as per the steps defined above, you should have noted down your JDK location as advised earlier.
5. Now you can add a new PATH environment variable and specify the path as %JAVA\_HOME%\bin

The final step is to test your JDK installation. Start windows command prompt and test JDK using below command.

java -version

The output should be something similar to below.

java version "1.8.0\_191"

Java(TM) SE Runtime Environment (build 1.8.0\_191-b12)

Java HotSpot(TM) 64-Bit Server VM (build 25.191-b12, mixed mode)

## **Configure and Test Kafka**

Installing single node Apache Kafka cluster on Windows 10 is as straightforward as doing it on Linux. You can follow the steps defined below to run and test Kafka on Windows 10 operating system.

### Configure Kafka for Windows 10

1. Download the Confluent kafka <http://packages.confluent.io/archive/6.0/confluent-6.0.0.zip>
2. Un-zip the file.
3. To make it work, we would be changing the Zookeeper data directory location.   
   Open etc\kafka\zookeeper.properties file and change the Zookeeper data directory location config to a valid windows directory location. An example value is given below.

data Dir = C:\zookeeper\_data

We also need to make some changes in the Kafka configurations.   
Open *etc\kafka\server.properties* and change/add following configuration properties.

log.dirs=C:\kafka\_logs

offsets.topic.num.partitions = 1

offsets.topic.replication.factor = 1

min.insync.replicas=1

default.replication.factor = 1

The Zookeeper and the Kafka data directories must already exist. So, make sure that the C:\zookeeper\_data and C:\kafka\_logs is there.   
You might have already learned all the above in the earlier section. The only difference is in topic default values. We are setting topic defaults to one, and that makes sense because we will be running a single node Kafka.   
Finally, add Kafka bin\windows directory to the PATH environment variable. This directory contains a bunch of Kafka tools for the windows platform. We will be using some of those in the next section.

### Starting and Testing Kafka

Kafka needs Zookeeper, so start Zookeeper on your Windows machine using below command.

bin\windows\zookeeper-server-start.bat etc\kafka\zookeeper.properties

Start a windows command prompt and execute the above command. It should start the zookeeper server. Minimize the command window and let the zookeeper running in that window.   
Start a new command window and start Kafka Broker using below command.

bin\windows\kafka-server-start.bat etc\kafka\server.properties

The above command should start the single node Kafka Broker. Minimize the window and let the broker running in that window.   
Now, you can test the Zookeeper and Kafka. Execute below command to test the Zookeeper and Kafka broker registration to the Zookeeper server.

zookeeper-shell.bat localhost:2181

ls /brokers/ids

You can create a new Kafka topic using below command.

bin\windows\kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic test

You can list the available topics using below command.

bin\windows\kafka-topics.bat --list --zookeeper localhost:2181

To describe the topic,

bin\windows\kafka-topics.bat --describe test --zookeeper localhost:2181

You can delete the topic using below command.

bin\windows\kafka-topics.bat --delete --topic remove-me --zookeeper localhost:2181

You can start a console producer and send some messages using below command.

bin\windows\kafka-console-producer.bat --broker-list localhost:9092 --topic test

You can start a console consumer and check the messages that you sent using below command.

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

This installation will help you to execute your Kafka application code locally and help you debug your application from the IDE.