

Hands-on: Apache Kafka

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Prerequisites

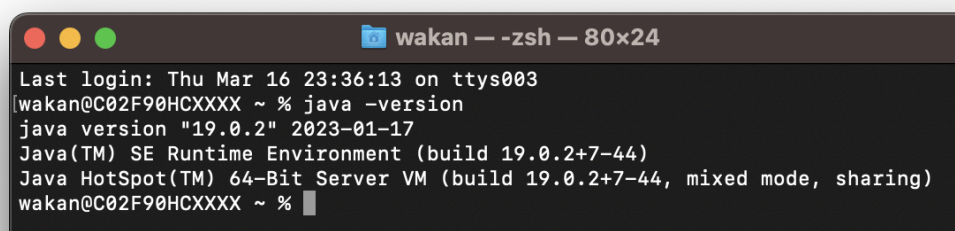
For Windows Users

<https://medium.com/@anilkumar.kanasani/installing-kafka-on-windows-71d7d24763ad>

<https://hevodata.com/learn/install-kafka-on-windows/>

Java

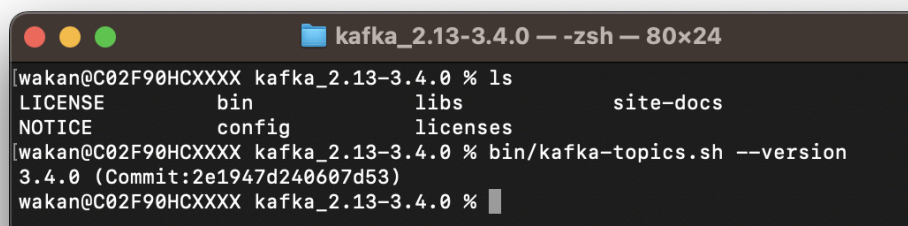
Ensure you've installed Java in your local, type `java -version` to check it. Or you can download Java SDK in [Java Downloads](#).

A terminal window titled 'wakan - zsh - 80x24' showing the output of the 'java -version' command. The output indicates Java 19.0.2 is installed.

```
wakan — zsh — 80x24
Last login: Thu Mar 16 23:36:13 on ttys003
wakan@C02F90HCXXX ~ % java -version
java version "19.0.2" 2023-01-17
Java(TM) SE Runtime Environment (build 19.0.2+7-44)
Java HotSpot(TM) 64-Bit Server VM (build 19.0.2+7-44, mixed mode, sharing)
wakan@C02F90HCXXX ~ %
```

Apache Kafka

1. You need to download the binary files of Apache Kafka in their [official download page](#) or directly click this link, [here](#).
2. Extract the `tgz` file and `cd` to the extracted folder
3. Validate the version to ensure you have functional Apache Kafka binary files, type `bin/kafka-topics.sh --version`.

A terminal window titled 'kafka_2.13-3.4.0 - zsh - 80x24' showing the output of the 'ls' and 'bin/kafka-topics.sh --version' commands. The output confirms the installation of Kafka 3.4.0.

```
kafka_2.13-3.4.0 — zsh — 80x24
wakan@C02F90HCXXX kafka_2.13-3.4.0 % ls
LICENSE      bin          libs         site-docs
NOTICE       config      licenses
wakan@C02F90HCXXX kafka_2.13-3.4.0 % bin/kafka-topics.sh --version
3.4.0 (Commit:2e1947d240607d53)
wakan@C02F90HCXXX kafka_2.13-3.4.0 %
```

Steps

Start ZooKeeper & Kafka Server

1. Start ZooKeeper Server in a new terminal

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 %  
bin/zookeeper-server-start.sh config/zookeeper.properties
```

2. Start Kafka Server in a new terminal

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 % bin/kafka-server-start.sh  
config/server.properties
```

Create a topic

1. List existing topics

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 % bin/kafka-topics.sh  
--bootstrap-server localhost:9092 --list
```

2. Create **students** topic

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 % bin/kafka-topics.sh  
--bootstrap-server localhost:9092 --topic students --create  
--partitions 3 --replication-factor 1  
Created topic students.
```

3. Describe students topic

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 % bin/kafka-topics.sh  
--bootstrap-server localhost:9092 --topic students --describe
```

4. List existing topics with the same command as before

Start Producer & Consumer Console

1. Start producer console

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 %  
bin/kafka-console-producer.sh --bootstrap-server localhost:9092  
--topic students
```

2. Start consumer console

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 %  
bin/kafka-console-consumer.sh --bootstrap-server localhost:9092  
--topic students
```

Start Consumer Group

1. Restart producer console

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 %  
bin/kafka-console-producer.sh --bootstrap-server localhost:9092  
--topic students --producer-property  
partitioner.class=org.apache.kafka.clients.producer.RoundRobinPart  
itioner
```

2. Start first consumer in a consumer group

```
wakan@C02F90HCXXXX kafka_2.13-3.4.0 %  
bin/kafka-console-consumer.sh --bootstrap-server localhost:9092  
--topic students --group iykra
```

3. Start second consumer in a consumer group with the same command

4. Start third consumer in a consumer group with the same command