

Hands-on Lab: Working with Streaming Data using Kafka

Exercise 1 - Download and extract Kafka

- Run the commands below on the newly opened terminal
 - Download Kafka

```
wget https://archive.apache.org/dist/kafka/2.8.0/kafka_2.12-2.8.0.tgz
```

- Extract kafka from the zip file by running the command below.

```
tar -xzf kafka_2.12-2.8.0.tgz
```

```
theia@theiadocker-craigtrupp8:/home/project$ wget
https://archive.apache.org/dist/kafka/2.8.0/kafka_2.12-2.8.0.tgz
--2023-09-24 14:09:47--
https://archive.apache.org/dist/kafka/2.8.0/kafka_2.12-2.8.0.tgz
Resolving archive.apache.org (archive.apache.org)... 65.108.204.189,
2a01:4f9:1a:a084::2
Connecting to archive.apache.org
(archive.apache.org)|65.108.204.189|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 71542357 (68M) [application/x-gzip]
Saving to: 'kafka_2.12-2.8.0.tgz'

kafka_2.12-2.8.0.tgz
100%[=====>] 68.23M
10.3MB/s in 6.4s

2023-09-24 14:09:54 (10.6 MB/s) - 'kafka_2.12-2.8.0.tgz' saved
[71542357/71542357]

theia@theiadocker-craigtrupp8:/home/project$ tar -xzf kafka_2.12-2.8.0.tgz
theia@theiadocker-craigtrupp8:/home/project$ ls
kafka_2.12-2.8.0  kafka_2.12-2.8.0.tgz
```

- This creates a new directory 'kafka_2.12-2.8.0' in the current directory.

Exercise 2 - start ZooKeeper

```
theia@theiadocker-craigtrupp8:/home/project$ cd kafka_2.12-2.8.0
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/zookeeper-server-start.sh config/zookeeper.properties
JVMJ9VM007W Command-line option unrecognised:
-Xlog:gc*:file=/home/project/kafka_2.12-2.8.0/bin/../../logs/zookeeper-gc.log:
time,tags:filecount=10,filesize=100M
[2023-09-24 14:13:34,616] INFO Reading configuration from:
config/zookeeper.properties
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,618] WARN config/zookeeper.properties is relative.
Prepend ./ to indicate that you're sure!
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,631] INFO clientPortAddress is 0.0.0.0:2181
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,631] INFO secureClientPort is not set
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,633] INFO autopurge.snapRetainCount set to 3
(org.apache.zookeeper.server.DataDirCleanupManager)
[2023-09-24 14:13:34,634] INFO autopurge.purgeInterval set to 0
(org.apache.zookeeper.server.DataDirCleanupManager)
[2023-09-24 14:13:34,634] INFO Purge task is not scheduled.
(org.apache.zookeeper.server.DataDirCleanupManager)
[2023-09-24 14:13:34,634] WARN Either no config or no quorum defined in
config, running in standalone mode
(org.apache.zookeeper.server.quorum.QuorumPeerMain)
[2023-09-24 14:13:34,638] INFO Log4j 1.2 jmx support found and enabled.
(org.apache.zookeeper.jmx.ManagedUtil)
[2023-09-24 14:13:34,650] INFO Reading configuration from:
config/zookeeper.properties
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,650] WARN config/zookeeper.properties is relative.
Prepend ./ to indicate that you're sure!
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,651] INFO clientPortAddress is 0.0.0.0:2181
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,651] INFO secureClientPort is not set
(org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-09-24 14:13:34,651] INFO Starting server
(org.apache.zookeeper.server.ZooKeeperServerMain)
[2023-09-24 14:13:34,655] INFO zookeeper.snapshot.trust.empty : false
(org.apache.zookeeper.server.persistence.FileTxnSnapLog)
```

```
[2023-09-24 14:13:34,667] INFO Server
environment:zookeeper.version=3.5.9-83df9301aa5c2a5d284a9940177808c01bc35ce
f, built on 01/06/2021 20:03 GMT
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,667] INFO Server
environment:host.name=theiadocker-craigtrupp8
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,667] INFO Server environment:java.version=11.0.11
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,667] INFO Server environment:java.vendor=AdoptOpenJDK
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,668] INFO Server
environment:java.home=/usr/lib/jvm/java-jdk-11.0.11+9
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,668] INFO Server
environment:java.class.path=/home/theia/dsdriver/tools/clplplus.jar:/home/th
eia/dsdriver/tools/jline-0.9.93.jar:/home/theia/dsdriver/tools/antlr-3.3-ja
va.jar:/home/theia/dsdriver/java/db2jcc4.jar:/home/theia/dsdriver/java/sqlj
4.zip:/usr/lib/jvm/java-jdk-11.0.11+9/lib:/home/project:/home/project/kafka
_2.12-2.8.0/bin/./libs/activation-1.1.1.jar:/home/project/kafka_2.12-2.8.0
/bin/./libs/aopalliance-repackaged-2.6.1.jar:/home/project/kafka_2.12-2.8.
0/bin/./libs/argparse4j-0.7.0.jar:/home/project/kafka_2.12-2.8.0/bin/./li
bs/audience-annotations-0.5.0.jar:/home/project/kafka_2.12-2.8.0/bin/./lib
s/commons-cli-1.4.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/commons-la
ng3-3.8.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/connect-api-2.8.0.
jar:/home/project/kafka_2.12-2.8.0/bin/./libs/connect-basic-auth-extension
-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/connect-file-2.8.0.ja
r:/home/project/kafka_2.12-2.8.0/bin/./libs/connect-json-2.8.0.jar:/home/p
roject/kafka_2.12-2.8.0/bin/./libs/connect-mirror-2.8.0.jar:/home/project/
kafka_2.12-2.8.0/bin/./libs/connect-mirror-client-2.8.0.jar:/home/project/
kafka_2.12-2.8.0/bin/./libs/connect-runtime-2.8.0.jar:/home/project/kafka_
2.12-2.8.0/bin/./libs/connect-transforms-2.8.0.jar:/home/project/kafka_2.1
2-2.8.0/bin/./libs/hk2-api-2.6.1.jar:/home/project/kafka_2.12-2.8.0/bin/./
libs/hk2-locator-2.6.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/hk2-
utils-2.6.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-annotati
ons-2.10.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-core-2.10
.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-databind-2.10.5.1
.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-dataformat-csv-2.10
.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-datatype-jdk8-2.1
0.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-jaxrs-base-2.10.
5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-jaxrs-json-provide
r-2.10.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-module-jaxb
-annotations-2.10.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-
```

module-paranamer-2.10.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jackson-module-scala_2.12-2.10.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jakarta.activation-api-1.2.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jakarta.annotation-api-1.3.5.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jakarta.inject-2.6.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jakarta.validation-api-2.0.2.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jakarta.ws.rs-api-2.1.6.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jakarta.xml.bind-api-2.3.2.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/javassist-3.27.0-GA.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/javax.servlet-api-3.1.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/javax.ws.rs-api-2.1.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jaxb-api-2.3.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-client-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-common-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-container-servlet-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-container-servlet-core-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-hk2-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-media-jaxb-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jersey-server-2.31.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-client-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-continuation-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-http-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-io-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-security-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-server-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-servlet-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-servlets-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-util-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jetty-util-ajax-9.4.39.v20210325.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jline-3.12.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/jopt-simple-5.0.4.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka_2.12-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka_2.12-2.8.0-sources.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-client-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-log4j-appender-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-metadata-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-raft-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-shell-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-streams-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-streams-examples-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-streams-scala_2.12-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-streams-test-utils-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/kafka-tools-2.8.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/log4j-1.2.17.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/lz4-java-1.7.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/maven-artifact

t-3.6.3.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/metrics-core-2.2.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-buffer-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-codec-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-common-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-handler-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-resolver-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-transport-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-transport-native-epoll-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/netty-transport-native-unix-common-4.1.62.Final.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/osgi-resource-locator-1.0.3.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/paranamer-2.8.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/plexus-utils-3.2.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/reflections-0.9.12.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/rocksdbjni-5.18.4.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/scala-collection-compat_2.12-2.3.0.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/scala-java8-compat_2.12-0.9.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/scala-library-2.12.13.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/scala-logging_2.12-3.9.2.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/scala-reflect-2.12.13.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/slf4j-api-1.7.30.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/slf4j-log4j12-1.7.30.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/snappy-java-1.1.8.1.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/zookeeper-3.5.9.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/zookeeper-jute-3.5.9.jar:/home/project/kafka_2.12-2.8.0/bin/./libs/zstd-jni-1.4.9-1.jar (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,669] INFO Server
environment:java.library.path=/usr/lib/jvm/java-jdk-11.0.11+9/lib/default:/usr/lib/jvm/java-jdk-11.0.11+9/lib:/home/theia/dsdriver/lib:/usr/lib64:/usr/lib (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:java.io.tmpdir=/tmp (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:java.compiler=j9jit29 (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:os.name=Linux (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:os.arch=amd64 (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server
environment:os.version=5.4.0-162-generic (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:user.name=theia (org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:user.home=/home/theia

```

(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server
environment:user.dir=/home/project/kafka_2.12-2.8.0
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:os.memory.free=428MB
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:os.memory.max=512MB
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,670] INFO Server environment:os.memory.total=512MB
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,673] INFO minSessionTimeout set to 6000
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,673] INFO maxSessionTimeout set to 60000
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,673] INFO Created server with tickTime 3000
minSessionTimeout 6000 maxSessionTimeout 60000 datadir
/tmp/zookeeper/version-2 snapdir /tmp/zookeeper/version-2
(org.apache.zookeeper.server.ZooKeeperServer)
[2023-09-24 14:13:34,690] INFO Using
org.apache.zookeeper.server.NIOServerCnxnFactory as server connection
factory (org.apache.zookeeper.server.ServerCnxnFactory)
[2023-09-24 14:13:34,693] INFO Configuring NIO connection handler with 10s
sessionless connection timeout, 1 selector thread(s), 4 worker threads, and
64 kB direct buffers. (org.apache.zookeeper.server.NIOServerCnxnFactory)
[2023-09-24 14:13:34,699] INFO binding to port 0.0.0.0/0.0.0.0:2181
(org.apache.zookeeper.server.NIOServerCnxnFactory)
[2023-09-24 14:13:34,728] INFO zookeeper.snapshotSizeFactor = 0.33
(org.apache.zookeeper.server.ZKDatabase)
[2023-09-24 14:13:34,733] INFO Snapshotting: 0x0 to
/tmp/zookeeper/version-2/snapshot.0
(org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2023-09-24 14:13:34,736] INFO Snapshotting: 0x0 to
/tmp/zookeeper/version-2/snapshot.0
(org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2023-09-24 14:13:34,754] INFO PrepRequestProcessor (sid:0) started,
reconfigEnabled=false (org.apache.zookeeper.server.PrepRequestProcessor)
[2023-09-24 14:13:34,766] INFO Using checkIntervalMs=60000
maxPerMinute=10000 (org.apache.zookeeper.server.ContainerManager)

```

- ZooKeeper, as of this version, is required for Kafka to work.
- ZooKeeper is responsible for the overall management of Kafka cluster.
 - It monitors the Kafka brokers and notifies Kafka if any broker or partition goes down, or if a new broker or partition goes up.

Exercise 3 - Start the Kafka broker service

- In a new terminal, Run the commands below.
 - This will start the Kafka message broker service.

```
cd kafka_2.12-2.8.0
bin/kafka-server-start.sh config/server.properties
```

Exercise 4 - Create a topic

- You need to create a topic before you can start to post messages.
- To create a topic named news, start a new terminal and run the command below.

```
theia@theiadocker-craigtrupp8:/home/project$ cd kafka_2.12-2.8.0
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-topics.sh --create --topic news --bootstrap-server localhost:9092
Created topic news.
```

Exercise 5 - Start Producer

- You need a producer to send messages to Kafka. Run the command below to start a producer.

```
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-console-producer.sh --topic news --bootstrap-server
localhost:9092
>
```

- Once the producer starts, and you get the '>' prompt, type any text message and press enter. Or you can copy the text below and paste. The below text sends three messages to kafka.

```
>Good morning
>Good day
>Enjoy the kafka lab
```


Exercise 6 - Start Consumer

You need a consumer to read messages from kafka.

Open a new terminal.

Run the command below to listen to the messages in the topic news.

```
theia@theiadocker-craigtrupp8:/home/project$ cd kafka_2.12-2.8.0
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-console-consumer.sh --topic news --from-beginning
--bootstrap-server localhost:9092
```

Good morning

Good day

Enjoy the kafka lab

You should see all the messages you sent from the producer appear here.

You can go back to the producer terminal and type some more messages, one message per line, and you will see them appear here

Exercise 7 - Explore Kafka directories.

Kafka uses the directory /tmp/kakfa-logs to store the messages.

Explore the folder news-0 inside /tmp/kakfa-logs.

This is where all the messages are stored.

Explore the folder /home/project/kafka_2.12-2.8.0

This folder has the below 3 sub directories.

- Bin
- Conig
- Logs


```

theia@theiadocker-craigtrupp8:/home/project$ cd /tmp/kafka-logs/
theia@theiadocker-craigtrupp8:/tmp/kafka-logs$ ls
cleaner-offset-checkpoint  __consumer_offsets-19  __consumer_offsets-3
__consumer_offsets-40  __consumer_offsets-7
__consumer_offsets-0  __consumer_offsets-2  __consumer_offsets-30
__consumer_offsets-41  __consumer_offsets-8
__consumer_offsets-1  __consumer_offsets-20  __consumer_offsets-31
__consumer_offsets-42  __consumer_offsets-9
__consumer_offsets-10  __consumer_offsets-21  __consumer_offsets-32
__consumer_offsets-43  log-start-offset-checkpoint
__consumer_offsets-11  __consumer_offsets-22  __consumer_offsets-33
__consumer_offsets-44  meta.properties
__consumer_offsets-12  __consumer_offsets-23  __consumer_offsets-34
__consumer_offsets-45  news-0
__consumer_offsets-13  __consumer_offsets-24  __consumer_offsets-35
__consumer_offsets-46  recovery-point-offset-checkpoint
__consumer_offsets-14  __consumer_offsets-25  __consumer_offsets-36
__consumer_offsets-47  replication-offset-checkpoint
__consumer_offsets-15  __consumer_offsets-26  __consumer_offsets-37
__consumer_offsets-48
__consumer_offsets-16  __consumer_offsets-27  __consumer_offsets-38
__consumer_offsets-49
__consumer_offsets-17  __consumer_offsets-28  __consumer_offsets-39
__consumer_offsets-5
__consumer_offsets-18  __consumer_offsets-29  __consumer_offsets-4
__consumer_offsets-6
theia@theiadocker-craigtrupp8:/tmp/kafka-logs$ cd news-0/
theia@theiadocker-craigtrupp8:/tmp/kafka-logs/news-0$ ls
00000000000000000000.index  00000000000000000000.log
00000000000000000000.timeindex  leader-epoch-checkpoint
theia@theiadocker-craigtrupp8:/tmp/kafka-logs/news-0$ cat
00000000000000000000.log
D''''i''''i''''''''''''''''''''$Good morning@Y''''''i''''i''''''''''''''''''''Good
dayK\''-''i''='i''='''''''''''''''''''''2&Enjoy the kafka
labW_''''k''k''''''''''''''''''''J>Not ideal result in today's
NLDtheia@theiadocker-craigtrupp8:/tmp/kafka-logs/news-0$

```

Exercise 8 - Clean up

```

theia@theiadocker-craigtrupp8:/home/project$ ls
kafka_2.12-2.8.0  kafka_2.12-2.8.0.tgz

```

```
theia@theiadocker-craigtrupp8:/home/project$ pwd
/home/project
theia@theiadocker-craigtrupp8:/home/project$ rm kafka_2.12-2.8.0.tgz
theia@theiadocker-craigtrupp8:/home/project$
```

Practice exercises

Practice exercises

1. Problem:

Create a new topic named `weather` .

▼ Click here for Hint

Use `kafka-topics.sh` command with the `create` option.

► Click here for Solution

2. Problem:

Post messages to the topic `weather` .

▼ Click here for Hint

Use `kafka-console-producer.sh` and point to topic `weather` .

► Click here for Solution

3. Problem:

Read the messages from the topic `weather` .

► Click here for Hint

► Click here for Solution

```
theia@theiadocker-craigtrupp8:/home/project$ ls
```

```
kafka_2.12-2.8.0
theia@theiadocker-craigtrupp8:/home/project$ cd kafka_2.12-2.8.0/
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-topics.sh --create --topic weahter --bootstrap-serve
Exception in thread "main" joptsimple.UnrecognizedOptionException:
bootstrap-serve is not a recognized option
    at
joptsimple.OptionException.unrecognizedOption(OptionException.java:108)
    at
joptsimple.OptionParser.handleLongOptionToken(OptionParser.java:510)
    at
joptsimple.OptionParserState$2.handleArgument(OptionParserState.java:56)
    at joptsimple.OptionParser.parse(OptionParser.java:396)
    at
kafka.admin.TopicCommand$TopicCommandOptions.<init>(TopicCommand.scala:691)
    at kafka.admin.TopicCommand$.main(TopicCommand.scala:52)
    at kafka.admin.TopicCommand.main(TopicCommand.scala)
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-topics.sh --create --topic weather --bootstrap-server
localhost:9092
Created topic weather.
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-console-producer.sh --topic weather --bootstrap-server
localhost:9092
>It's so hot ... 100+ with humidity index
```

```
theia@theiadocker-craigtrupp8:/home/project/kafka_2.12-2.8.0$
bin/kafka-console-consumer.sh --topic weather --from-beginning
--bootstrap-server localhost:9092
It's so hot ... 100+ with humidity index
```