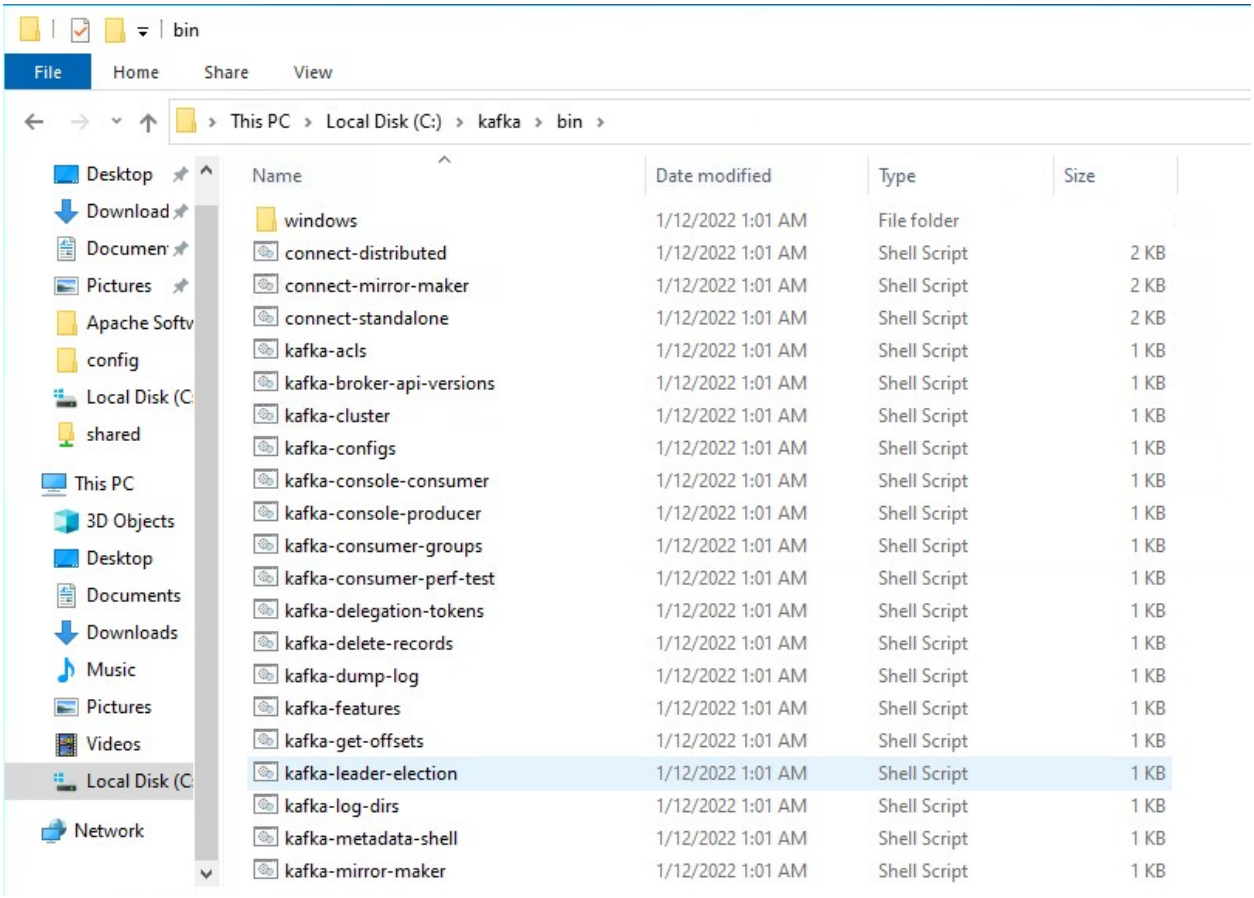
Java Programming
Lab Kafka 1

1. Introduction

In this lab you will create a Kafka topic, and run both a consumer and producer for that topic.

2. Setup

1. Kafka has been installed on your lab machine. For this lab we will be executing CLI commands to use Kafka
2. Kafka is located as shown below



3. The commands we will be executing will be in the windows sub-directory directory
4. Open a command window and go the directory c:\kafka

3. Start zookeeper

Execute the command as shown

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

Do not shut down this window, open a new command window to start the serer

```
C:\kafka>.\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
[2023-01-26 19:43:40,208] INFO Reading configuration from: .\config\zookeeper.properties (org.a-
pache.zookeeper.server.quorum.QuorumPeerConfig)
... lots of output ...
[2023-01-26 19:43:44,873] INFO Using checkIntervalMs=60000 maxPerMinute=10000 maxNeverUsedInter-
valMs=0 (org.apache.zookeeper.server.ContainerManager)
[2023-01-26 19:43:44,874] INFO ZooKeeper audit is disabled. (org.apache.zookeeper.audit.ZKAuditPro-
vider)
```

4. Start Kafka

In a new command window, execute the command as shown

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

As before, do not shut down this window

```
C:\kafka>.\bin\windows\kafka-server-start.bat .\config\server.properties
[2023-01-26 19:47:42,914] INFO Registered kafka:type=kafka.Log4jController MBean (kafka.utils.Lo-
g4jControllerRegistration$)
... lots of output ...
2023-01-26 19:47:53,213] INFO [BrokerToControllerChannelManager broker=0 name=alterPartition]: Re-
corded new controller, from now on will use node DESKTOP-69UD379:9092 (id: 0 rack: null)
(kafka.server.BrokerToControllerRequestThread)
```

5. Create a topic

In yet another command window, create a topic named “lab1” or whatever else you want. There is already a topic created when the installation was tested during set-up so there will be a topic already that you didn’t create.

Create the topic with the command:

```
.\bin\windows\kafka-topics.bat --create --bootstrap-server localhost:9092 --topic lab1
```

You can list all of the topics with

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

```
C:\kafka>bin\windows\kafka-topics.bat --create --bootstrap-server localhost:9092 --topic lab1
Created topic lab1.

C:\kafka>bin\windows\kafka-topics.bat --list --bootstrap-server localhost:9092
lab1
```

6. Create a console producer

You can create the producer in the same window you created the topic in. Use the command:

```
.\bin\windows\kafka-console-producer.bat --bootstrap-server localhost:9092 --topic lab1
```

```
C:\kafka>bin\windows\kafka-topics.bat --create --bootstrap-server localhost:9092 --topic lab1
Created topic lab1.

C:\kafka>bin\windows\kafka-topics.bat --list --bootstrap-server localhost:9092
lab1

C:\kafka>.\bin\windows\kafka-console-producer.bat --bootstrap-server localhost:9092 --topic lab1
>message1
>message2
```

Once the producer is created, line you type at the console will be put onto the topic as a string message.

7. Create a console consumer

In a new command window create a console consumer by executing the command below. The from-begining option will have the consumer go back and read all of the messages already in the topic.

```
.\bin\windows\kafka-console-consumer.bat --bootstrap-server localhost:9092 --topic lab1
      --from-beginning
```

```
C:\kafka>.\bin\windows\kafka-console-consumer.bat --bootstrap-server localhost:9092 --topic lab1 --
from-beginning
message1
message2
```

You can continue to type messages into the producer window and you will see them appear in the consumer window.

To shut everything down, just close all the command windows.

End of Lab