Name: Gordon Foo A0199554L  
Link to github repo: https://github.com/gordonfgz/OTOT\_TASK\_D.git  
  
Followed instructions here:  
<https://docs.confluent.io/5.0.0/installation/docker/docs/installation/clustered-deployment.html#docker-setup-3-node>  
  
How to setup:  
first, cd cp-docker-images/examples/kafka-cluster  
Then, docker-compose up  
You should see the clusters firing up:  
Text

Description automatically generated  
  
Open docker desktop to check that the kafka cluster is up and running with 3 zookeepers and 3 kafka brokers:  
Text

Description automatically generated

Next, create a topic called bar by running the following commands:  
1.

cd cp-docker-images/examples/kafka-cluster

2.  
docker run \

--net**=**host \

--rm \

confluentinc/cp-kafka:5.0.0 \

kafka-topics --create --topic bar --partitions 3 --replication-factor 3 --if-not-exists --zookeeper localhost:32181

Results:  
Text

Description automatically generated  
  
  
Check that it works by describing the topic by running:  
docker run \

--net**=**host \

--rm \

confluentinc/cp-kafka:5.0.0 \

kafka-topics --describe --topic bar --zookeeper localhost:32181

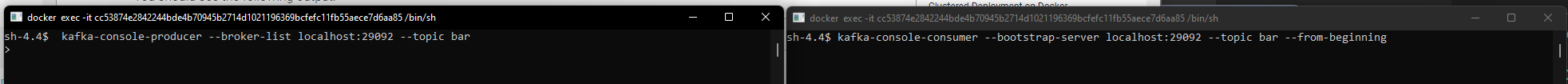
Results:  
Text

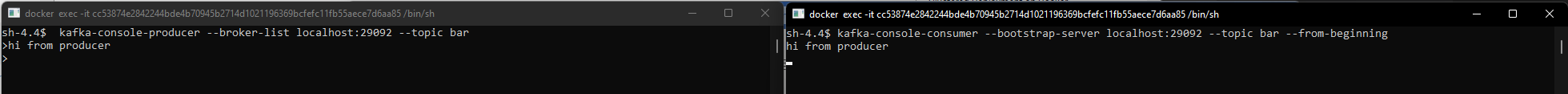
Description automatically generated

Choose one of the kafka broker, in this example I choose kafka-cluster-kafka-1-1. Open up 2 bash terminals (I did this by clicking the cli button twice):  


2 terminals should pop out like this:  
Graphical user interface, application

Description automatically generated  
  
Choose the left one to be producer by running:   
kafka-console-producer --broker-list localhost:29092 --topic bar  
Choose the right one to be consumer by running:  
kafka-console-consumer --bootstrap-server localhost:29092 --topic bar --from-beginning

Results:  


Type “hi from producer” in the producer terminal and enter, and it should come out on the consumer:  


Next, moving on to killing a node, I will choose to kill kafka-1-1. From the zookeeper describe call we did previously, it is shown that kafka-1 is the leader of partition 0

Text

Description automatically generated

Hence I kill kafka-1-1 by running: docker container kill kafka-cluster-kafka-1-1  
And verify that there is no more kafka-cluster-kafka-1-1 by running: docker ps

A computer screen capture

Description automatically generated with medium confidence

After killing kafka-1-1, I ran zookeeper describe again and the following result shows that partition 0 now have kafka 3 as leader:  
Text

Description automatically generated

Now that I open 2 terminals for kafka-cluster-kafka-2-1 and do the same producer consumer setup,  
I still get the previous hi from producer:  
