rtshkmr Add particulars to Task D README ... 2 minutes ago History

..

resources	yesterday
README.md	2 minutes ago
docker-compose.yml	yesterday

README.md

Task D: Pub-Sub Messaging via Kafka

> Student Name: Ritesh Kumar

> Matriculation Number: A0201829H

> GitHub Repository

Background

0. Kafka is the message broker, groups messages into topics and handles topics. Both pub and sub can be done
    - here's a thorough introduction to kafka
1. Kafka ZooKeeper.
    - here's a primer on it

Deliverables

The configuration for the servers is at here. This indicates the configuration for a single zookeeper and 3 kafka nodes.

Simple Pub-Sub

1. Spin up the servers via `docker-compose up` (I prefer to open up non-detached instance docker so that the logs can be easily seen). Verify that the container is up by running `docker ps` to see this output:

2. Now we enter one of the nodes in order to carry out actions within it:

    i. `docker exec -it taskd_kafka-1_1 bash` interactively spawns a bash shell within that node.

3. Create a dummy topic like so:

```
kafka-topics --create --zookeeper zoo1:2181 --replication-factor 2 --parti
# output: Created topic dummy-topic.
```

    This creates a topic which can be produced to and consumed from.

4. Now, produce a message to the `dummy-topic`:

    i. Enter the producer console in order to publish messages to that topic:

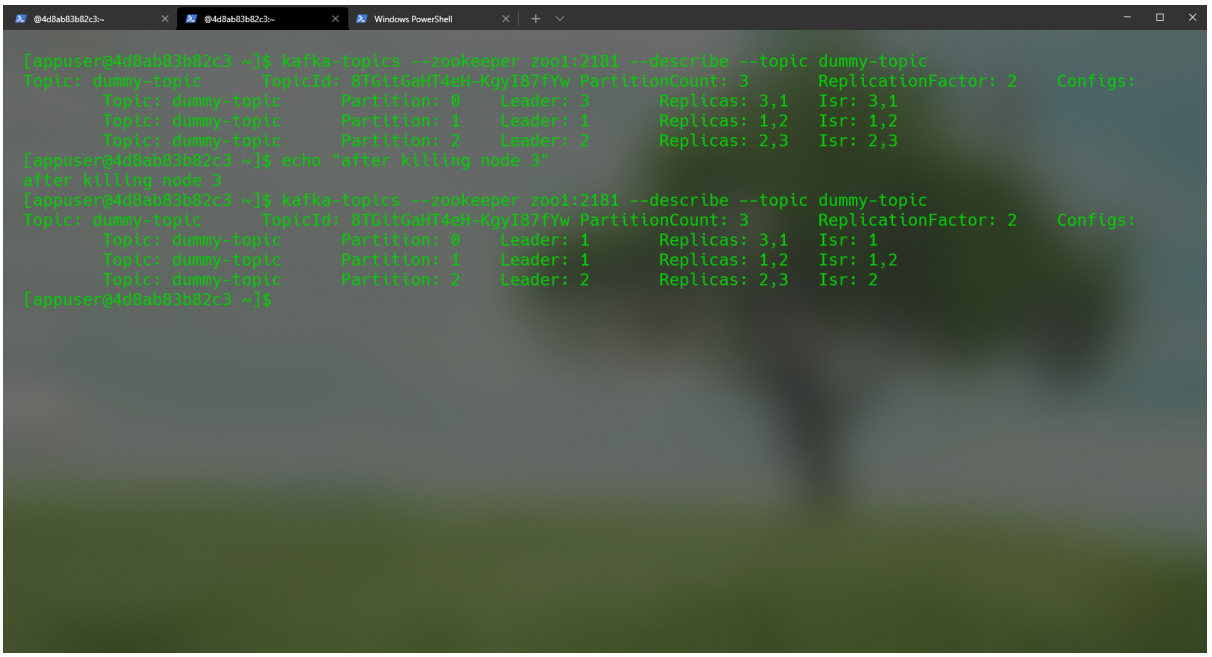
```
kafka-console-producer --broker-list kafka-1:9092 --topic dummy-topic
```

    ii. On a separete shell, enter the consumer console in order to consume messages from that topic:

```
kafka-console-consumer --bootstrap-server kafka1:9092 --topic dummy-to
```

iii. type any message in the produce and see it appear in the consumer terminal:

Failover Demo



1. Run `kafka-topics --zookeeper zoo1:2181 --describe --topic dummy-topic` to see the current description of the topic, which shows the master node
2. Kill the Leader node:
    i. in the host shell, run `docker container kill taskd_kafka-3_1`
    ii. here (node 3) will change the state like in the screenshot above, allocating other nodes.
3. The pub-sub functionality still works if we use another node:

i. 
@4d8ab83b82c3:~
@4d8ab83b82c3:~
Windows PowerShell
@6e03b1beacbe:~
[appuser@6e03b1beacbe ~]$ kafka-console-producer --broker-list kafka-2:9092 --topic dummy-topic #enters producer
>STILL HERE
>
[appuser@6e03b1beacbe ~]$ kafka-console-consumer --bootstrap-server kafka-2:9092 --topic dummy-topic --from-beginning #enters consumer
STILL HERE