Lecture 3 exercises

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Follow up on last exercise

- Available on Github
- Highly encourage to experiment and learn!
- In docker containers, you can’t break anything

Docker-compose a Kafka cluster!

- “docker-compose up -d”
  - Everything in “ “ marks can be executed as a command
- A Zookeeper, a Kafka broker and a Kafka UI (kowl)
- One network
- One volume

- Sometimes, when restarted, the Kafka fails to launch. Solved by:
  - “docker-compose down” (in the Lecture 3 directory)
  - “docker volume rm kafka”

Kafka shell commands

- Kafka supports a bunch of different shell commands
  - Producers, consumers, topic management, etc.
- Examples are shown in /Lecture3/kafka-commands
  - Let’s go browse them!
- Heavily inspired from: https://docs.confluent.io/3.2.2/installation/docker/docs/quickstart.html#kafka

Kafka UI

- With the docker-compose running: http://localhost:8080
- All sorts of information, most important
  - Brokers (what is up and running, and what are their configs)
  - Topics (everything from messages overview to consumers and partitions)

Let’s start using Kafka!

- Open a consumer
  - Start a new cmd prompt and navigate to BDDST21\Lecture3\consumer
  - “run” -> When complete, you’re now inside a docker container
  - “python example.py”
- Produce messages
  - Start a new cmd prompt and navigate to BDDST21\Lecture3\kafka-commands
  - “produce-messages”
- Consumer should print out messages!

Two consumers?

- Open another consumer in another cmd prompt
- Produce messages
  - Completely fine to reuse the “produce messages” cmd prompt from last slide
- Does both consumers receive messages?
- Why?

Let’s fix that!

- In BDDST21\Lecture3\kafka-commands
  - “alter-topic-partition”
- With both consumers running, produce messages one more time

Your turn!

- Go through my examples, and make sure they can run
- Make a python producer!
  - Make sure you consume the messages in another cmd prompt (using the provided consumer is completely fine)
- Use Flume to read from a Kafka topic and write it to a file
  - Flume use guide: https://flume.apache.org/FlumeUserGuide.html
    - Examples of Twitter to File configs are available in the flume-confs folder
  - Consider finding a Docker image for a Flume agent
    - Alternatively, create your own using Dockerfile
  - Consider using the Kafka cluster from today, remember to network