南昌大学实验报告

姓名：**陈华豪**

学号：**6130116238**

邮箱地址：**6130116238@email.ncu.edu.cn**

专业班级：**网络工程161班**

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课程名称：**云计算**

实验项目名称

Lab 6 Introduction to Cloud Computing -- Kafka

实验目的

- **Understanding the concept of message passing**
- **Trying to follow up the procedure of a message broker that handles messagefrom many tenants**
- **Repeating what others have done in the past sheds the light on your future**

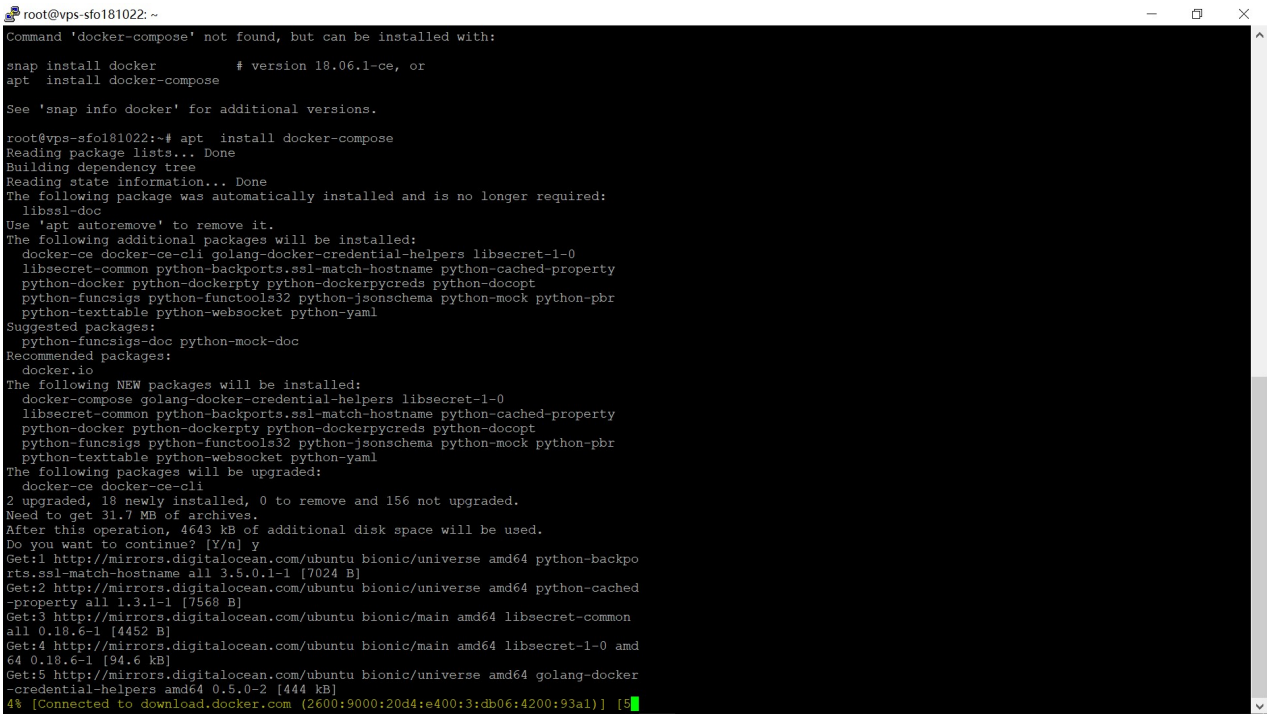
实验基础

https://data-flair.training/blogs/kafka-docker/
https://blog.antlypls.com/blog/2015/10/05/getting-started-with-spark-streaming-using-docker/
https://gerardnico.com/dit/kafka/stream_wordcount
https://gerardnico.com/dit/kafka/docker_single_node

实验步骤

1. 安装docker-compose

```
apt install docker-compose
```

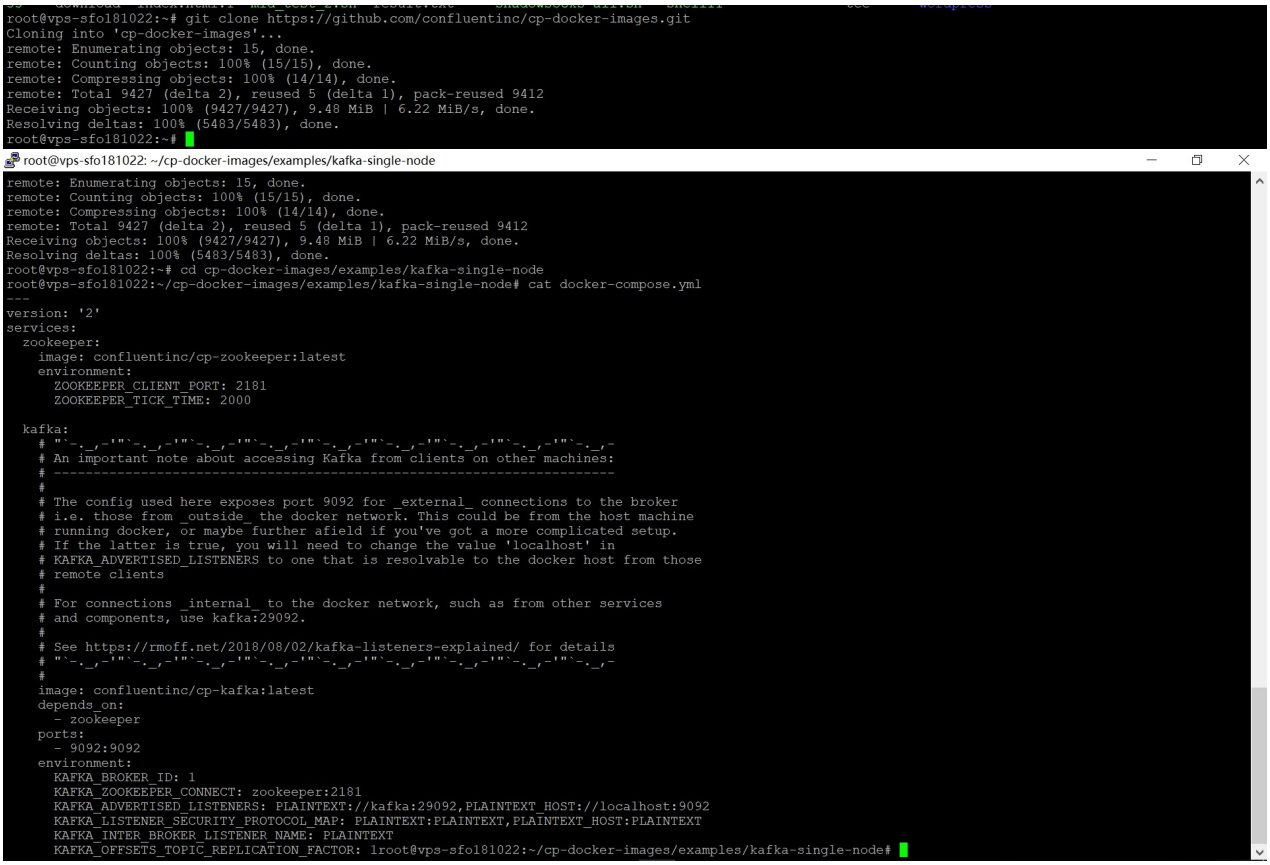


2. 查看docker-compose版本

```
docker-compose
```

3. 获取docker-compose.yml

```
git clone https://github.com/confluentinc/cp-docker-images.git
cd cp-docker-images/examples/kafka-single-node
cat docker-compose.yml
```

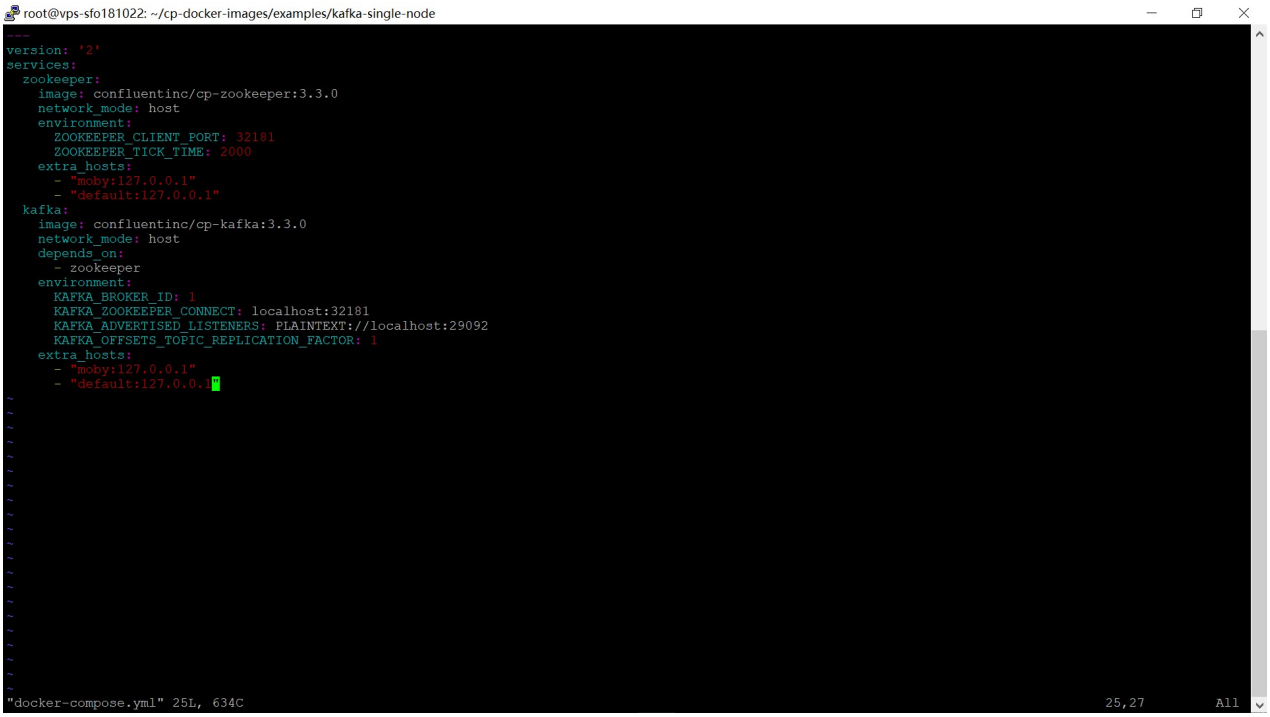


4. 修改docker-compose.yml

> vim docker-compose.yml

```
---
version: '2'
services:
  zookeeper:
    image: confluentinc/cp-zookeeper:3.3.0
    network_mode: host
    environment:
      ZOOKEEPER_CLIENT_PORT: 32181
      ZOOKEEPER_TICK_TIME: 2000
    extra_hosts:
      - "moby:127.0.0.1"
      - "default:127.0.0.1"
  kafka:
    image: confluentinc/cp-kafka:3.3.0
```

```
    network_mode: host
    depends_on:
      - zookeeper
    environment:
      KAFKA_BROKER_ID: 1
      KAFKA_ZOOKEEPER_CONNECT: localhost:32181
      KAFKA_ADVERTISED_LISTENERS: PLAINTEXT://localhost:29092
      KAFKA_OFFSETS_TOPIC_REPLICATION_FACTOR: 1
    extra_hosts:
      - "moby:127.0.0.1"
      - "default:127.0.0.1"
```



5. 开始服务

```
docker-compose up -d
```

```
root@vps-sfo181022:~/cp-docker-images/examples/kafka-single-node# docker-compose up -d
Pulling zookeeper (confluentinc/cp-zookeeper:3.3.0)...
3.3.0: Pulling from confluentinc/cp-zookeeper
ad74af05f5a2: Pull complete
d02e292e7b5e: Pull complete
8de7f5c81ab0: Pull complete
ed0b76dc2730: Pull complete
cfc44fa8a002: Pull complete
1e07e523d000: Pull complete
4462147ab37b: Pull complete
Digest: sha256:97b4f3fded09e8466f65ba722b684b3ac6f5a711de2e7723f9b1b699886ada15
Status: Downloaded newer image for confluentinc/cp-zookeeper:3.3.0
Pulling kafka (confluentinc/cp-kafka:3.3.0)...
3.3.0: Pulling from confluentinc/cp-kafka
ad74af05f5a2: Already exists
d02e292e7b5e: Already exists
8de7f5c81ab0: Already exists
ed0b76dc2730: Already exists
cfc44fa8a002: Already exists
f441b84ed9ba: Pull complete
d42bb38e2f0e: Pull complete
Digest: sha256:61373cf6eca980887164d6fede2552015db31a809c99d6c3d5dfc70867b6cd2d
Status: Downloaded newer image for confluentinc/cp-kafka:3.3.0
Creating kafkasinglenode_zookeeper_1 ...
Creating kafkasinglenode_zookeeper_1 ... done
Creating kafkasinglenode_kafka_1 ...
Creating kafkasinglenode_kafka_1 ... done
root@vps-sfo181022:~/cp-docker-images/examples/kafka-single-node#
```

服务状态

```
docker-compose ps
```

```
root@vps-sfo181022:~/cp-docker-images/examples/kafka-single-node# docker-compose ps
          Name                        Command           State    Ports
-------------------------------------------------------------------------
kafkasinglenode_kafka_1       /etc/confluent/docker/run   Exit 1
kafkasinglenode_zookeeper_1   /etc/confluent/docker/run   Exit 1
root@vps-sfo181022:~/cp-docker-images/examples/kafka-single-node#
```

实验数据或结果

结果同上

实验思考

参考资料