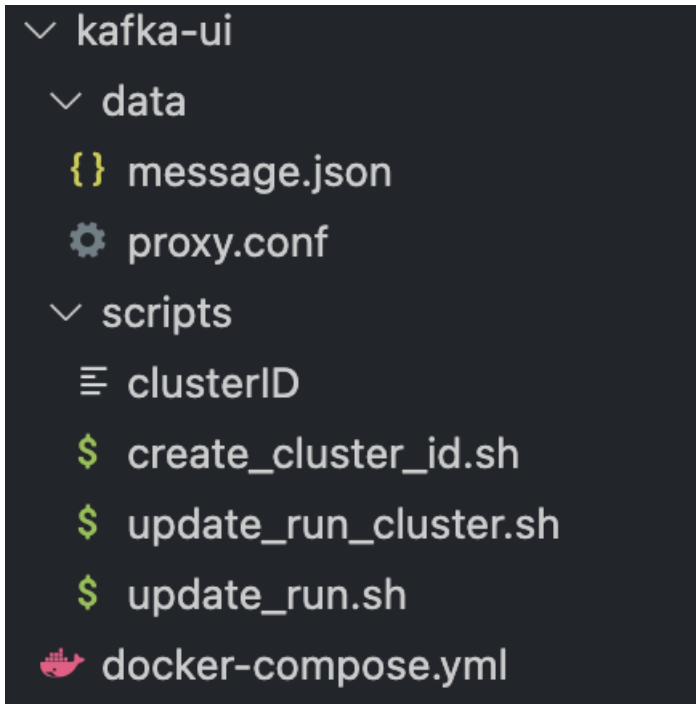


# Docker建立Kafka cluster



docker-compose.yml

10.20.30.40 -> 改成自己的ip

```
---
version: '2'
services:
  kafka-ui:
    container_name: kafka-ui
    image: provectuslabs/kafka-ui:latest
    ports:
      - 8081:8080
    depends_on:
      - kafka0
      - kafka1
      - kafka2
      - schema-registry0
      - kafka-connect0
    environment:
      KAFKA_CLUSTERS_0_NAME: local
      KAFKA_CLUSTERS_0_BOOTSTRAPSERVERS: kafka0:29092,kafka1:29092,kafka2:29092
      KAFKA_CLUSTERS_0_METRICS_PORT: 9997
      KAFKA_CLUSTERS_0_SCHEMAREGISTRY: http://schema-registry0:8085
      KAFKA_CLUSTERS_0_KAFKACONNECT_0_NAME: first
      KAFKA_CLUSTERS_0_KAFKACONNECT_0_ADDRESS: http://kafka-connect0:8083

  kafka0:
    image: confluentinc/cp-kafka:7.2.1
    hostname: kafka0
    container_name: kafka0
    ports:
      - 9092:9092
      - 9997:9997
    environment:
      KAFKA_LISTENER_SECURITY_PROTOCOL_MAP: PLAINTEXT:PLAINTEXT,CONTROLLER:PLAINTEXT,PLAINTEXT_HOST:PLAINTEXT
      KAFKA_ADVERTISED_LISTENERS: PLAINTEXT://kafka0:29092,PLAINTEXT_HOST://10.20.30.40:9092
      KAFKA_INTER_BROKER_LISTENER_NAME: PLAINTEXT
      KAFKA_OFFSETS_TOPIC_REPLICATION_FACTOR: 1
      KAFKA_GROUP_INITIAL_REBALANCE_DELAY_MS: 0
      KAFKA_TRANSACTION_STATE_LOG_MIN_ISR: 1
```

```
KAFKA_TRANSACTION_STATE_LOG_REPLICATION_FACTOR: 1
KAFKA_PROCESS_ROLES: 'broker,controller'
KAFKA_CLUSTER_ID:
KAFKA_NODE_ID: 1
KAFKA_CONTROLLER_QUORUM_VOTERS: '1@kafka0:29093,2@kafka1:29093,3@kafka2:29093'
KAFKA_LISTENERS: 'PLAINTEXT://kafka0:29092,CONTROLLER://kafka0:29093,PLAINTEXT_HOST://0.0.0.0:9092'
KAFKA_CONTROLLER_LISTENER_NAMES: 'CONTROLLER'
KAFKA_LOG_DIRS: '/tmp/kraft-combined-logs'
KAFKA_JMX_PORT: 9997
KAFKA_JMX_OPTS: -Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.authenticate=false -
Dcom.sun.management.jmxremote.ssl=false -Djava.rmi.server.hostname=kafka0 -Dcom.sun.management.jmxremote.rmi.port=9997
volumes:
- ./scripts/update_run_cluster.sh:/tmp/update_run.sh
- ./scripts/clusterID:/tmp/clusterID
- ./data/kafka0/kraft-combined-logs:/tmp/kraft-combined-logs
command: "bash -c 'if [ ! -f /tmp/update_run.sh ]; then echo \"ERROR: Did you forget the update_run.sh file that came with this
docker-compose.yml file?\" && exit 1 ; else /tmp/update_run.sh && /etc/confluent/docker/run ; fi"
```

```
kafka1:
image: confluentinc/cp-kafka:7.2.1
hostname: kafka1
container_name: kafka1
ports:
- 9093:9092
environment:
KAFKA_LISTENER_SECURITY_PROTOCOL_MAP: PLAINTEXT:PLAINTEXT,CONTROLLER:PLAINTEXT,PLAINTEXT_HOST:PLAINTEXT
KAFKA_ADVERTISED_LISTENERS: PLAINTEXT://kafka1:29092,PLAINTEXT_HOST://10.20.30.40:9093
KAFKA_INTER_BROKER_LISTENER_NAME: PLAINTEXT
KAFKA_OFFSETS_TOPIC_REPLICATION_FACTOR: 1
KAFKA_GROUP_INITIAL_REBALANCE_DELAY_MS: 0
KAFKA_TRANSACTION_STATE_LOG_MIN_ISR: 1
KAFKA_TRANSACTION_STATE_LOG_REPLICATION_FACTOR: 1
KAFKA_PROCESS_ROLES: 'broker,controller'
KAFKA_NODE_ID: 2
KAFKA_CONTROLLER_QUORUM_VOTERS: '1@kafka0:29093,2@kafka1:29093,3@kafka2:29093'
KAFKA_LISTENERS: 'PLAINTEXT://kafka1:29092,CONTROLLER://kafka1:29093,PLAINTEXT_HOST://0.0.0.0:9092'
KAFKA_CONTROLLER_LISTENER_NAMES: 'CONTROLLER'
KAFKA_LOG_DIRS: '/tmp/kraft-combined-logs'
KAFKA_JMX_PORT: 9997
KAFKA_JMX_OPTS: -Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.authenticate=false -
Dcom.sun.management.jmxremote.ssl=false -Djava.rmi.server.hostname=kafka1 -Dcom.sun.management.jmxremote.rmi.port=9997
volumes:
- ./scripts/update_run_cluster.sh:/tmp/update_run.sh
- ./scripts/clusterID:/tmp/clusterID
- ./data/kafka1/kraft-combined-logs:/tmp/kraft-combined-logs
command: "bash -c 'if [ ! -f /tmp/update_run.sh ]; then echo \"ERROR: Did you forget the update_run.sh file that came with this
docker-compose.yml file?\" && exit 1 ; else /tmp/update_run.sh && /etc/confluent/docker/run ; fi"
```

```
kafka2:
image: confluentinc/cp-kafka:7.2.1
hostname: kafka2
container_name: kafka2
ports:
- 9094:9092
environment:
KAFKA_LISTENER_SECURITY_PROTOCOL_MAP: PLAINTEXT:PLAINTEXT,CONTROLLER:PLAINTEXT,PLAINTEXT_HOST:PLAINTEXT
KAFKA_ADVERTISED_LISTENERS: PLAINTEXT://kafka2:29092,PLAINTEXT_HOST://10.20.30.40:9094
KAFKA_INTER_BROKER_LISTENER_NAME: PLAINTEXT
KAFKA_OFFSETS_TOPIC_REPLICATION_FACTOR: 1
KAFKA_GROUP_INITIAL_REBALANCE_DELAY_MS: 0
KAFKA_TRANSACTION_STATE_LOG_MIN_ISR: 1
KAFKA_TRANSACTION_STATE_LOG_REPLICATION_FACTOR: 1
KAFKA_PROCESS_ROLES: 'broker,controller'
KAFKA_NODE_ID: 3
KAFKA_CONTROLLER_QUORUM_VOTERS: '1@kafka0:29093,2@kafka1:29093,3@kafka2:29093'
KAFKA_LISTENERS: 'PLAINTEXT://kafka2:29092,CONTROLLER://kafka2:29093,PLAINTEXT_HOST://0.0.0.0:9092'
KAFKA_CONTROLLER_LISTENER_NAMES: 'CONTROLLER'
KAFKA_LOG_DIRS: '/tmp/kraft-combined-logs'
KAFKA_JMX_PORT: 9997
```

```
KAFKA_JMX_OPTS: -Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.authenticate=false -
Dcom.sun.management.jmxremote.ssl=false -Djava.rmi.server.hostname=kafka1 -Dcom.sun.management.jmxremote.rmi.port=9997
volumes:
- ./scripts/update_run_cluster.sh:/tmp/update_run.sh
- ./scripts/clusterID:/tmp/clusterID
- ./data/kafka2/kraft-combined-logs:/tmp/kraft-combined-logs
command: "bash -c 'if [ ! -f /tmp/update_run.sh ]; then echo \"ERROR: Did you forget the update_run.sh file that came with this
docker-compose.yml file?\" && exit 1 ; else /tmp/update_run.sh && /etc/confluent/docker/run ; fi'"
```

#### schema-registry0:

```
image: confluentinc/cp-schema-registry:7.2.1
ports:
- 8085:8085
depends_on:
- kafka0
environment:
SCHEMA_REGISTRY_KAFKASTORE_BOOTSTRAP_SERVERS: PLAINTEXT://kafka0:29092
SCHEMA_REGISTRY_KAFKASTORE_SECURITY_PROTOCOL: PLAINTEXT
SCHEMA_REGISTRY_HOST_NAME: schema-registry0
SCHEMA_REGISTRY_LISTENERS: http://schema-registry0:8085

SCHEMA_REGISTRY_SCHEMA_REGISTRY_INTER_INSTANCE_PROTOCOL: "http"
SCHEMA_REGISTRY_LOG4J_ROOT_LOGLEVEL: INFO
SCHEMA_REGISTRY_KAFKASTORE_TOPIC: _schemas
```

#### kafka-connect0:

```
image: confluentinc/cp-kafka-connect:7.2.1
ports:
- 8083:8083
depends_on:
- kafka0
- schema-registry0
environment:
CONNECT_BOOTSTRAP_SERVERS: kafka0:29092
CONNECT_GROUP_ID: compose-connect-group
CONNECT_CONFIG_STORAGE_TOPIC: _connect_configs
CONNECT_CONFIG_STORAGE_REPLICATION_FACTOR: 1
CONNECT_OFFSET_STORAGE_TOPIC: _connect_offset
CONNECT_OFFSET_STORAGE_REPLICATION_FACTOR: 1
CONNECT_STATUS_STORAGE_TOPIC: _connect_status
CONNECT_STATUS_STORAGE_REPLICATION_FACTOR: 1
CONNECT_KEY_CONVERTER: org.apache.kafka.connect.storage.StringConverter
CONNECT_KEY_CONVERTER_SCHEMA_REGISTRY_URL: http://schema-registry0:8085
CONNECT_VALUE_CONVERTER: org.apache.kafka.connect.storage.StringConverter
CONNECT_VALUE_CONVERTER_SCHEMA_REGISTRY_URL: http://schema-registry0:8085
CONNECT_INTERNAL_KEY_CONVERTER: org.apache.kafka.connect.json.JsonConverter
CONNECT_INTERNAL_VALUE_CONVERTER: org.apache.kafka.connect.json.JsonConverter
CONNECT_REST_ADVERTISED_HOST_NAME: kafka-connect0
CONNECT_PLUGIN_PATH: "/usr/share/java,/usr/share/confluent-hub-components,/usr/share/filestream-connectors,/tmp/kfk"
volumes:
- ./data/kfk:/tmp/kfk:ro
- ./data/kfk/test.txt:/tmp/kfk/test.txt
```

#### # kafka-init-topics:

```
# image: confluentinc/cp-kafka:7.2.1
# volumes:
# - ./data/message.json:/data/message.json
# depends_on:
# - kafka0
# command: "bash -c 'echo Waiting for Kafka to be ready... && \
# cub kafka-ready -b kafka0:29092 1 30 && \
# kafka-topics --create --topic second.users --partitions 3 --replication-factor 1 --if-not-exists --bootstrap-server kafka0:29092
&& \
# kafka-topics --create --topic second.messages --partitions 2 --replication-factor 1 --if-not-exists --bootstrap-server
kafka0:29092 && \
# kafka-topics --create --topic first.messages --partitions 2 --replication-factor 1 --if-not-exists --bootstrap-server kafka0:29092
&& \
```

```
# kafka-console-producer --bootstrap-server kafka0:29092 --topic second.users < /data/message.json"
```

```
# https://docs.kafka-ui.provectus.io/configuration/complex-configuration-examples/kraft-mode-+-multiple-brokers
```

data/message.json

```
{}
```

data/proxy.conf

```
server {
    listen      80;
    server_name localhost;

    location /kafka-ui {
        # rewrite /kafka-ui/(.*) /$1 break;
        proxy_pass http://kafka-ui:8080;
    }
}
```

scripts/clusterID

```
zIFiTJeITouhnlFwLWixw
```

scripts/create\_cluster\_id.sh

```
kafka-storage random-uuid > /workspace/kafka-ui/documentation/compose/clusterID
```

scripts/create\_update\_run\_cluster.sh

```
# This script is required to run kafka cluster (without zookeeper)
#!/bin/sh

# Docker workaround: Remove check for KAFKA_ZOOKEEPER_CONNECT parameter
sed -i '/KAFKA_ZOOKEEPER_CONNECT/d' /etc/confluent/docker/configure

# Docker workaround: Ignore cub zk-ready
sed -i 's/cub zk-ready/echo ignore zk-ready/' /etc/confluent/docker/ensure

# KRaft required step: Format the storage directory with a new cluster ID
echo "kafka-storage format --ignore-formatted -t $(cat /tmp/clusterID) -c /etc/kafka/kafka.properties" >> /etc/confluent/docker/ensure
```

scripts/update\_run.sh

```
# This script is required to run kafka cluster (without zookeeper)
#!/bin/sh

# Docker workaround: Remove check for KAFKA_ZOOKEEPER_CONNECT parameter
sed -i '/KAFKA_ZOOKEEPER_CONNECT/d' /etc/confluent/docker/configure

# Docker workaround: Ignore cub zk-ready
sed -i 's/cub zk-ready/echo ignore zk-ready/' /etc/confluent/docker/ensure

# KRaft required step: Format the storage directory with a new cluster ID
echo "kafka-storage format --ignore-formatted -t $(kafka-storage random-uuid) -c /etc/kafka/kafka.properties" >> /etc/confluent/docker/ensure
```

🕒 修訂版本 #3

★ 由 treeman 建立於 20 🕒 2023 19:25:29

🔧 由 treeman 更新於 26 🕒 2024 18:15:31