

RocketMQ

1. 功能描述

a. 消息异步，上游无需等待下游执行完毕，加快上游响应速度，下游系统故障不会影响上游系统的运行，增加下游只需订阅 MQ

b. 解耦

c. 削峰

2. 前提准备

安装环境	说明	版本
java 环境	RocketMQ 运行需要 JDK 环境	1.8
Maven 环境	项目下载下来之后需要使用 Maven 编译	3.6.3

3. RocketMQ 安装

2.1. 下载解压

这里选择从 git 上下载，当然也可以从 Apache 官网下载

1. ## 下载安装包

2. `wget https://github.com/apache/rocketmq/archive/rocketmq-all-4.7.0.tar.gz`

3. ## 解压

4. `tar -zxvf rocketmq-all-4.7.0.tar.gz`

上面执行完命令后，如下图

```
rocketmq-all-4.7.0
-rw-r--r-- 1 root root 2178114 May  3 06:47 rocketmq-all-4.7.0.tar.gz
drwxrwxr-x 22 root root    4096 Mar  5 06:06 rocketmq-rocketmq-all-4.7.0
```

1. ## 把文件夹名称改短一点，看着顺眼

2. `mv rocketmq-rocketmq-all-4.7.0/ rocketmq-all-4.7.0/`

```
drwxrwxr-x 23 root root    4096 Jun 25 23:00 rocketmq-all-4.7.0
-rw-r--r-- 1 root root 2178114 Jun 23 18:52 rocketmq-all-4.7.0.tar.gz
```

2.2. 编译部署

1. ## 进入 rocketmq-all-4.7.0

2. `cd /apps/rocketmq/rocketmq-all-4.7.0`

3. ## 开始编译，注意 maven 要安装配置好

4. mvn -Prelease-all -DskipTests clean install -U

```
[INFO] Building tar: /opt/rocketmq/rocketmq-all-4.7.0/distribution/target/rocketmq-4.7.0.tar.gz
[INFO] Building zip: /opt/rocketmq/rocketmq-all-4.7.0/distribution/target/rocketmq-4.7.0.zip
[INFO] --- jacoco-maven-plugin:0.7.8:prepare-agent-integration (default-prepare-agent-integration) @ rocketmq-distribution ---
[INFO] failsafeArgLine set to -javaagent:/opt/maven/repository/org/jacoco/org.jacoco.agent/0.7.8/org.jacoco.agent-0.7.8-runtime.jar=destfile=/opt/rocketmq/rocketmq-all-4.7.0/distribution
[INFO] --- maven-checkstyle-plugin:2.17:check (verify) @ rocketmq-distribution ---
[INFO] Starting audit...
Audit done.
[INFO] --- jacoco-maven-plugin:0.7.8:report (default-report) @ rocketmq-distribution ---
[INFO] Skipping JaCoCo execution due to missing execution data file.
[INFO] --- jacoco-maven-plugin:0.7.8:report-integration (default-report-integration) @ rocketmq-distribution ---
[INFO] Skipping JaCoCo execution due to missing execution data file.
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ rocketmq-distribution ---
[INFO] Installing /opt/rocketmq/rocketmq-all-4.7.0/distribution/pom.xml to /opt/maven/repository/org/apache/rocketmq/rocketmq-distribution/4.7.0/rocketmq-distribution-4.7.0.pom
[INFO] Installing /opt/rocketmq/rocketmq-all-4.7.0/distribution/target/rocketmq-4.7.0.tar.gz to /opt/maven/repository/org/apache/rocketmq/rocketmq-distribution/4.7.0/rocketmq-distribution
[INFO] Installing /opt/rocketmq/rocketmq-all-4.7.0/distribution/target/rocketmq-4.7.0.zip to /opt/maven/repository/org/apache/rocketmq/rocketmq-distribution/4.7.0/rocketmq-distribution-4
[INFO] -----
[INFO] Reactor Summary for Apache RocketMQ 4.7.0 4.7.0:
[INFO]
[INFO] Apache RocketMQ 4.7.0 ..... SUCCESS [04:14 min]
[INFO] rocketmq-logging 4.7.0 ..... SUCCESS [ 24.992 s]
[INFO] rocketmq-remoting 4.7.0 ..... SUCCESS [ 19.524 s]
[INFO] rocketmq-common 4.7.0 ..... SUCCESS [ 7.560 s]
[INFO] rocketmq-client 4.7.0 ..... SUCCESS [ 10.203 s]
[INFO] rocketmq-store 4.7.0 ..... SUCCESS [ 7.907 s]
[INFO] rocketmq-srvutil 4.7.0 ..... SUCCESS [ 1.202 s]
[INFO] rocketmq-filter 4.7.0 ..... SUCCESS [ 3.591 s]
[INFO] rocketmq-acl 4.7.0 ..... SUCCESS [ 4.968 s]
[INFO] rocketmq-broker 4.7.0 ..... SUCCESS [ 4.445 s]
[INFO] rocketmq-tools 4.7.0 ..... SUCCESS [ 2.669 s]
[INFO] rocketmq-namesrv 4.7.0 ..... SUCCESS [ 1.173 s]
[INFO] rocketmq-logappender 4.7.0 ..... SUCCESS [ 2.826 s]
[INFO] rocketmq-openmessaging 4.7.0 ..... SUCCESS [ 2.379 s]
[INFO] rocketmq-example 4.7.0 ..... SUCCESS [ 1.594 s]
[INFO] rocketmq-test 4.7.0 ..... SUCCESS [ 4.682 s]
[INFO] rocketmq-distribution 4.7.0 ..... SUCCESS [02:31 min]
[INFO] -----
[INFO] BUILD SUCCESS
```

1. ##为了方便操作，我将目标目录移动到/apps/rocketmq/下
2. mv /apps/rocketmq/rocketmq-all-4.7.0/distribution/target/rocketmq-4.7.0/rocketmq-4.7.0 /apps/rocketmq/

```
drwxr-xr-x 7 root root 132 Jun 25 23:26 rocketmq-4.7.0
drwxrwxr-x 23 root root 4096 Jun 25 23:00 rocketmq-all-4.7.0
-rw-r--r-- 1 root root 2178114 Jun 23 18:52 rocketmq-all-4.7.0.tar.gz
```

4. 启动 RocketMQ

3.1. 添加环境变量

vi /etc/profile

在文件末尾添加以下内容

1. export rocketmq=/apps/rocketmq/rocketmq-4.7.0
2. export PATH=\$PATH:\$rocketmq/bin
3. #配置服务地址
4. export NAMESRV_ADDR=127.0.0.1:9876

```
# rocketmq
export rocketmq=/apps/rocketmq/rocketmq-4.7.0
export PATH=$PATH:$rocketmq/bin

#配置服务地址
export NAMESRV_ADDR=127.0.0.1:9876
```

1. ## 让配置生效
2. source /etc/profile

3.2. 修改内存

1. ## 进入 bin 目录

2. cd /apps/rocketmq/rocketmq-4.7.0/bin
- 3.
4. ## 编辑 runserver.sh
5. vi runserver.sh
6. ## 找到 JAVA_OPT="{JAVA_OPT} -server -Xms4g -Xmx4g -Xmn2g -XX:MetaspaceSize=128m -XX:MaxMetaspaceSize=320m"
7. ## 修改成可接受范围
8. JAVA_OPT="{JAVA_OPT} -server -Xms512m -Xmx512m -Xmn256m -XX:MetaspaceSize=128m -XX:MaxMetaspaceSize=320m"
- 9.
10. ## 编辑 runbroker.sh
11. vi runbroker.sh
12. ## 找到 JAVA_OPT="{JAVA_OPT} -server -Xms8g -Xmx8g -Xmn4g"
13. ## 修改成可接受范围
14. JAVA_OPT="{JAVA_OPT} -server -Xms512m -Xmx512m -Xmn256m"
- 15.

3.3. 开放防火墙

1. ## 停止 firewall
2. systemctl stop firewalld.service
3. ## 禁止 firewall 开机启动
4. systemctl disable firewalld.service

3.4. 启动 RocketMQ

1. ## 新建 logs 文件
2. mkdir /apps/rocketmq/rocketmq-4.7.0/logs
3. ## 切换到 bin 目录
4. cd /apps/rocketmq/rocketmq-4.7.0/bin
5. ## 启动 nameserver
6. nohup sh mqnamesrv >/apps/rocketmq/rocketmq-4.7.0/logs/mqnamesrv.log 2>&1 &
7. ## 启动 rroker
8. nohup sh mqbroker -n localhost:9876 >/apps/rocketmq/rocketmq-4.7.0/logs/broker.log 2>&1 &

5. 发送&接收消息

建议在两个窗口分别启动以下两个脚本，便于观测。

4.1.生产者

1. ## 生产者生产消息
2. cd /apps/rocketmq/rocketmq-4.7.0/bin
3. export NAMESRV_ADDR=localhost:9876
4. sh tools.sh org.apache.rocketmq.example.quickstart.Producer

```

SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7403DE, offsetMsgId=COA80C7900002A9F000000000005765C, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7503DF, offsetMsgId=COA80C7900002A9F0000000000057710, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7503E0, offsetMsgId=COA80C7900002A9F00000000000577C4, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7603E1, offsetMsgId=COA80C7900002A9F0000000000057878, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7703E2, offsetMsgId=COA80C7900002A9F000000000005792C, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7803E3, offsetMsgId=COA80C7900002A9F00000000000579E0, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7903E4, offsetMsgId=COA80C7900002A9F0000000000057A94, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7A03E5, offsetMsgId=COA80C7900002A9F0000000000057B48, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7B03E6, offsetMsgId=COA80C7900002A9F0000000000057BFC, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId
SendResult [sendStatus=SEND_OK, msgId=COA80C79098E6BC7C0540C413C7C03E7, offsetMsgId=COA80C7900002A9F0000000000057C80, messageQueue=MessageQueue [topic=TopicTest, brokerName=rocketmq121, queueId

```

4.2.消费者

1. ## 消费者消费消息
2. cd /apps/rocketmq/rocketmq-4.7.0/bin
3. export NAMESRV_ADDR=localhost:9876
4. sh tools.sh org.apache.rocketmq.example.quickstart.Consumer

```

ConsumeMessageThread_5 Receive New Messages: [MessageExt [brokerName=rocketmq121, queueId=2, storeSize=180, queueOffset=358, sysFlag=0, bornTimestamp=1588511200838, bornHost=/192.168.12.121:4793
AX, OFFSET=500, CONSUME_START_TIME=1588511216341, UNIQ_KEY=COA80C79098E6BC7C0540C41384601B3, WAIT=true, TAGS=TagA], body=[72, 101, 108, 108, 111, 32, 82, 111, 99, 107, 101, 116, 77, 81, 32, 52, 5
ConsumeMessageThread_10 Receive New Messages: [MessageExt [brokerName=rocketmq121, queueId=2, storeSize=180, queueOffset=257, sysFlag=0, bornTimestamp=1588511200823, bornHost=/192.168.12.121:479
eHost=/192.168.12.121:10911, msgId=COA80C7900002A9F000000000003ED50, commitLogOffset=257360, bodyCRC=1524976880, reconsumeTimes=0, preparedTransactionOffset=0, toString()=Message[topic=TopicTes
MAX_OFFSET=500, CONSUME_START_TIME=1588511216341, UNIQ_KEY=COA80C79098E6BC7C0540C41383701AF, WAIT=true, TAGS=TagA], body=[72, 101, 108, 108, 111, 32, 82, 111, 99, 107, 101, 116, 77, 81, 32, 52, 5
ConsumeMessageThread_15 Receive New Messages: [MessageExt [brokerName=rocketmq121, queueId=2, storeSize=180, queueOffset=356, sysFlag=0, bornTimestamp=1588511200803, bornHost=/192.168.12.121:479
eHost=/192.168.12.121:10911, msgId=COA80C7900002A9F000000000003E480, commitLogOffset=256840, bodyCRC=714807652, reconsumeTimes=0, preparedTransactionOffset=0, toString()=Message[topic=TopicTest
AX, OFFSET=500, CONSUME_START_TIME=1588511216341, UNIQ_KEY=COA80C79098E6BC7C0540C41382301AB, WAIT=true, TAGS=TagA], body=[72, 101, 108, 108, 111, 32, 82, 111, 99, 107, 101, 116, 77, 81, 32, 52, 5

```

6. 停止 RocketMQ

1. sh mqshutdown broker
2. sh mqshutdown namesrv

```

[root@rocketmq121 bin]# sh mqshutdown broker
The mqbroker(2157) is running...
Send shutdown request to mqbroker(2157) OK
[root@rocketmq121 bin]# sh mqshutdown namesrv
The mqnamesrv(2131) is running...
Send shutdown request to mqnamesrv(2131) OK
[2]+ Exit 143          nohup sh mqbroker -n localhost:9876 > /opt/rocketmq/rocketmq-4.7.0/logs/broker.log 2>&1
[root@rocketmq121 bin]#

```

7. 可视化管理页面

6.1. 可视化管理页面安装

1. cd /apps/rocketmq/console
2. ## 下载 & 解压
3. wget https://gitee.com/mirrors/RocketMQ-Externals/repository/archive/master.zip
4. unzip master.zip
- 5.

1. ## 切换到 console 工程下 修改配置文件

2. cd /apps/rocketmq/console/RocketMQ-Externals/rocketmq-console

3. vi src/main/resources/application.properties

1. ##文件内容，主要修改 namesrv 的地址

2. rocketmq.config.namesrvAddr=localhost:9876

1. ##编译打包

2. cd /apps/rocketmq/consle/RocketMQ-Externals/rocketmq-console

3. mvn clean package -Dmaven.test.skip=true

```
Downloaded from alimaven: http://maven.aliyun.com/nexus/content/groups/public/commons-io/commons-io-1.3.2.jar (88 kB at 35 kB/s)
Downloaded from alimaven: http://maven.aliyun.com/nexus/content/groups/public/asm/asm-analysis/3.2/asm-analysis-3.2.jar (18 kB at 6.6 kB/s)
Downloaded from alimaven: http://maven.aliyun.com/nexus/content/groups/public/asm/asm-util/3.2/asm-util-3.2.jar (37 kB at 13 kB/s)
[INFO]
[INFO] >>> mvn-source-plugin:3.0.1:jar (attach-sources) > generate-sources @ rocketmq-console-ng >>>
[INFO]
[INFO] --- mvn-checkstyle-plugin:2.17:check (validate) @ rocketmq-console-ng ---
[INFO] Starting audit...
Audit done.
[INFO]
[INFO] --- jacoco-maven-plugin:0.7.9:prepare-agent (default-prepare-agent) @ rocketmq-console-ng ---
[INFO] argLine set to -javaagent:/opt/maven/repository/org/jacoco/org.jacoco.agent/0.7.9/org.jacoco.agent-0.7.9-runtime.jar=destfile=/opt/rocketmq/mqconsole/RocketMQ-Externals/rocketmq-console-ng/target/rocketmq-console-ng-1.0.1-jacoco.exec
[INFO]
[INFO] <<< mvn-source-plugin:3.0.1:jar (attach-sources) < generate-sources @ rocketmq-console-ng <<<
[INFO]
[INFO]
[INFO] --- mvn-source-plugin:3.0.1:jar (attach-sources) @ rocketmq-console-ng ---
[INFO] Building jar: /opt/rocketmq/mqconsole/RocketMQ-Externals/rocketmq-console-ng/target/rocketmq-console-ng-1.0.1-sources.jar
[INFO]
[INFO] BUILD SUCCESS
[INFO]
```

6.2. 可视化管理页面启动

1. cd /apps/rocketmq/consle/RocketMQ-Externals/rocketmq-console

2.

3. #如果配置文件没有填写 Name Server 的话，可以在启动项目时指定 namesrvAddr

4. java -jar target/rocketmq-console-ng-1.0.1.jar --rocketmq.config.namesrvAddr='localhost:9876'

5.

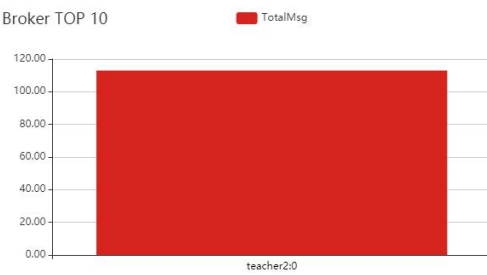
6. #在打包时配置了 namesrvAddr，故而执行如下命令

7. java -jar target/rocketmq-console-ng-1.0.1.jar

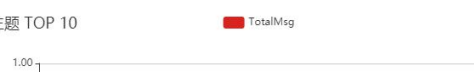
```
[2020-05-04 10:04:22.183] INFO Starting beans in phase 0
[2020-05-04 10:04:22.191] INFO Located managed bean 'requestMappingEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=requestMappingEndpoint]
[2020-05-04 10:04:22.220] INFO Located managed bean 'environmentEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=environmentEndpoint]
[2020-05-04 10:04:22.223] INFO Located managed bean 'healthEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=healthEndpoint]
[2020-05-04 10:04:22.239] INFO Located managed bean 'beansEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=beansEndpoint]
[2020-05-04 10:04:22.241] INFO Located managed bean 'infoEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=infoEndpoint]
[2020-05-04 10:04:22.243] INFO Located managed bean 'metricsEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=metricsEndpoint]
[2020-05-04 10:04:22.247] INFO Located managed bean 'traceEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=traceEndpoint]
[2020-05-04 10:04:22.268] INFO Located managed bean 'dumpEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=dumpEndpoint]
[2020-05-04 10:04:22.272] INFO Located managed bean 'autoConfigurationReportEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=autoConfigurationReportEndpoint]
[2020-05-04 10:04:22.274] INFO Located managed bean 'configurationPropertiesReportEndpoint': registering with JMX server as MBean [org.springframework.boot:type=Endpoint,name=configurationPropertiesReportEndpoint]
[2020-05-04 10:04:22.297] INFO No TaskScheduler/ScheduledExecutorService bean found for scheduled processing
[2020-05-04 10:04:22.314] INFO Initializing ProtocolHandler ["http-nio-8080"]
[2020-05-04 10:04:22.337] INFO Starting ProtocolHandler [http-nio-8080]
[2020-05-04 10:04:22.357] INFO Using a shared selector for servlet write/read
[2020-05-04 10:04:22.379] INFO Tomcat started on port(s): 8080 (http)
[2020-05-04 10:04:22.386] INFO Started App in 9.217 seconds (JVM running for 10.467)
[2020-05-04 10:04:31.460] INFO closeChannel: close the connection to remote address[127.0.0.1:9876] result: true
[2020-05-04 10:04:31.460] INFO closeChannel: close the connection to remote address[192.168.12.121:10909] result: true https://blog.c
```

6.3. 访问

Broker TOP 10

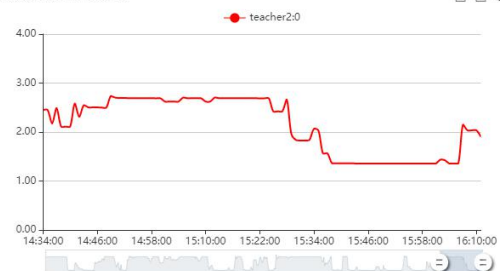


主题 TOP 10



日期:

Broker 5min trend



主题:

主题 5min trend

[🔍](#) [🔄](#) [📱](#)

[🔍](#) [🔄](#) [📱](#)