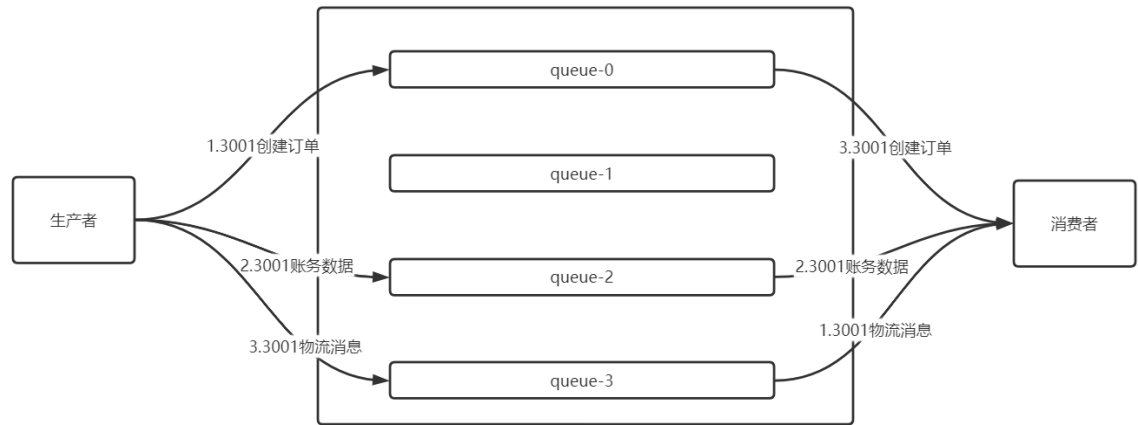


RocketMQ发送消息之有序消息

假设没有分区时有什么问题？

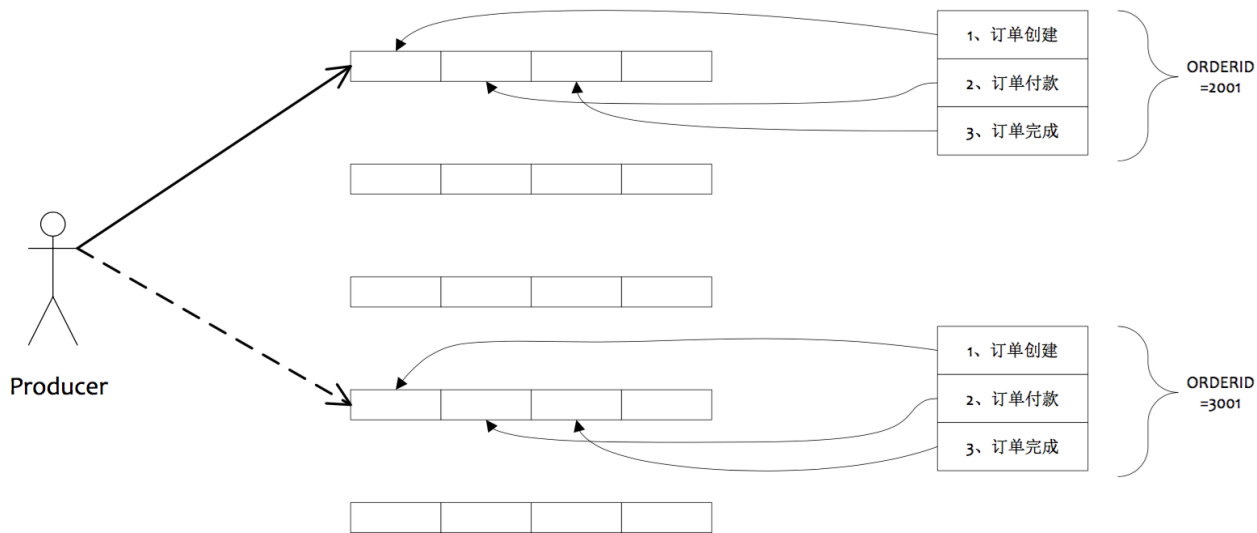
如果某一笔业务产分为多条普通消息同时发送，消费者无法保证按按生产者预期的顺序进行消费，进而导致代码逻辑错误。



分区有序消息

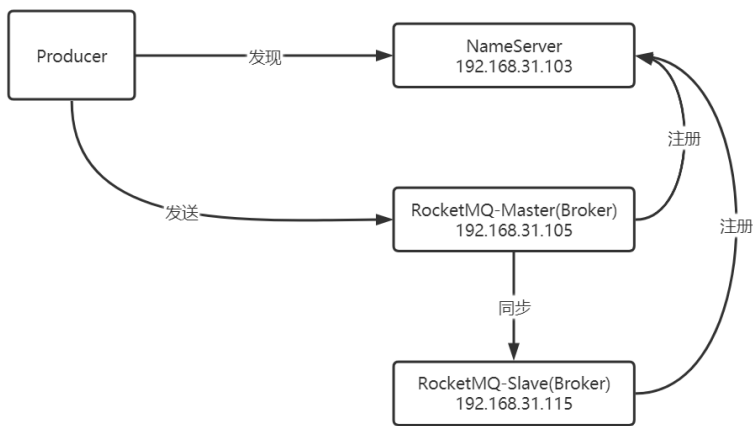
分区有序消息：与Kafka中的分区类似，把一个Topic消息分为多个分区“保存”和消费，在一个分区内的消息就是传统的队列，遵循FIFO（先进先出）原则。

全局有序消息：如果把一个 Topic 的分区数设置为 1，那么该 Topic 中的消息就是单分区，所有消息都遵循FIFO（先进先出）的原则。



Consumer消费时通过一个分区只能有一个线程消费的方式来保证消息顺序。

部署拓扑



源码讲解

pom.xml

```

<dependency>
  <groupId>org.apache.rocketmq</groupId>
  <artifactId>rocketmq-client</artifactId>
  <version>4.9.2</version>
</dependency>

```

MessageType2

```
package com.itlaoqi.rocketmq.mtype;
```

...

```
import java.util.List;
```

```
@Slf4j
```

```
//发送分区顺序消息
```

```
public class MessageType2 {
```

```
  public static void main(String[] args) {
```

```
    DefaultMQProducer producer = new DefaultMQProducer("ProducerGroupName");
```

```
    producer.setNamesrvAddr("192.168.31.103:9876");
```

```
    producer.setRetryTimesWhenSendAsyncFailed(2);
```

```
    try {
```

```
      producer.start();
```

```
      Integer id = 4465;
```

```
      String data = "{\"id\":\"" + id + "\", \"title\":\"X市2021年度第四季度税务汇总数据\"}";
```

```
      Message message = new Message("tax-data", "2021S4", id.toString(),
```

```
data.getBytes(RemotingHelper.DEFAULT_CHARSET));
```

//分区有序消息最大的区别便是调用send方法是，需要实现MessageQueueSelector接口，确定使用哪个队列投递消息

```
      SendResult result = producer.send(message, new MessageQueueSelector() {
```

```
        @Override
```

```
        public MessageQueue select(List<MessageQueue> mqs, Message msg, Object
```

```
arg) {
```

```
          log.info("当前队列数量: " + mqs.size() + ",明细: " + mqs.toString());
```

```
          log.info("Message对象: " + msg.toString());
```

```
          int dataId = Integer.parseInt(msg.getKeys());
```

```
          int index = dataId % mqs.size();
```

```
          MessageQueue messageQueue = mqs.get(index);
```

```
          log.info("分区队列:" + messageQueue);
```

```
          return messageQueue;
```


15:08:18.295 [main] INFO com.itlaoqi.rocketmq.mtype.MessageType2 - 当前队列数量: 4, 明细: [MessageQueue [topic=tax-data, brokerName=broker-a, queueId=0], MessageQueue [topic=tax-data, brokerName=broker-a, queueId=1], MessageQueue [topic=tax-data, brokerName=broker-a, queueId=2], MessageQueue [topic=tax-data, brokerName=broker-a, queueId=3]]

15:08:18.297 [main] INFO com.itlaoqi.rocketmq.mtype.MessageType2 - Message对象: Message{topic='tax-data', flag=0, properties={KEYS=4465, WAIT=true, TAGS=2021S4}, body=[123, 34, 105, 100, 34, 58, 52, 52, 54, 53, 32, 44, 32, 43, 32, 34, 116, 105, 116, 108, 101, 34, 58, 34, 88, -27, -72, -126, 50, 48, 50, 49, -27, -71, -76, -27, -70, -90, -25, -84, -84, -27, -101, -101, -27, -83, -93, -27, -70, -90, -25, -88, -114, -27, -118, -95, -26, -79, -121, -26, -128, -69, -26, -107, -80, -26, -115, -82, 34, 125], transactionId='null'}

15:08:18.297 [main] INFO com.itlaoqi.rocketmq.mtype.MessageType2 - 分区队列: MessageQueue [topic=tax-data, brokerName=broker-a, queueId=0]

15:08:18.602 [main] INFO com.itlaoqi.rocketmq.mtype.MessageType2 - 消息已发送: MsgId:7F00000134C418B4AAC20D8C4D220000, 发送状态:SEND_OK