

廈門大學



软件学院

《中间件技术》大作业报告（四）

题 目 为 ActiveMQ 添加一个自定义的 Message

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1 实验目的

为 ActiveMQ 添加一个自定义的 Message 并支持其收发等主要功能

2 本次实验目的

测试与完善

3 实验步骤

1. 编写测试代码

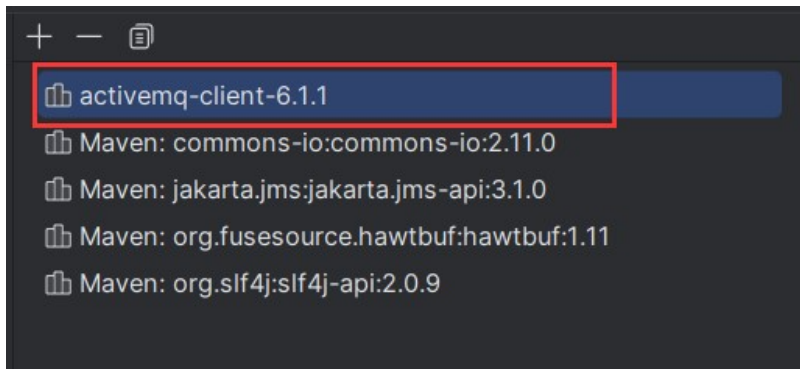
```
public class Main {  
    1个用法  
    private static final String BROKER_URL = "tcp://localhost:61616";  
    //用户订阅的TOPIC，只有相同的TOPIC才能收到相同的消息（即群聊）  
    1个用法  
    private static final String CHAT_TOPIC = "chatTopic";  
    //用户的用户名，用于唯一标识一个用户，后续也会作为ClientID使用  
    2个用法  
    private static final String USER_NAME = "user2";  
  
    public static void main(String[] args) throws JMSException, IOException {  
        //与ActiveMq建立连接  
        ConnectionFactory connectionFactory = new ActiveMQConnectionFactory(BROKER_URL);  
        Connection connection = connectionFactory.createConnection();  
        connection.setClientID(USER_NAME);  
        connection.start();  
  
        //设定消息确认模式（此处是自动确认）和TOPIC  
        Session session = connection.createSession(false, Session.AUTO_ACKNOWLEDGE);  
        Topic topic = session.createTopic(CHAT_TOPIC);  
  
        //创建消息监听事件，便于收到其他用户消息  
        MessageConsumer consumer = session.createDurableSubscriber(topic, USER_NAME);  
        consumer.setMessageListener(message -> {  
            if (message instanceof ActiveMQFileMessage) {  
                try {  
                    File file = ((ActiveMQFileMessage) message).getFile();  
                    System.out.println("收到文件");  
                } catch (JMSException e) {  
                    throw new RuntimeException(e);  
                }  
            }  
        });  
  
        BufferedReader reader = new BufferedReader(new InputStreamReader(System.in));  
        while(true) {  
            String messageText = reader.readLine();  
            MessageProducer producer = session.createProducer(topic);  
            producer.send(((ActiveMQSession) session).createFileMessage(new File(messageText)));  
        }  
    }  
}
```

核心代码如下：

```
while(true) {  
    String messageText = reader.readLine();  
    MessageProducer producer = session.createProducer(topic);  
    producer.send(((ActiveMQSession) session).createFileMessage(new File(messageText)));  
}
```

```
if (message instanceof ActiveMQFileMessage) {  
    try {  
        File file = ((ActiveMQFileMessage) message).getFile();  
        System.out.println("收到文件");  
    }  
}
```

2. 将修改后的项目编译并打包，添加到测试项目的项目库



3. 打开命令行，启动服务端

```
Windows PowerShell  
版权所有 (C) Microsoft Corporation。保留所有权利。  
安装最新的 PowerShell，了解新功能和改进！ https://aka.ms/PSWindows  
  
PS D:\apache-activemq-6.0.1\bin> ./activemq start  
Java Runtime: Oracle Corporation 21.0.1 C:\Program Files\Java\jdk-21  
Heap sizes: current=1048576k free=1038336k max=1048576k  
JVM args: -Dcom.sun.management.jmxremote -Xms1G -Xmx1G -Djava.util.logging.config.file=logging.properties -Djava.se  
curity.auth.login.config=D:\apache-activemq-6.0.1\bin\..\conf\login.config -Dactivemq.classpath=D:\apache-activemq-6.0.1\  
bin\..\conf;D:\apache-activemq-6.0.1\bin\..\conf;D:\apache-activemq-6.0.1\bin\..\conf; -Dactivemq.home=D:\apache-activem  
q-6.0.1\bin\.. -Dactivemq.base=D:\apache-activemq-6.0.1\bin\.. -Dactivemq.conf=D:\apache-activemq-6.0.1\bin\..\conf -Dac  
tivismq.data=D:\apache-activemq-6.0.1\bin\..\data -Djolokia.conf=file:D:\apache-activemq-6.0.1\bin\..\conf\jolokia-a  
ccess.xml -Djava.io.tmpdir=D:\apache-activemq-6.0.1\bin\..\data\tmp  
Extensions classpath:  
[D:\apache-activemq-6.0.1\bin\..\lib;D:\apache-activemq-6.0.1\bin\..\lib\camel;D:\apache-activemq-6.0.1\bin\..\lib\opt  
ional;D:\apache-activemq-6.0.1\bin\..\lib\web;D:\apache-activemq-6.0.1\bin\..\lib\extra]  
ACTIVEMQ_HOME: D:\apache-activemq-6.0.1\bin\..  
ACTIVEMQ_BASE: D:\apache-activemq-6.0.1\bin\..  
ACTIVEMQ_CONF: D:\apache-activemq-6.0.1\bin\..\conf  
ACTIVEMQ_DATA: D:\apache-activemq-6.0.1\bin\..\data  
Loading message broker from: xbean:activemq.xml  
INFO | Using Persistence Adapter: KahaDBPersistenceAdapter[D:\apache-activemq-6.0.1\bin\..\data\kahadb]  
INFO | Starting Persistence Adapter: KahaDBPersistenceAdapter[D:\apache-activemq-6.0.1\bin\..\data\kahadb]  
INFO | Starting KahaDBStore  
INFO | Opening MessageDatabase  
INFO | KahaDB is version 7  
INFO | Starting Temp Data Store  
INFO | PListStore[D:\apache-activemq-6.0.1\bin\..\data\localhost\tmp_storage] started  
INFO | Starting Job Scheduler Store
```

4. 服务端出现提示，说明客户端代码已经完善，可以成功发送和接收。

```
INFO | For help or more information please see: http://activemq.apache.org
INFO | ActiveMQ WebConsole available at http://127.0.0.1:8161/
INFO | ActiveMQ Jolokia REST API available at http://127.0.0.1:8161/api/jolokia/
WARN | Transport Connection to: tcp://127.0.0.1:64927 failed: Unknown data type: 35
```