POJO Messaging Example

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Introduction

This example shows that you don't need to learn Camel's super cool DSLs if you don't want to. Camel has a set of annotations that allow you to produce, consume or route messages to endpoints.

Requirements

The example is shipped with Camel 2.0, but only requires Camel 1.5 to run. It also depends on the camel-jms component and Apache ActiveMQ. Of course, since we are using Maven these dependencies will be downloaded automatically.

Running the example

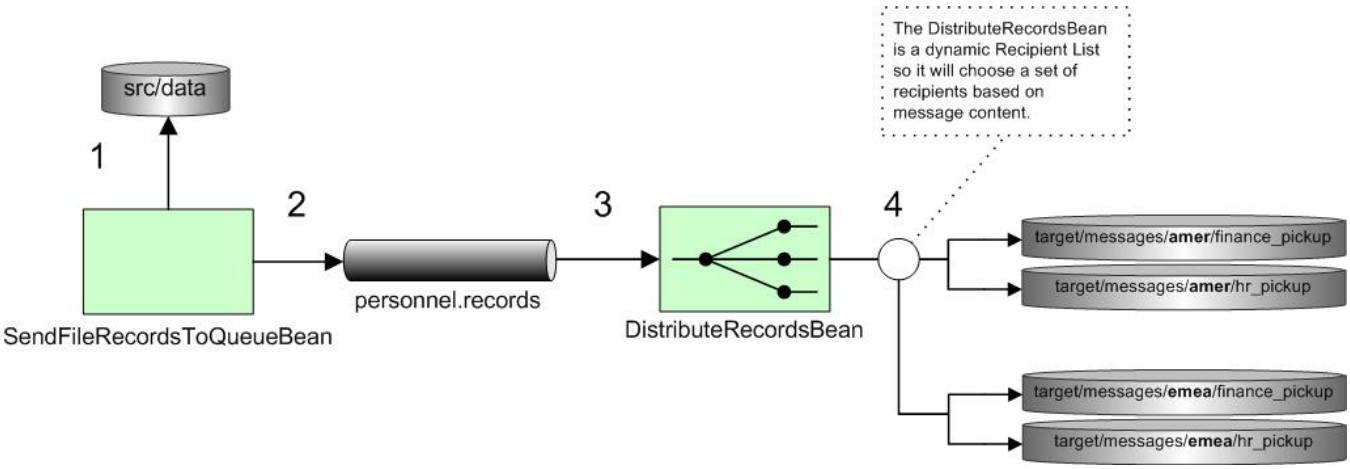
The `README.txt` states how to run the example from either Ant or Maven.

Here's how to run it with Maven:

mvn compile camel:run

Whats happening?

When you start the example up you'll see a whole bunch of logs that won't really mean anything to you 🙂 The interesting stuff is happening in the background. Here's a diagram of whats going on.



At step 1 the `SendFileRecordsToQueueBean` polls the `./src/data` directory for new files. There are 3 files in this directory so 3 messages will be created. As shown below, the `@Consume` annotation will cause any new messages coming from the `file:src/data endpoint` to be sent to the `onFile SendToQueue` method.

{snippet:id=ex|lang=java|url=camel/trunk/examples/camel-example-pojo-messaging/src/main/java/org/apache/camel/example/pojo_messaging/SendFileRecordsToQueueBean.java}

At step 2 the `SendFileRecordsToQueueBean` then sends the contents of the `File` message as a `String` to the `personnel.records` JMS queue, which is backed by an embedded instance of Apache ActiveMQ. The conversion from String to JMS message is automatic. The `@Produce` annotation is used to access the ActiveMQ endpoint.

At step 3 the `DistributeRecordsBean` (shown below) consumes the JMS message from the `personnel.records` queue. Again the `@Consume` annotation is used to get messages from the ActiveMQ endpoint.

{snippet:id=ex|lang=java|url=camel/trunk/examples/camel-example-pojo-messaging/src/main/java/org/apache/camel/example/pojo_messaging/DistributeRecordsBean.java}

You will notice an additional `@RecipientList` annotation on the route method. This turns the method into a Recipient List EIP where the return value is a list of URIs for the recipients (can be String[], List<String>, URI[], etc). This annotation is great for creating custom dynamic Recipient Lists. In this case at step 4 we peek at the city field in the message (using the `@XPath` annotation) and provide a set of recipients based on that. For folk from London, their files will be sent to file locations for the EMEA region (`file:target/messages/emea/...`). Others fall into the AMER region (`file:target/messages/amer/...`).

If you have messages that are not XML, don't fret! Camel has ways to get information out of arbitrary message payloads. For instance, you can try using the @Bean annotation to peek at the message using your own Java bean.

@Consume(uri = "activemq:personnel.records") @RecipientList public String[] route(@Bean("cityExtractorBean") String city) { if (city.equals("London")) {

Check out Parameter Binding Annotations for more information on this.

After running the example, browse to the `target/messages` directory to see where the messages were saved.

See also

- Bean Integration
- POJO Producing
- POJO Consuming
- RecipientList Annotation
- Recipient List
- Parameter Binding Annotations
- Examples
- Tutorials
- User Guide