

Delayer

Overview

A *delayer* is a processor that enables you to apply either a *relative* time delay or an *absolute* time delay to incoming messages.

Java DSL example

You can use the `delayer()` command to add a *relative* time delay, in units of milliseconds, to incoming messages. For example, the following route delays all incoming messages by 2 seconds:

```
from("seda:a").delayer(2000).to("mock:result");
```

Alternatively, you could specify the *absolute* time when a message should be dispatched. The absolute time value must be expressed in coordinated universal time (UTC), which is defined as the number of milliseconds that have elapsed since midnight, January 1, 1970. For example, to dispatch a message at the absolute time specified by the contents of the `JMSTimestamp` header, you could define a route like the following:

```
from("seda:a").delayer(header("JMSTimestamp")).to("mock:result");
```

You can also combine an absolute time with a relative time delay. For example, to delay an incoming message until the time specified in the `JMSTimestamp` header plus an additional 3 seconds, you could define a route like the following:

```
from("seda:a").delayer(header("JMSTimestamp"),  
3000).to("mock:result");
```

The preceding examples assume that delivery order is maintained. This could result in messages being delivered later than their specified time stamp, however. To avoid this, you could reorder the messages based on their delivery time, by combining the `delayer` pattern with the `resequencer` pattern. For example:

```
from("activemq:someQueue").  
resequencer(header("JMSTimestamp")).
```

```
    delayer(header("JMSTimestamp")).to("activemq:delayedQueue");
```

XML configuration example

To delay an incoming message until the time specified in the `JMSTimestamp` header plus an additional 3 seconds, you could define a route using the following XML configuration:

```
<camelContext id="delayerRoute" xmlns="http://activemq.apache.org/camel/schema/spring">
  <route>
    <from uri="seda:a"/>
    <delayer>
      <simple>header.JMSTimestamp</simple>
      <delay>3000</delay>
      <to uri="mock:result"/>
    </delayer>
  </route>
</camelContext>
```