

Lab A - Exercise 3: Send Notification using Topic

Overview

In this exercise, you will create a process using a JMS Send Message activity to send the shipment notification out to a JMS topic. Any interested party would subscribe to the topic to receive the notification. You will create a process which uses the JMSReceiveMessage activity to subscribe to that topic and then verify that if two instances of that process are started, they both receive the shipment notification.

Steps

1. Create SendShipmentNotification process definition and add activities to it.

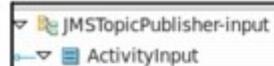
- Add a new process to **LabA** folder
 - ◆ Name: **SendShipmentNotification**
- Add the following activities to the process
 - ◆ *General Activities* > **Timer**
 - ◆ *JMS* > **JMS Send Message**
 - ◆ *General Activities* > **Log**
- **Save**

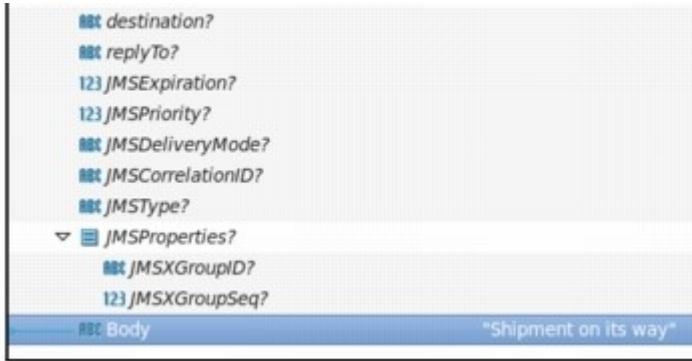
2. Configure transitions.

- Add the following transitions:
 - ◆ Timer to **JMSSendMessage**
 - ◆ **JMSSendMessage** to **Log**
- **Save**

3. Configure JMSSendMessage as a topic publisher.

- Double-click **JMSSendMessage** activity
 - ◆ Notice that this opens the configuration for that activity in the *Properties* view below
- In *Properties* > **General** configure as follows:
 - ◆ Name: **JMSTopicPublisher**
 - ◆ Messaging Style: **Topic**
 - ◆ JMS Connection: Browse for **EMS206project.JMSConn** shared resource
 - ◆ Destination Topic: **topic.sample**
- Select *Input* tab
 - ◆ *Activity Input* > **Body**: "**Shipment on its way**"

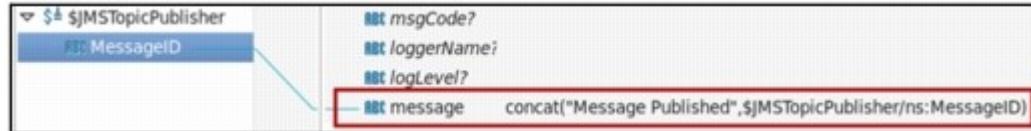




- Save the project

4. Configure the Log activity.

- Select the **Log** activity
 - ◆ Under *Properties*, select the *Input* tab and map as shown:



- Save the changes

5. Create a process to subscribe to the topic and add activities and a transition.

- Add a new process definition to the LabA folder
 - ◆ Name: **ReceiveShipmentNotification-Customer**
- Add activities to the process
 - ◆ **JMSReceiveMessage**
 - ◆ **Log**
- Add a transition from the **JMSReceiveMessage** to the **Log**
- Save the project

6. Configure the topic subscriber process activities.

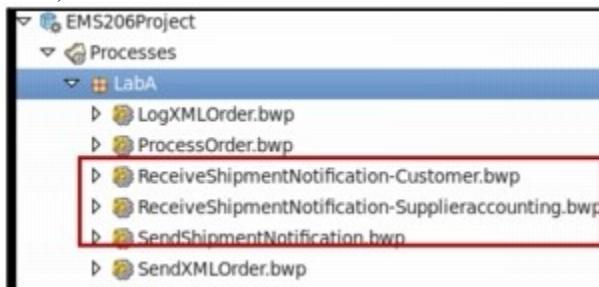
- Select **JMSReceiveMessage** and in *Properties > General* configure:
 - ◆ Name: **JMSTopicSubscriber-Customer**
 - ◆ Messaging Style: **Topic**
 - ◆ JMS Connection: Browse for JMS Connection shared resource
 - ◆ Destination Topic: **topic.sample**
 - ◆ Save
- Select **Log** and in *Properties > Input* configure the mapping:
 - ◆ From the available *Data Source* on the left, select the element **\$JMSTopicSubscriber-Customer/Body**
 - ◆ Drag it to the *Activity Input* element **Log/ActivityInput/message** (on the right)
 - ◆ Save

7. Create a copy of the *ReceiveShipmentNotification-Customer* process.

- Select the LabA folder in the *EMS206Project* tree
- Copy and paste the *ReceiveShipmentNotification-Customer* process into the same folder
 - ◆ Name: **ReceiveShipmentNotification-SupplierAccounting**
- Select the **JMSTopicSubscriber-Customer** activity and change the name
 - ◆ Name: **JMSTopicSubscriber-SupplierAccounting**
- Verify that the input mapping of the **Log** activity is updated automatically



- Verify that you have one process to send notification and two processes to receive it (as shown below)



8. Configure the component list with all three Shipment Notification processes.

- In Project Explorer, open *EMS206Project > Module Descriptors > Components*
- Delete all the existing components
- Configure components for the following processes:
 - ◆ *Send Shipment Notification*
 - ◆ *Receive Shipment Notification - Customer*
 - ◆ *Receive Shipment Notification - Supplier Accounting*
- Save the project

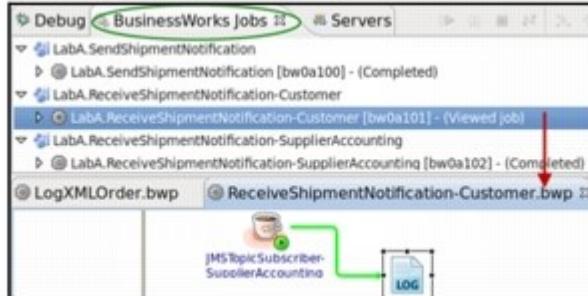
9. Run the debugger and verify the results.

- Right-click on the process diagram and choose **Debug BusinessWorks Applications**
- Select the *Console* view to follow the execution while the debugger is running

```
>> 17:48:18.745 INFO [Start Level Event Dispatcher] com.tibco.thor.frwk.Deployer - Started by BusinessSt
[Start Level Event Dispatcher] com.tibco.bw.frwk.engine.BWEngine - TIBCO-BW-FRMK-300002: BW Engine [Main
[Framework Event Dispatcher] com.tibco.thor.frwk.Deployer - TIBCO-THOR-FRMK-300001: Started OSGi Framewo
[Framework Event Dispatcher] com.tibco.thor.frwk.Application - TIBCO-THOR-FRMK-300018: Deploying BW Appl
[Framework Event Dispatcher] com.tibco.thor.frwk.Application - TIBCO-THOR-FRMK-300021: All Application d
[Thread-21] com.tibco.thor.frwk.Application - TIBCO-THOR-FRMK-300006: Started BW Application [EMS206Proj
[Framework Event Dispatcher] com.tibco.thor.frwk.Application - Started by BusinessStudio, ignoring .enab
[bwEngThread:In-Memory Process Worker-1] c.t.b.p.g.Log.EMS206Project.Log - Message PublishedID:EMS-SERVE
```

```
[bwEngInread:in-Memory Process Worker-3] c.t.b.p.g.Log.EMS206Project.Log - Shipment on its way  
[bwEngThread:In-Memory Process Worker-2] c.t.b.p.g.Log.EMS206Project.Log - Shipment on its way
```

- Select the *BusinessWorks Jobs* view - located right beside the *Debug* view
 - ◆ Observe the order in which components are executed
 - *SendShipmentNotification* is the first - it sends the message to the topic.sample
 - Both Subscriber processes start as they both receive the message
 - ◆ Click the job inside of each component to view the execution path



- Green transitions indicate which path was executed

10. Verify that topic messages are only received by active subscribers.

- Configure the component list to execute only *Send Shipment Notification*
- Start the debugger
 - ◆ Notice that the process executes immediately and publishes the message
 - ◆ Relaunch the debugger to run the process a few times and publish a few more messages
- Configure the component list to include one or both *Receive Shipment Notification* processes
 - ◆ Do not include *Send Shipment Notification*
- Relaunch the debugger
 - ◆ **JMSTopicSubscriber** activities are waiting for the message
 - The messages sent prior to activating the subscribers are not received
- Terminate the debugger
- Switch to **Design** perspective
- Select *File > Close All* to close all Process Editors