

Lab C - Exercise 2: Work with Large Messages

Overview

In this exercise you publish a large amount of data to a topic with a durable subscription. The subscriber will be inactive at the time of publishing so that you can monitor how EMS server persist the messages to the file store. You will also observe the size change in the store where messages are persisted.

Steps

1. Create a new process to publish a content of a file to a topic.

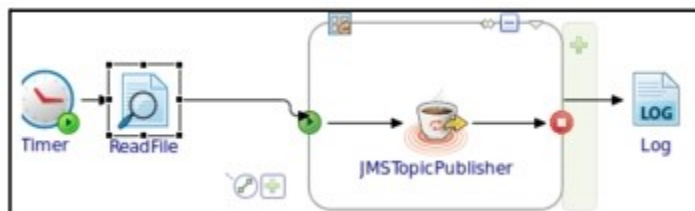
- Switch to **Design** perspective
- Copy *Publisher* process and paste it into the LabC
 - ◆ Rename the copy
 - Name: **Publisher-LargeMessage**

2. Modify the new process to send 100 MB of data - 100 messages, each with a body of 1MB.

- Open *Publisher-LargeMessage*
- Create a group to send 100 messages
 - ◆ Right-click **JMSTopicPublisher** activity
 - ◆ Select *Create a Group > Repeat*
 - ◆ Select the group and in *Properties* view configure:
 - Name: **MessageCounter**
 - Group Type: **Repeat** (default)
 - Index Name: **index**
 - Condition: **\$index=100**
 - ◆ Save

Note: The **JMS Topic Publisher** activity is configured to publish to the topic `topic.sample`. The durable subscription is created for that topic in the previous exercise.

- Add the **Read File** activity from the *File* palette to your process
- Create transitions as shown below:



- Configure the **ReadFile** activity to supply the file name
 - ◆ Select the *Input* tab
 - Filename: `"/home/tibco/EMS206Files/1_mb_file.txt"`
- Map the data input for **JMS Topic Publisher**
 - ◆ Select *Input* tab of **JMSTopicPublisher**
 - Replace existing expression for *Activity Input* > *Body* with the one below:



- ◆ **Save**

3. Clear all pending messages from the topic and compact the store associated with it.


- From the TIBCO EMS Administrator execute the following actions:
 - ◆ Purge topic `topic.sample` of any pending messages
 - `purge topic topic.sample`**
 - ◆ Verify that there is no pending messages
 - Use the command **`show topic topic.sample`**

```
tcp://educ1t:7222> show topic topic.sample
Topic:                topic.sample
Type:                 static
Properties:            *prefetch=64, *store=$sys.nonfailsafe
JNDI Names:           <none>
Bridges:               <none>
Subscriptions:        1
Durable Subscriptions: 1
Consumers:            1
Durable Consumers:    1
Pending Msgs:         0, (0 persistent)
Pending Msgs Size:    0.0 Kb, (0.0 Kb persistent)
```

- Verify that there is exactly one durable subscription for the topic `topic.sample`
 - ◆ Issue the command **`show durables`**
- Compress the store `$sys.nonfailsafe` associated with this topic
 - ◆ Issue the command: **`compact $sys.nonfailsafe 10`**
 - Confirm the operation when prompted
 - ◆ View the message count and used space in the store by using the command:
 - `show store $sys.nonfailsafe`**
 - It is possible that you have few queue messages from earlier exercises still pending in the queue - you can delete them all by using the command **`purge all queues`**

4. Run the process to publish 100 messages each sending 1MB of data.

- Configure the Components list
 - ◆ *Publisher-LargeMessage*
 - Start the application
 - ◆ Right-click on any process diagram and choose ***Run BusinessWorks Applications***
- OR**

With focus on any process diagram, click the "Run BWApplication" icon  in the toolbar

- ◆ Monitor application progress in *Console* view
 - The log message with the EMS message ID indicates that all messages are published and process completed

```
pr.frwk.Application - TIBCO-THOR-FRWK-300000: Started BW Application [EMS206Project.appl  
her] com.tibco.thor.frwk.Application - Started by BusinessStudio, ignoring .enabled settin  
rocess Worker-1] c.t.b.p.g.Log.EMS206Project.Log - ID:EMS-SERVER.3D12561D259710E:103
```

- ◆ **Terminate** the application
- From the Administration Tool check the number of pending messages:
show topic topic.sample
- ◆ View the message size and the message count stored in \$sys.nonfailsafe
show store \$sys.nonfailsafe

```
File Size:          102.0 MB  
Free Space:         2.0 MB (1.9%)  
Used Space:         100.0 MB (98.1%)  
Fragmentation:      0%  
Message Count:      100  
Message Size:       100.0 MB
```

5. Run your durable subscriber to consume the messages.

- Modify the mapping in the process to avoid printing large messages to the *Console* view
 - ◆ Select the *StaticDurableSubscriber* process diagram
 - Click on the **Log** activity
 - In *Properties*, select the *Input* tab
 - Right-click *Activity Input* > **message** and select *Remove mapping*
 - Drag the **\$JMSTopicSubscriber/JMSHeaders/JMSMessageID** from *Data Source* to the **message** in *Activity Input*
 - **Save**
- Configure the Components list with:
 - ◆ *StaticDurableSubscriber*
- Run your application
 - ◆ Select *Console* view and wait until the log messages stop
- Using EMS Administration Tool verify that there is no pending messages
 - ◆ Message count and Message size is 0 in the store \$sys.nonfailsafe
- **Terminate** the application and switch to **Design** perspective