

Enterprise-Scale Software Development (COMP5348)

Tutorial Week 9, Semester 1, 2009

Part A - MessageBox

Setup

1. Download the source package, unzip it. You should see three “messagebox” folders.
2. Import the projects into NetBeans.

Create your database.

1. In Netbeans, under the Runtime tab, create a New Database Connection with the following parameters:
 - URL - jdbc:derby://localhost:1527/msgbox;create=true
 - User: APP Password: APP
2. Run schema.sql from Netbeans

Deploy messagebox-ejb

1. Start your Sun App Server - Start → Programs → Sun Microsystems → Application Server PE 9 → Start Default Server
2. Go to the Admin console <http://localhost:4848>
 - user: admin password: student
3. Setup your JDBC resource Resources → JDBC → Connection Pools → DerbyPool. Change the DatabaseName property to msgbox.
4. Under the Common Tasks pane, select EJB Modules and click on the Deploy button. Upload the messagebox-ejb/dist/messagebox-ejb.jar package. messagebox-ejb is one of the project folders.

Run Event Generator

Inside Netbeans, run the messagebox-rmi.MessageBoxSim file.

Part B - JMS

Create JMS Resources

1. Go to your Admin Console. Under Resources → JMS Resources → Connection Factories.
2. Create a new ConnectionFactory with JNDI Name “jms/MessageBoxConnectionFactory” and type javax.jms.ConnectionFactory.
3. Go to your Admin Console. Under Resources → JMS Resources → Destination Resources.
4. Create a new Destination with JNDI Name “jms/MessageBoxQueue” and type javax.jms.Queue and Name property of “MessageBoxQueue”.
5. This step is **IMPORTANT** if you are working in the Undergraduate Access Lab i.e. computers in ug.cs.usyd.edu.au domain.
 - In the Admin Console, go to Configuration → Java Message Service → JMS Hosts → default_JMS_host. Add the ‘ug.cs.usyd.edu.au’ suffix to the “Host:” field e.g. change pc-112-25 to pc-112-25.ug.cs.usyd.edu.au.
 - Save.

If you are working in the Undergraduate Access Lab, your computer will appear to hang/slow down when running the following programs especially through Netbeans. This is unavoidable but the programs will work.

Producing & Consuming Messages

1. In NetBeans, run messagebox-jms.MsgBoxProducer. Note the output.
2. Now run MsgBoxAsync. Note output and comment.
3. Now run MsgBoxSync.
4. Run MsgBoxProducer again. Note output of MsgBoxSync and comment.

Part C – Convert the Event Generator to use JMS

This is part of the next assignment. You'll need to design a message structure to fit into JMS Messages e.g. a String format for the box events.

Discuss with your team.