

Publishing JD Edwards Real Time Events to Oracles Enterprise Service Bus

Overview

In this tutorial you will be publishing JD Edwards EnterpriseOne Real Time Events (RTE) to Oracles Enterprise Service Bus (ESB). This process utilizes JMS Queues as the mechanism for passing the Real Time Events from JD Edwards EnterpriseOne to ESB.

This Tutorial leverages the Reference Implementation (RI) for JD Edwards EnterpriseOne Real Time Events to ESB (RTForOutbound.zip) – which can be found on the “system\classes\samples\ESB\” directory of the JD Edwards EnterpriseOne install.

There are several steps to configure, test, and run this process – including:

1. Creating the JMS Queue Connection Factory.
2. Configuring the JD Edwards Transaction Server to publish RTE's to JMS Queue.
3. Test publishing RTE from JD Edwards EnterpriseOne to JMS Queue.
4. Import the Reference Implementation to JDev.
5. Register and Test the sample on the ESB Server.

Pre-reqs:

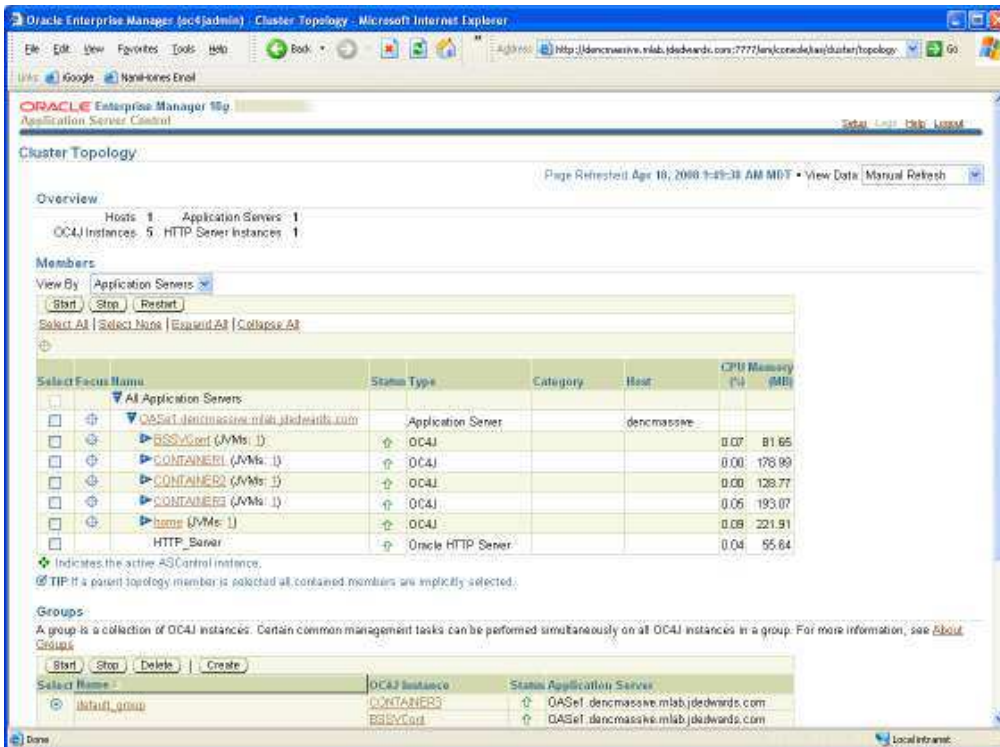
- JD Edwards EnterpriseOne 8.12/8.97 Install.
- You are familiar with JD Edwards EnterpriseOne Server Manager
- You have installed SOA suite with ESB console
- You have installed JDeveloper 10.1.3.1.0
- You have found RTForOutbound.zip in the system\classes\samples\ESB\ directory, and you have extracted the file.

For your note: Write down all your machine information.

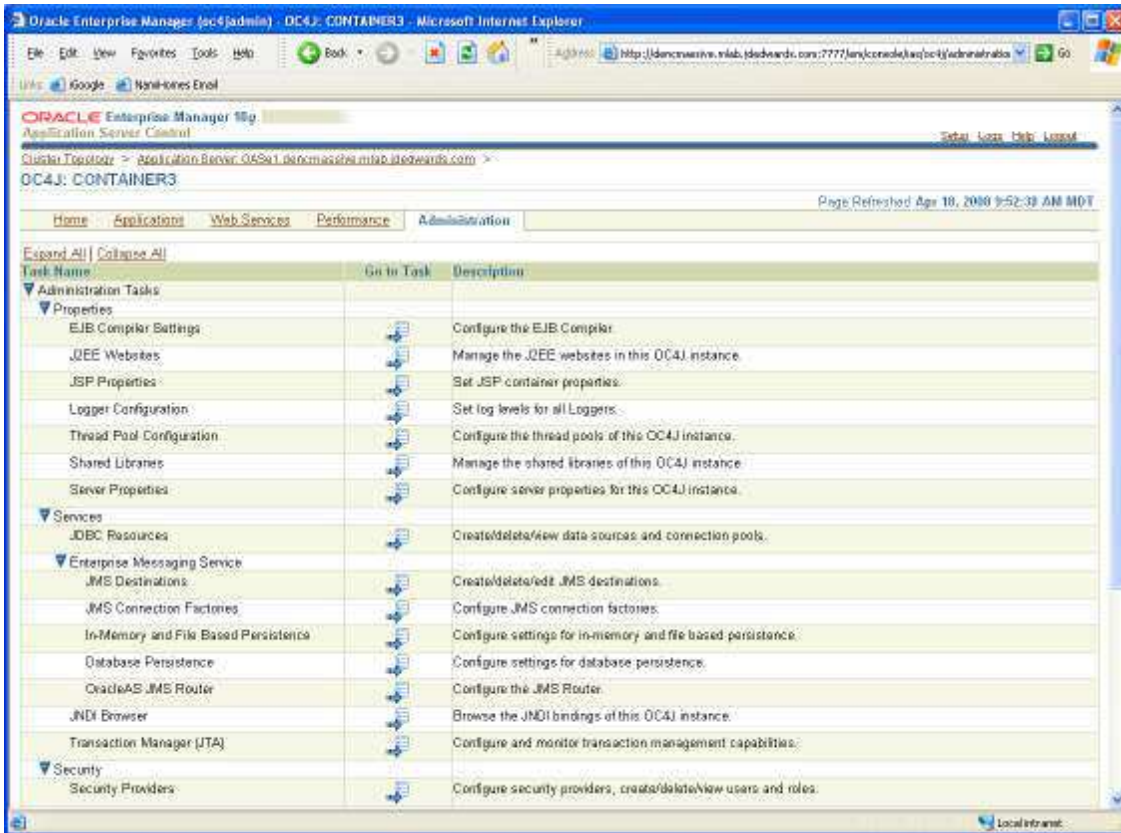
Server/Machine	Machine Information	Example:
Enterprise Server:		http://jde_enterpriseone:5800
HTML Client:		http://jde_html:12001/jde/E1Menu.maf jde/jde
Server Manager:		http://jde_manage:8999/manage jde_admin/jde_admin
Transaction Server:		http://jde_trans:7777/em oc4jadmin/oc4jadmin
SOA Suite/ESB server		http://soa_suite:8888 oc4jadmin/welcome1

Step 1: Create JMS Queue and Connection Factory in OAS (where Transaction Server is installed)

1. Login to admin console of OAS where the Transaction Server is installed.
note: we installed Transaction Server in CONTAINER3 instance



2. Click on the **CONTAINER3** link and click on the Administration link.

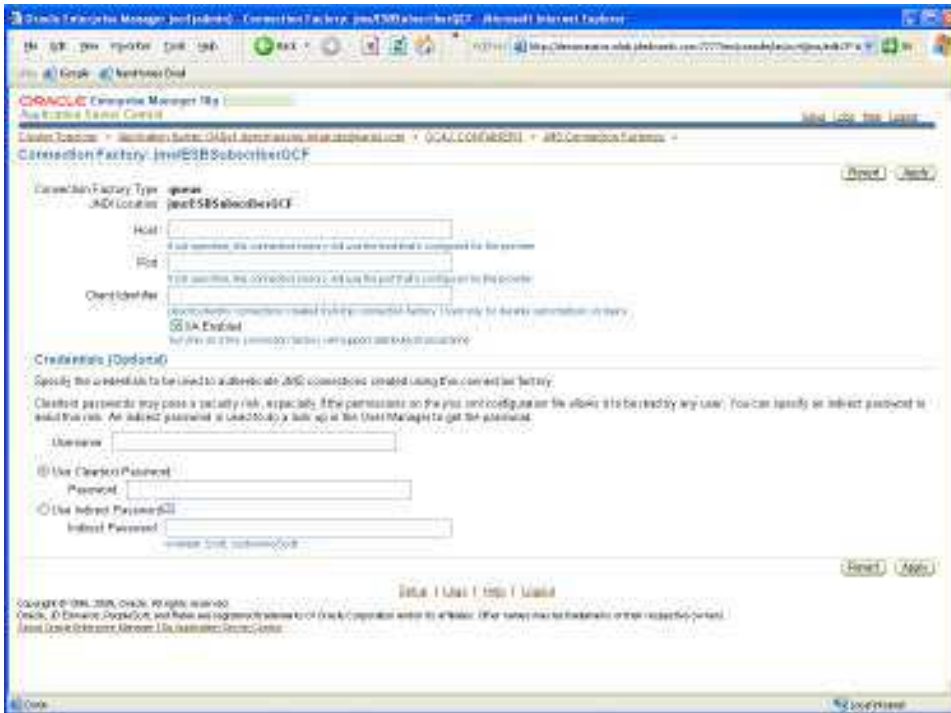


3. Click on the “Go to Task” icon for “JMS Connection Factories”

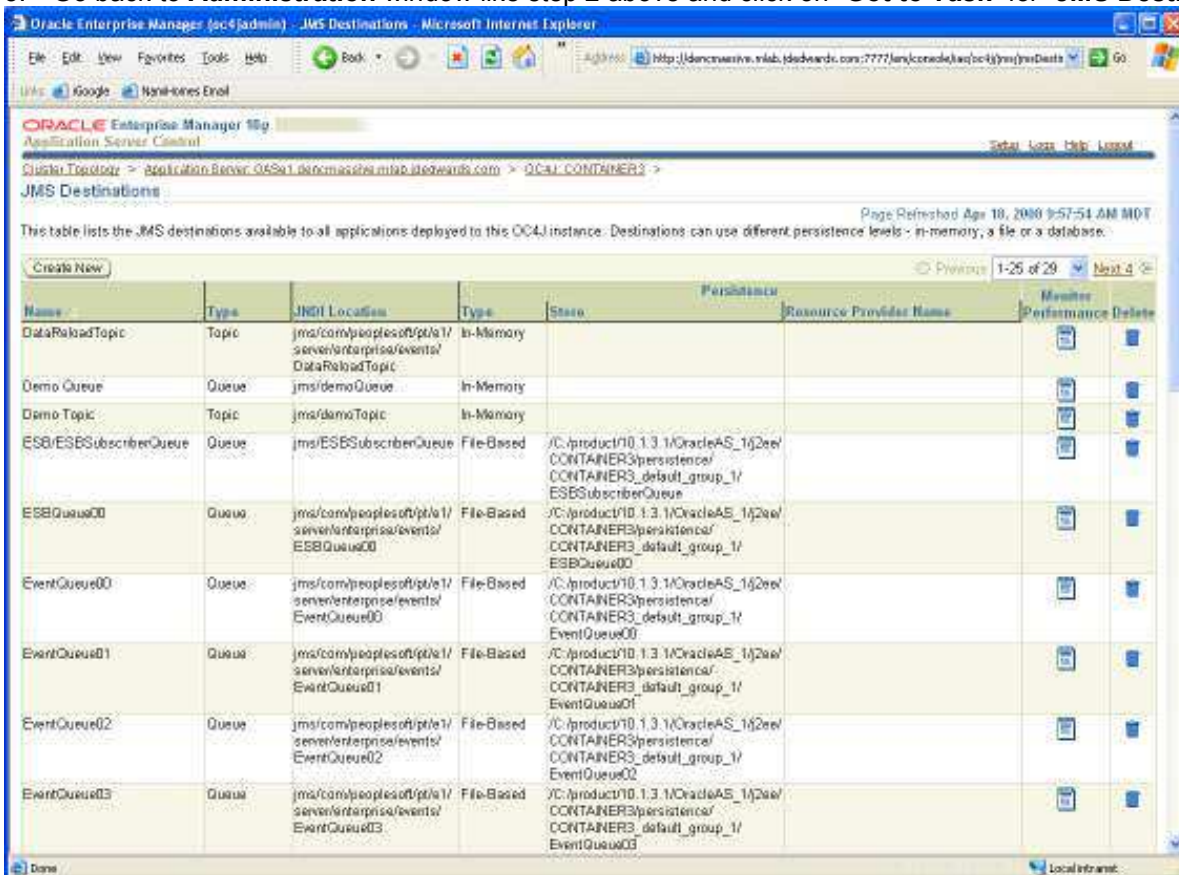


4. Create New and enter the values as follows:

ConnectionFactoryType = **Queue**
 JNDI Location = **jms/ESBSubscriberQCF**
 XA Enabled – **Select**



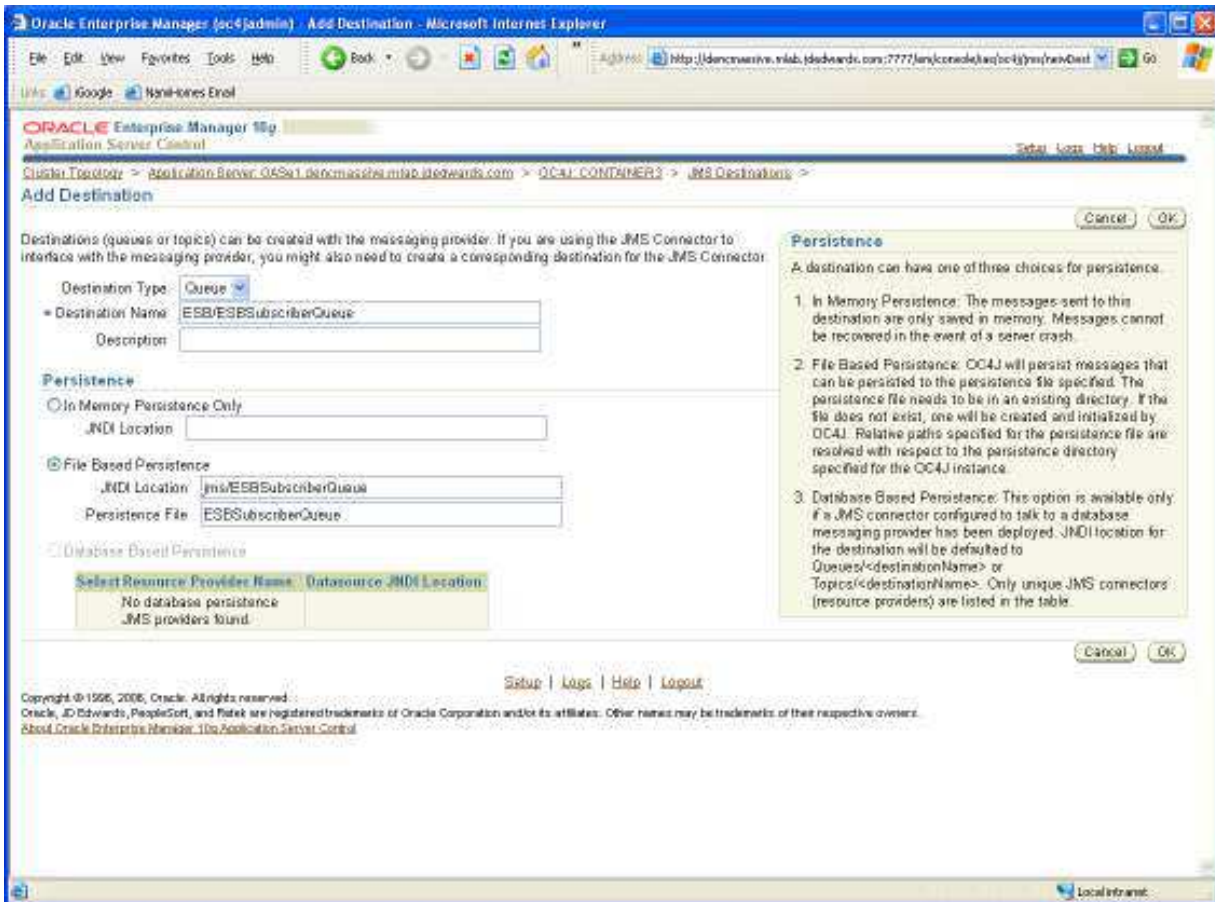
5. Go back to **Administration** window like step 2 above and click on **“Got to Task”** for **“JMS Destinations”**.



6. Click **Create New** and enter values as follow:

Destination Type = Queue

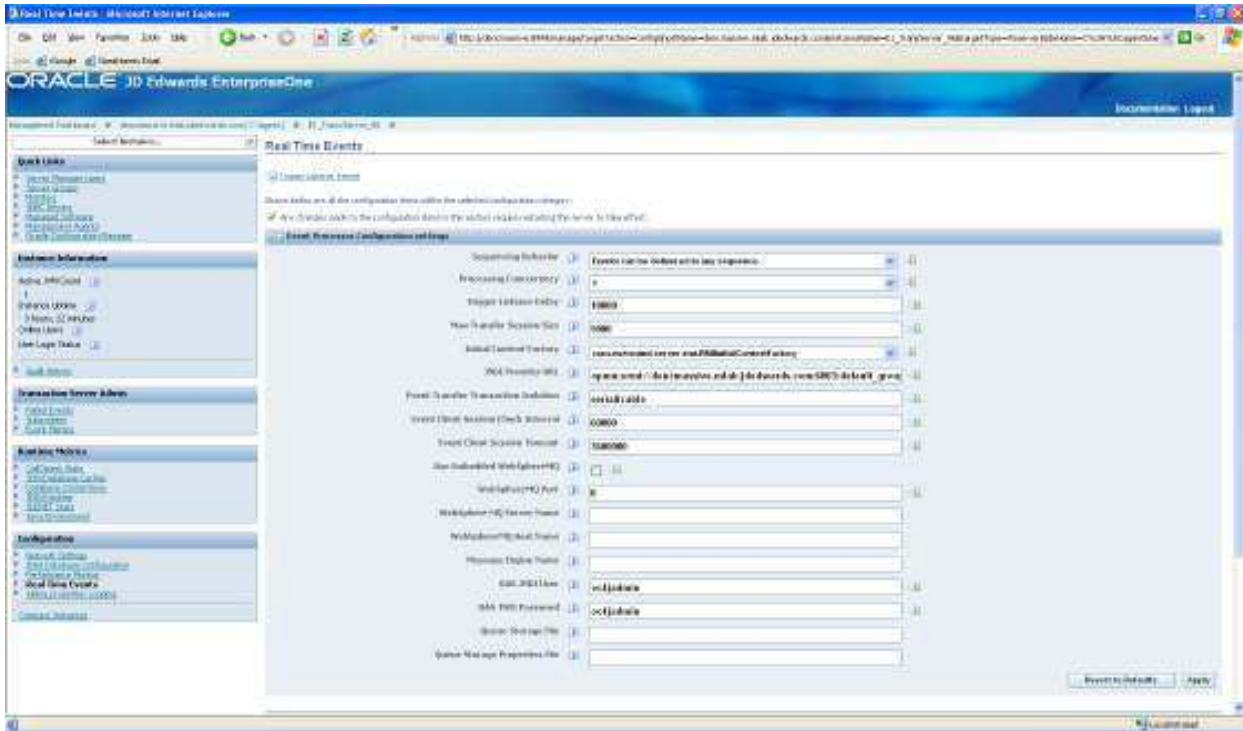
Destination Name = **ESB/ESBSubscriberQueue**
JNDI Location = **jms/ESBSubscriberQueue**
Persistence File = **ESBSubscriberQueue**



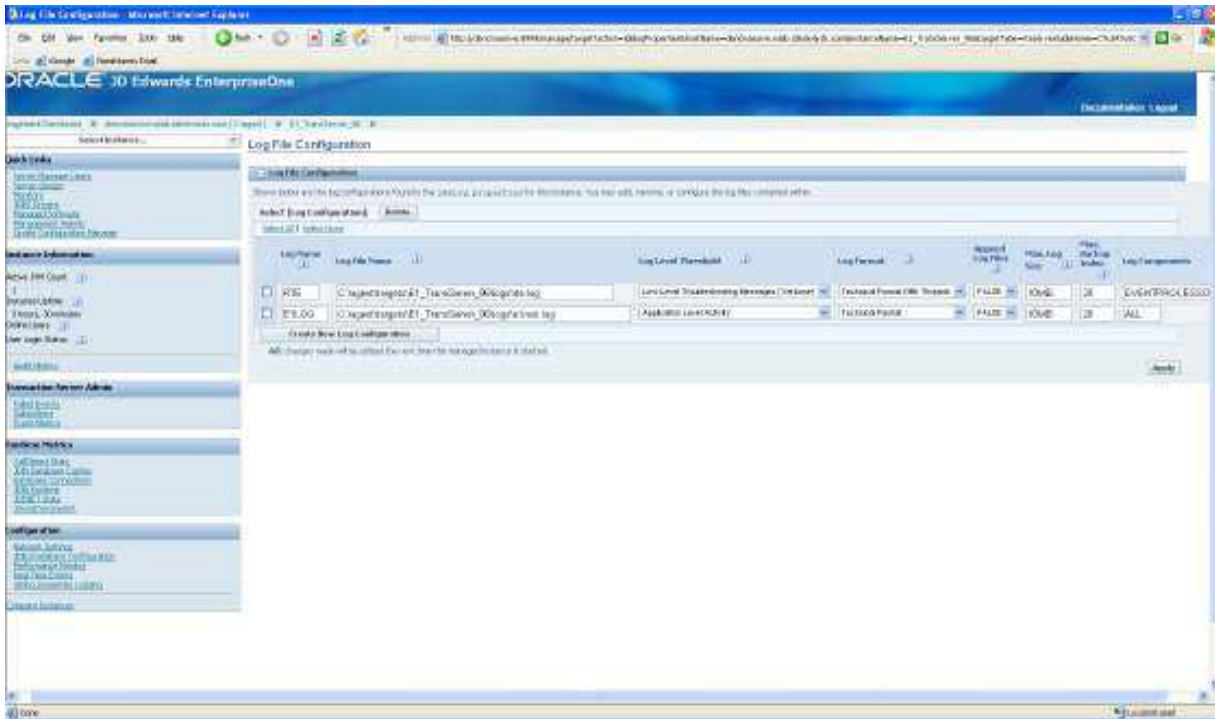
7. Newly created Queue will be appeared like the screenshot in step number 5.
8. Edit jas.ini of your Transaction Server from **Server Manager** and click on the “**Real Time Events**” under **Configuration** (see below).

OAS JNDI User: **oc4jadmin (user for OAS/TS)**
OAS JNDI Password: **oc4jadmin (Password for OAS/TS)**

Note: you cannot directly change this in your jas.ini you must do it from server manager.



9. Add a new log file for **EVENPROCESSOR** for troubleshooting purpose. – click on “**jdelog.properties logging**” link under “**configuration**” in Server Manager. Add info below:



10. Start the transaction server from Server Manager. And monitor your log. The rtxxxxxx.log should grow about 32K and it should stop growing. If this keeps increasing then you might be experiencing some errors in the logs. (X:\agent\targets\E1_TransServer_96\logs)

11. **STOP THE Transaction Server from Server Manager.**

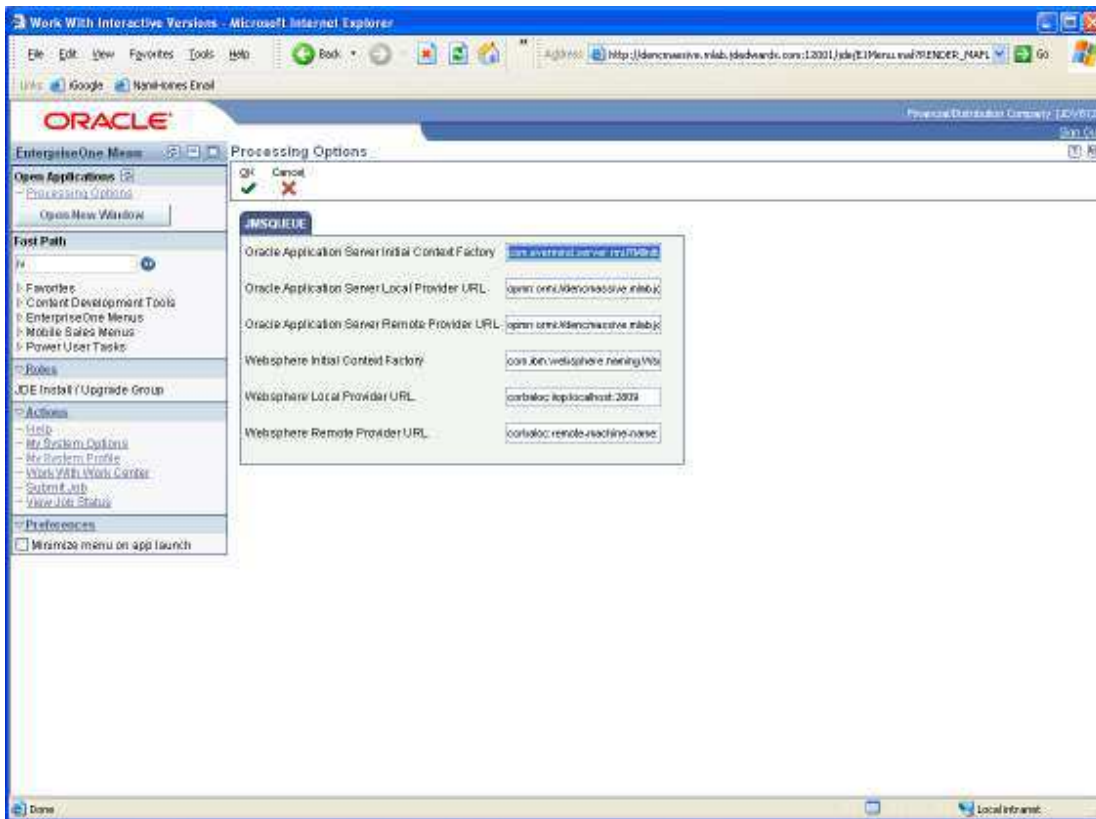
Step 2: Create ESB Subscriber Information in JDE E1 (P90702A)

1. Create an E1 user for an ESB subscriber – make sure you can log in to HTML client using the new user ID. (I created a user ID called **ESB**)
2. Go to Fast Path and type **P90702A**
3. Click Add and enter following values:

Subscriber:	ESB
Transport Type :	JMSQUEUE
Delivery Format :	XML
Application Server :	OAS
Queue location	LOCAL
QueueConnectionFactoryJNDI	jms/ESBSubscriberQCF
Queue Name:	jms/ESBSubscriberQueue
ContextFactory	com.evermind.server.rmi.RMIInitialContextFactory
providerURL	opmn:ormi://dencmassive.mlab.jdedwards.com:6003:CONTAINER3

opmn:ormi://YourTransactionServerName:port:TSInstanceName
port: this is OPMN port number. From your SOA suite machine, type following command to find out the port number.
SOA install\opmn\bin\opmnctl status -port
Repose should be: **DENCCAPITOL:6003**
TSInstanceName: The name of the instance of your transaction server.
See screenshot of Step 1 #1.

Note: You can update the processing option for P90702A for **Contextfactory** and **provider URL**. So, next time you create another subscriber, the correct info gets populated:



4. Add RTABOUT(Event) and JDV812 (environment) and activate it.

Subscribed Events - Microsoft Internet Explorer

File Edit View Favorites Tools Help Back Home Stop Refresh Forward Go

Address http://dancswriter.mdb.oracle.com:12001/ide/E1Menus.rvt?ENCER_MAP1

Links Google Non-Oracle Email

ORACLE Personal Database Company [20/07/03] Sun 04

EnterpriseOne Menu

Open Applications

- Subscribed Events
- Work With Interactive Messages

Open New Window

First Path

p99792x

- Favorites
- Content Development Tools
- EnterpriseOne Menus
- Mobile Sales Menus
- Power User Tasks

Views

JDE Install / Upgrade Group

Actions

- Help
- My System Options
- My System Profile
- Work With Work Center
- Submit Job
- View Job Status

Preferences

Minimize menu on app launch

Subscribed Events

Get Find Delete Cancel Lock

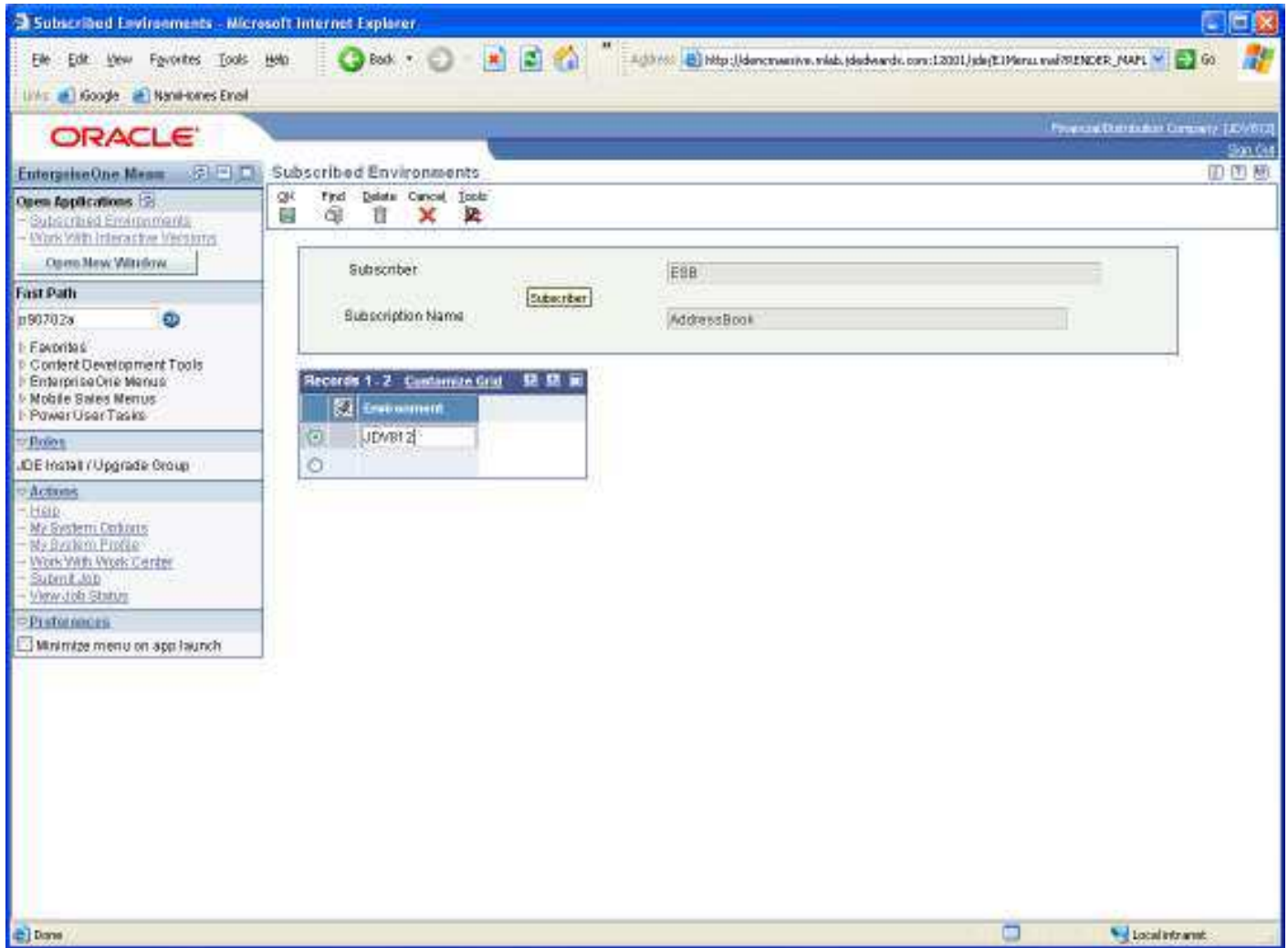
Subscriber: EBB

Subscription Name: AddressBook

Records 1 - 2 Customized Grid

<input checked="" type="checkbox"/>	Event Type	Event Category
<input type="radio"/>	RTABOUT	RTE
<input type="radio"/>		

Done Local Intranet



5. RESTART E1

Note: If you have any other subscribers, you might want to disable them except ESB subscriber for testing.

Step 3: Test RTE Message from JDE E1 to ESB Subscriber Queue.

1. Create an Address Book info from P01012
2. At this point, you should have Transaction Server stopped (see Step 1 #11), so make sure you see a RTABOUT message in F90710.
3. If you see the message, then start the Transaction Server
 - a. Transaction Server will pick up the message from F90710 and the message passes through the ESBQueue00 and it ends up in ESBSubscriberQueue.
 - b. Open
 O:\product\10.1.3.1\OracleAS_1\jee\CONTAINER3\persistence\CONTAINER3_default_group_1 folder and see if you have more than 1KB for the ESBSubscriberQueue.

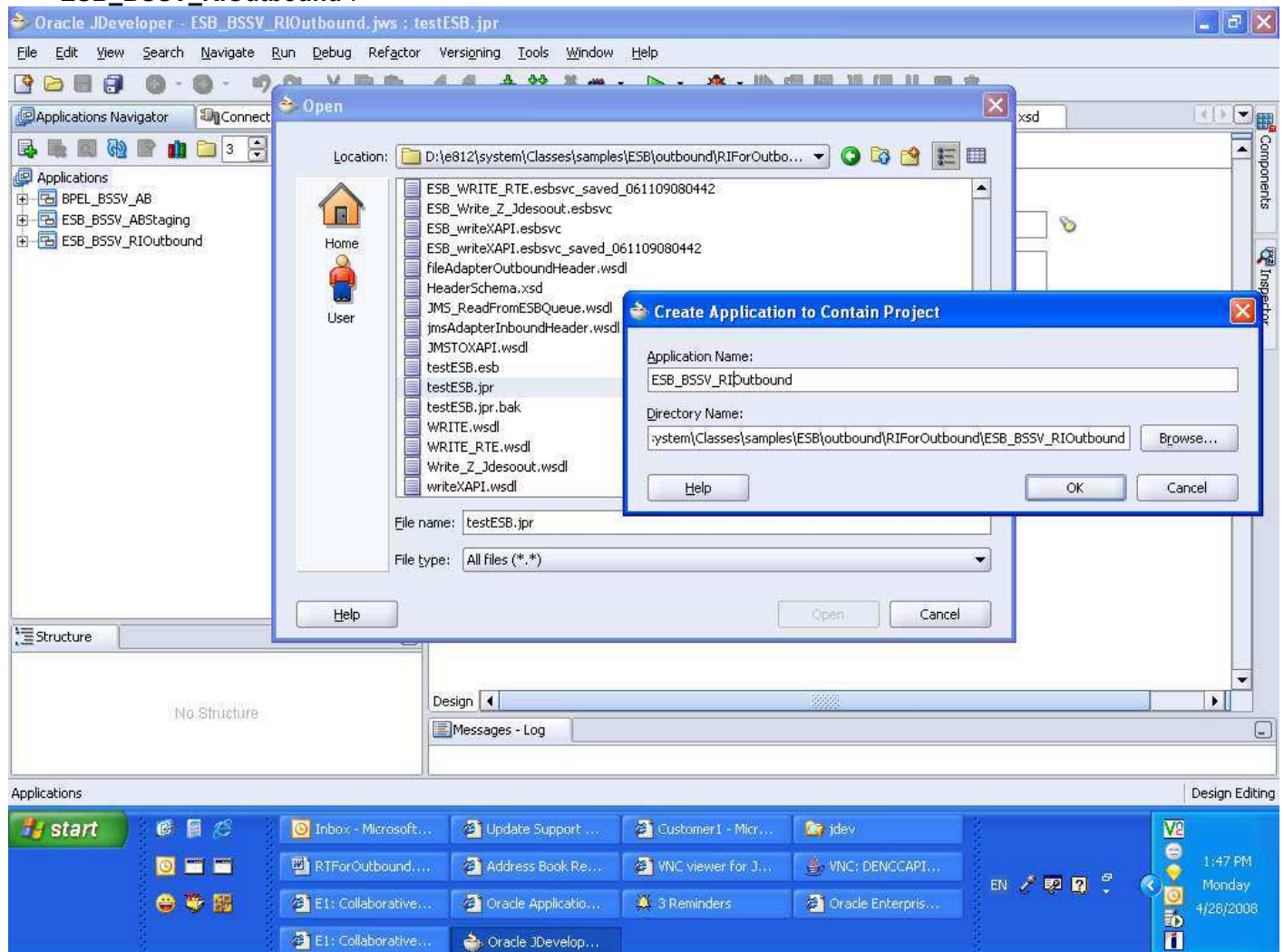
- c. You can check to see if you have a message in ESBSsubscriberQueue using OAS. Please review the guide "**How to view the queue.doc**". If it is working successfully, then you'll see a message in the "ESBSsubscriberQueue" queue (see below).

Return Value

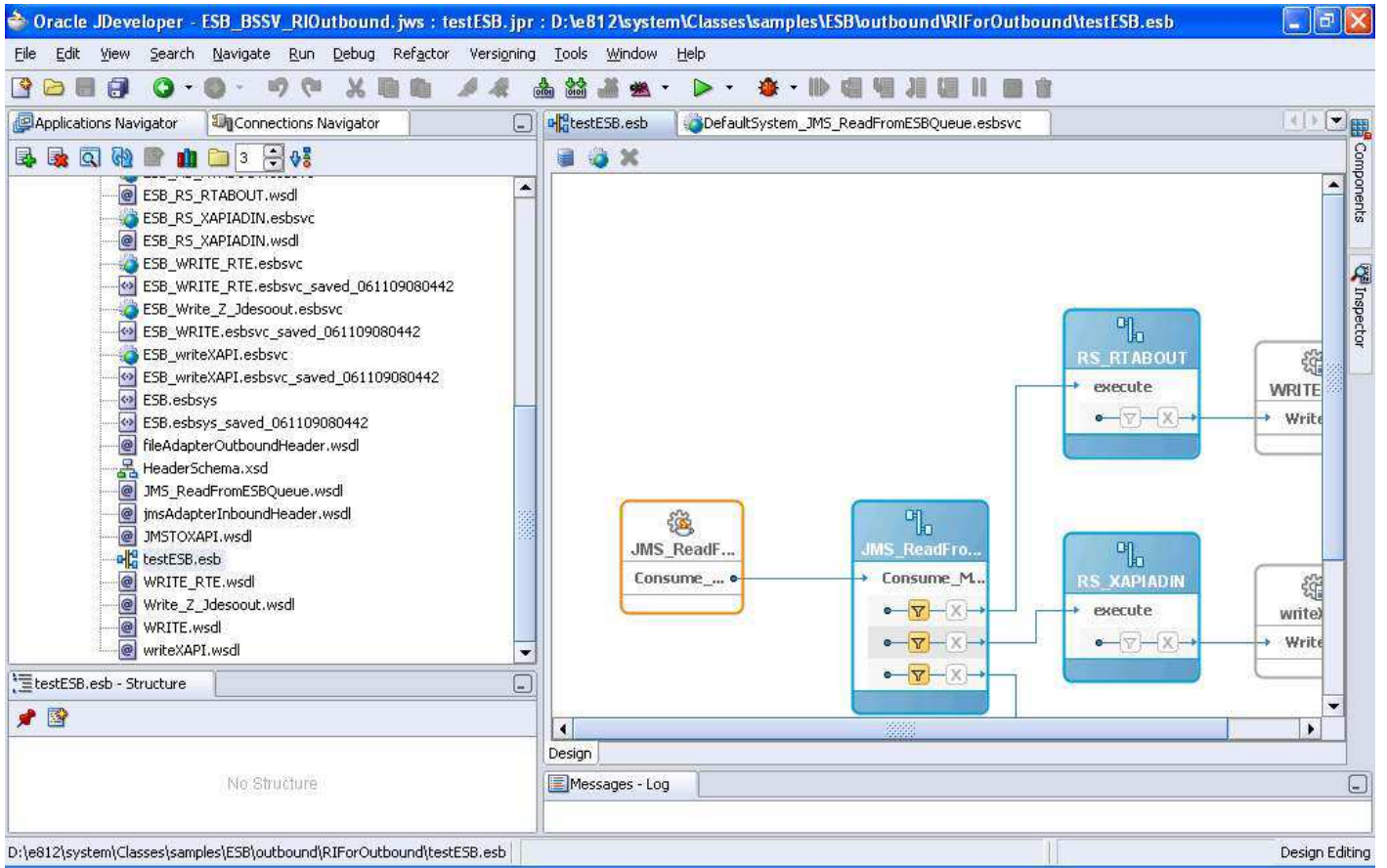
```
<textmessage>
  <header>
    <JMSCorrelationID value="" />
    <JMSDeliveryMode value="PERSISTENT" />
    <JMSDestination value="Queue[ESB/ESBSsubscriberQueue]" />
    <JMSExpiration value="0" />
    <JMSMessageID value="ID:Oc4jJMS.Message.dencmassive.4b6cd8a4:1198662edb3:-8000.27230" />
    <JMSPriority value="4" />
    <JMSRedelivered value="false" />
    <JMSReplyTo value="null" />
    <JMSTimestamp value="1209411694193" />
    <JMSType value="" />
  </header>
  <properties>
    <string key="JMSXConsumerTXID" value="" />
    <int key="JMSXDeliveryCount" value="1" />
    <string key="JMSXProducerTXID" value="Oc4jJMS.Session.dencmassive.4b6cd8a4:1198662edb3:-8000.27228.0" />
    <long key="JMSXRcvTimestamp" value="1209411696521" />
    <string key="JMSXUserID" value="" />
    <string key="JMS_OC4J_Type" value="textmessage" />
  </properties>
  <textbody>
    <string value="<?xml version = '1.0' encoding = 'UTF-8'?>
<jdeResponse pwd="" token="" role="*ALL" type="realTimeEvent" category="RTE" user="JDE" session="c71c90" environment=
on><version>ZJDE0001</version><sessionID>c71c90</sessionID><environment>JDV812</environment><host>DENCBELFC
elInfo></header><body elementCount="1"><detail_D0100085A date="04282008" name="AddressBookMasterRealTimeWrapp
essType3/><cAddressType2/><szCategoryCodeAddressBook2/><szTaxId/><szEdiTranslationFormat/><szTypeTransaction/><
12 /><szProgramId><cPersonCorporationCode/><szCategoryCodeAddressBk26/><szCategoryCodeAddressBk25/><szGIBank
on/><cAddressTypeEmployee/><szCreditMessage/><szCountry/><szUserId/><szReportCodeAddBook020/><jdDateBeginning
dBook019/><szWorkStationId/><mnTimeScheduledIn>0</mnTimeScheduledIn><szReportCodeAddBook018/><szReportCode
zReportCodeAddBook011/><szReportCodeAddBook010/><mnAddressNumber6th>0</mnAddressNumber6th><szContactTitle
ssNumber4th>0</mnAddressNumber4th><szTradingPartnerId/><cSubledgerInactiveCode/><jdUserReservedDate/><szReport
eAddBook005/><szUserReservedCode/><szReportCodeAddBook004/><szAlternateAddressKey/><szReportCodeAddBook003
essNumber1st><mnEdiLineNumber>0</mnEdiLineNumber><szPhoneAreaCode2/><szPhoneAreaCode1/><szEdiBatchNumbe
</szMailingName><mnParentNumber>0</mnParentNumber><szUserReservedReference/><mnAddressNumber3rd>0</mnAc
astUpdated></detail_D0100085A></body></event></jdeResponse>" />
    </textbody>
  </textmessage>
1 messages processed
```

Step 4: Import the “RIForOutbound.zip” to JDev.

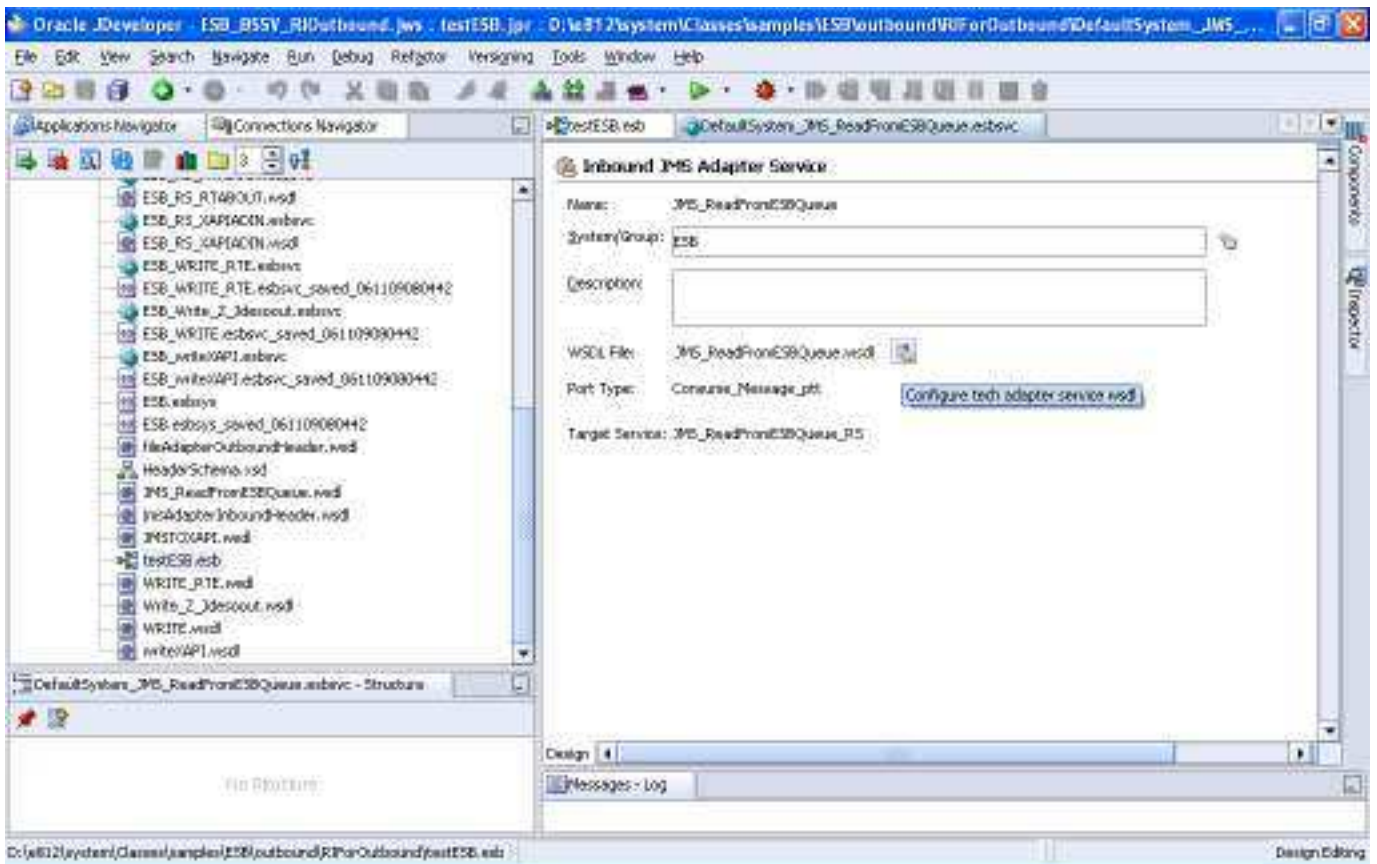
1. Open JDev and import “testESB.jpr” from the extracted “RIForOutbound.zip” folder. I named the application “ESB_BSSV_RIOutbound”.



2. Open “testESB.esb”file



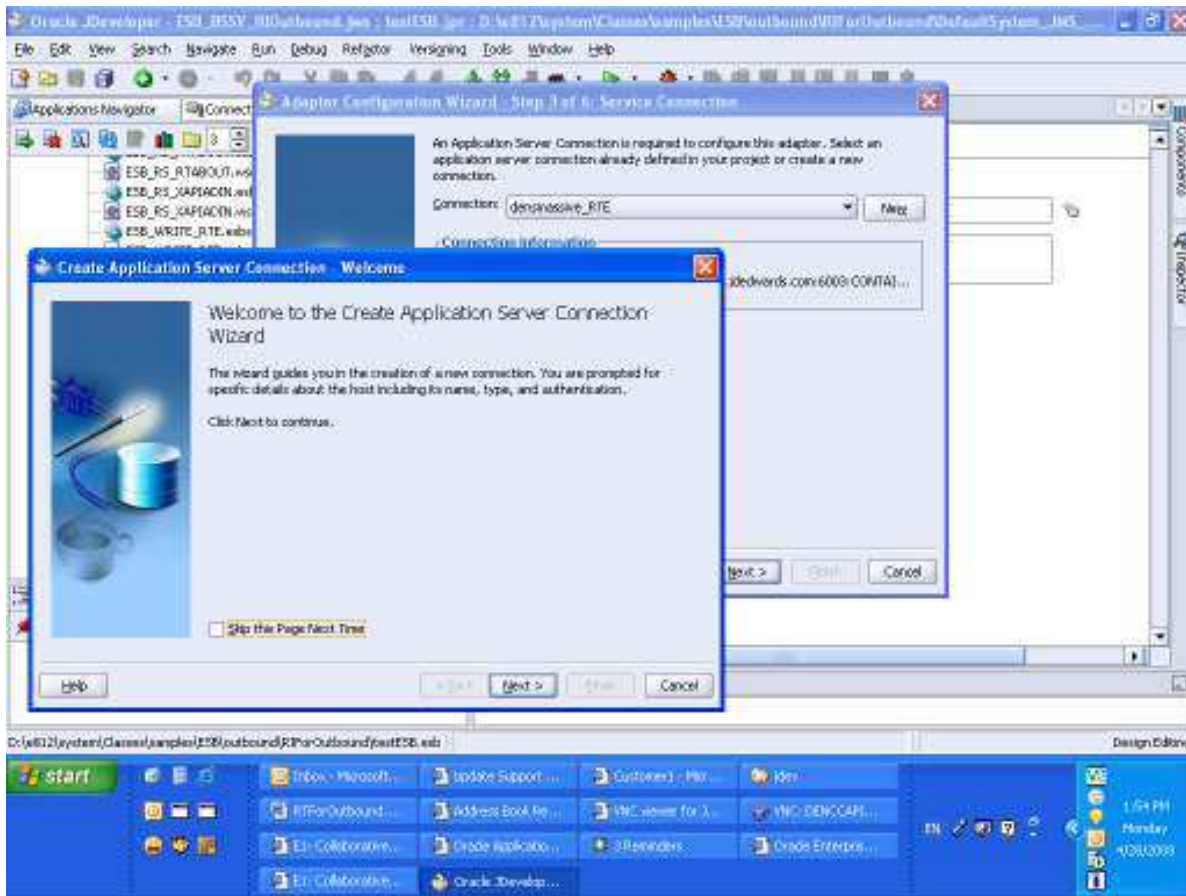
3. click on the icon on the “JMS_ReadF...” (JMS_ReadFromESBQueue). You’ll see following window:



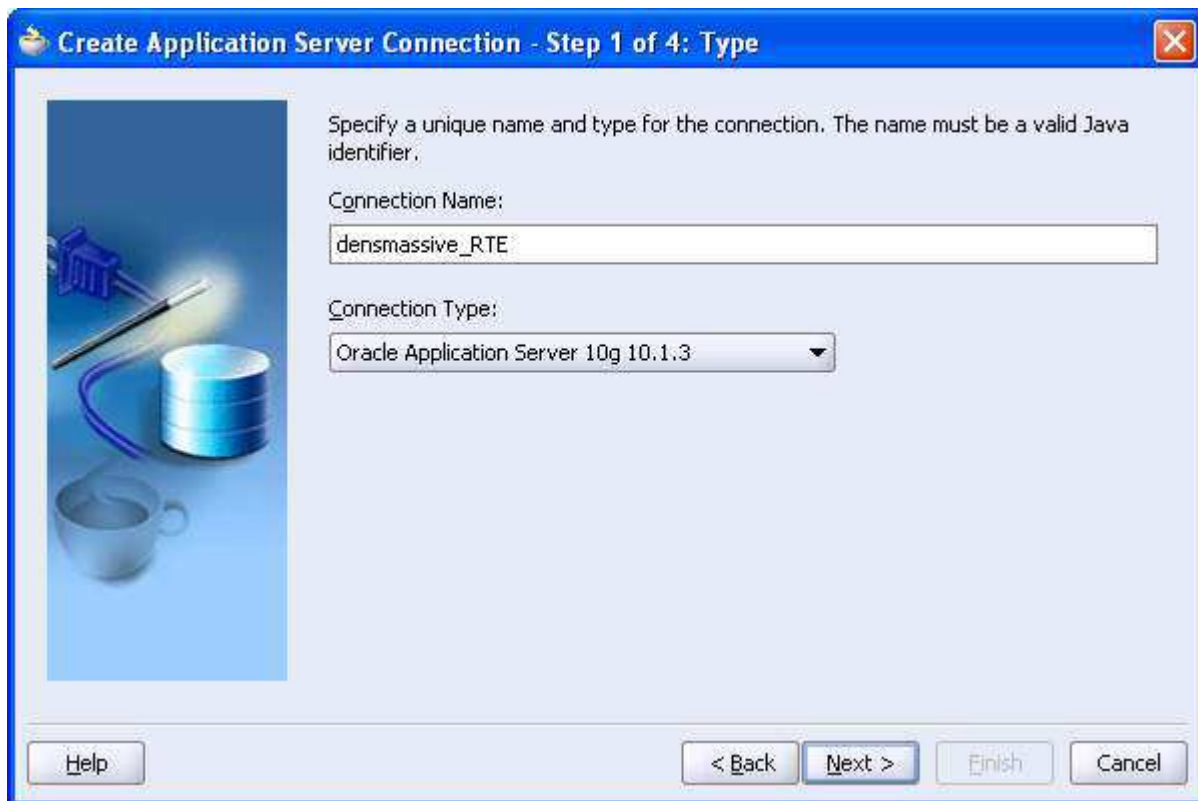
4. Click on the “**Configure tech adapter service wsdl**” icon right next to the “**WSDL File: JMS_ReadFromESBQueue.wsdl**”
5. The Adapter Configuration Wizard will start Click on Next twice and take the defaults.
6. Select “Oracle Enterprise Messaging Service (OEMS)” Memory/File and click next



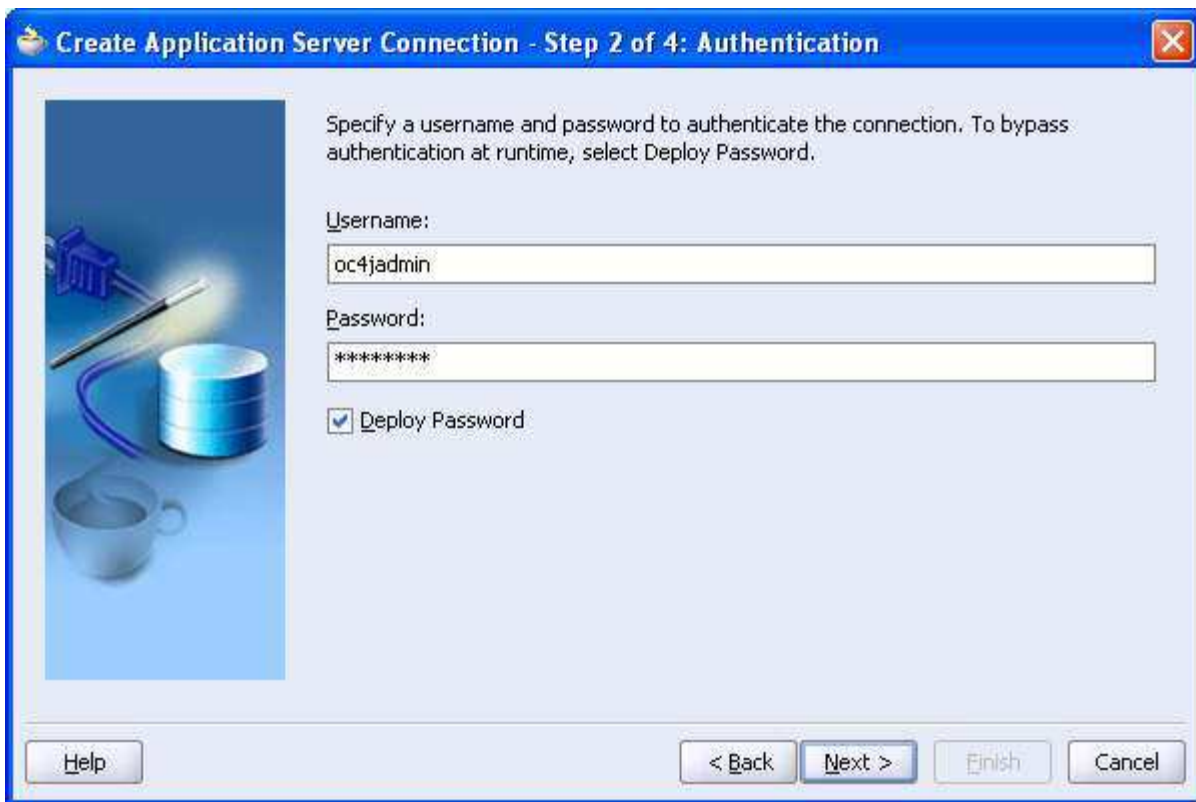
7. Click New to create a connection to your Transaction Server queue: Create Application Connection Wizard will show up (see below)



8. Type your connection name and select “**Oracle Application Server 10g 10.1.3**” for your Connection Type:



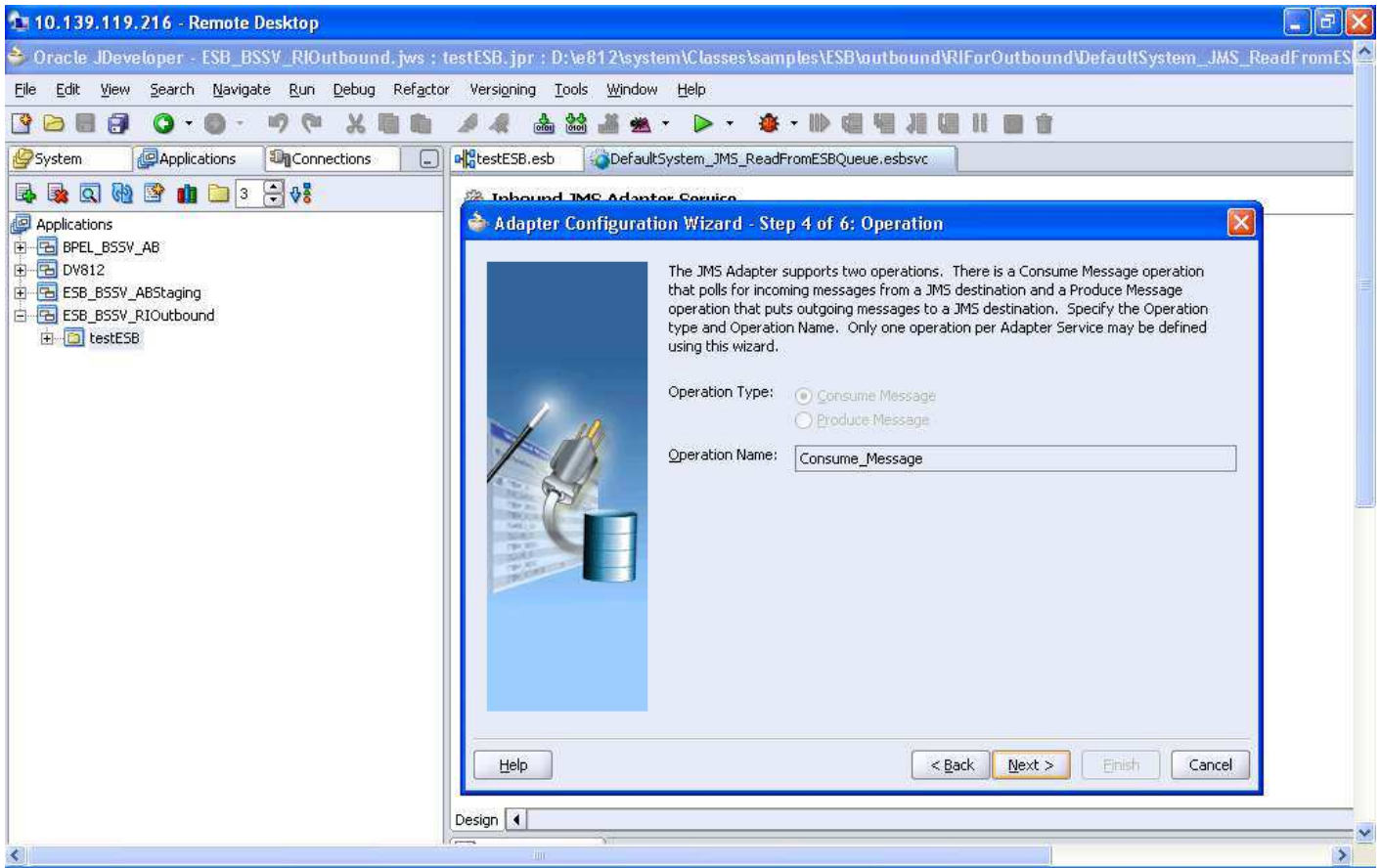
9. Enter your username: and Password: for your transaction server OAS and check “Deploy Password”.



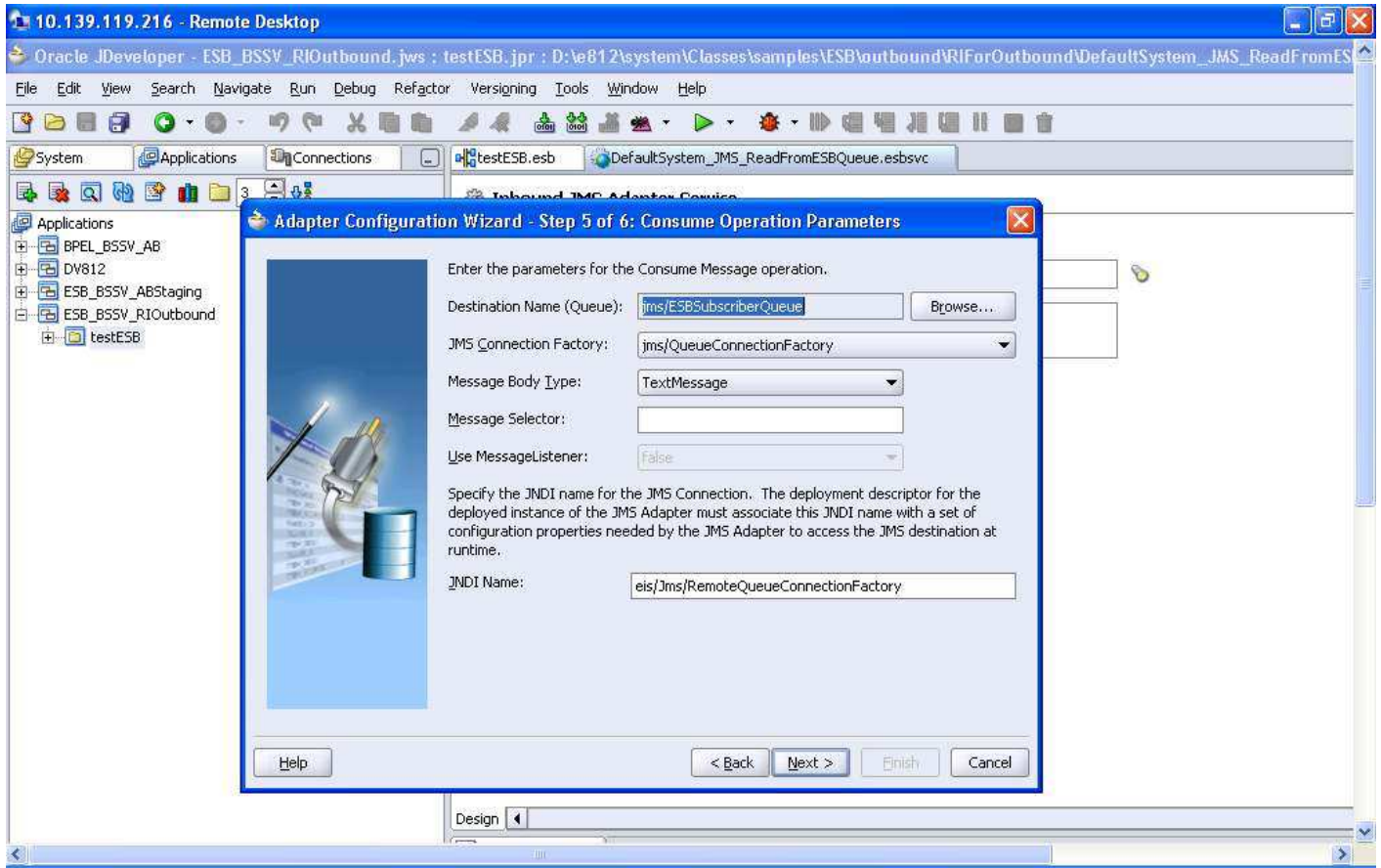
6. Select **"Single Instance"**
 - a. Host Name: your TS OAS name
 - b. OPMN Port: See Step2 #3
 - c. OC4J Instance Name: See Step2 #3



7. Test the connection and make you get **“Success!!”** message
8. Now, you should be back in the STEP 4 of the Adapter configuration Wizard page.



9. Enter your JMS Queue info:
Destination Name (Queue): jms/ESBSubscriberQueue (You can browse to it)
JMS Connection Factory: jms/QueueConnectionFactory
Message Body Type: TextMessage
Message Selector:
JNDI Name: eis/Jms/RemoteQueueConnectionFactory



10. Open `oc4j-ra.xml` in `<SOAinstall>\j2ee\home\application-deployment\default\jmsadater`
11. Add below entry at the end of the file:

```

<<connector-factory location="eis/Jms/RemoteQueueConnectionFactory" connector-name="Jms Adapter">
  <config-property name="connectionFactoryLocation" value="jms/QueueConnectionFactory" />
  <config-property name="factoryProperties"
    value="java.naming.factory.initial=oracle.j2ee.rmi.RMIInitialContextFactory;java.naming.provider.url=ormi://de
ncmassive.mlab.jdedwards.com:12404;java.naming.security.principal=oc4jadmin;java.naming.security.creden
tials=oc4jadmin" />
  <config-property name="acknowledgeMode" value="AUTO_ACKNOWLEDGE" />
  <config-property name="isTopic" value="false" />
  <config-property name="isTransacted" value="false" />
  <config-property name="username" value="oc4jadmin" />
  <config-property name="password" value="oc4jadmin" />
  <connection-pooling use="none" />
  <security-config use="none" />
</connector-factory>

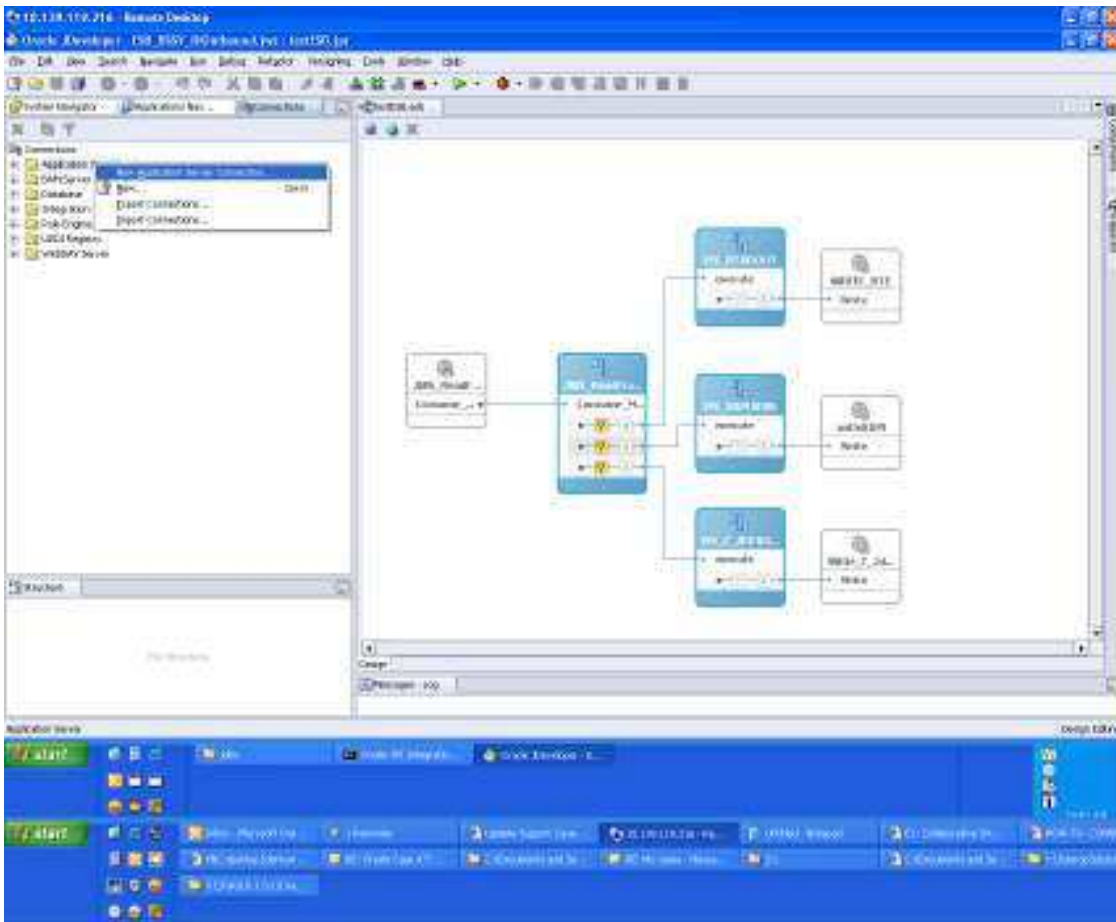
```

12. Save the file and restart SOA Suite

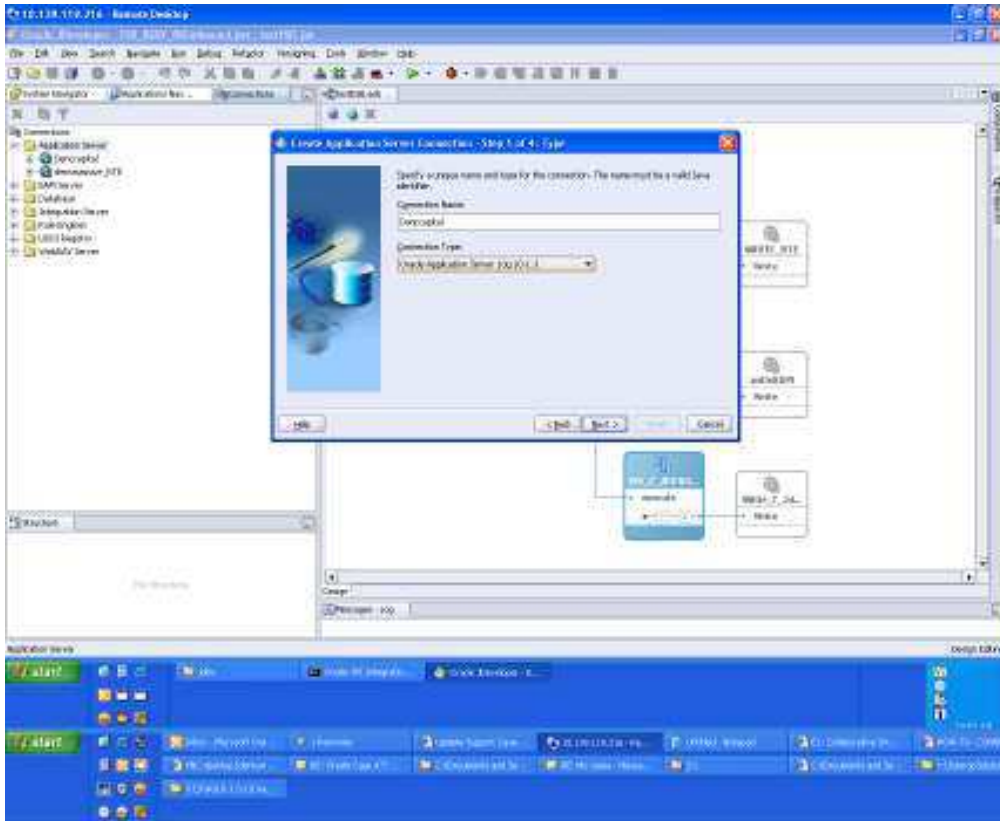
Step 5: Register and Test to Sample on the ESB Server

1. Open JDeveloper
2. Start SOA Suite
3. Create **Application Server Connection** and **Integration Serer Connection** for your SOA Suite

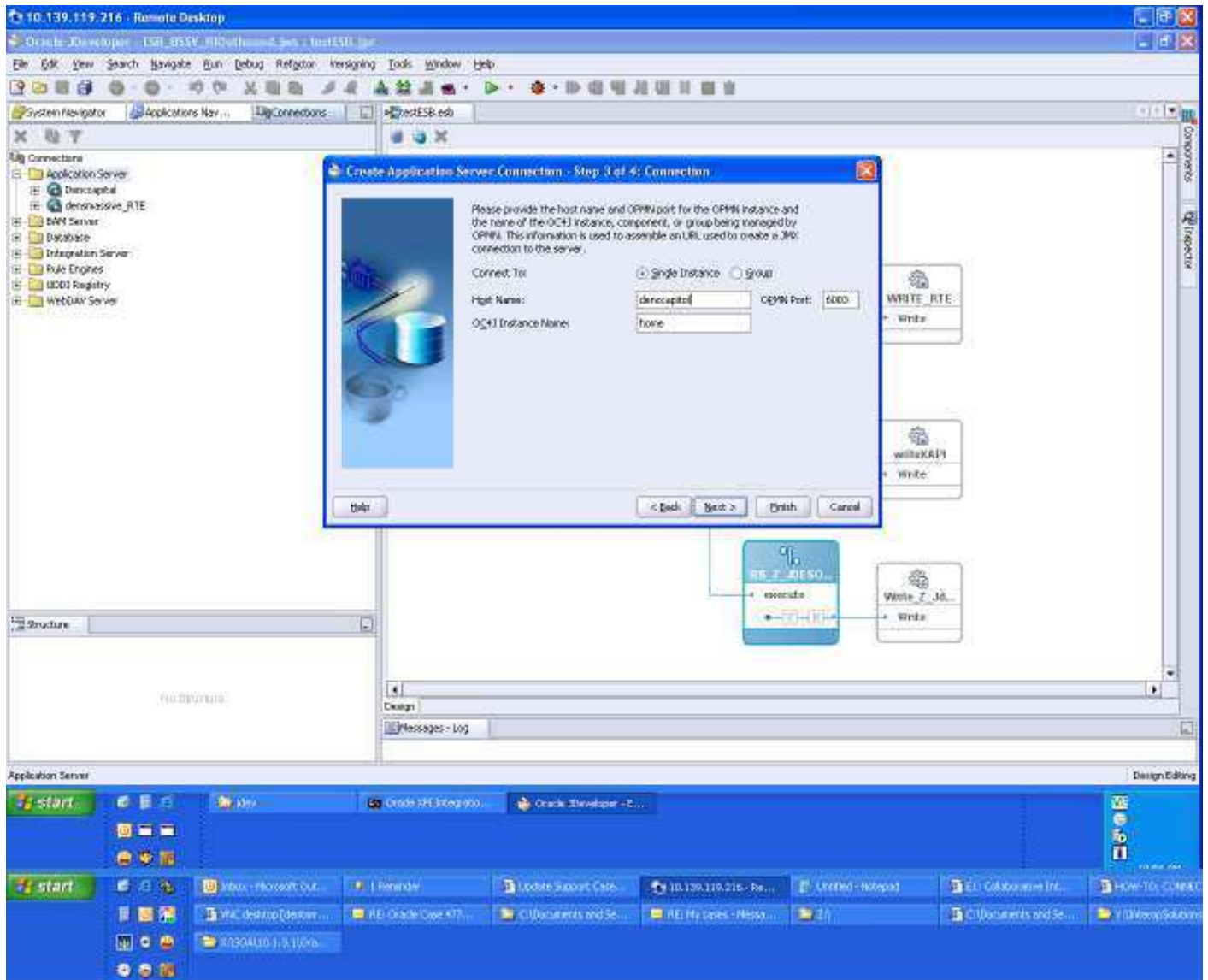
4. Click on the **Connections Tab** and right mouse click on **Application Server**



5. Type the Connection Name: and Select “**Oracle Application Server 10g 10.1.3**” for the Connection Type:

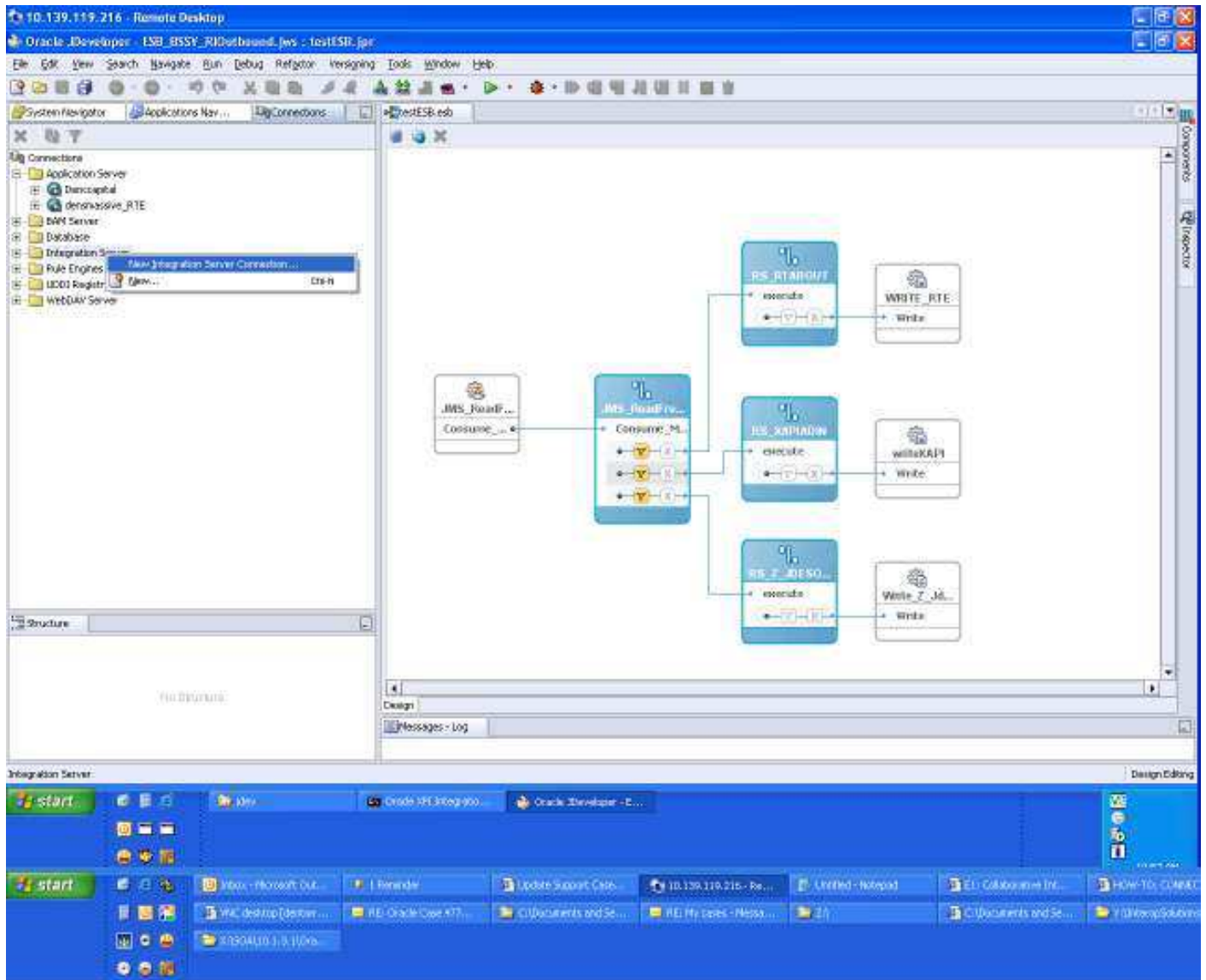


6. In the next screen Type your Username: and Password: for SOA Suite. Check the “Deploy Password”.
7. Select Single Instance, Type SOA suite host name, OPMN port: and OC4J instance name:



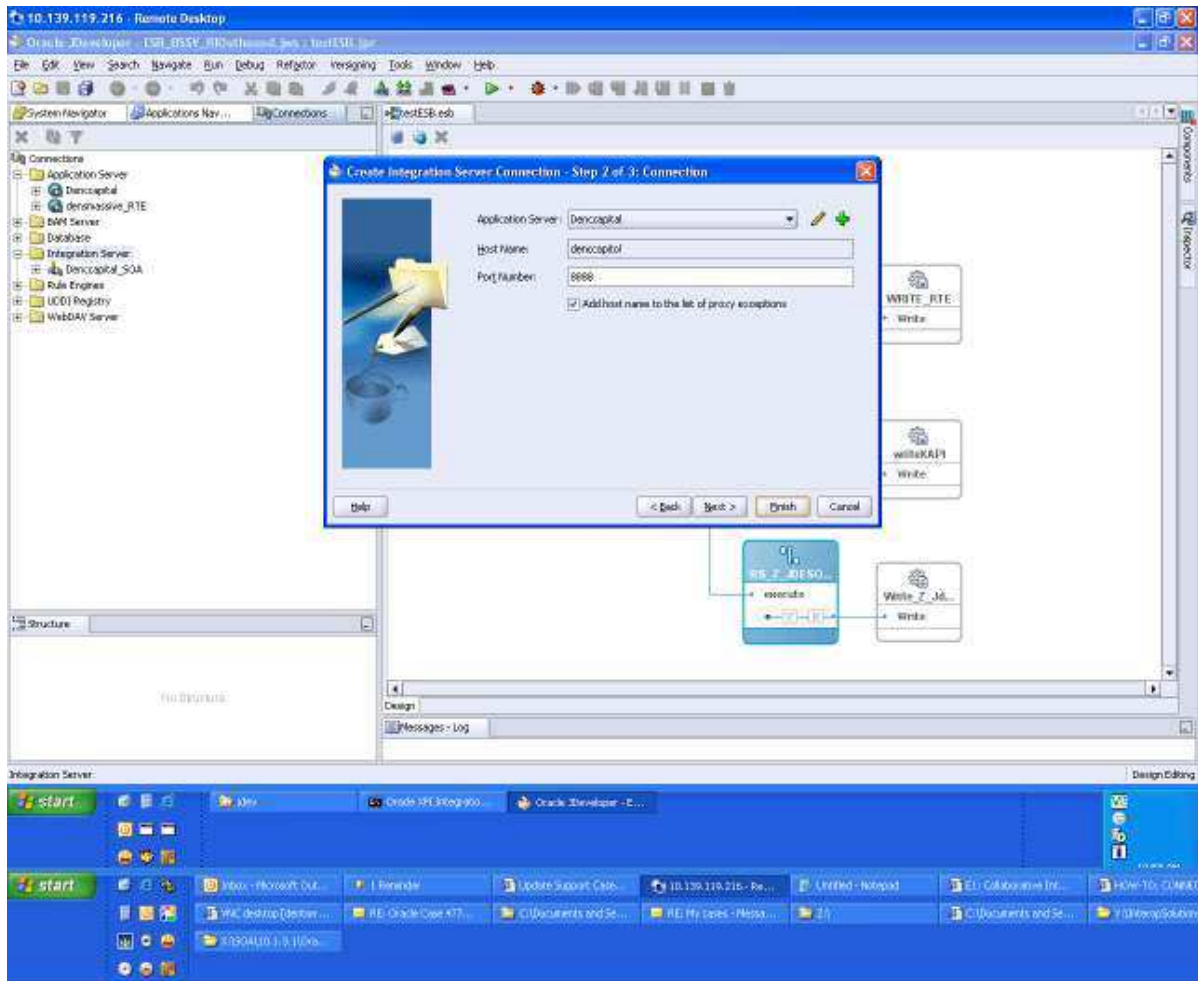
12. Test the connection and Finish

13. Right mouse click "New Integration Server Connection" on "Integration Server" in the Connections tab.



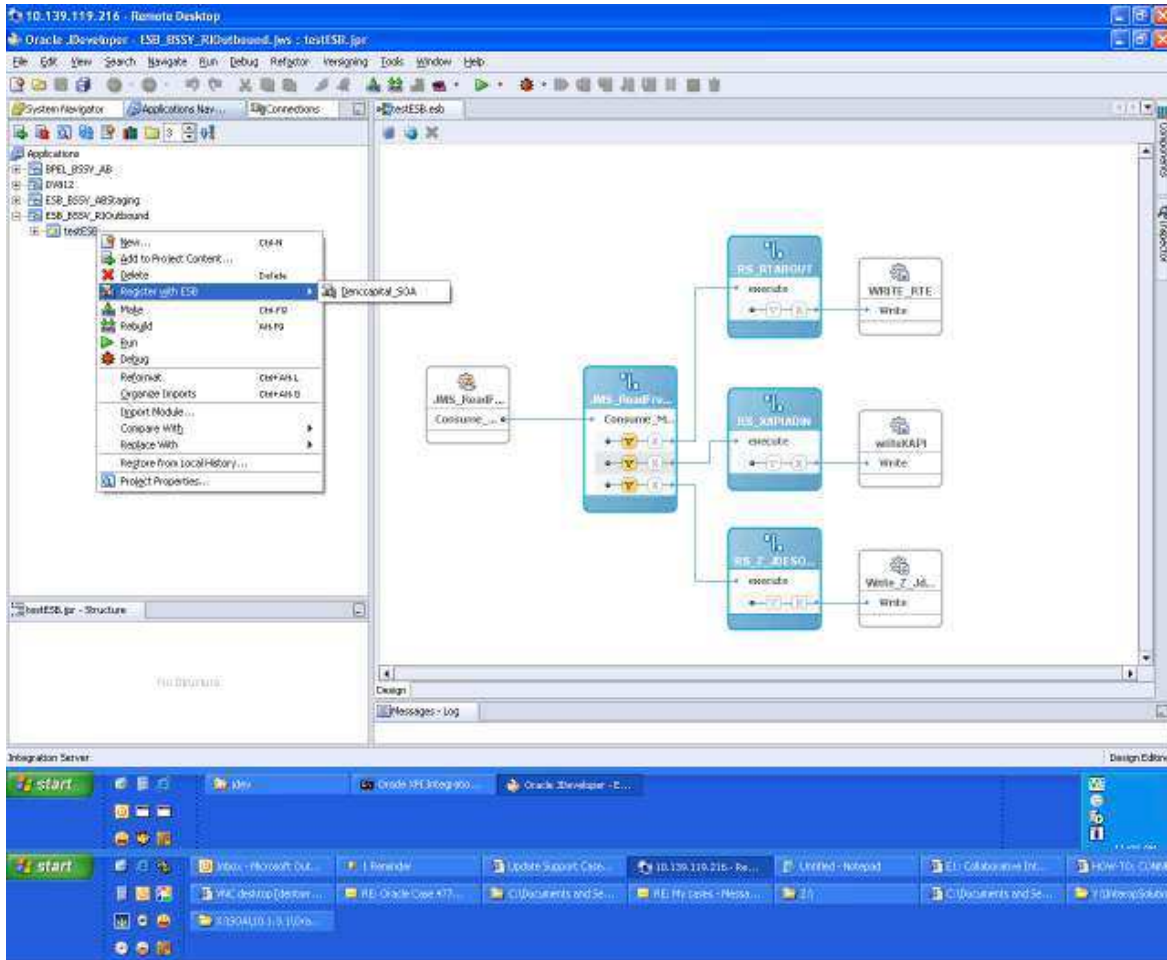
14. Enter the connection Name:

15. Select you Application Server Connection and take defaults:



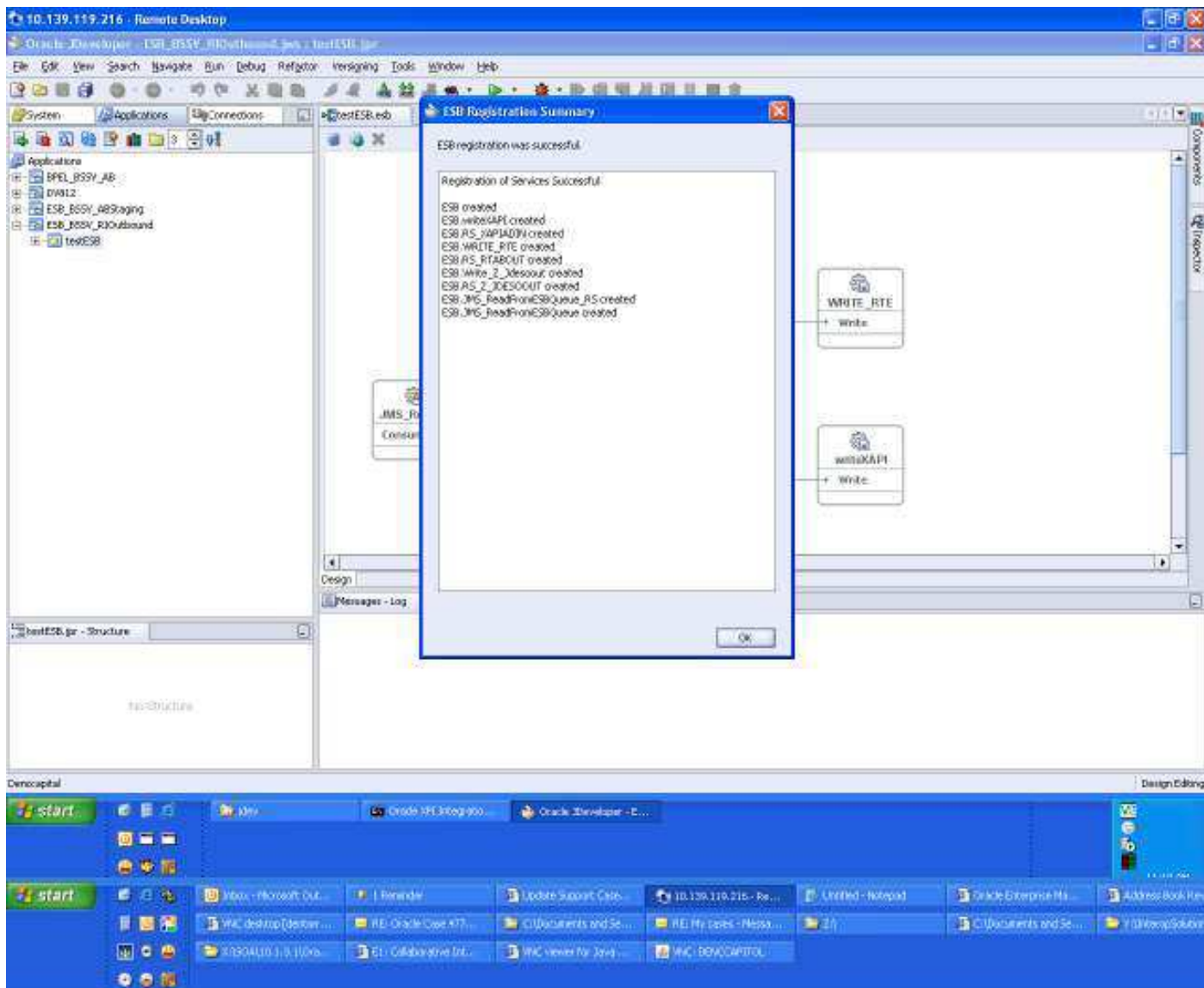
16. Test the connection and finish

17. Go back to the **“Applications Navigation”** tab and right mouse click on **testESB** project



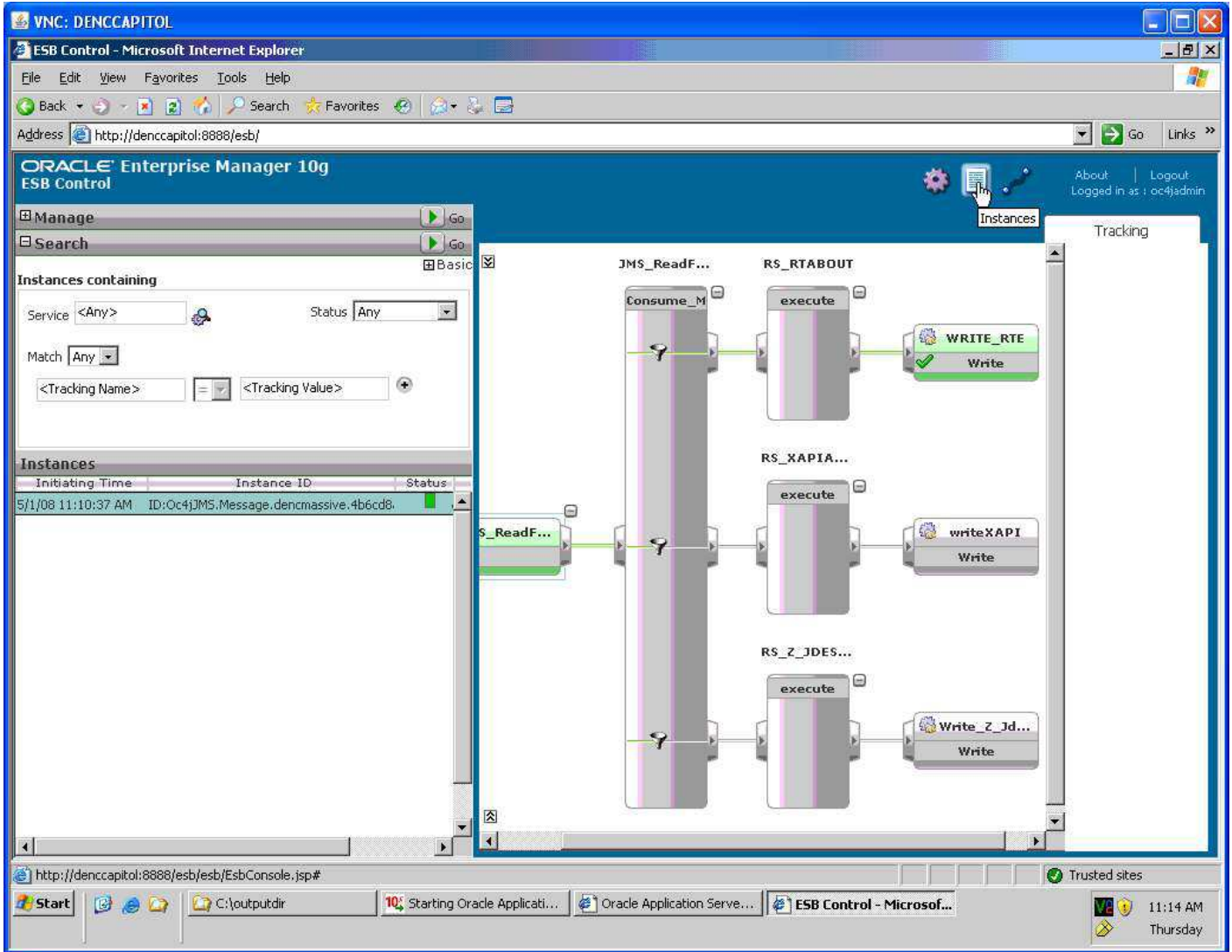
18. Remember, you have a message in JMSQueue(ESB/ESBSubscriberQueue) in your OAS. Select “**Register with ESB**” and select your Integration Server connection.

19. Wait until you see the successful message



20. Go to **C:\outputdir** on SOA machine. You should be able to see the XML doc with today's date.

21. Go to **ESB console**, and you can view your ESB process (click on the **"Instance"** icon and click on the instance on the left window).



22. As you can see, the JMS adapter picked the message up and routed to RS_RTABOUT and wrote a file using the file adapter.

COMPLETE!!!!