

Oracle Insurance

**Insbridge Enterprise
Rating
Using Batch Rating**

Release 5.1.x

December 2015

Copyright © 2005, 2015, Oracle and/or its affiliates. All rights reserved.

Oracle Insurance Insbridge Enterprise Rating Using Batch Rating

Release 5.1.x

Part # E69580-01

Library # E69590-01

December 2015

Primary Authors: Mary Elizabeth Wiger

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Where an Oracle offering includes third party content or software, we may be required to include related notices. For information on third party notices and the software and related documentation in connection with which they need to be included, please contact the attorney from the Development and Strategic Initiatives Legal Group that supports the development team for the Oracle offering. Contact information can be found on the Attorney Contact Chart.

CONTENTS

PREFACE	5
AUDIENCE	5
RELATED DOCUMENTS.....	5
CONVENTIONS	6
<i>Manual History.....</i>	<i>6</i>
BATCH OVERVIEW.....	7
OPTIONS	7
<i>System Requirements</i>	<i>9</i>
DATABASE USER PERMISSIONS	9
<i>Database File Location.....</i>	<i>9</i>
<i>Oracle – Batch.....</i>	<i>10</i>
STEPS TO BE PERFORMED TO ALLOW FOR BATCH	11
CONTROLLER ENVIRONMENT AND BATCH RATING	13
ORACLE DATABASE UPDATES	14
WEBSphere	16
CONFIGURING PROCESS CONFIGURATION DETAILS	16
<i>Troubleshooting.....</i>	<i>28</i>
UPDATES TO IBSS.....	34
CONFIGURING NOTIFICATION	36
WEBLogic	40
CONFIGURING PROCESS CONFIGURATION DETAILS	40
STEPS FOR SETTING UP JMS QUEUE IN WEBLOGIC:.....	40
UPDATES TO IBSS.....	47
CONFIGURING NOTIFICATION	49
JBoss	53
CONFIGURING PROCESS CONFIGURATION DETAILS	53
UPDATES TO IBSS.....	58
CONFIGURING NOTIFICATION	60
BATCH	64
EXAMPLE STEPS FOR BATCH RATING	64
<i>Rate Normal: - Synchronous Processing</i>	<i>64</i>
<i>Rate Synchronous & Add Inputs/Results to DB.....</i>	<i>64</i>
<i>Rate Async – Show Items in the Queue</i>	<i>65</i>
<i>Rate Using ESI Tester.....</i>	<i>65</i>
STATUS TABLE DEFINITIONS.....	67
<i>Getting Status.....</i>	<i>67</i>

SUPPORT.....	71
CONTACTING SUPPORT	71
INDEX.....	72

PREFACE

Welcome to the *Oracle Insurance Insbridge Enterprise Rating Batch*. The Insbridge Enterprise Rating (Insbridge) System is a browser-based, multiplatform insurance rating and underwriting technology solution that provides integrated management for every aspect of the rate definition and modification process. This guide assists with the setup of the IBSS component for batch rating.

In previous Insbridge releases, batch rating was performed in a Windows environment where multiple XML files were rated at one time with rates returned in a result report. This meant Java users had to have a Windows environment to batch. Java users now can use their Java production environments to batch including using multiple nodes. Batch rating rates all files in the SoftRater DBRuntime database and batch rates from database to database and not to and from files.

Batch is available for IBSS for WebSphere, IBSS for JBoss and IBSS for WebLogic application servers using Oracle 11g and 12c databases only. IBM DB2 and Microsoft SQL Server cannot be used for batching in IBSS.

NOTE: *Batch is not available for use with Microsoft SQL Server or IBM DB2 databases.*

AUDIENCE

This guide is intended for system administrators, and others tasked with installing and configuring the Insbridge system and associated databases.

RELATED DOCUMENTS

For more information, refer to the following Oracle resources:

- The Oracle Insurance Insbridge Enterprise Rating Operating Environments for Hardware and Software.
- You can view this guide on-line at this address:

<http://www.oracle.com/technetwork/documentation/insurance-097481.html>

CONVENTIONS

The following text conventions are used in this document:

Convention	Description
bold	Boldface type indicates graphical user interface elements associated with an action.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Manual History

New editions incorporate any updates issued since the previous edition.

Edition	Publication Number	Product Version	Publication Date	Comment
1 st Edition	P01-794-01	R 4.8	August 2014	Introduced for release 4.8
2 nd Edition	P01-794-02	R 4.9	December 2014	Update release
3 rd Edition	P01-794-03	R 5.0.1	August 2015	Update release
4 th Edition	P01-794-04	R 5.1	December 2015	Update Release

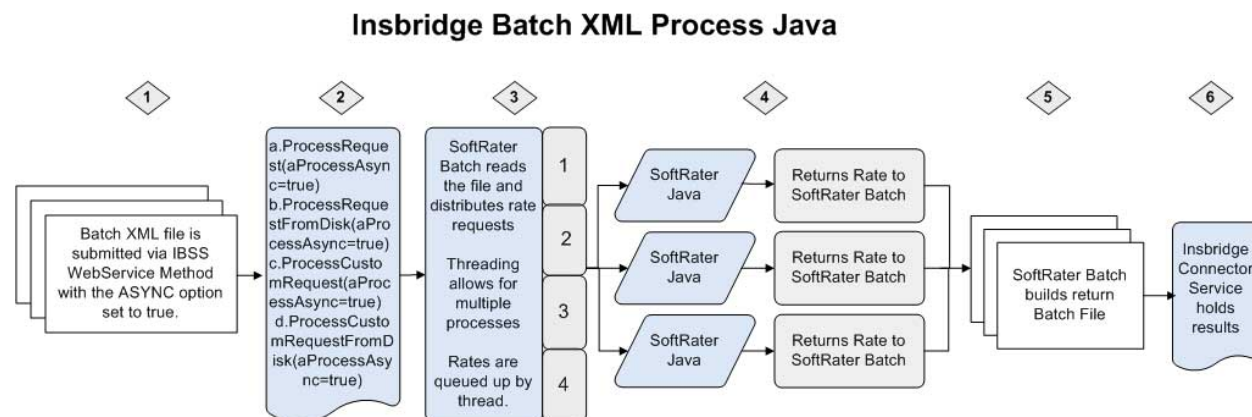
BATCH OVERVIEW

In previous Insbridge releases, batch rating was performed in a Windows environment where multiple XML files were rated at one time with rates returned in a result report. This meant Java users had to have a Windows environment to batch. Java users now can use their Java production environments to batch including using multiple nodes. Batch rating rates all files in the SoftRater DBRuntime database and batch rates from database to database and not to and from files.

Batch is available for IBSS for WebSphere, IBSS for JBoss and IBSS for WebLogic application servers using Oracle 11g and 12c databases only. IBM DB2 and Microsoft SQL Server cannot be used for batching in IBSS.

NOTE: Batch is not available for use with Microsoft SQL Server or IBM DB2 database.

BATCH PROCESS FOR JAVA



1. Batch XML file is submitted via IBSS WebService Method with the ASYNC option set to true.
 - a. ProcessRequest(aProcessAsync=true) – will submit the message to the JMS Request Queue
 - b. ProcessRequestFromDisk(aProcessAsync=true) – will submit the message to the JMS Request Queue
 - c. ProcessCustomRequest(aProcessAsync=true) – will submit the message to the JMS Request Queue
 - d. ProcessCustomRequestFromDisk(aProcessAsync=true) – will submit the message to the JMS Request Queue
2. The file is read and processed.
3. Rates are queued up by threads. The number of threads that SoftRater uses can be set in Insbridge Connector Service properties. This allows for multiple rates to be processed at the same time.
4. The requests are distributed for rating.
5. Insbridge Connector Service holds the results in the JMS Response Queue

- a. `ReceiveAsyncRequest()` – will retrieve the message from the JMS Response Queue
6. The rating environment return results to the SoftRater Batch. Results are gathered in the order in which they were processed. This may not be the order in which they are in the request file.
7. SoftRater Batch builds the result file and places the file in the directory specified in the batch request.
8. When the rating is completed, a results message is placed in the Insbridge Connector Service.

OPTIONS

Batch rating for Java offers multiple options when batching large volumes of policies.

Option 1 – Transactional Batch. (Production Option) There are times when you want to rate more than one policy at a time but the files do not exist on disk. Instead, these files exist in memory and you do not want to execute this unit of work serially. Using a configurable option on the SoftRater for Java WebService, you can rate these policies as a batch. We call this a Transactional Batch option. This option uses a configurable “max threads per job” setting via the IBSS.

Option 2 – SoftRater Async Rating. (Production Option) This option accepts a rate request via Web Services and processes the rate request asynchronously using JMS. The system created correlation ID returned is used to poll a Web Service for a response from rating.

Option 3 – SoftRater Node Batch Rating. (Development and Production Option) This option is the most familiar batch rating option offered by Insbridge. This option is available in SoftRater for Windows and is also available in SoftRater for Java. Using a configurable “max threads per job” setting via the IBSS, the SoftRater Engine processes a file from disk (or a directory of files /*.xml) and place the results from rating on disk.

When Batch Rating from RateManager (Development Option), the Insbridge Framework Administrator (IBFA) calls the IBSS via a Web Service.

Option 4 – SoftRater Cluster Batch Rating. (Production Option) When it is essential to process large volumes of records, we suggest you choose the batch enterprise solution to rate your book of business. Unlike the SoftRater Node Batch Rating, which rates files from and to disk, this option utilizes your Oracle 11g or 12c (RAC) database as the store for the input files and the result files. After setting up your cluster on the enterprise application server of your choice (WebLogic, WebSphere, or JBoss), you can register each node on your Insbridge SoftRater Server (IBSS). The registered SoftRater Nodes (JVM(s)) can all be on one machine or spread out over multiple machines. This batch option requires that clusters with multiple machines use an NFS mount to point all nodes to a shared IBSS config file. When all nodes are registered (and the config settings shared), the system can now use every node in the cluster to satisfy the job. With the number of servers, threads and jobs being a configurable option, the solution has the ability to scale vertically and horizontally.

Option 5 – Insbridge ISoftServices Batch Execution. (Production Option) An IBSS SoftLibrary can now be executed as a job using SoftRater Batch. If there is a nightly process that you would like to run using a custom library, the SoftRater Batch for Java can make a call to any SoftLibrary configured as (JNDI Lookup) library on the IBSS. This job can override the max number of threads, but the thread size cannot be higher than the maximum thread size configured on the IBSS Cluster.

System Requirements

Administrators should be familiar with managing application servers and working with IBSS.

- **Access to the server where IBSS has been installed.**
- **Permissions to update files.**
- **Access to the server where the application server resides.**
- **Access to the database where the Oracle database resides.**

DATABASE USER PERMISSIONS

The recommended permissions are required for new tables to be created in the SoftRater (IBSR) database dynamically when or if an SRP (SoftRater Package) in a new project/product is loaded to the SoftRater system. If the recommended permissions are not possible, manual steps will need to be performed.

- It is recommended that db_owner permissions be given to the Insbridge user.
- It is recommended that the Insbridge user be granted, as minimum defaults, the "CONNECT" and "RESOURCE" Roles.

It is recommended that the databases be on separate machines from the applications due to performance and security issues. The Insbridge applications and databases can be tenants in a larger setup.

Database File Location

If you are updating an existing Oracle database prior to release 5.0, update scripts may need to be run against an existing database or a new database can be created exclusively for batch. The update scripts add the required tables that allow for data to be stored in the database. The DDL scripts can be found in the Insbridge download.

1. Locate the 5.1.0-insbridge-windows folder.
2. Navigate to the Databases\Oracle\SoftRater-IBSR\DDL\Batch folder.
3. Open the IBSS50B20.15.zip file.
4. Run the Schema script first.
5. Run the Procs script next.

The Drops script does not need to be run unless instructed by Oracle Support.

Oracle – Batch

SoftRater database schema is support by all available Oracle database platforms.

JDBC Driver Class

“oracle.jdbc.driver.OracleDriver”

Using prefix jdbc:oracle:thin:

Supported Versions – 11g, 12c

User Account Requirements

Create Table

Create Index

Query access to “SYS.OBJ\$”

INSBRIDGE BATCH 2.0 STORAGE ESTIMATION REFERENCE

Given the tremendous variability in the volume of data stored by the Insbridge Rating process, Oracle Insbridge provides a formula to help calculate the data storage required by the Batch 2.0 process. This calculation is based off the physical data file storage for Insbridge file based rating.

The calculations should be performed per Line of Business and the Sample Data used for each Line of Business should be known to be representative of that Line of Business.

Line of Business Sample Data Information

Input XML files	A Sample Set of Policy XML files. This sample should represent your forecasted business.
Input XML file size	Total Physical storage size at the operating system level for the Input XML files. This number should be in bytes.
Sample Number of Policies	Number of Policies included in the Input XML files.
Output XML files	A Sample set of Rating XML Results files (Rating Results.) This sample should represent your forecasted business.
Output XML file size	Total Physical storage size at the operating system level for the Output XML files. This number should be in bytes.
Sample Number of Ratings	Number of Rating Results included in Output XML files.

Line of Business Forecasts

Forecasted Number of Policies per day	Number of policies to be loaded into the Batch 2.0 database per day.
Forecasted Number of Ratings per day	Number of Rating Results to be loaded into the Batch 2.0 database per day.
Input Retention Duration	Number of days a policy is expected to be kept in the database before being purged.
Rating Result Retention Duration	Number of days a Rating result is expected to be kept in the database.

Line of Business Calculations

Average Policy size	$(\text{Input XML file size}) / (\text{Sample Number of Policies})$
Average Rating Result size	$(\text{Output XML file size}) / (\text{Sample Number of Ratings})$
Input Storage per day	$(\text{Forecasted Number of Policies per day}) \times (\text{Average Policy size})$
Output Storage per day	$(\text{Forecasted Number of Ratings per day}) \times (\text{Average Rating Result size})$
Input Storage estimation	$(\text{Input Storage per day}) \times (\text{Input Retention Duration})$
Output Storage estimation	$(\text{Output Storage per day}) \times (\text{Rating Result Retention Duration})$
Approximate Line of business Database Size	$(\text{Input Storage estimation}) + (\text{Output Storage estimation})$ Standard conversions may be used to represent this number in Megabytes...etc. (For Megabytes please divide by 1,048,576)

Please Note: If the retention policy is rolling two months as opposed to a moving window then the Database Size should be doubled.

STEPS TO BE PERFORMED TO ALLOW FOR BATCH

There are multiple areas that require setup to allow for batch.

In Oracle Database:

- If you are updating an existing Oracle database prior to release 5.0, update scripts may need to be run against an existing database or a new database can be created exclusively for batch. The update scripts add the required tables that allow for data to be stored in the database. Run the schema script first and then the Procs script. The Drops script does not need to be run.
- A DBRuntime database for every schema you want to add DBRuntime tables to.
- If you want to add results to a database, then you must run the DBRuntime scripts.

In IBSS:

- A controller Oracle Database must be added. You can use a one controller to many DBRuntime configuration.
- Email must be configured to accept and send success and failure messages.
- JMS properties must be entered.

In the Application Server:

The application server being used also has a setup.

- **WebSphere:**
 - Setup JMS Queue by creating:
 - Bus and Members
 - Destination
 - Queue Connection Factory
- **WebLogic -**
 - Setup JMS Queue by creating:
 - JMS Server
 - JMS Module
 - Subdeployments
 - Connection Factory
 - JMS Queue
- **JBoss -**
 - Setup JMS Queue by creating:
 - JMS Queue
 - Connection Factory

CONTROLLER ENVIRONMENT AND BATCH RATING

Batch rating requires a Controller environment entry. The controller manages the requests from the system. This is not the controller used by the IBFA. Only Oracle database connections can be used.

Controller

The Controller environment is a SoftRater database. This can be a standalone database, used strictly for managing batch ratings, or it can be a shared SoftRater database. If the Controller environment is shared, an entry must be made as a regular environment as well.



The screenshot shows a web browser window titled "-- Webpage Dialog" displaying the "SoftRater Server" options page. The page has a blue header with the "SoftRater Server" logo and a "close" link. Below the header, the "Options" section prompts the user to "Please enter/update your IBSS Option information." The form contains the following fields and values:

- Subscriber: System (dropdown)
- Environment Name: CONTROLLER (text input)
- Environment Type: DSN (dropdown)
- Database Server: 10.100.10.100 (text input)
- Database Port: 1521 (text input)
- Query Block: (empty text input)
- Database Name: ord (text input)
- Schema name: IBSR_BATCH (text input)
- Database User Id: sa (text input)
- Database Password: (masked with dots and a show/hide icon)
- Provider Type: ORACLE (dropdown)
- Database Type: SoftRater (dropdown)
- Data Dir: (empty text input)
- Default Environment: False (dropdown)

At the bottom of the form, there are four buttons: "Save", "Delete", "Test Connection!", and "Close".

No data directory is used for a Controller environment. The Controller environment cannot be default. The controller connection must be on the same database server as the customer that you are running. The Subscriber will need to look at the controller. The controller connection handles the tasks and the services and logs.

When you batch rate from the database to the database, it must all be Oracle. The schemas can be different but it must be the same database. The controller must be Oracle.

ORACLE DATABASE UPDATES

Log into database as sysdba and create the user Controller. Then login as Controller and run the scripts.

1) Database Installation Requirements:

- a. The Oracle database instance must be up and running. This database does not have to be on the same system where you will execute the database schema scripts.
- b. SQL Developer or equivalent tool for executing Oracle PL/SQL. The tool must be able to connect and authenticate with the appropriate user on an Oracle 11g release 2 database instance or Oracle 12c database instance.
- c. If you are updating an existing Oracle database prior to release 5.0, you will need file system access to the provided installation SQL files: IBSS50B20.15 Schema.sql and IBSS50B20.15 Procs.sql.
- d. An Insbridge Oracle Database User satisfying the requirements specified in this document.

2) Insbridge Oracle Database User Requirements:

- a. Password Authentication on the appropriate Oracle database
- b. Be granted the CONNECT role
- c. Be granted the RESOURCE role
- d. Be granted the CREATE ANY VIEW system privilege
- e. Must have sufficient or QUOTA UNLIMITED on the user's default tablespace, or the UNLIMITED TABLESPACE system privilege

3) Database Schema Creation steps:

- a. If the target of this installation is an existing user/schema then perform a complete database backup.

NOTE: *Proceeding without a database recovery method for an existing user/schema is not recommended.*

- b. Connect to the chosen database using the appropriate user.
- c. Locate and execute the file IBSS50B20.15 Schema.sql first. When that script is finished, run the IBSS50B20.15 Procs.sql next. You do not need to run the IBSS50B20.15 Drops.sql script unless instructed by Oracle Support.
- d. If no errors are logged then continue to the next step, otherwise proceed to Error handling.

Error Handling

- e. Evaluate any errors.
- f. Correct the errors where possible.
- g. If all errors are correctable then proceed to Error Recovery.

Error Recovery

Since the Database User's schema has been left in an unknown state, follow these recovery steps:

- h. Restore the database to a state prior to this installation.
- i. Ensure that the Oracle Database User satisfies the Insbridge Database User Requirements portion of this document.

NOTE: Prior Insbridge user installation did not require the CREATE ANY VIEW system privilege. *Confirm that this system privilege requirement is met.*

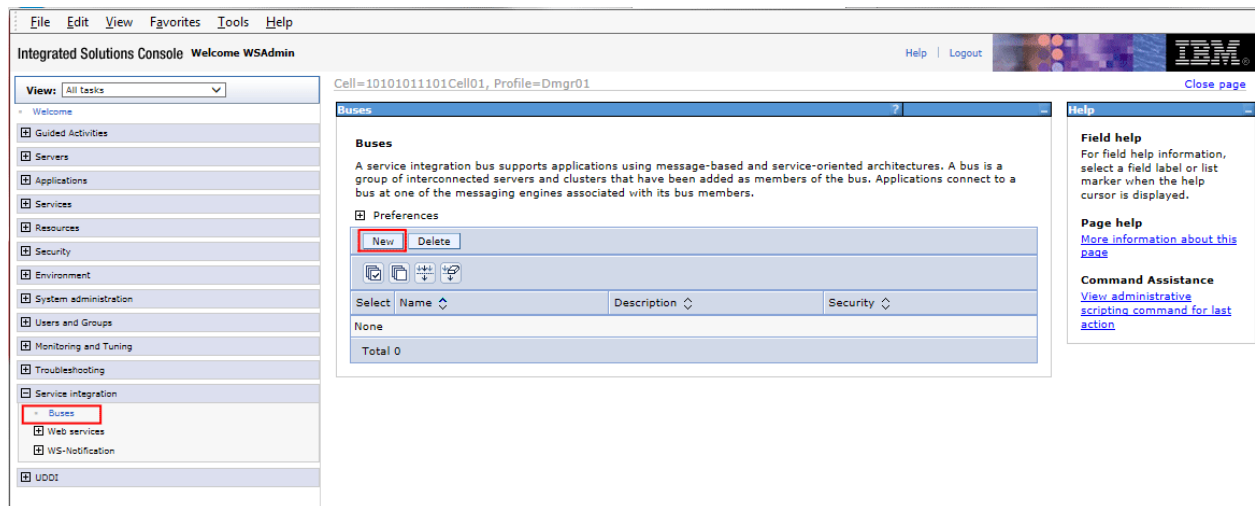
- j. Start the Database Schema Creation process over and repeat this process until all correctable errors have been cleared.

CONFIGURING PROCESS CONFIGURATION DETAILS

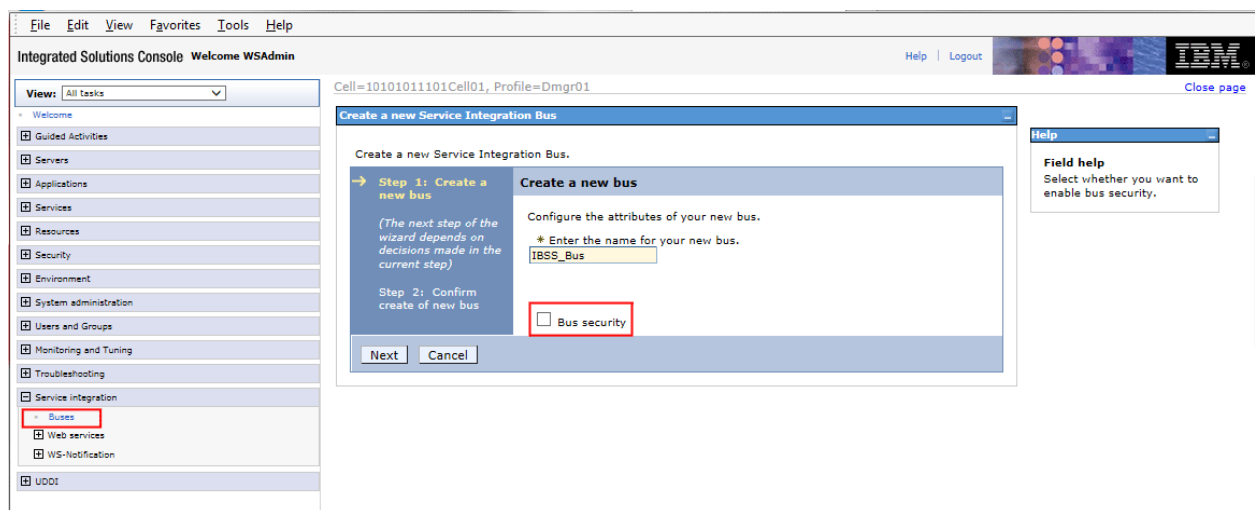
The first step is setting up a JMS Queue. In order to create a JMS Queue in WebSphere, Bus and members, a Destination, and a Queue Destination Factory must be created.

Create Bus and Members:

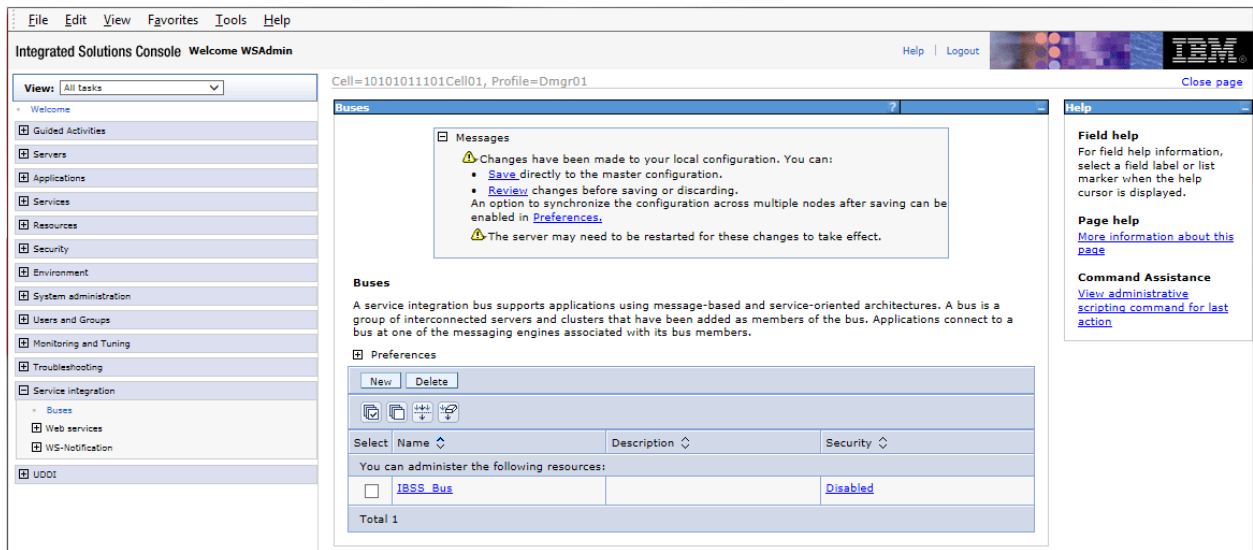
1. Navigate to Service integration > Buses



2. Click **New**. A separate screen is displayed.
3. Enter a Bus name of your choice, for example IBSS_Bus. Do not check the Security, it is not required.

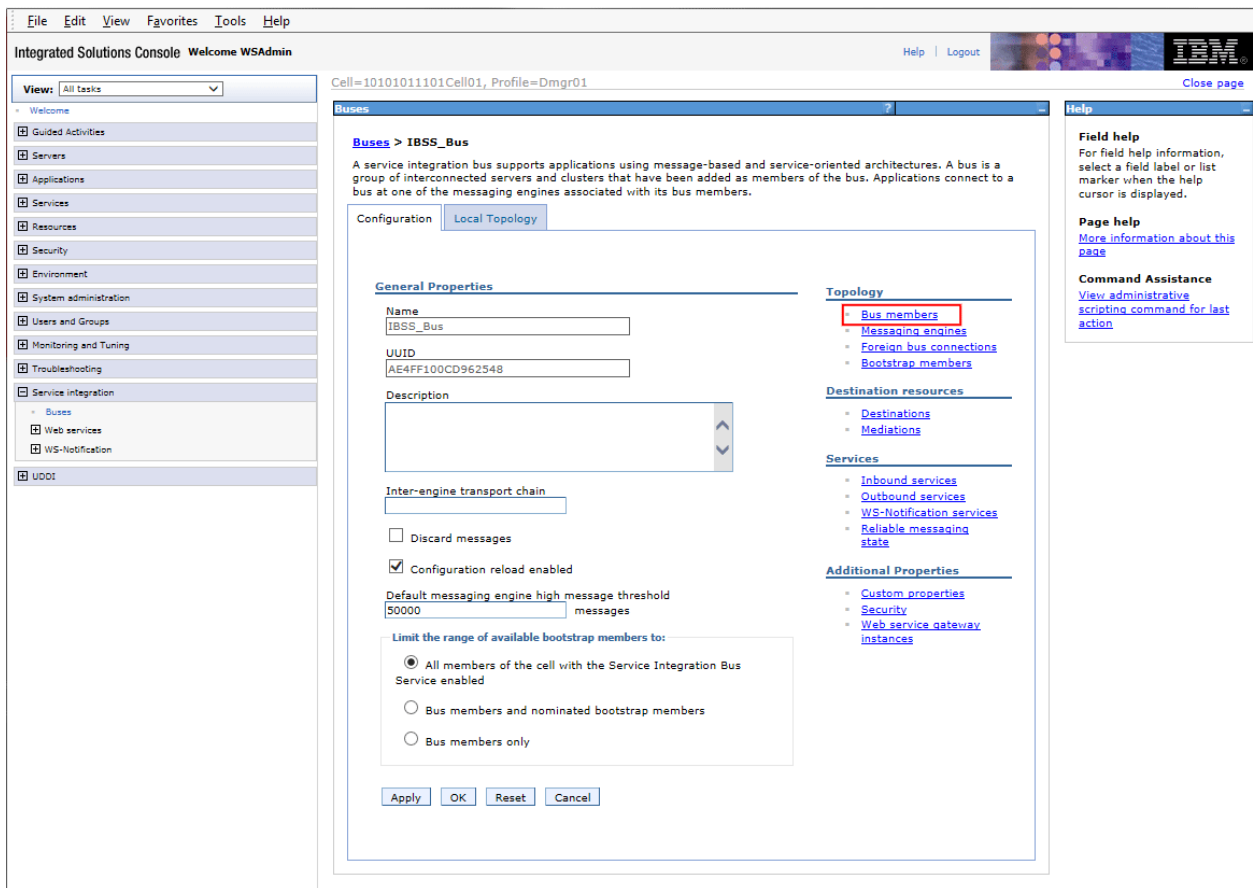


4. Click Next and Finish.

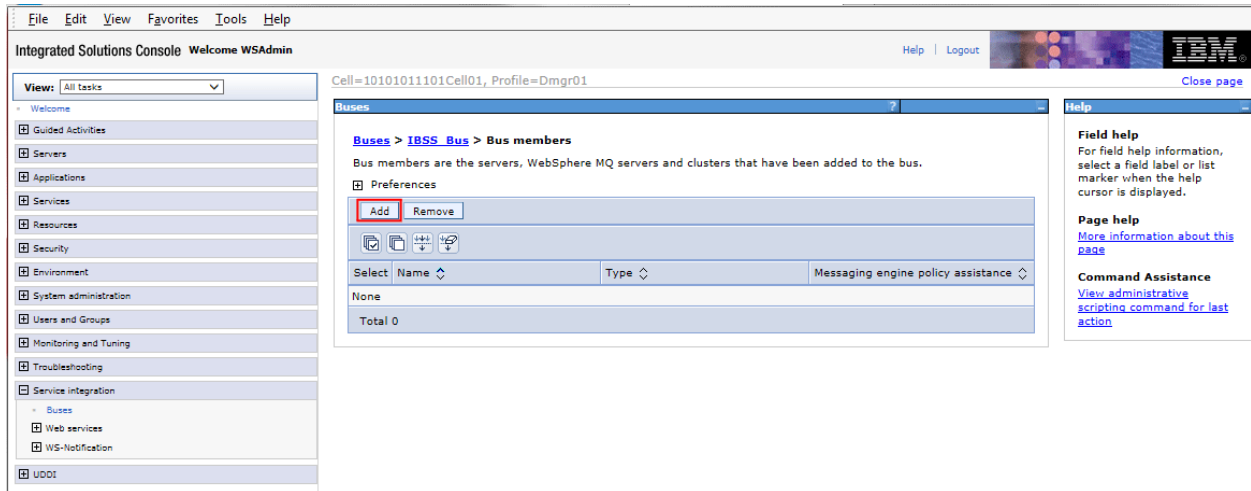


5. Save the Changes.

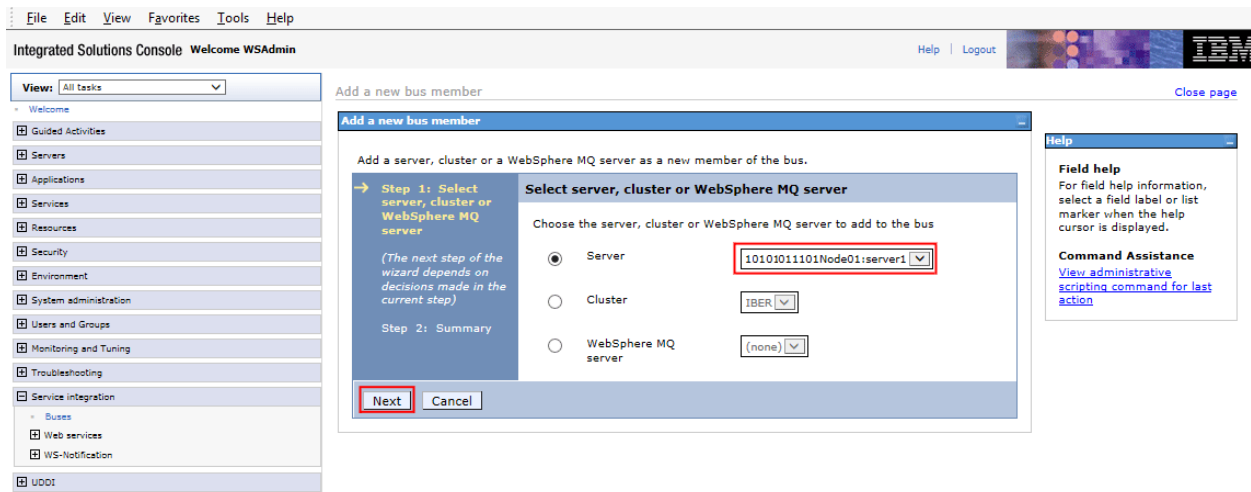
6. Bus members must be entered next. Click the Bus name to open the configuration screen.



7. Click on the Bus members. A separate screen is displayed.



8. Click **Add**. A separate screen is displayed.



9. Select the server where you want to add the bus and click **Next**.

10. Leave all the values as default in the steps that follow.

11. On the Summary screen, click **Finish**.

12. Save the changes.

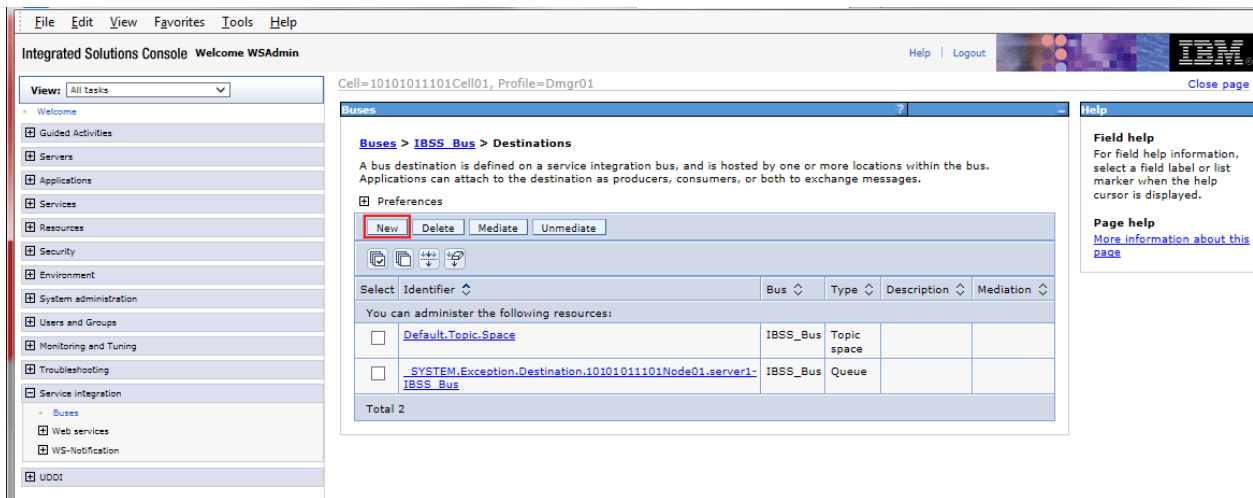
Create Destination:

A JMS Destination is created next. There should always be a destination Queue for every JMS queue.

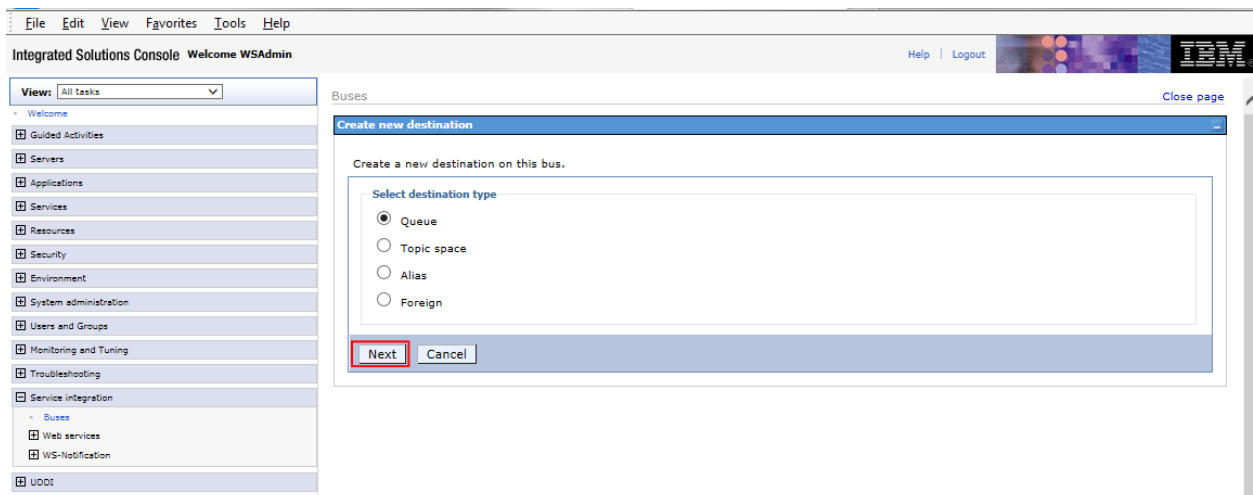
1. Click the Bus name to open the configuration screen.
2. Click on Destinations under Destination Resources. A separate screen is displayed.

The screenshot shows the IBM Integrated Solutions Console (ISC) interface. The main window displays the configuration for the 'IBSS_Bus'. The left sidebar contains a navigation tree with categories like Guided Activities, Servers, Applications, Services, Resources, Security, Environment, System administration, Users and Groups, Monitoring and Tuning, Troubleshooting, Service Integration, and UDDI. The 'Service Integration' category is expanded, showing 'Buses', 'Web services', and 'WS-Notification'. The 'Buses' category is selected, and the 'IBSS_Bus' configuration page is displayed. The page has a title bar with 'Cell=10101011101Cell01, Profile=Dmgr01' and a 'Close page' button. The main content area is divided into several sections: 'General Properties' (Name: IBSS_Bus, UUID: AE4FF100CD962548, Description: [empty text area]), 'Topology' (Bus members, Messaging engines, Foreign bus connections, Bootstrap members), 'Destination resources' (Destinations, Mediations), 'Services' (Inbound services, Outbound services, WS-Notification services, Reliable messaging state), and 'Additional Properties' (Custom properties, Security, Web service gateway instances). The 'Destinations' link under 'Destination resources' is highlighted with a red box. The bottom of the page has 'Apply', 'OK', 'Reset', and 'Cancel' buttons.

3. On the Destination Screen, click New.



4. Select Destination Type -> Queue and click Next.



5. Enter IBSS_JMS_RESPONSE_QUEUE for the Destination in the Identifier field and click Next.

The screenshot shows the 'Create new queue' wizard in the IBM Integrated Solutions Console. The left sidebar contains a navigation tree with categories like Welcome, Guided Activities, Servers, Applications, Services, Resources, Security, Environment, System administration, Users and Groups, Monitoring and Tuning, Troubleshooting, and Service integration. The main panel is titled 'Create new queue' and 'Set queue attributes'. It instructs the user to 'Configure the attributes of your new queue'. The 'Identifier' field is highlighted with a red box and contains the text 'IBSS_JMS_REQUEST_QUEUE'. Below it is a 'Description' field. At the bottom are 'Next' and 'Cancel' buttons. A 'Help' sidebar on the right explains the 'Field help' for the identifier.

6. Select the Bus Member that was created earlier from the dropdown and click Next.

The screenshot shows the 'Create new queue' wizard in the IBM Integrated Solutions Console, now at 'Step 2: Assign the queue to a bus member'. The 'Identifier' field from the previous step is still visible. The main panel now instructs the user to 'Assign the queue to a bus member that will store and process the messages for the queue.' Below this is a 'Bus member' dropdown menu showing the selected option 'Node=10101011101Node01:Server=server1'. At the bottom are 'Previous', 'Next', and 'Cancel' buttons. The 'Help' sidebar on the right provides field help for the bus member selection.

7. Click Finish.
8. Back on the Destination Screen, click New. A queue must be created for reply.
9. Select Destination Type -> Queue and click Next.
10. Enter IBSS_JMS_REPLYTO_QUEUE for the Destination in the Identifier field and click Next.
11. Select the Bus Member that was created earlier from the dropdown and click Next.
12. Click Finish.
13. Save the changes.

The two IBSS Queue Destinations should be listed.

Create Queue Connection Factory:

1. Navigate to Resources -> JMS -> Queue connection factories.
2. On the Queue Connection factories screen, select the Server that was used in the creation of the bus member.

NOTE: If the application is to be deployed to a cluster, select the 'Node' in the dropdown when creating a Queue Connection Factory.

A Queue Connection Factory should be created for a server per node in the cluster in order for the Queue Connection Factory to be available across the cluster. By creating it in the Node level, the Queue Connection Factory will be shared across all the other Nodes in the Cluster.

Integrated Solutions Console Welcome WSAdmin

Cell=10101011101Cell01, Profile=Dmgr01

Queue connection factories

Queue connection factories

A queue connection factory is used to create connections to the associated JMS provider of the JMS queue destinations, for point-to-point messaging.

Scope: Cell=10101011101Cell01, Node=10101011101Node01, Server=server1

☒ Show scope selection drop-down list with the all scopes option

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=10101011101Node01, Server=server1

Preferences

New Delete

Select	Name	JNDI name	Provider	Description	Scope
You can administer the following resources:					
None					
Total 0					

3. Click New. A separate screen is displayed.

4. Select **Default Messaging Provider** and click OK. On the Queue Connection Factories screen, the new connection will be listed.

Cell=10101011101Cell01, Profile=Dmgr01

Queue connection factories

Queue connection factories

A queue connection factory is used to create connections to the associated JMS provider of the JMS queue destinations, for point-to-point messaging.

☐ Scope: Cell=10101011101Cell01, Node=10101011101Node01, Server=server1

☒ Show scope selection drop-down list with the all scopes option

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=10101011101Node01, Server=server1

Preferences

New Delete

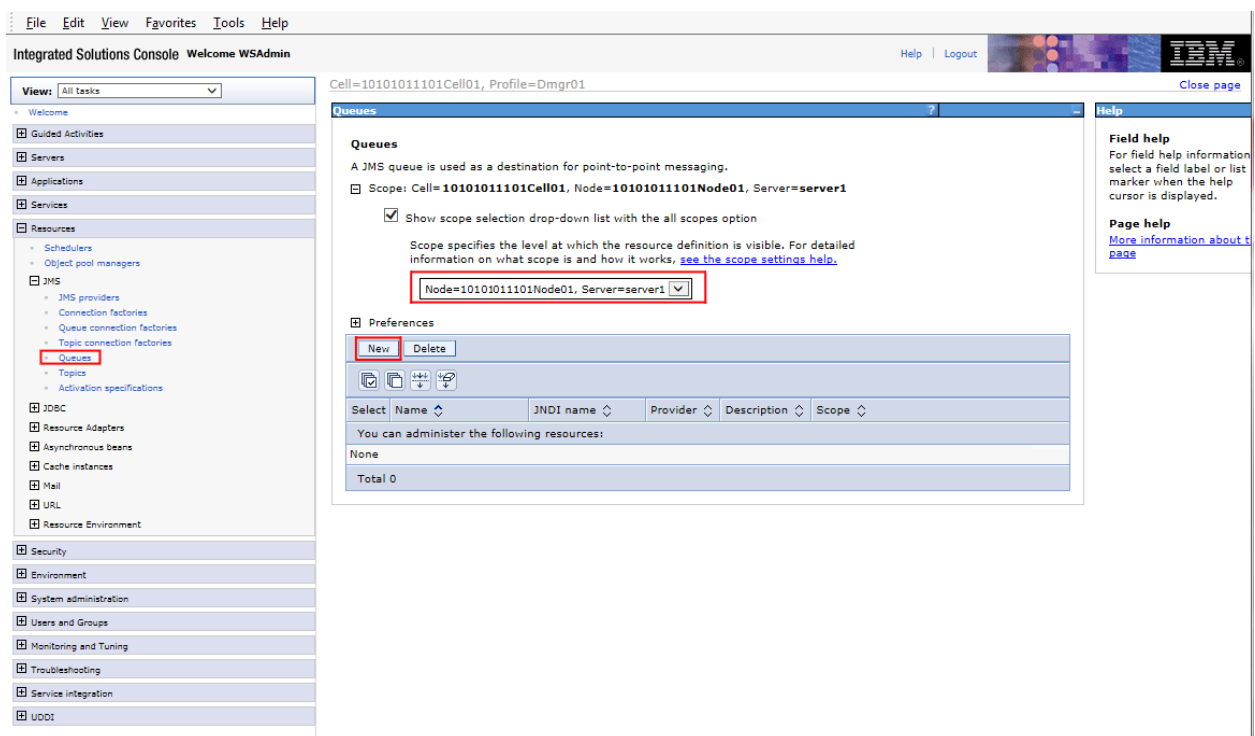
Select	Name	JNDI name	Provider	Description	Scope
<input type="checkbox"/>	JBSS Queue Connection Factory	jms/ConnectionFactory	Default messaging provider		Node= 10101011101Node01,Server=server1
Total 1					

Creating Queues:

After creating Queue Connection Factory, there are two queues that need to be created.

- **Request Queue**
- **ReplyToQueue**

1. Navigate to Resources -> JMS -> Queues.
2. On the Queues screen, select the Server that was used in the creation of the Queue Connection Factory.



3. Click New. A separate screen is displayed.
4. Select Default messaging provider and click OK.
5. On the Configuration Screen, enter the details of the queue.

File Edit View Favorites Tools Help

Integrated Solutions Console Welcome WSAAdmin

Cell=10101011101Cell01, Profile=Dmgr01

View: All tasks

Queues > Default messaging provider > New

A JMS queue is used as a destination for point-to-point messaging. Use JMS queue destination administrative objects to manage JMS queues for the default messaging provider.

Configuration

General Properties

Administration

Scope
Node:10101011101Node01,Server=server1

Provider
Default messaging provider

* Name
IBSS_Request_Queue

* JNDI name
jms/RequestQueue

Description

Related Items

- Buses

Connection

Bus name
IBSS_Bus

* Queue name
IBSS_JMS_REQUEST_QUEUE

Delivery mode
Application

Time to live
milliseconds

Priority

Advanced

Read ahead
Inherit from connection factory

Message control across multiple queue points (supported from WebSphere Application Server V7 onwards)

☐ Restrict messages to the local queue point if a queue point is configured on the connected messaging engine

Control across multiple queue points per MessageProducer

Local queue point preference

☒ Prefer to send messages to a local queue point

☐ Do not prefer a local queue point over other queue points

Message affinity across queue points

☐ Send all messages to the same queue point

☒ Messages may be sent to different queue points

Control across multiple queue points per MessageConsumer or QueueBrowser

Message visibility

☒ Only messages on a single queue point are visible

☐ Messages on all queue points are visible

Apply OK Cancel

- **Name** - Name for the Request Queue for example **IBSS_Request_Queue**
- **JNDI Name** - **jms/RequestQueue**. The exact JNDI Name should be same as entered here.
- **Bus name** - Select the Bus name that was used for the Queue Connection.
- **Queue name** - Select the destination that was created for the Queue Connection Factory.

The rest of the fields can be left to defaults.

6. Click **Apply**.
7. **Save** the changes.
8. Repeat the same steps for creating a **jms/ReplyToQueue**, with the values:

The screenshot displays a configuration window with two main sections. The top section contains three fields: a required field for 'Name' with the value 'IBSS_ReplyToQueue', a required field for 'JNDI name' with the value 'jms/ReplyToQueue', and a 'Description' field which is currently empty. The bottom section, titled 'Connection', contains two dropdown menus: 'Bus name' set to 'IBSS_Bus' and 'Queue name' set to 'IBSS_JMS_REPLYTO_QUEUE'.

- **Name** - Name for the Request Queue for example **IBSS_ReplyToQueue**
- **JNDI Name** - **jms/ReplyToQueue**. The exactJNDI Name should be same as entered here.
- **Bus name** - Select the Bus name that was used for the Queue Connection.
- **Queue name** - Select the destination that was created for the Queue Connection Factory.

The rest of the fields can be left to defaults.

9. Click **Apply**.
10. **Save** the changes.

11. After successfully creating the Request Queue and the Reply to Queue, the Queues list will be listed.

The screenshot shows the IBM Integrated Solutions Console (ISC) interface. The main content area is titled "Queues" and displays a list of queues. The left sidebar shows the navigation tree, and the right sidebar contains help links.

Queues

A JMS queue is used as a destination for point-to-point messaging.

Scope: Cell=**10101011101Cell01**, Node=**10101011101Node01**, Server=**server1**

☒ Show scope selection drop-down list with the all scopes option

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=**10101011101Node01**, Server=**server1**

Preferences

Select	Name	JNDI name	Provider	Description	Scope
<input type="checkbox"/>	IBSS_ReplyToQueue	jms/ReplyToQueue	Default messaging provider		Node= 10101011101 Node01, Server=server1
<input type="checkbox"/>	IBSS_Request_Queue	jms/RequestQueue	Default messaging provider		Node= 10101011101 Node01, Server=server1
Total 2					

Field help

For field help information select a field label or list marker when the help cursor is displayed.

Page help

[More information about this page](#)

Troubleshooting

If you encounter issues while deploying the .EAR file you may want to try these measures to correct the problem.

Increase WebSphere JVM Memory:

The default WebSphere's Java Virtual Machine memory may not be enough. To avoid a **"java.lang.OutOfMemory"** exception, the JVM memory can be expanded on the WebSphere Application Server.

Note: Before modifying the heap size, ensure that the system has enough physical memory to support a Java Virtual Machine (JVM). The recommendation is for 1024 for "Initial heap size" and 2048 for "Maximum heap size."

For Application Server:

1. On WebSphere web console, select Servers -> Server Types -> WebSphere application servers -> YOUR SERVER -> Java and Process Management -> Process definition.

Java and Process Management is an expandable side menu.

The screenshot displays the WebSphere Integrated Solutions Console interface. On the left, a navigation tree shows the path: Servers > Server Types > WebSphere application servers > server1. The main content area is titled 'Application servers > server1' and contains a 'Configuration' tab. Under 'General Properties', the 'Name' is 'server1' and the 'Node name' is '10101011101Node01'. The 'Parallel start' checkbox is checked. Under 'Server-specific Application Settings', the 'Classloader policy' is set to 'Multiple' and the 'Class loading mode' is 'Classes loaded with parent class loader first'. On the right, a 'Container Settings' section lists various services, and a 'Server Infrastructure' section lists 'Java and Process Management' with 'Process definition' highlighted. A 'Field help' sidebar is visible on the far right.

2. In the Additional Properties section, select Java Virtual Machine

File Edit View Favorites Tools Help

Integrated Solutions Console Welcome WSAAdmin

Cell=10101011101Cell01, Profile=Dmgr01

Views: All tasks

- Home
- Guided Activities
- Servers
 - New server
 - Server Types
 - WebSphere application servers
 - WebSphere proxy servers
 - Generic servers
 - Version 5 JMS servers
 - WebSphere MQ servers
 - Web servers
 - Clusters
 - DataPower
 - Core Groups
- Applications
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Application servers > server1 > Process definition

Use this page to configure a process definition. A process definition defines the command line information necessary to start or initialize a process.

Configuration

General Properties

Executable name

Executable arguments

Start command

Start command arguments

Stop command

Stop command arguments

Working directory
\${USER_INSTALL_ROOT}

Executable target type
JAVA_CLASS

Executable target
com.ibm.ws.runtime.WsServer

Apply OK Reset Cancel

Additional Properties

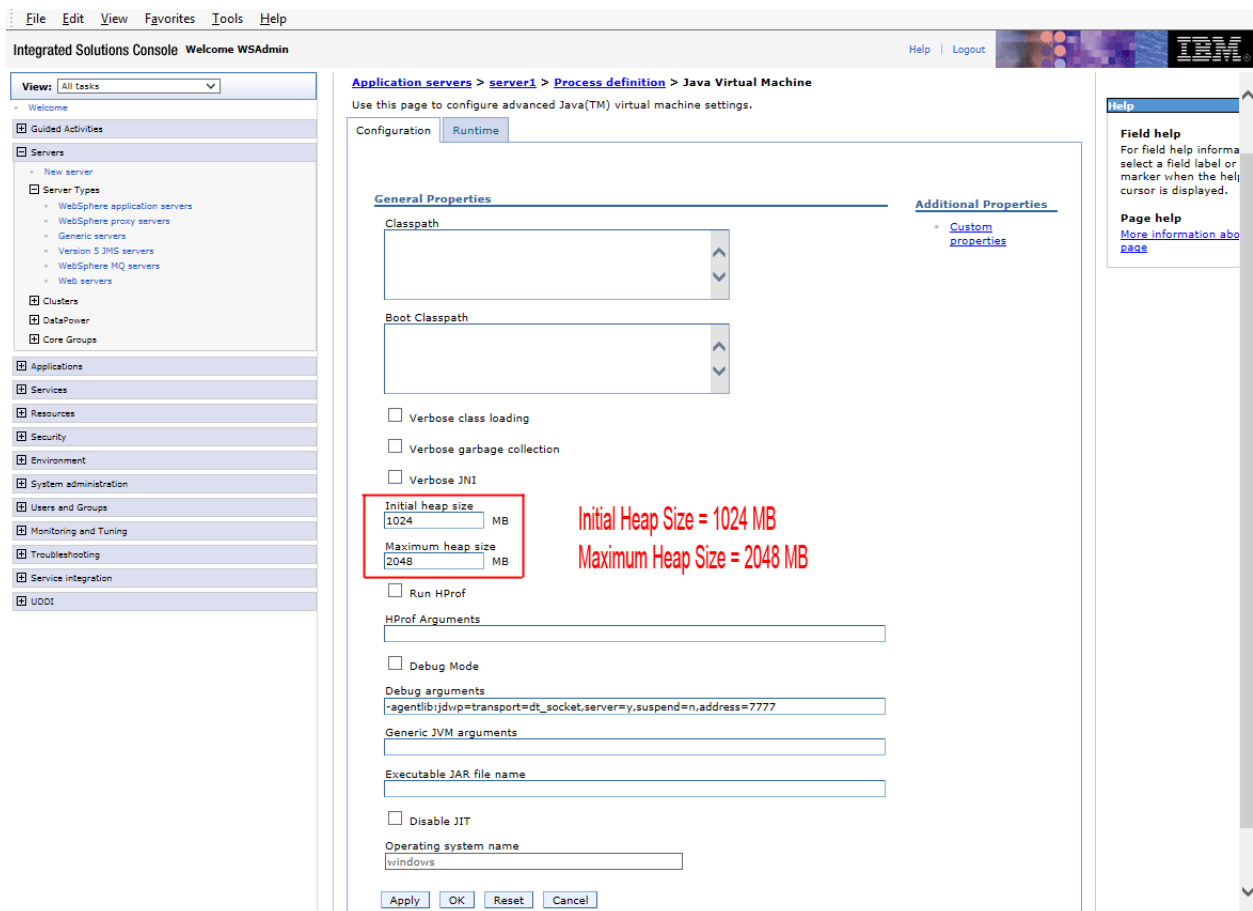
- Java Virtual Machine
- Environment Entries
- Process execution
- Process logs
- Logging and tracing

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Close page

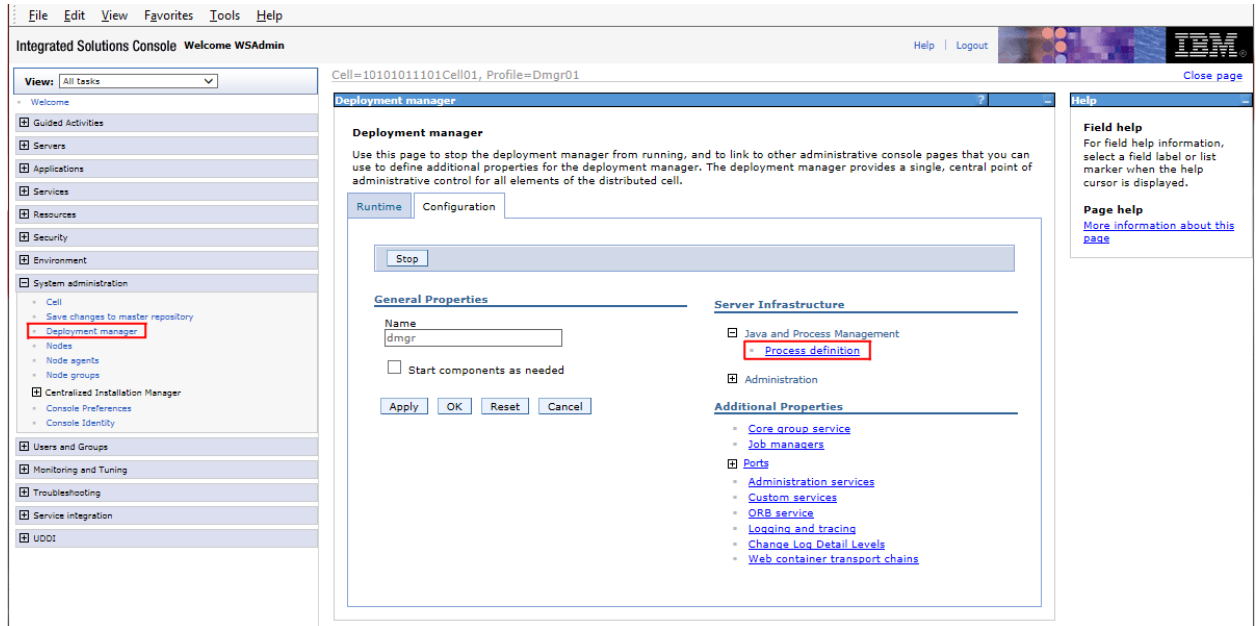
3. In General Properties section, enter **1024** for “Initial heap size” and **2048** for “Maximum heap size”.



4. Click Apply and OK.
5. Make the same changes in all the servers that are a part of the cluster in which the application is to be deployed.
6. When completed, restart the WebSphere service.

For Deployment Manager:

1. On WebSphere web console, select System administration -> Deployment manager -> Java and Process Management -> Process definition.



2. In Additional Properties section, select Java Virtual Machine.

File Edit View Favorites Tools Help

Integrated Solutions Console Welcome WSAAdmin

Cell=10101011101Cell01, Profile=Dmgr01

Deployment manager

Deployment manager > Process definition

Use this page to configure a process definition. A process definition defines the command line information necessary to start or initialize a process.

Configuration

General Properties

Executable name

Executable arguments

Start command

Start command arguments

Stop command

Stop command arguments

Working directory

Executable target type

Executable target

Additional Properties

Java Virtual Machine

Environment Entries

Process execution

Process logs

Logging and tracing

Field help

Specifies the executable name of the process.

Page help

More information about this page

3. In General Properties section, enter **1024** for “Initial heap size” and **2048** for “Maximum heap size”.

File Edit View Favorites Tools Help

Integrated Solutions Console Welcome WSAAdmin

Cell=10101011101Cell01, Profile=Dmgr01

Deployment manager

Deployment manager > Process definition > Java Virtual Machine

Use this page to configure advanced Java(TM) virtual machine settings.

Configuration Runtime

General Properties

Classpath

Boot Classpath

Verbose class loading

Verbose garbage collection

Verbose JNI

Initial heap size

Maximum heap size

Run HProf

HProf Arguments

Additional Properties

Custom properties

Field help

Specifies the maximum heap size available to the JVM (in megabytes). Specify 0 to use the default.

Page help

More information about this page

Initial Heap Size = 1024 MB

Maximum Heap Size = 2048 MB

4. Click Apply and OK.
5. Save the configuration changes.
6. When complete, restart the Deployment Manager.

WebSphere Temp Directory Clean Up:

When upgrading from a previous version, the contents from **temp** directory and **wstemp** directory under the AppServer folder in WebSphere should be deleted before installing the application in WebSphere. This is to avoid any conflicts that may exist between any cached WSDL and the Service Endpoint Interface of the Webservice classes in the application.

You must have access to the server where WebSphere has been installed.

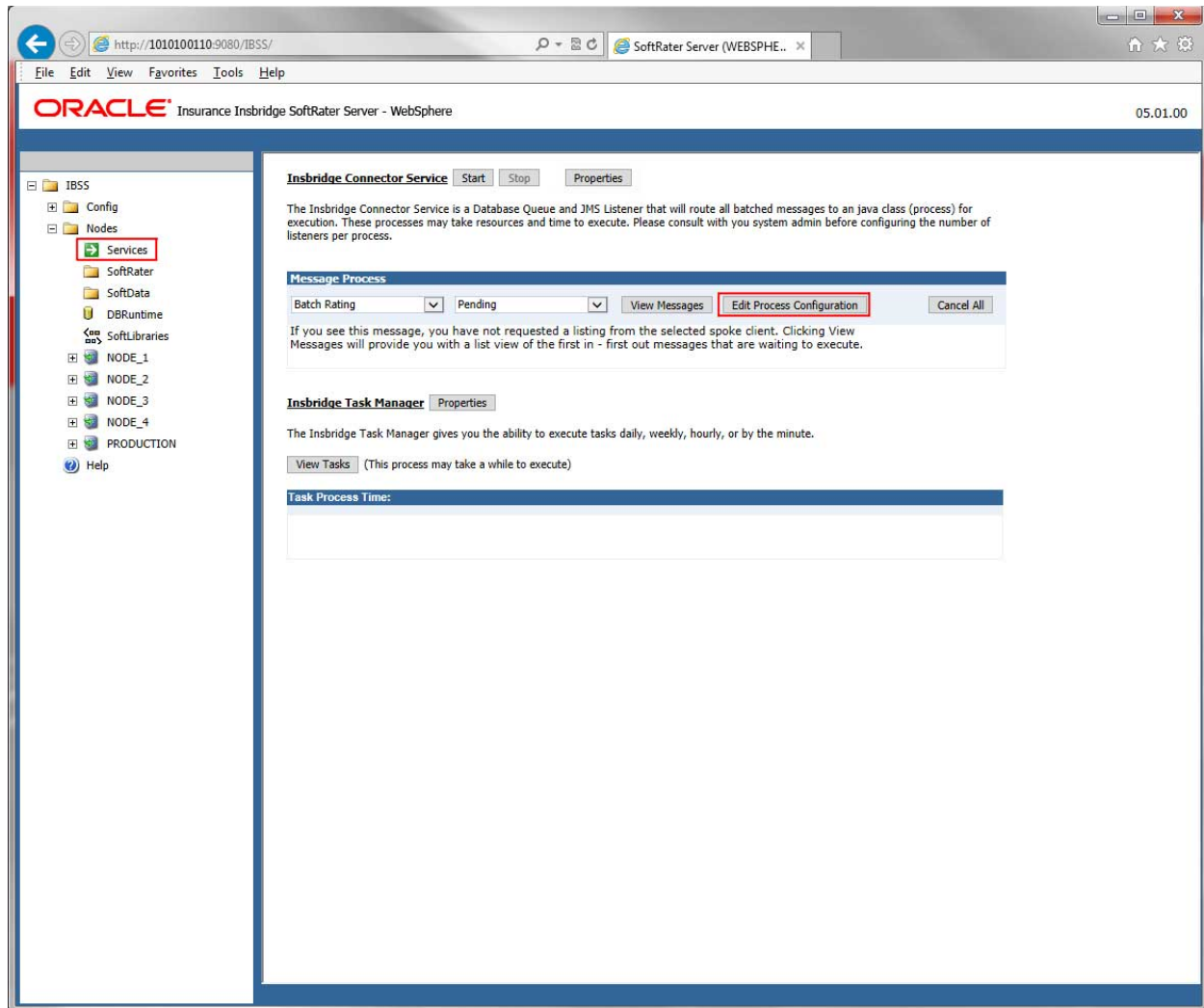
1. On the server where WebSphere was installed locate: **WAS_HOME=<Websphere Installed Directory>\WebSphere\AppServer**.
2. Remove the contents from the following directories:
 - i. **<WAS_HOME>\profiles\temp**
 - ii. **<WAS_HOME>\profiles\wstemp**
3. A make sure no cached content is used, restart the server. Otherwise, start the DeploymentManager/CellManager, NodeManager and the required Servers of WebSphere.
4. The new IBSS .EAR file can be deployed.

NOTE: *If you are not installing a new IBSS .EAR file, you do not need to clear the temp files.*

UPDATES TO IBSS

Open the IBSS application screen.

1. Locate the Services screen under the Nodes options. IBSS > Nodes > Services.



2. Click Edit Process Configuration. A separate screen is displayed.
3. Enter values for the Insbridge Connector Service.



4. Click Save.

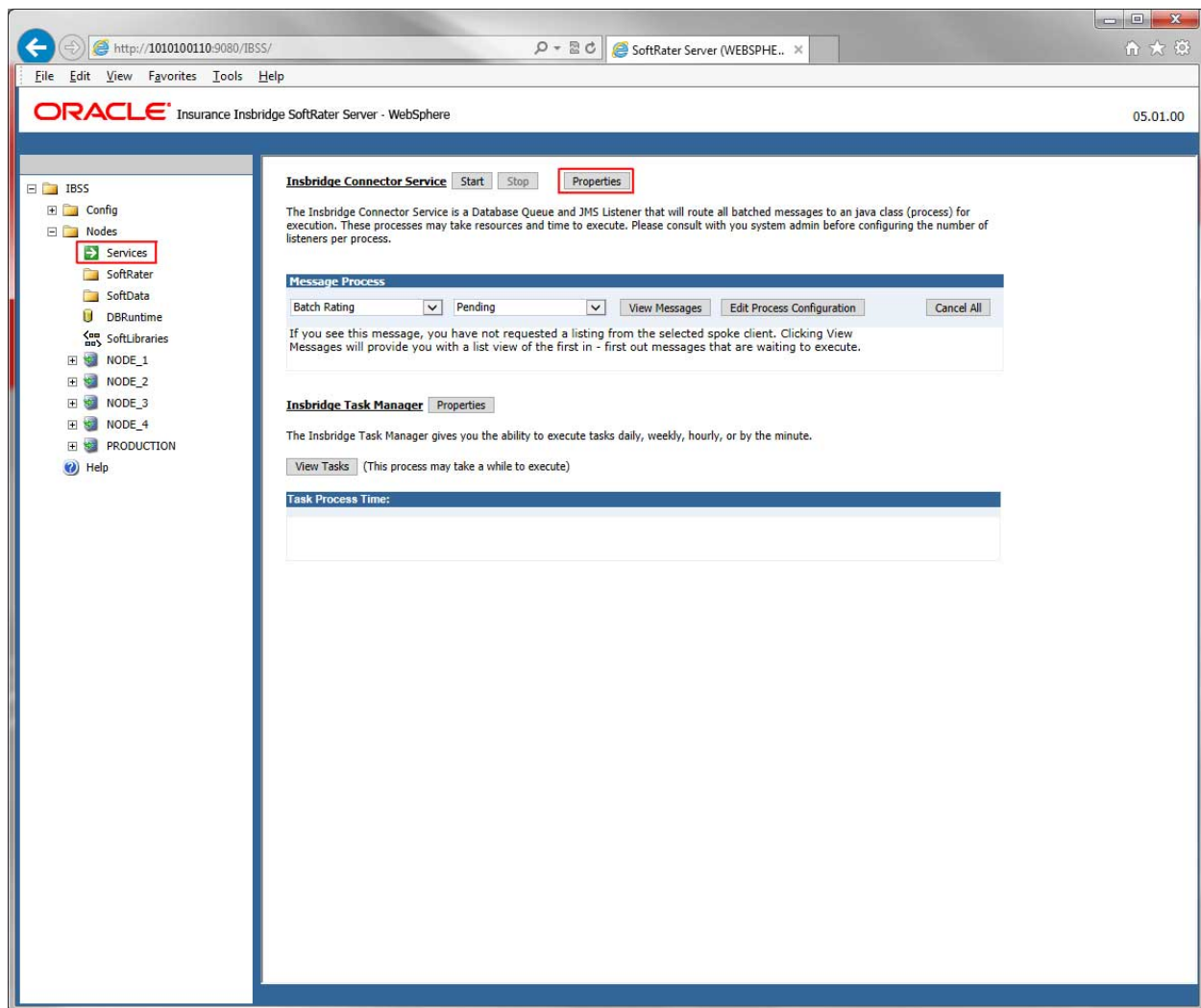
CONFIGURING NOTIFICATION

Notification details need to be configured in order to receive the email response for successful/failed transactions.

Configuring Email on IBSS:

Open the IBSS application screen.

1. Locate the Services screen under the Nodes options. IBSS > Nodes > Services.



2. Click Properties. A separate screen is displayed.
3. Enter values for the Insbridge Connector Service.

-- Webpage Dialog

http://1010100110:9080/IBSS/services/connector_config.jsp

SoftRater Server

[close](#)

Connector Properties

The Insbridge Connector Service has configurations for the items below.

Maximum Simultaneous Jobs:

Maximum Threads per Job:

The Insbridge Connector Service has the ability to send email notification(s) on success and/or failure of batch processes. Please enter the SMTP information below.

Protocol:

Host:

Port:

User:

Password:

The Insbridge Connector Service has the ability to process offline processes using JMS. Please enter the Queue and ReplyTo Queue information below.

Queue Location:

ReplyTo Location:

Connection Factory:

Context Factory:

Provider Url:

- **Protocol** - SMTP or SMTPS or JNDI
- **Host** - email host
- **Port** - port used
- **User** - Login id
- **Password** - Password

4. Click **Save**.

You can use the Test Connector Properties! Options to verify your entry.

Configuring Queue Entries in IBSS:

JMS must be setup prior to entering queue details. Stay on the Connector Properties.

Webpage Dialog

http://1010100110:9080/IBSS/services/connector_config.jsp

SoftRater Server

Connector Properties

The Insbridge Connector Service has configurations for the items below.

Maximum Simultaneous Jobs:

Maximum Threads per Job:

The Insbridge Connector Service has the ability to send email notification(s) on success and/or failure of batch processes. Please enter the SMTP information below.

Protocol:

Host:

Port:

User:

Password:

The Insbridge Connector Service has the ability to process offline processes using JMS. Please enter the Queue and ReplyTo Queue information below.

Queue Location:

ReplyTo Location:

Connection Factory:

Context Factory:

Provider Url:

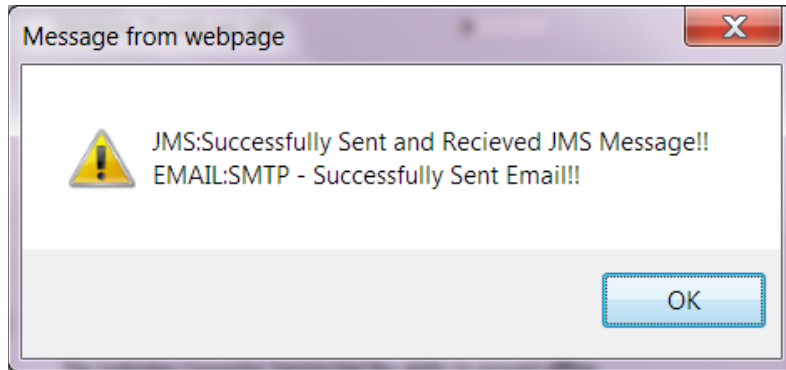
Test Connector Properties! Save Close

1. All fields are required in order to configure queues:

- **Queue Location** - JNDI Name of the Request Queue
- **ReplyTo Location** - JNDI Name of the Reply To Queue
- **Connection Factory** - JNDI Name of the Queue Connection Factory
- **Context Factory** - com.ibm.websphere.naming.WsnInitialContextFactory
- **Provider URL** - iiop://<machine_ip_address>:<server_bootstrap_address>

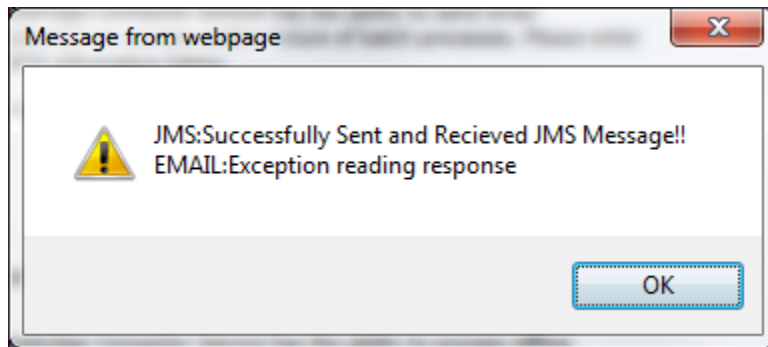
2. Click Save
3. Click **Test Connector Properties!** to verify your entries.

A successful setup returns a success message.



This message means that the JMS Connection was successful, and a sample mail will be sent to the email id that is configured in the properties.

A message failure indicates where the message failed.



In this example, SMTP server was not available on the server.

CONFIGURING PROCESS CONFIGURATION DETAILS

A JMS queue in WebLogic Server is associated with a number of additional resources:

- **JMS Server:** A JMS server acts as a management container for resources within JMS modules. Some of its responsibilities include the maintenance of persistence and state of messages and subscribers. A JMS server is required in order to create a JMS module.
- **JMS Module:** A JMS module is a definition which contains JMS resources such as queues and topics. A JMS module is required in order to create a JMS queue.
- **Subdeployment:** JMS modules are targeted to one or more WLS instances or a cluster. Resources within a JMS module, such as queues and topics are also targeted to a JMS server or WLS server instances. A subdeployment is a grouping of targets. It is also known as advanced targeting.
- **Connection Factory:** A connection factory is a resource that enables JMS clients to create connections to JMS destinations.
- **JMS Queue:** A JMS queue (as opposed to a JMS topic) is a point-to-point destination type. A message is written to a specific queue or received from a specific queue.

STEPS FOR SETTING UP JMS QUEUE IN WEBLOGIC:

The following are the steps to setup JMS for WebLogic Server.

Create a JMS Server

1. Start the WebLogic server and Login to WebLogic console. (e.g: <http://10.100.10.100:7001/console>).



2. Go to Services > Messaging > JMS Servers (left-hand navigation menu of server console).
3. Select New.
4. Name: JMSServer-0 & Persistent Store: (none).
5. Click next.
6. Target: AdminServer (or choose an available server).
7. Click Finish.
8. The JMS server should now be visible in the list with Health OK.

Summary of JMS Servers

JMS servers act as management containers for the queues and topics in JMS modules that are targeted to them.

This page summarizes the JMS servers that have been created in the current WebLogic Server domain.

[Customize this table](#)

JMS Servers (Filtered - More Columns Exist)

<input type="checkbox"/>	Name	Persistent Store	Target	Current Server	Health
<input type="checkbox"/>	JMSServer-0		AdminServer	AdminServer	OK

Create a JMS Module

1. Go to Services > Messaging > JMS Modules (left-hand navigation menu of server console).



2. Select New.
3. Name: SystemModule-0.
4. Click Next.
5. Leave the other options empty.
6. Targets: AdminServer (or choose the same one as the JMS server).
7. Click Next.
8. Leave "Would you like to add resources to this JMS system module" unchecked.
9. Click Finish.

Create a SubDeployment

A subdeployment is not necessary for the JMS queue to work, but it allows you to easily target subcomponents of the JMS module to a single target or group of targets. We will use the subdeployment in this example to target the following connection factory and JMS queue to the JMS server we created earlier.

1. Go to Services > Messaging > JMS Modules.
2. Select SystemModule-0.
3. Select the Subdeployments tab and New.

Settings for SystemModule-0

Configuration **Subdeployments** Targets Security Notes

This page displays subdeployments created for a JMS system module. A subdeployment is a mechanism by which JMS n server instances, or cluster).

[Customize this table](#)

Subdeployments

New Delete

	Name	Resources
	Subdeployment0	ReplyToQueue, ConnectionFactory-0

New Delete

4. Subdeployment Name: Subdeployment-0.
5. Click Next.

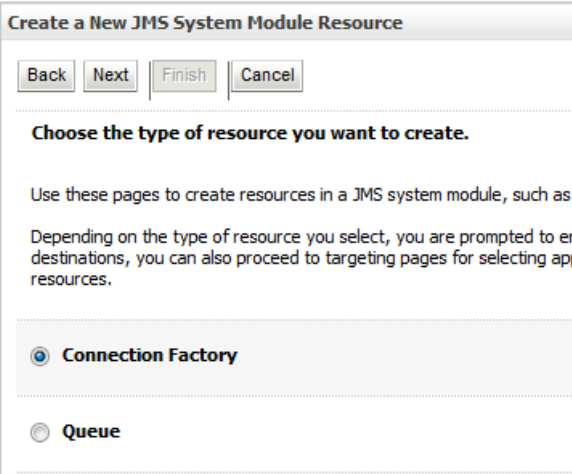
Here you can select the target(s) for the subdeployment. You can choose either Servers (i.e. WebLogic Admin server, such as the Admin Server) or JMS Servers such as the

JMS Server created earlier. As the purpose of our subdeployment is to target a specific JMS server, choose the JMS Server option.

6. Select the JMSServer-0 created earlier.
7. Click Finish.

Create a Connection Factory

1. Services > Messaging > JMS Modules
2. Select SystemModule-0 and press New
3. Select Connection Factory.
4. Click Next.



Create a New JMS System Module Resource

Back Next Finish Cancel

Choose the type of resource you want to create.

Use these pages to create resources in a JMS system module, such as

Depending on the type of resource you select, you are prompted to enter destinations, you can also proceed to targeting pages for selecting application resources.

☒ **Connection Factory**

☐ **Queue**

5. Name: ConnectionFactory-0
6. JNDI Name: jms/ConnectionFactory
7. Leave the other values at default
8. On the Targets page, select the Advanced Targeting button and select Subdeployment-0

Create a New JMS System Module Resource

Back

Next

Finish

Advanced Targeting

Cancel

The following properties will be used to target your new JMS system module resource

Use this page to view and accept the default targets where this JMS resource will be targeted. The default subdeployment mechanism for targeting this resource.

The following JMS module targets will be used as the default targets for your new JMS system module resource

Targets :

Servers

☒ AdminServer

Back

Next

Finish

Advanced Targeting

Cancel

Create a New JMS System Module Resource

Back

Next

Finish

Cancel

The following properties will be used to target your new JMS system module resource

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which you can group related resources together. You can also reconfigure subdeployment targets later by clicking the **Create a New Subdeployment** button.

Select the subdeployment you want to use. If you select (none), no targeting will occur.

Subdeployments: Subdeployment0 ▾ Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets :

Servers

☐ AdminServer

Clusters

☐ Cluster1

- ☐ All servers in the cluster
- ☐ Part of the cluster
 - ☐ MS2
 - ☐ MS1

JMS Servers

☒ JMSServer-0

Back

Next

Finish

Cancel

9. Click **Finish**
10. The connection factory should be listed on the following page with **SystemModule-0** and **JMSServer-0** as the target.

Creating JMS Queues

1. Services > Messaging > JMS Modules.
2. Select **SystemModule-0** and press **New**.
3. Select **Queue** and **Next**.
4. Name: **ReplyToQueue**
5. JNDI Name: **jms/ReplyToQueue**
6. Template: **None**
7. Click **Next**
8. Subdeployments: **Subdeployment-0**
9. Finish. The ReplyToQueue should be listed on the following page with Subdeployment-0 and JMSServer-0.
10. Select **SystemModule-0** and press **New**.
11. Select **Queue** and **Next**.
12. Name: **RequestQueue**
13. JNDI Name: **jms/RequestQueue**
14. Template: **None**
15. Click **Next**
16. Subdeployments: **Subdeployment-0**
17. Finish. The RequestQueue should be listed on the following page with Subdeployment-0 and JMSServer-0.

The JMS setup is now complete and can be accessed using the JNDI names: Jms/connectionFactory, jms/ReplyToQueue and jms/RequestQueue.

Settings for SystemModule-0

Configuration

Subdeployments

Targets

Security

Notes

This page displays general information about a JMS system module and its resources. It also allows you to configure new resources and access existing resources.

Name:

SystemModule-0

The name of this JMS system module. [More Info...](#)

Descriptor File Name:

jms/systemmodule-0-jms.xml

The name of the JMS module descriptor file. [More Info...](#)

This page summarizes the JMS resources that have been created for this JMS system module, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters.

[Customize this table](#)

Summary of Resources

New

Delete

Showing 1 to 3 of 3

Previous

Next

<input type="checkbox"/>	Name ↕	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/>	ConnectionFactory-0	Connection Factory	.jms/ConnectionFactory	Subdeployment-0	JMSServer-0
<input type="checkbox"/>	ReplyToQueue	Queue	.jms/ReplyToQueue	Subdeployment-0	JMSServer-0
<input type="checkbox"/>	RequestQueue	Queue	.jms/RequestQueue	Subdeployment-0	JMSServer-0

New

Delete

Showing 1 to 3 of 3

Previous

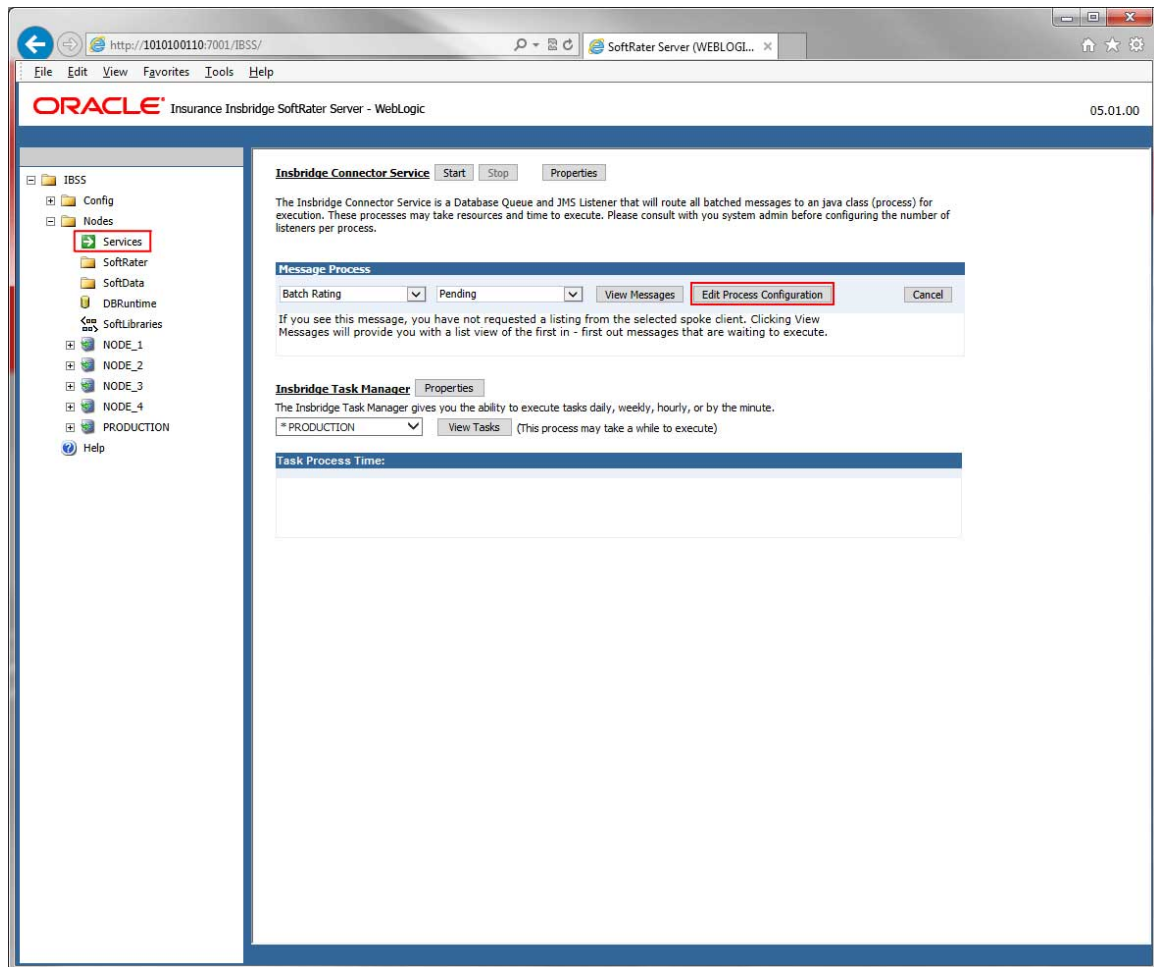
Next

UPDATES TO IBSS

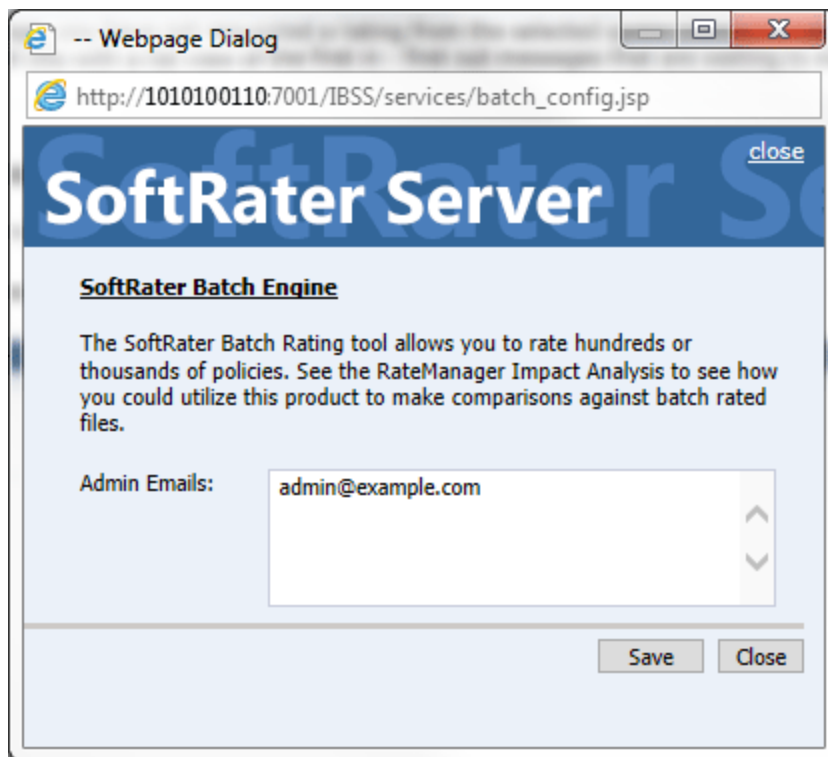
The Notification details need to be configured in order to receive the email response for successful/failed transactions.

Open the IBSS application screen.

1. Locate the Services screen under the Nodes options. IBSS > Nodes > Services.



2. Click Edit Process Configuration. A separate screen is displayed.
3. Enter values for the Inbridge Connector Service.



4. Click Save.

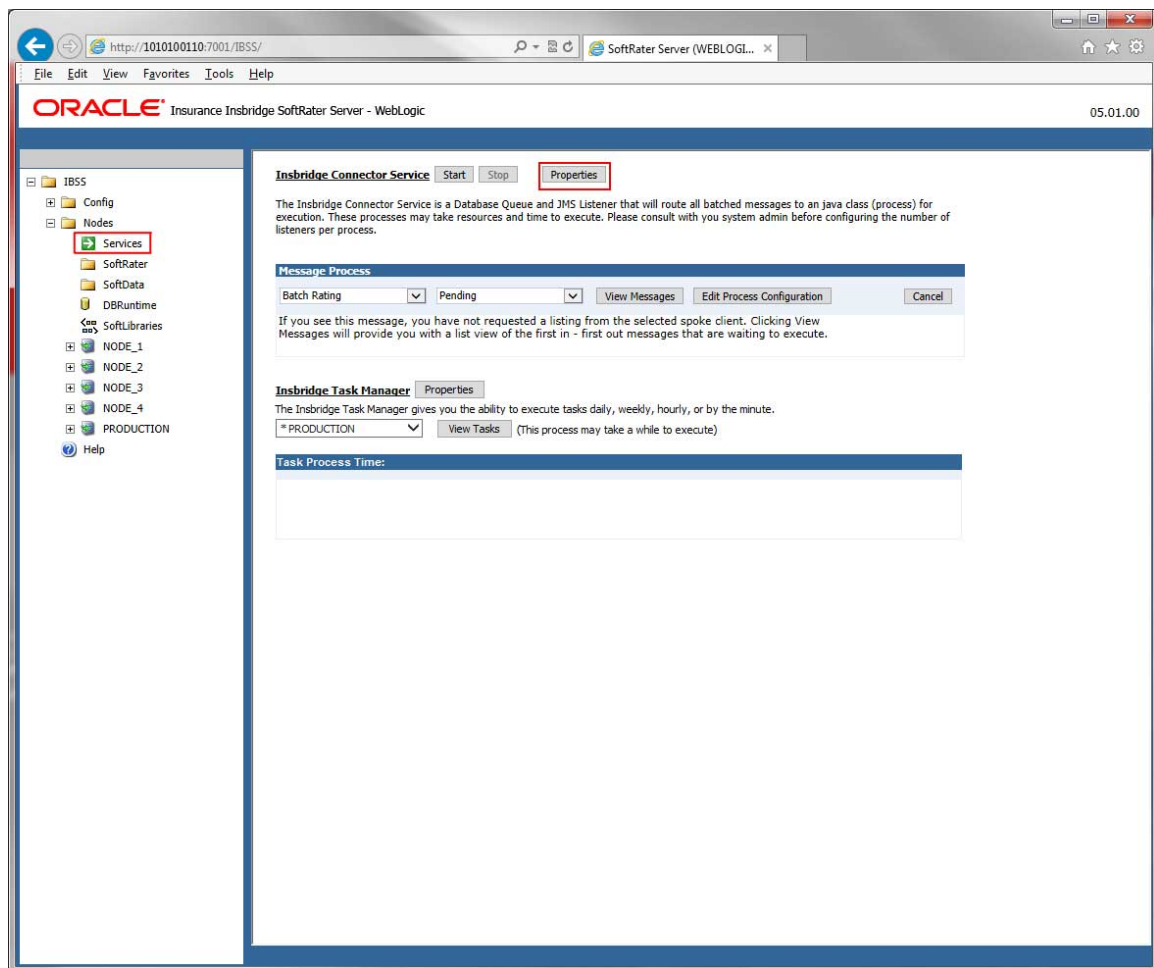
CONFIGURING NOTIFICATION

Notification details need to be configured in order to receive the email response for successful/failed transactions.

Configuring Email on IBSS:

Open the IBSS application screen.

1. Locate the Services screen under the Nodes options. IBSS > Nodes > Services.



2. Click Properties. A separate screen is displayed.
3. Enter values for the Inbridge Connector Service.

-- Webpage Dialog

http://1010100110:7001/IBSS/services/connector_config.jsp

SoftRater Server [close](#)

Connector Properties

The Insbridge Connector Service has configurations for the items below.

Maximum Simultaneous Jobs:

Maximum Threads per Job:

The Insbridge Connector Service has the ability to send email notification(s) on success and/or failure of batch processes. Please enter the SMTP information below.

Protocol: ▼

Host:

Port:

User:

Password:

The Insbridge Connector Service has the ability to process offline processes using JMS. Please enter the Queue and ReplyTo Queue information below.

Queue Location:

ReplyTo Location:

Connection Factory:

Context Factory:

Provider Url:

- **Protocol** - SMTP or SMTPS or JNDI
- **Host** - email host
- **Port** - port used
- **User** - Login id
- **Password** - Password

4. Click **Save**.

You can use the Test Connector Properties! Options to verify your entry.

Configuring Queue Entries in IBSS:

JMS must be setup prior to entering queue details. Stay on the Connector Properties.

The screenshot shows a web browser window titled "-- Webpage Dialog" with the URL "http://1010100110:7001/IBSS/services/connector_config.jsp". The page has a blue header with "SoftRater Server" and a "close" button. The main content area is titled "Connector Properties" and contains the following sections:

The Insbridge Connector Service has configurations for the items below.

Maximum Simultaneous Jobs:
Maximum Threads per Job:

The Insbridge Connector Service has the ability to send email notification(s) on success and/or failure of batch processes. Please enter the SMTP information below.

Protocol:
Host:
Port:
User:
Password:

The Insbridge Connector Service has the ability to process offline processes using JMS. Please enter the Queue and ReplyTo Queue information below.

Queue Location:
ReplyTo Location:
Connection Factory:
Context Factory:
Provider Url:

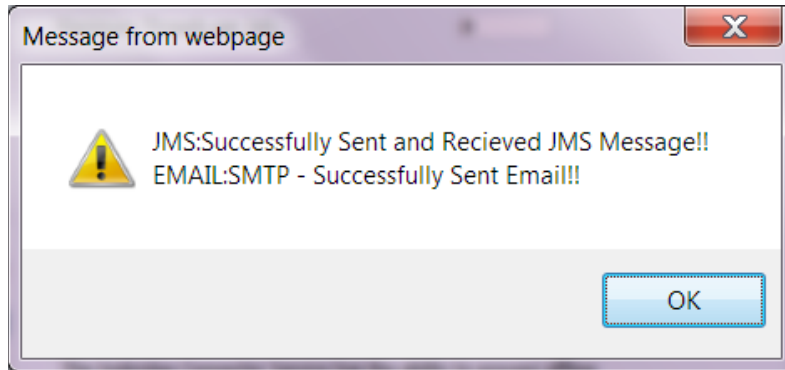
At the bottom, there are three buttons: "Test Connector Properties!", "Save", and "Close".

4. All fields are required in order to configure queues:

- **Queue Location** - JNDI Name of the Request Queue
- **ReplyTo Location** - JNDI Name of the Reply To Queue
- **Connection Factory** - JNDI Name of the Queue Connection Factory
- **Context Factory** - weblogic.jndi.WLInitialContextFactory
- **Provider URL** - t3://localhost:7001

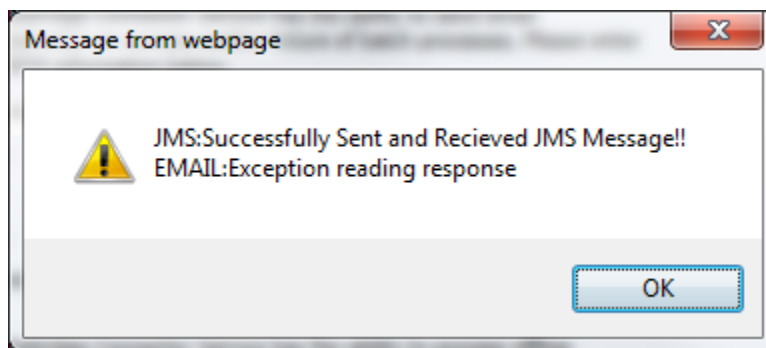
5. Click Save
6. Click **Test Connector Properties!** to verify your entries.

A successful setup returns a success message.



This message means that the JMS Connection was successful, and a sample mail will be sent to the email id that is configured in the properties.

A message failure indicates where the message failed.



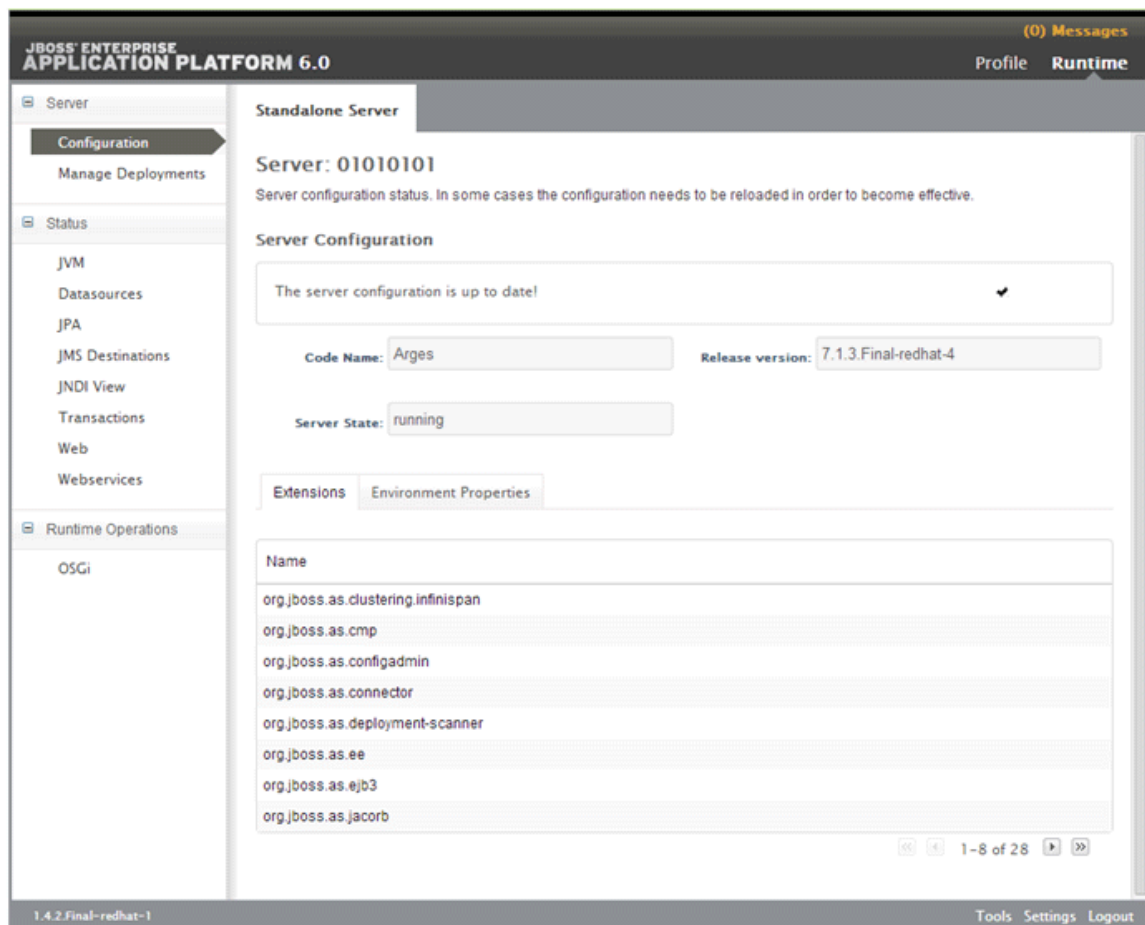
In this example, SMTP server was not available on the server.

CONFIGURING PROCESS CONFIGURATION DETAILS

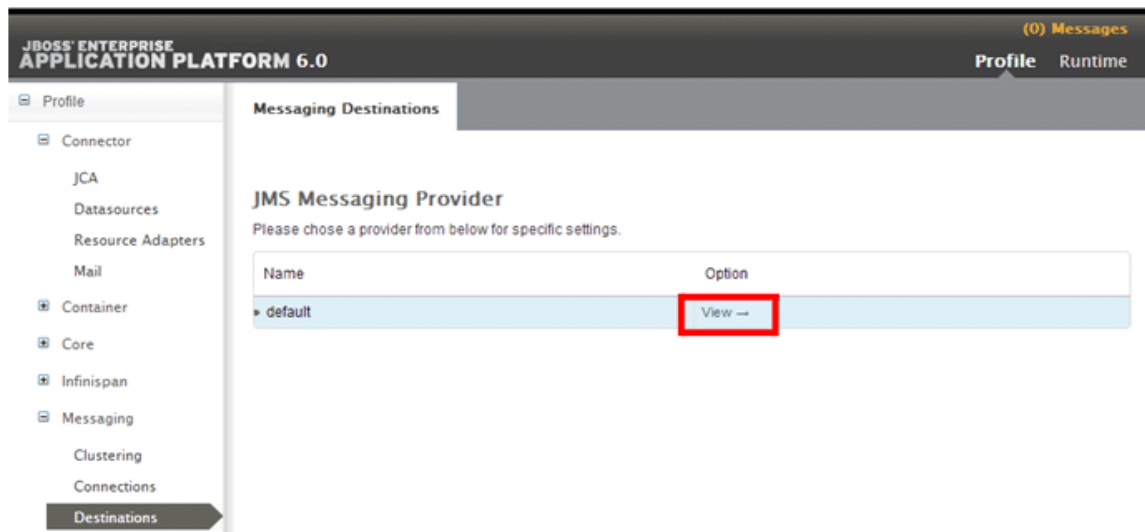
The first step is to create and configure JMS queues and connection factory.

JMS Queue:

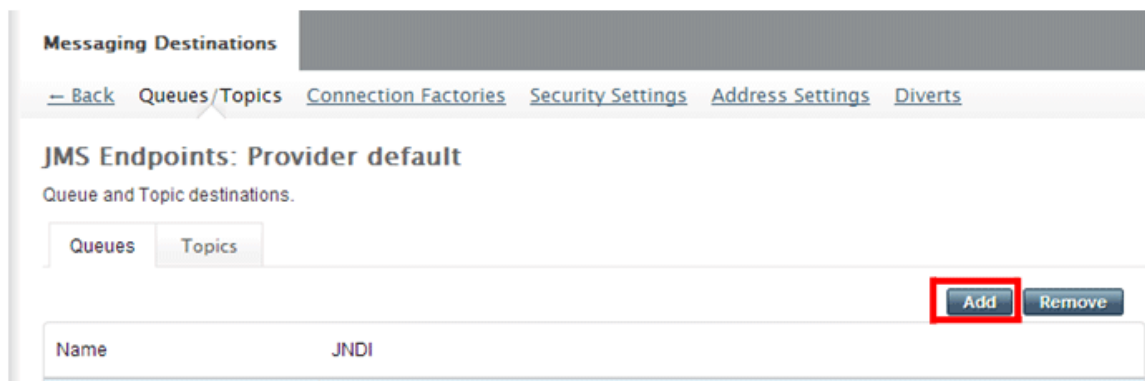
1. Start the Jboss server. (run the standalone.bat file for windows and standalone.sh for linux machine.)
2. Open up a web browser and go to <http://localhost:9990/> to open the management console. (e.g, <http://10.100.10.100:9990/console>)



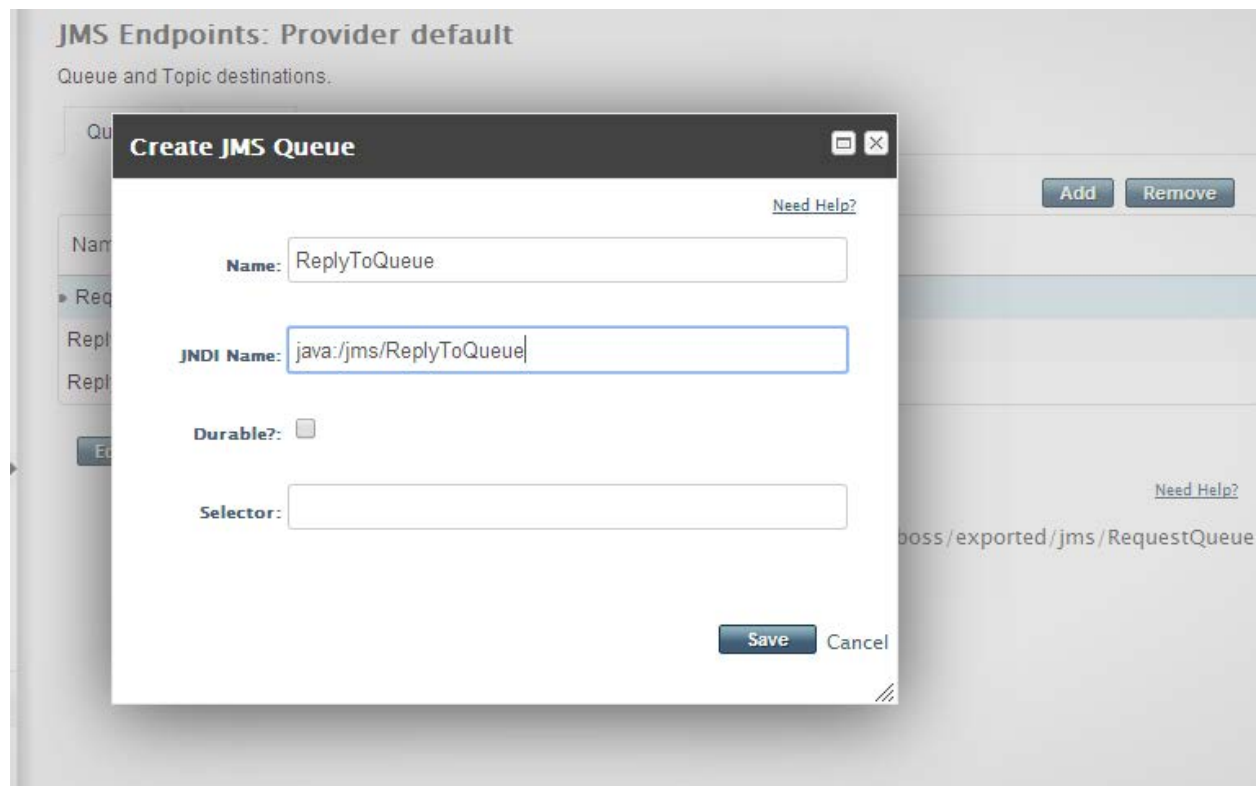
3. Go to Configuration -> Subsystems -> Messaging -> Destinations -> view (default). The Queues/Topics should be displayed.



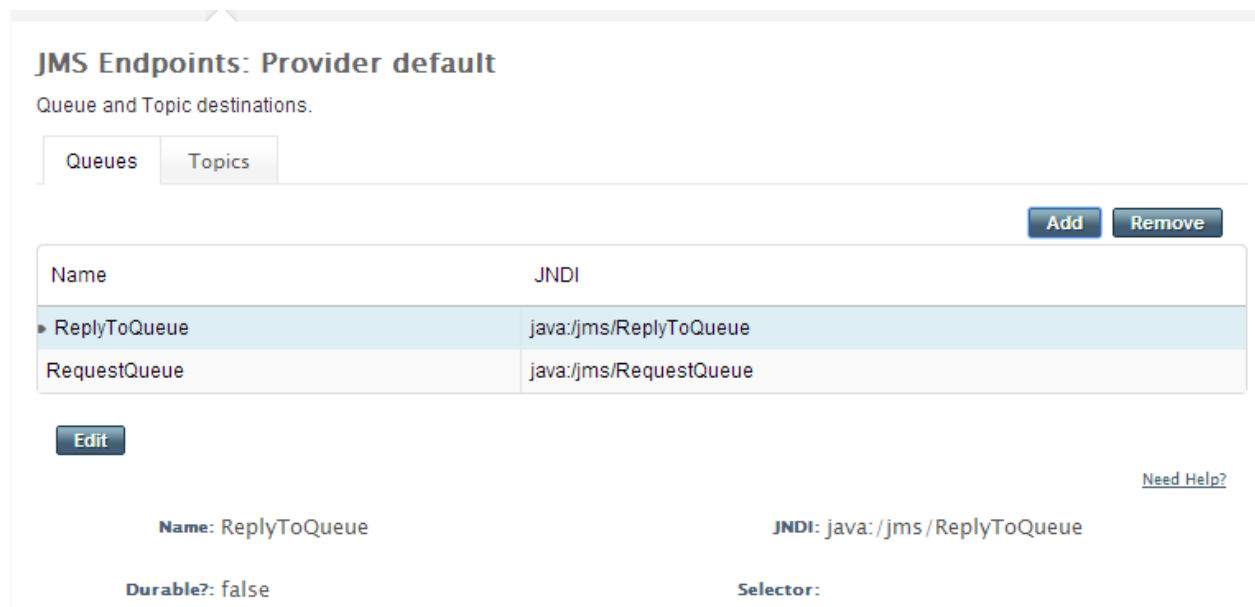
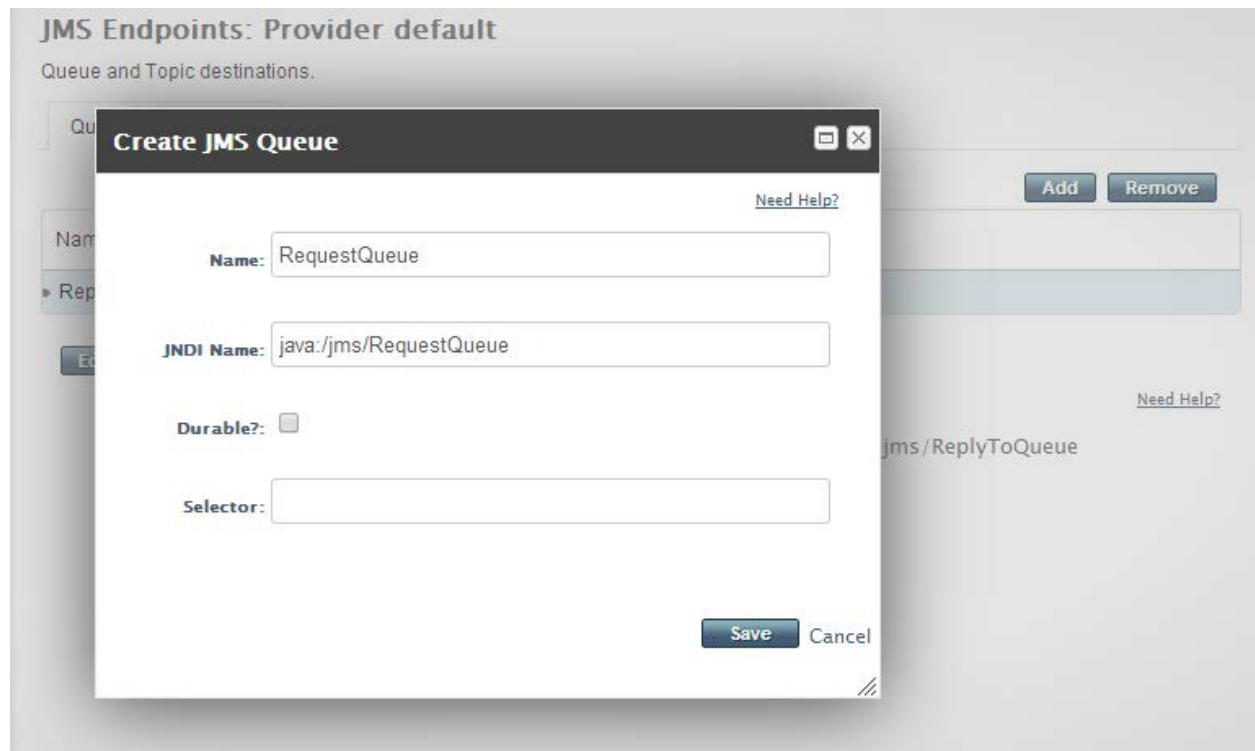
- Click the Add button to add a new Queue.



- Enter ReplyToQueue as Name and java:/jms/ReplyToQueue for the JNDI Name.

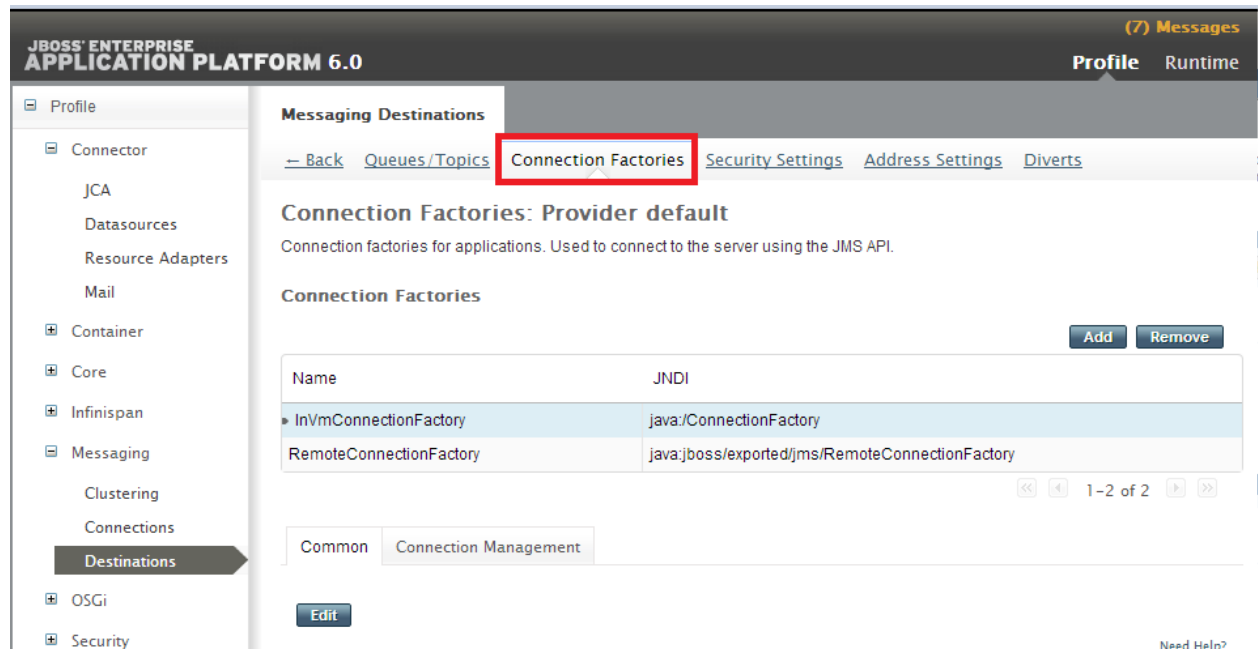


6. Click save and verify. You now have a non-durable queue.
7. To add the Request Queue, click the Add button.
8. Enter RequestQueue as Name and java:/jms/RequestQueue for the JNDI Name.
9. Click save and verify. You now have a second non-durable queue.

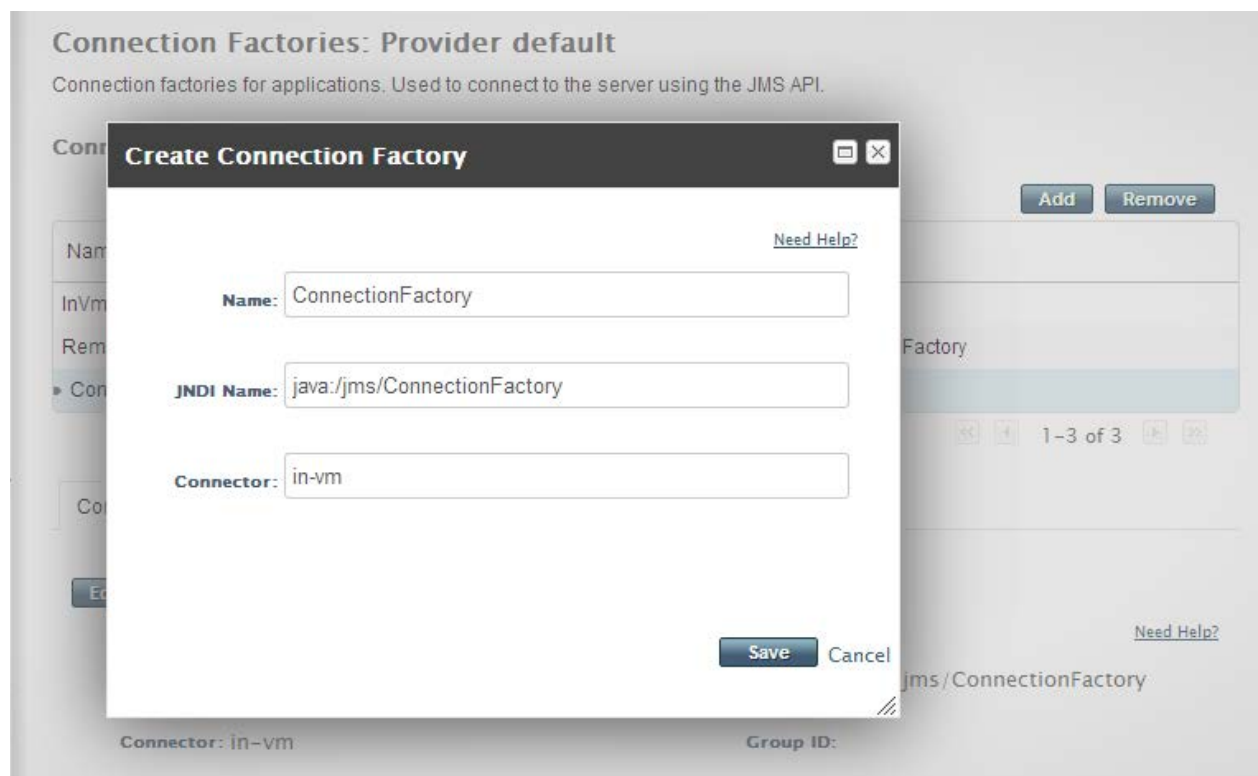


Connection Factory:

1. Go to Configuration -> Subsystems -> Messaging -> Destinations -> view (default), select the Connection Factories tab.



2. Click the Add button to add a new Connection Factory.
3. Enter ConnectionFactory as Name, java:/jms/ConnectionFactory for the JNDI Name and in-vm for the Connector.



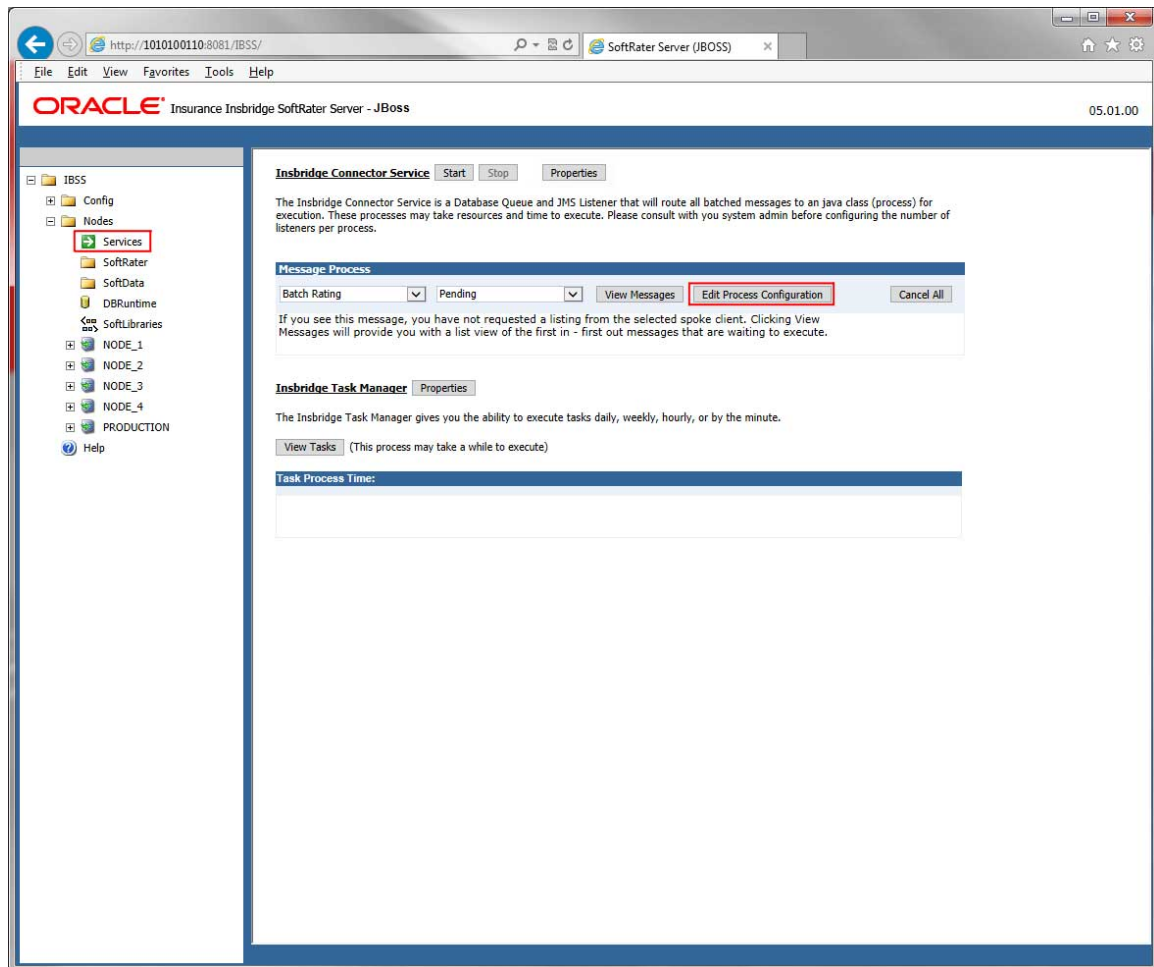
4. Click save to save your entry.

UPDATES TO IBSS

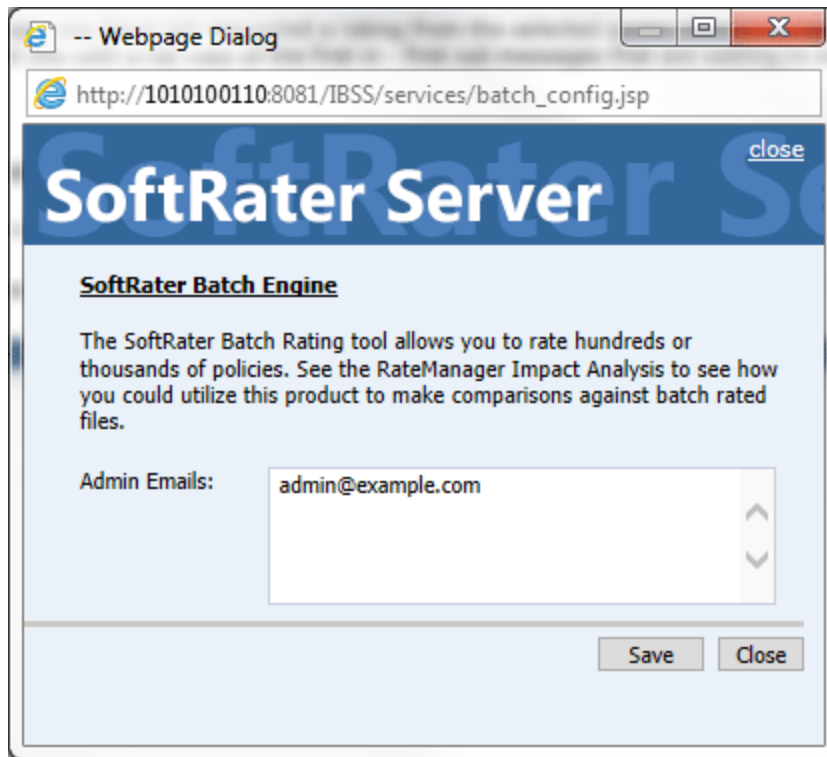
The Notification details need to be configured in order to receive the email response for successful/failed transactions.

Open the IBSS application screen.

1. Locate the Services screen under the Nodes options. IBSS > Nodes > Services.



2. Click Edit Process Configuration. A separate screen is displayed.
3. Enter values for the Insubridge Connector Service.



4. Click Save.

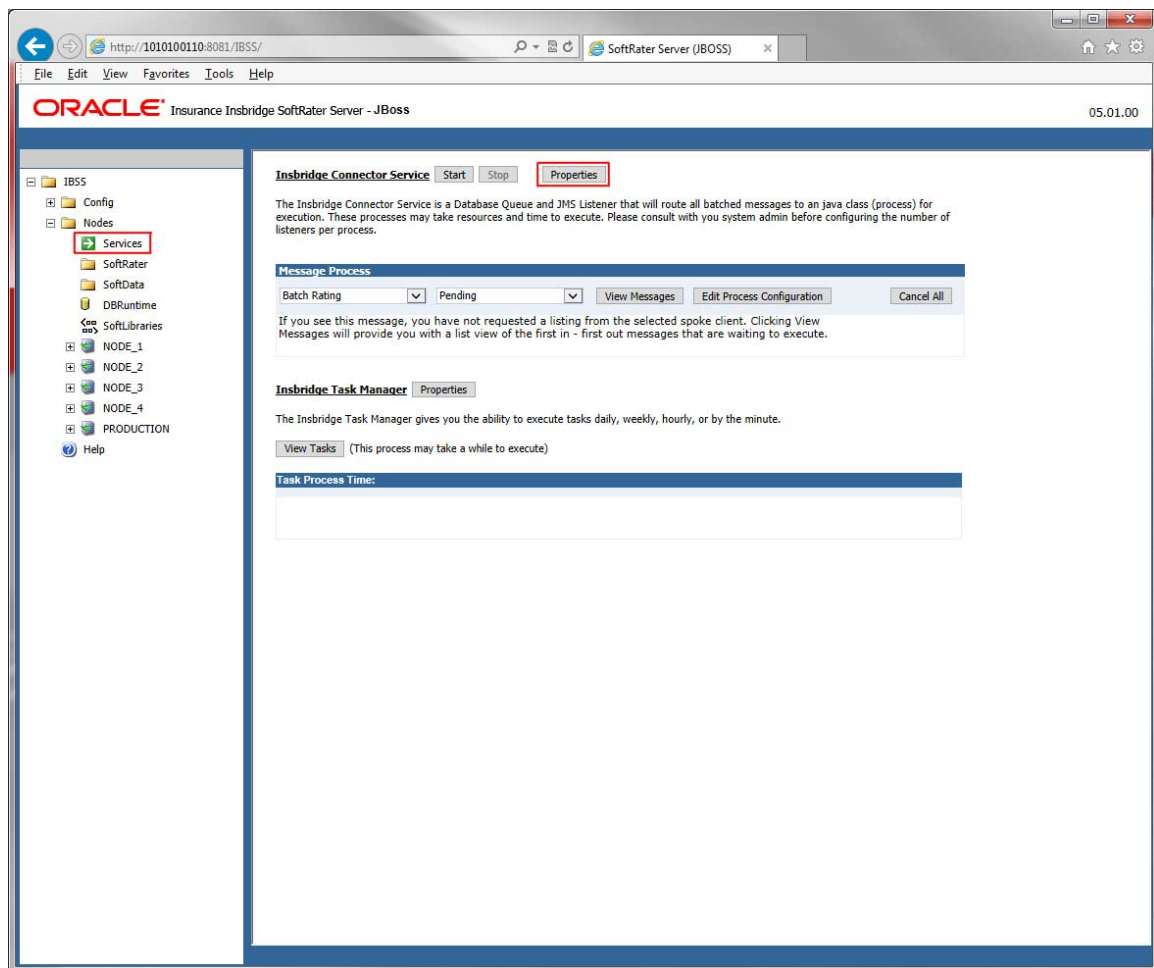
CONFIGURING NOTIFICATION

Notification details need to be configured in order to receive the email response for successful/failed transactions.

Configuring Email on IBSS:

Open the IBSS application screen.

5. Locate the Services screen under the Nodes options. IBSS > Nodes > Services.



6. Click Properties. A separate screen is displayed.
7. Enter values for the Inbridge Connector Service.

The screenshot shows a web browser window titled "-- Webpage Dialog" displaying the URL `http://1010100110:8081/IBSS/services/connector_config.jsp`. The page has a blue header with the text "SoftRater Server" and a "close" link. Below the header, the section is titled "Connector Properties".

The first part of the form states: "The Insbridge Connector Service has configurations for the items below." It includes two input fields: "Maximum Simultaneous Jobs:" and "Maximum Threads per Job:".

The second part states: "The Insbridge Connector Service has the ability to send email notification(s) on success and/or failure of batch processes. Please enter the SMTP information below." It includes the following fields:

- Protocol: A dropdown menu with "SMTP" selected.
- Host: `email.server@example.com`
- Port: `465`
- User: `Insbridge.user@example.com`
- Password: A masked field with 8 dots.

The third part states: "The Insbridge Connector Service has the ability to process offline processes using JMS. Please enter the Queue and ReplyTo Queue information below." It includes the following fields:

- Queue Location: An empty text box.
- ReplyTo Location: An empty text box.
- Connection Factory: An empty text box.
- Context Factory: An empty text box.
- Provider Url: An empty text box.

At the bottom of the form, there are three buttons: "Test Connector Properties!", "Save", and "Close".

- **Protocol** - SMTP or SMTPS or JNDI
- **Host** - email host
- **Port** - port used
- **User** - Login id
- **Password** - Password

8. Click **Save**.

You can use the Test Connector Properties! Options to verify your entry.

Configuring Queue Entries in IBSS:

JMS must be setup prior to entering queue details. Stay on the Connector Properties.

The screenshot shows a web browser window titled "-- Webpage Dialog" displaying the URL `http://1010100110:8081/IBSS/services/connector_config.jsp`. The page has a blue header with "SoftRater Server" and a "close" link. The main content area is titled "Connector Properties" and contains the following sections:

The Insbridge Connector Service has configurations for the items below.

Maximum Simultaneous Jobs:
Maximum Threads per Job:

The Insbridge Connector Service has the ability to send email notification(s) on success and/or failure of batch processes. Please enter the SMTP information below.

Protocol:
Host:
Port:
User:
Password:

The Insbridge Connector Service has the ability to process offline processes using JMS. Please enter the Queue and ReplyTo Queue information below.

Queue Location:
ReplyTo Location:
Connection Factory:
Context Factory:
Provider Url:

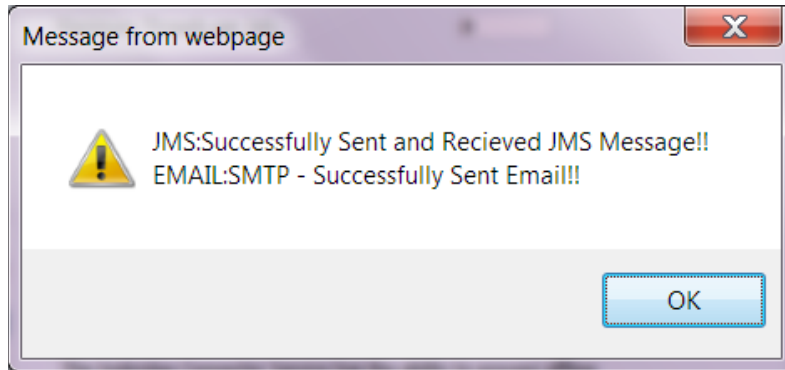
At the bottom, there are three buttons: "Test Connector Properties!", "Save", and "Close".

7. All fields are required in order to configure queues:

- **Queue Location** - JNDI Name of the Request Queue
- **ReplyTo Location** - JNDI Name of the Reply To Queue
- **Connection Factory** - JNDI Name of the Queue Connection Factory
- **Context Factory** - org.jboss.naming.remote.client.InitialContextFactory
- **Provider URL** – REMOTE:// (URL):4447

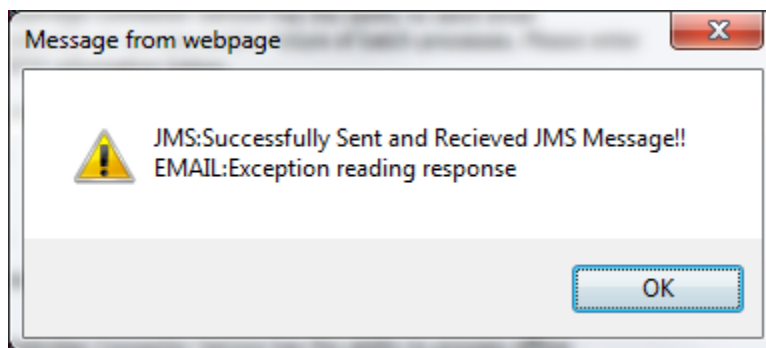
8. Click Save
9. Click **Test Connector Properties!** to verify your entries.

A successful setup returns a success message.



This message means that the JMS Connection was successful, and a sample mail will be sent to the email id that is configured in the properties.

A message failure indicates where the message failed.



In this example, SMTP server was not available on the server.

EXAMPLE STEPS FOR BATCH RATING

These examples show batch rating in various ways.

Rate Normal: - Synchronous Processing

1. Navigate to **IBSS → Nodes → SoftRater**.
2. Select the Node from the dropdown.
3. In "Enter Request XML text or file path below:", Select XML and paste the rateDoc in the text field.
4. Under ProcessAsync, select Async Processing as "**Off**".
5. Under Optional Rate Operators, type the Environment Name in the text box.
6. Click **Execute!**
7. The Result Information text area should be populated with the result xml.
8. Click on **ViewXml** and find **TOTALPOLICYPREMIUM_R**. Note down the value.

Rate Synchronous & Add Inputs/Results to DB

1. Navigate to **IBSS -> Nodes -> SoftRater**.
2. Select the Node from the dropdown.
3. In "Enter Request XML text or file path below:", Select XML and paste the rateDoc in the text field.
4. Under ProcessAsync, select Async Processing as "**Off**".
5. Under Optional Rate Operators, type the Environment Name in the text box.
6. Under Rate Operators, select the checkbox for **Add Input data to the DB** and **Add Result data to the DB**.
7. Click **Execute!**
8. The Result Information text area should be populated with the result xml.
9. Click on **ViewXml** and get the 'db__rt_INPUT_BATCH_ID', 'db__rt_INPUT_FILE_ID', 'db__rt_RESULT_BATCH_ID', 'parent_id' values from the resultXML.
10. Leave the current window as such and open IBSS application in a new window.
11. Navigate to **IBSS → Nodes → DBRuntime**
12. Select Node value as the node that was earlier selected while executing the rateDoc.
13. In the method, select '**GetInputXML**'.
14. Enter 'Input Batch Id' with **db__rt_INPUT_BATCH_ID** and 'File Id' with **db__rt_INPUT_FILE_ID** with the values noted down from the resultXML.
15. Enter **parent_id** value for 'Subscriber Id'.
16. Environment value should be the same as we entered in SoftRater screen.
17. After entering all the required values, click **Execute!**
18. The Result Information text area should be populated with the xml having **complete="no"** as below

```
<rate project_id="1" env_def="oracle_dr"
PolicyNumber="XMLInput_ChangeAutoComplex_127" complete="no"
><heading><program parent_id="8659" id="318" ver="1" ></program></heading></rate>
```
19. Now open IBSS application in another window.

20. Navigate to **IBSS → Nodes → <Node_Name>**(Node which was selected to execute)-> **Services**
21. Now, Start the Insbridge Connector Service by clicking **Start**.
22. Now go to the window where the DBRuntime screen is open.
23. Clear the Result Information.
24. With the previously entered values, click **Execute!**
25. The Result Information should display the complete Request XML.
26. Now from the Request Information, select **GetResultXML** from the dropdown for Method.
27. Enter the **db__rt_RESULT_BATCH_ID** value in the text box for Result Batch Id, **db__rt_INPUT_FILE_ID** value for File Id, and other values as previously entered.
28. Clear result information.
29. Click **Execute!**
30. The Result information text area gets populated with the Result XML.

Rate Async – Show Items in the Queue

1. Navigate to **IBSS → Nodes → SoftRater**.
2. Select the Node from the dropdown.
3. In “Enter Request XML text or file path below:”, Select XML and paste the rateDoc in the text field.
4. Under ProcessAsync, select Async Processing as “Off”
5. Under Optional Rate Operators, type the Environment Name in the text box.
6. Under Rate Operators, select the checkbox for **Add Input data to the DB** and **Add Result data to the DB**
7. Click **Execute!**
8. The Result Information text area should be populated with the result xml.
9. Now open IBSS application in another window.
10. Navigate to **IBSS → Nodes → <Node_Name>**(Node which was selected to execute)-> **Services**
11. In the Services screen, select **Broker – Request** from the first dropdown, the second dropdown defaults to **pending**.
12. Click on **View Messages**.
13. The table should display the request that was just submitted to db.
14. Now, Start the Insbridge Connector Service by clicking **Start**.
15. Then clicking on the **View Messages** for Broker - Request should return “No Messages found”.
This means that the request has been picked up by the Timer service that was just started and the request has been stored to the Database.
16. Now select **Broker – Response** from the first dropdown
17. Click **View Messages**
18. The table should display the result.

Rate Using ESI Tester

1. Store the all the rateDoc input files to a directory. Eg. D:\ReqFiles
2. In the IBSS application, navigate to **IBSS → Nodes → <Node_Name>**(Node which was selected to execute) → **Services**
3. Make sure the Insbridge Connector Service is **Stopped**.
4. Open ESI Tester using 7-zip or similar program.

5. Edit the **resource.properties** file to point to the correct hostname and contextRoot.
6. Double clicking on the ESI-Tester.jar should open a UI, select **Test IBSS**
7. This will open a new screen where to the right top corner, Assembly Process and Soft Service should be Online. This shows that the value in the resource.properties file is correct.
8. Now click on the InsbridgeXML tab.
9. Select XML Type as **File**.
10. In the text area select the directory in which the rate request files are stored.
<directory_name>*.xml
11. Enter the subscriber id and Environment name in the respective text fields below.
12. Click **Submit to Runtime DB**
13. The system returns a Batch Id. Make a note of it.
14. Now open the IBSS application, Services screen.
15. Select **Broker – Request** from the dropdown, click **View Messages**.
16. A complete list of the requests is displayed.
17. Start **Insbridge Connector Service**.
18. Upon checking the **Broker – Request**, we could notice that the requests are picked up one after the other for every specified interval.
19. When there are no more Requests to display in the **Broker – Request**, **Stop** the Insbridge Connector Service.
20. Open the ESI-Tester screen.
21. Click on the **Submit Batch** tab.
22. Enter the Batch Id, which we got from the system while submitting to Runtime DB in Step 12.
23. Enter the Subscriber Id and Environment Id.
24. Check the **Read Write Option** box.
25. Enable Email Notification by checking the **Email Notification**.
26. Enter the email id to which the response should be sent. Separate the email ids with “,”
27. Click **Start Batch**.
28. This will return a message saying “Successfully Submitted Batch” and a batch Id.
29. Now open the IBSS application, Services screen.
30. Select **Batch Rating** from the dropdown. Click **View Messages**.
31. The Batch Request that we submitted through the ESI-Tester will be displayed.
32. Start the Insbridge Connector Service.
33. Select **Batch Rating** from the first dropdown, select **Processing** from the next dropdown.
34. Click **View Messages**.
35. This shows that the request is being processed by the Worker Manager.
36. If this doesn't show up any records in the **processing**, select **Completed** and verify if the request is completed.

Upon completion of rating, the response will be sent to the email which was entered in the ESI-Tester screen.

STATUS TABLE DEFINITIONS

The status table presents the current information regarding the node.

Getting Status

1. Navigate to **IBSS → Nodes**.
2. Click on the **GET STATUS** button.
3. Get Status table contains seven columns which are Node Name, Node Status, Service Status, Config last time Changed, Connector last time Changed, JMS Status, Email Status.

Node Name

- This column shows all the registered node names.
- If Node is Active (or up) then the node name appears as a hyperlink.
- When you click on the hyperlink of any node, a new IBSS page of that node opens in separate browser window.
- If Node is Inactive (or down) then only node name will appear in the table.

Node Status

- This column shows the Node status as **Active / Inactive** of all the registered nodes.
- If Node is up then the node status cell value is **Active**.
- If Node is down then the node status cell value is **Inactive**.

Service Status

- This column shows the Service status as **ON / OFF / Unknown** of all the registered nodes.
- If Node is Active and Connector Service is in running state then the service status cell value will be **ON**.
- If Node is Active and Connector Service is stopped then the service status cell value will be **OFF**.
- If Node is Inactive then the service status cell value will be **Unknown**.

Config Last Time Changed

- This column shows the Softrater Config last time changed of all the registered nodes in the date format: **YYYY-MM-DD HH: MM:SS PM/AM**.
- New Config properties values of each node are reflected after Starting the connector service of all the nodes and after resetting the Environments of all the nodes.

After this Config last time changed cell has the exact last date changed.

- Start All Service:
 - Go to **IBSS → Nodes → Services** to start the connector services of all the nodes.
 - Click on Start button of Insbridge Connector Service.
- Reset All Environment:
 - Go to **IBSS → Nodes** to Reset the Environment of all the nodes.
 - Click on Start button of Insbridge Connector Service.
- If Node is Inactive (or down) then Config last time changed status cell value is ' – ' (dash).

Connector Last Time Changed

- This column shows the Connector properties last time changed of all the registered nodes in the date format: YYYY-MM-DD HH: MM:SS PM/AM.
- New Connector properties values of each node are reflected after Starting the connector service of all the nodes and after resetting the Environments of all the nodes.

After this connector last time changed cell has the exact last date changed.

- Start All Service:
 - Go to **IBSS → Nodes → Services** to start the connector services of all the nodes.
 - Click on Start button of Insbridge Connector Service.
- Reset All Environment:
 - Go to **IBSS → Nodes** to Reset the Environment of all the nodes.
 - Click on Start button of Insbridge Connector Service.
- If Node is Inactive (or down) then Connector last time changed status cell value is ' – ' (dash).

JMS Status

- This column shows the JMS status as **Success / Error** of all the registered nodes.
- Check the JMS configuration set up values in Connector properties section:
 - Go to **IBSS→ Nodes → Services**
 - Click **Properties** button of on Insbridge Connector Services.
 - For **Success** status values must be:
 - **Websphere**
 - **Context Factory:**
com.ibm.websphere.naming.WsnInitialContextFactory

- **Provider URL:** iiop://<ip address>:<port> [e.g: iiop://localhost:9817]
- **Weblogic**
 - **Context Factory:** weblogic.jndi.WLInitialContextFactory
 - **Provider URL:** t3://<ip address>:<port> [e.g: t3://localhost:7001]
- **JBoss**
 - **Context Factory:** org.jnp.interfaces.NamingContextFactory
 - **Provider URL:** jnp://<ip address>:<port> [e.g: jnp://localhost:1099]

- If above fields have wrong data then JMS status cell value will be **Error**.
- New JMS properties values of each node are reflected after Starting the connector service of all the nodes.

After this JMS status cell shows proper status.

- Start All Service:
 - Go to **IBSS → Nodes → Services** to start the connector services of all the nodes.
 - Click on Start button of Insbridge Connector Service.
- If Node is Inactive (or down) then JMS status cell value is ' – ' (dash).

Email Status

- This column shows the Email status as **Success / Error** of all the registered nodes.
- Check the SMTP configuration set up values in Connector properties section:
 - Go to **IBSS → Nodes → Services**
 - Click **Properties** button of on Insbridge Connector Services.
 - For **Success** status values must be:
 - **SMTP**
 - **JNDI**
 - If above fields have wrong data, then the Email status cell value will be **Error**.
- New Email properties values of each node are reflected after Starting the connector service of all the nodes.

After this Email status cell shows proper status.

- Start All Service:

- Go to **IBSS** → **Nodes** → **Services** to start the connector services of all the nodes.
- Click on Start button of Insbridge Connector Service.
- If Node is Inactive (or down) then Email status cell value is ‘ – ’ (dash).

CONTACTING SUPPORT

If you need assistance with an Oracle Insurance Insbridge Enterprise Rating System product, please log a Service Request using My Oracle Support at <https://support.oracle.com/>.

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Address any additional inquiries to:

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
oracle.com

Index

B

Batch	
Databases	7

C

Controller	
Environment	11

D

Database	
Oracle Support	9

E

Edition Notice	2
----------------------	---

I

Insbridge	
Overview	5
Insbridge ISoftServices Batch Execution	8

O

Oracle	
SoftRater Database Schema	9
Oracle Database	
Setup for Batch	9
Supported Version	9
User Account Requirements	9

R

Requirements	
Oracle Database	9

S

SoftRater	
IBSR	8
Supported Databases	9
SoftRater Async Rating	7
SoftRater Cluster Batch Rating	7
SoftRater Node Batch Rating	7
Support	69

T

Transactional Batch	7
---------------------------	---