

Oracle Financial Services  
Inline Processing Engine  
Configuration Guide

Release 8.0.4.0.0



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## PREFACE

This Preface provides supporting information for the *Oracle Financial Services Analytical Applications Infrastructure Inline Processing Configuration (OFSAAI IPE) Guide* and includes the following topics:

- [Summary](#)
- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

### Summary

You can find the latest copy of this document in the [OTN library](#) which includes all the recent additions/revisions (if any) done till date.

Before you begin the installation, ensure that you have an access to the Oracle Support Portal with the required login credentials to quickly notify us of any issues at any stage. You can obtain the login credentials by contacting Oracle Support.

### Audience

*Oracle Financial Services Analytical Applications Infrastructure Inline Processing Application Configuration Guide* is intended for administrators and implementation consultants who are responsible for installing and maintaining the application pack components.

### Prerequisites for the Audience

Following are the expected preparations before starting the actual installation:

The document assumes you have experience in installing Enterprise components. Basic knowledge about the Oracle Financial Services Analytical Applications Infrastructure Applications Pack components, Inline Processing Sample Application, OFSAA Architecture, UNIX commands, Database concepts and Web Server/ Web Application Server is recommended.

### Related Documents

This section identifies additional documents related to OFSAA Infrastructure. You can access Oracle documentation online from the Documentation Library for OFSAAI 8.0.4.0.0 ([OTN](#)).

- *Oracle Financial Services Analytical Applications Infrastructure Inline Processing User Guide*



- *Oracle Financial Services Analytical Applications Infrastructure Inline Processing Sample Application Installation Guide*
- *Release Notes*

## Conventions and Acronyms

The following conventions are used in this guide.

Conventions	Description
Bold.	Indicates Actions
Courier New font	Indicates Command or Query

## Acronyms

This guide contains the following acronyms.

Acronyms	Description
IPE	Inline Processing Engine
Infodom	Information Domain
OFS AAI	Oracle Financial Services Analytical Application Infrastructure.
OFS AAAI	Oracle Financial Services Advanced Analytical Application Infrastructure.
OTN	Oracle Technology Network

# 1 About OFSAAI IPE

This chapter includes the following topics:

- [About OFSAA](#)
- [About IPE](#)

## 1.1 About OFSAA

In today's turbulent markets, financial institutions require a better understanding of their risk-return, while strengthening competitive advantage and enhancing long-term customer value. Oracle Financial Services Analytical Applications (OFSAA) enable financial institutions to measure and meet risk adjusted performance objectives, cultivate a risk management culture through transparency, lower the costs of compliance and regulation, and improve insight into customer behavior.

OFSAA uses industry-leading analytical methods, shared data model and applications architecture to enable integrated risk management, performance management, customer insight, and compliance management. OFSAA actively incorporates risk into decision making, enables to achieve a consistent view of performance, promote a transparent risk management culture, and provide pervasive intelligence.

Oracle Financial Services Analytical Applications delivers a comprehensive, integrated suite of financial services analytical applications for both banking and insurance domain.

## 1.2 About IPE

This guide provides step by step instructions for performing Inline Processing Configuration process actions. Inline Processing builds a scoring mechanism for activity data like transactions in real time or batch mode. For example, this capability enables you to identify fraud events earlier, avert more losses, and minimize customer service and retention issues.

## 2 Configuring IPE

This chapter discusses the prerequisite instructions required to configure IPE.

### 2.1 Prerequisites

The following prerequisite configurations must be verified before installation:

- A user must be created and mapped with the IPEADMIN (Inline Processing Admin Group) user group. To create a user, refer *Oracle Financial Services Advanced Analytics Applications Infrastructure User Guide* on [OTN](#).
- The IPEADMIN user group must be mapped with Infodom.
- Connection Pooling and Data Source must created for the following schemas:
  - Config Schema with Data Source name as jdbc/FICMASTER
  - IPE Atomic Schema with Data Source name as jdbc/<INFODOM NAME>

**NOTE:** jdbc/<INFODOM NAME> should be pointed to metadom. For more information, refer the section on **Information Domain** in *Oracle Financial Services Advanced Analytics Applications Infrastructure User Guide* on [OTN](#).

- IPE Atomic schema with Data Source name as jdbc/<INFODOM NAME>CNF

**NOTE:** jdbc/<INFODOM NAME>CNF is required only for real time processing

For more information, refer to section *Configuring Resource Reference* of the *OFS AAAI Application Pack Installation and Configuration Guide*.

- **Oracle Database Patches:** Ensure that the following patches are applied.

**Table 1: Oracle Database Patches**

Database Server	Prerequisite DB Patches
Oracle Server 12c, v12.1.0.1	17082699
Oracle Server 12c, v12.1.0.2	19392604, 18112110

The Websphere JDBC Providers should point to the oracle driver file path where the patch 17082699 is installed.

### 3 Configuring IPE in Web Application Servers for Real Time Mode

This section explains the details about configuring the Web Application Servers.

This section includes the following topics:

- [Configuring IPE in WebLogic](#)
- [Configuring IPE in WebSphere](#)

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**NOTE:** IPE does not support Tomcat Web Application Server.

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#### 3.1 Configuring IPE in WebLogic

To configure IPE in WebLogic, follow these topics:

- [Login to WebLogic Administrative console](#)
- [Configuring JMS Servers](#)
- [Configuring JMS Modules](#)
- [Creating Subdeployments](#)
- [Creating JMS Connection Factory](#)
- [Creating JMS Topic](#)
- [Creating JMS Queues](#)

##### 3.1.1 Login to WebLogic Administrative Console

To login to the WebLogic Administrative Console, follow these steps:

1. Open the following URL in the browser window:  
`http://<ipaddress>:<administrative console port>/console.` (https if SSL is enabled). The Welcome window is displayed.
2. Login with the **Administrator Username** and **Password**.

##### 3.1.2 Configuring JMS Servers

To configure JMS Servers, follow these steps:

1. In the Domain Structure LHS menu, click **+** to expand **Services**.
2. Click **+** to expand **Messaging**. The *WebLogic Server Administration Console* page is displayed.
3. Select **JMS Servers**. The *Summary of JMS Servers* page is displayed.

# Configuring IPE in Web Application Servers for Real Time Mode

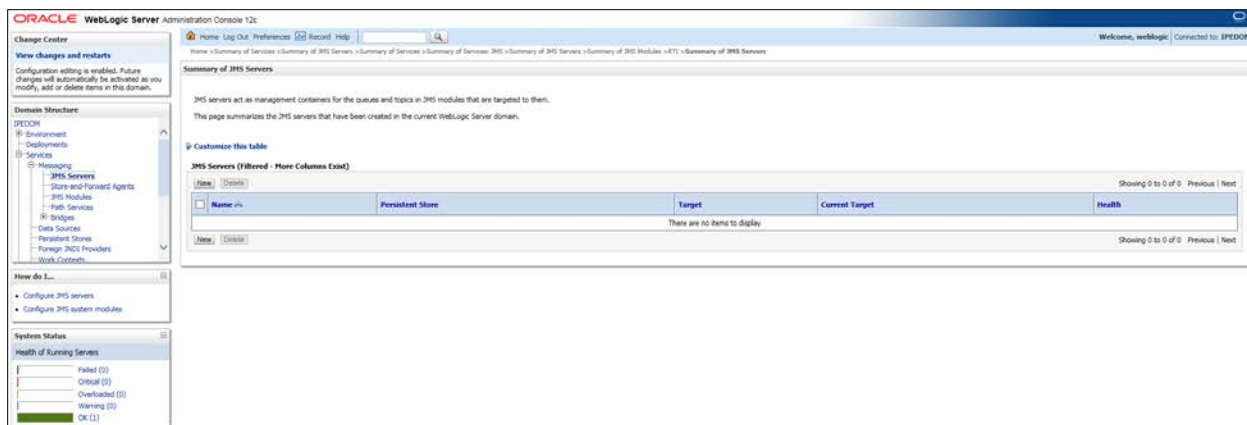


Figure 1: Summary of JMS Server

4. Click **New**. The *Create a New JMS Server* page is displayed.

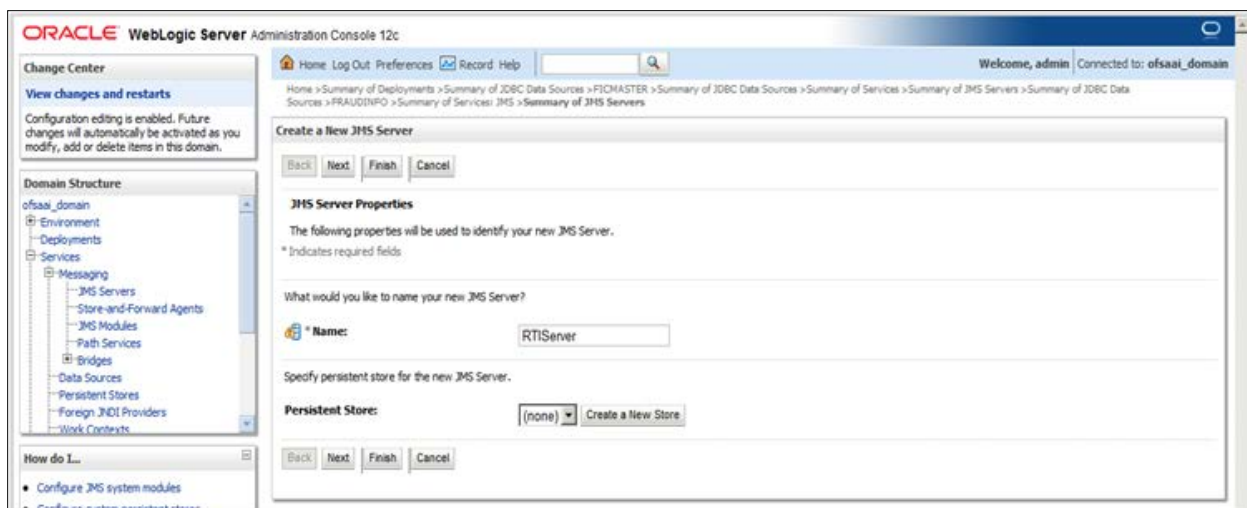


Figure 2: Create a New JMS Server

5. Enter the name as **RTIServer** under JMS Server Properties.
6. Click **Next**. The *Select Targets* section is displayed.

## Configuring IPE in Web Application Servers for Real Time Mode

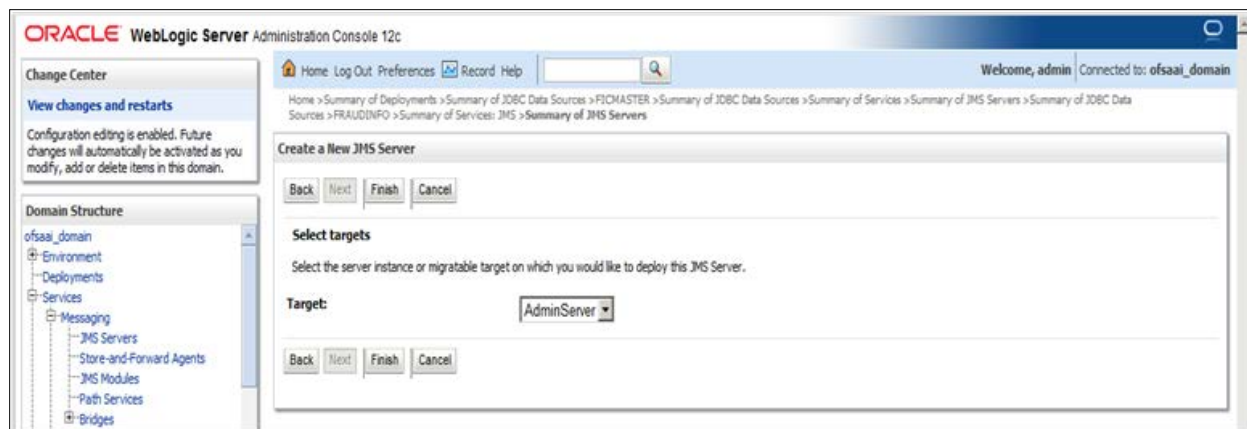


Figure 3: Create a New JMS Server – Select Targets

7. Select the Target as **AdminServer**.
8. Click **Finish**.

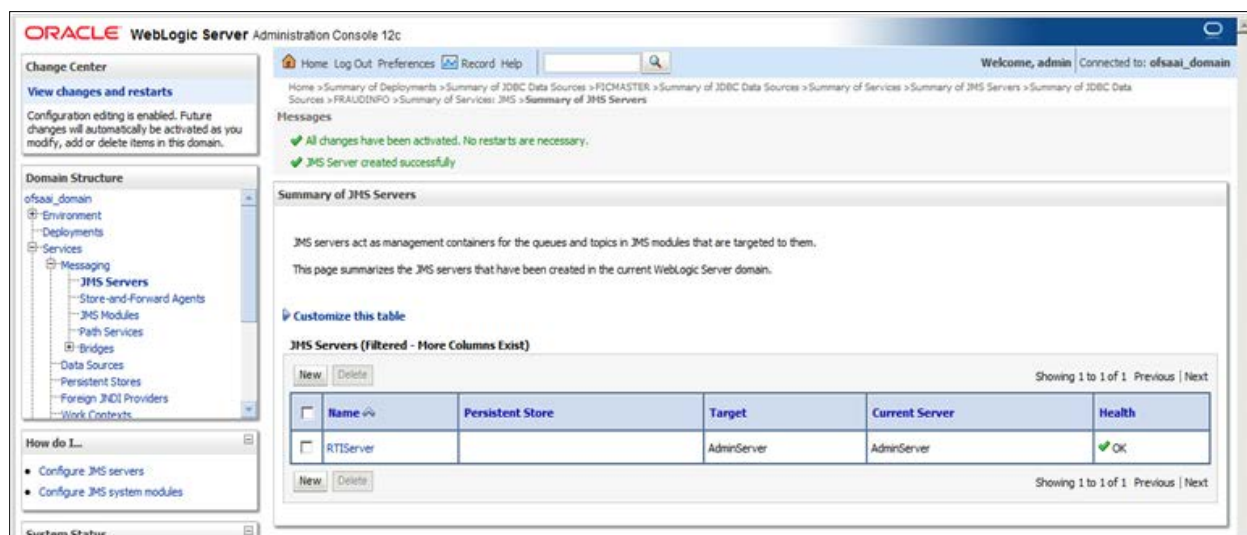


Figure 4: Summary of JMS Servers

9. The following confirmation message is displayed  
*JMS Server is created successfully.*

## 3.1.3 Configuring JMS Modules

To configure JMS Modules, follow these steps:

1. In the Domain Structure LHS menu, click **+** to expand **Services**.
2. Click **+** to expand **Messaging**.
3. Click **JMS Modules**. The *JMS Module* screen is displayed.

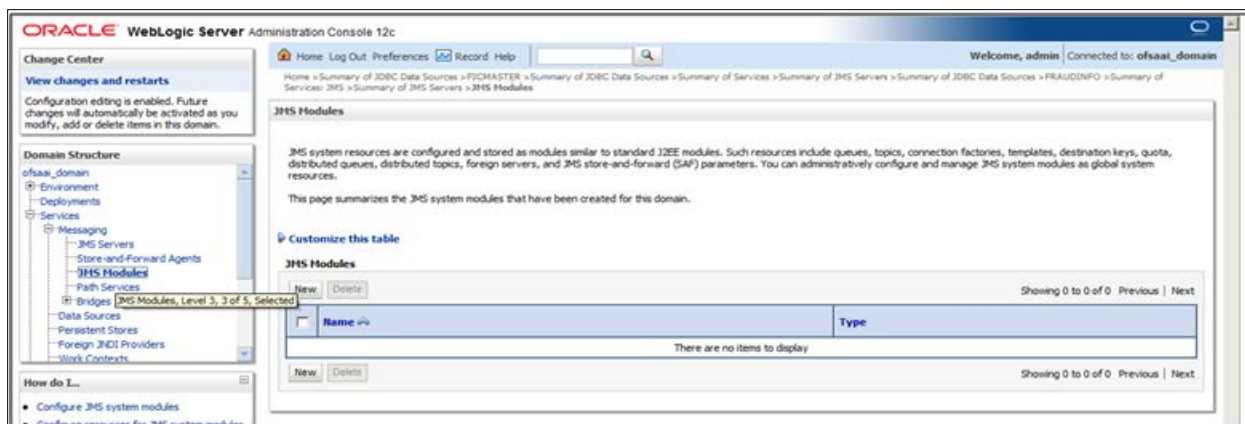
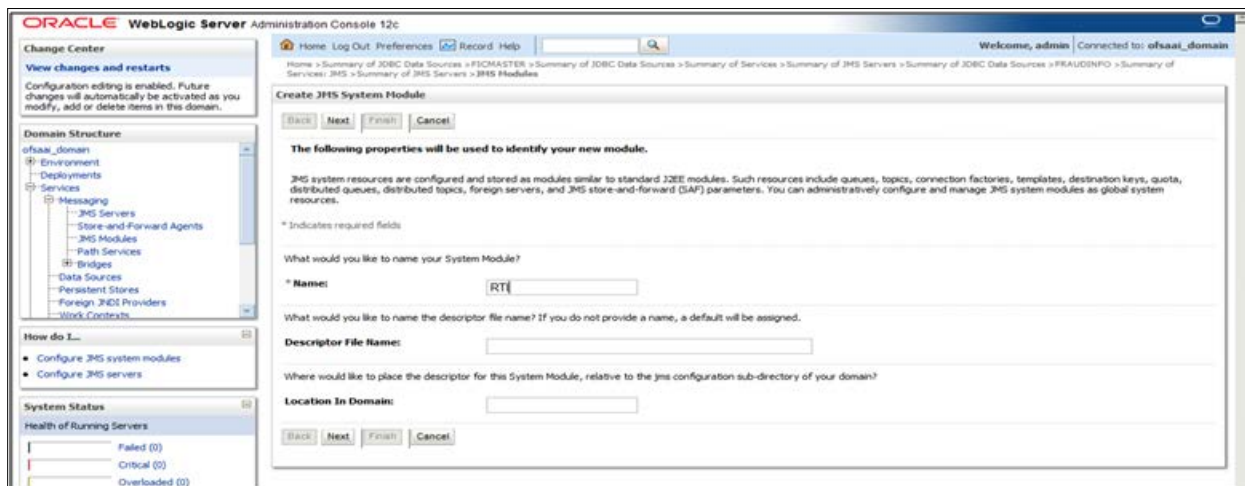


Figure 5: JMS Module

4. Click **New**. The *Create JMS System Module* page is displayed.



5. Enter the name as **RTI**.
6. Click **Next**. The *Create JMS System Module* page is displayed.

## Configuring IPE in Web Application Servers for Real Time Mode

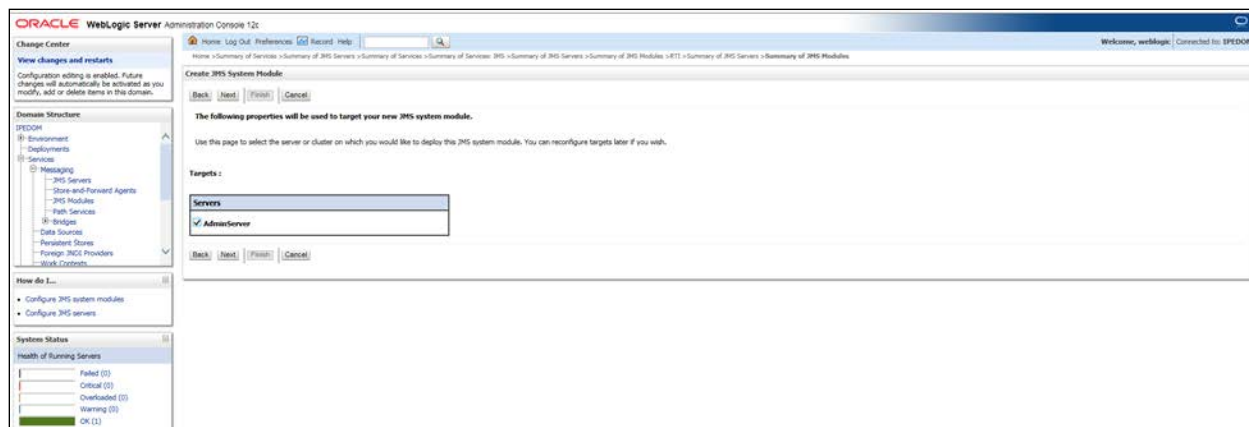


Figure 6: Create JMS System Module

7. Check the **AdminServer** in the *Servers* section.
8. Click **Next**.

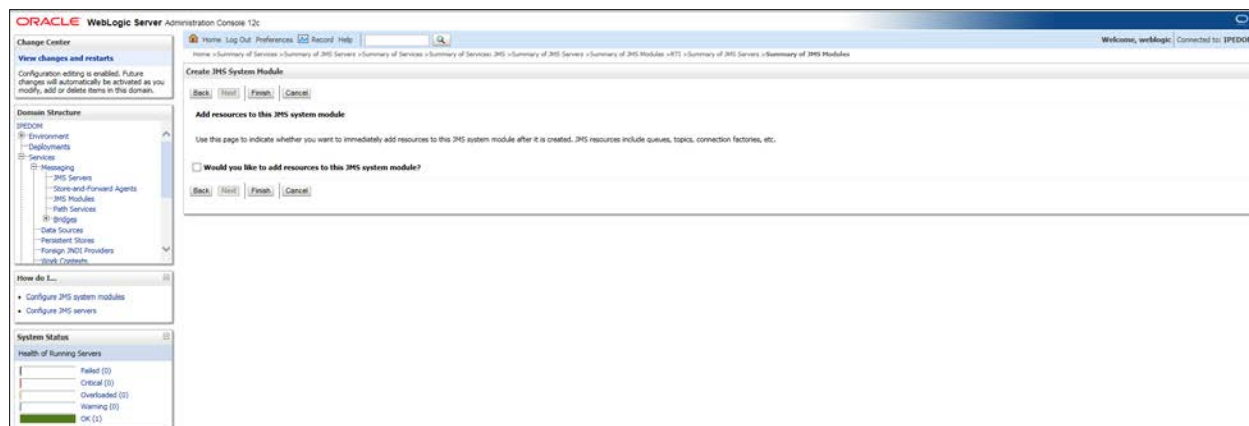
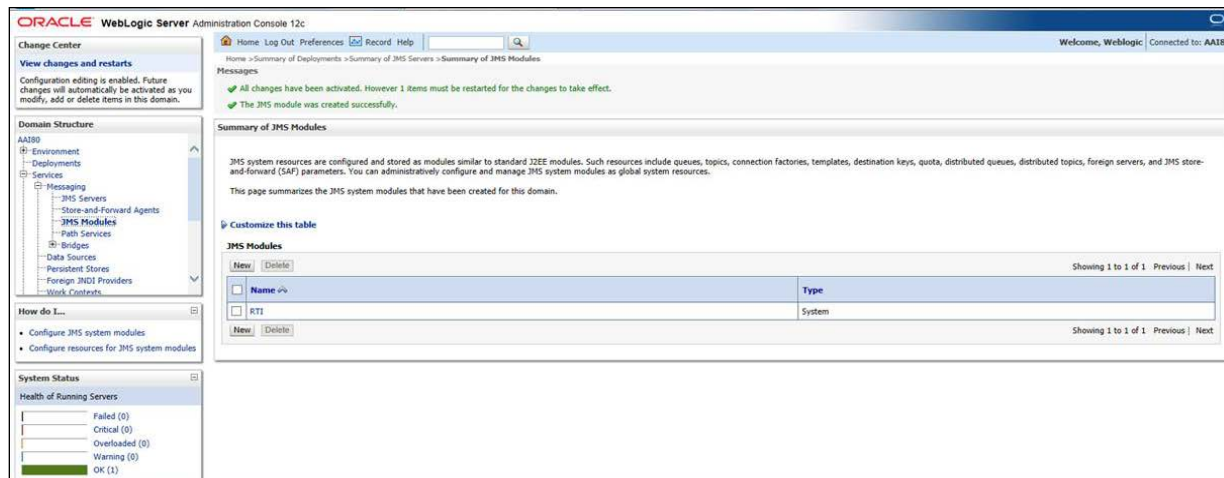


Figure 7: Create JMS System Module



## 9. Click **Finish**.



**Figure 8: Summary of JMS Modules**

10. The following confirmation message is displayed: *JMS Module is created successfully.*

## 3.1.4 Creating Subdeployments

This section discusses the following Subdeployments which are to be created

- [Creating RTI Deploy](#)
- [Creating RTISubdeploy](#)

### 3.1.4.1 Creating RTI Deploy

To create **RTI Deploy** subdeployment, follow these steps:

1. In the Domain Structure LHS menu, click **+** to expand **Services**.
2. Click **+** to expand **Messaging**.
3. Click **JMS Modules**. The *JMS Module* screen is displayed.
4. Click JMS Module **RTI**. The *Settings for RTI* screen is displayed.
5. Click the **Subdeployments** tab.

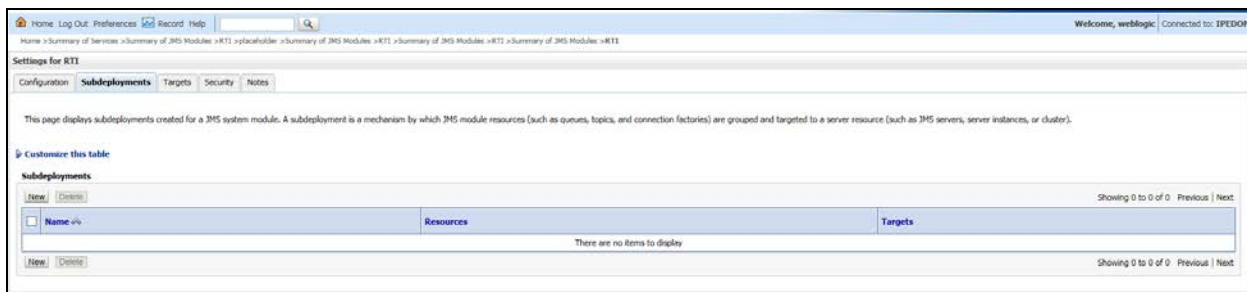


Figure 9: Setting for RTI

## Configuring IPE in Web Application Servers for Real Time Mode

- Click **New**. The *Create a New Subdeployment* screen is displayed.



Figure 10: Create a New Subdeployment

- Enter the Subdeployment Name as **RTI Deploy**.
- Click **Next**.

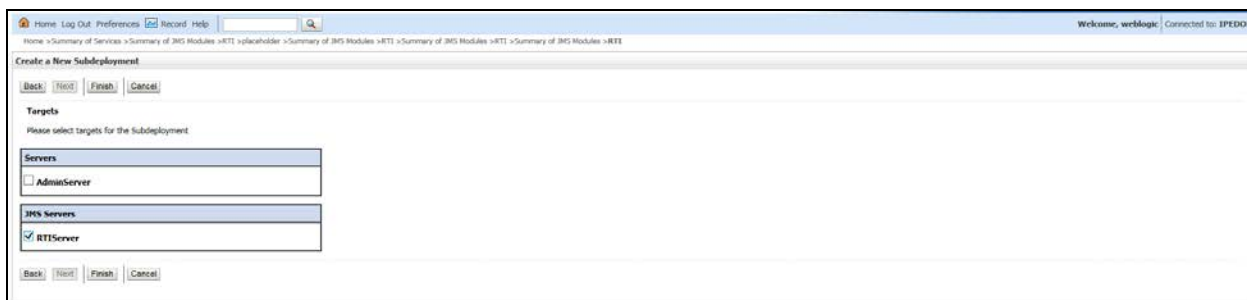


Figure 11: Create a New Subdeployment

- Select the JMS Servers as **RTIServer**.
- Click **Finish**.

The following confirmation message is displayed: *Subdeployment is created successfully*.



Figure 12: Settings for RTI

### 3.1.4.2 Creating RTISubdeploy

To create **RTISubdeploy** subdeployment, follow these steps:

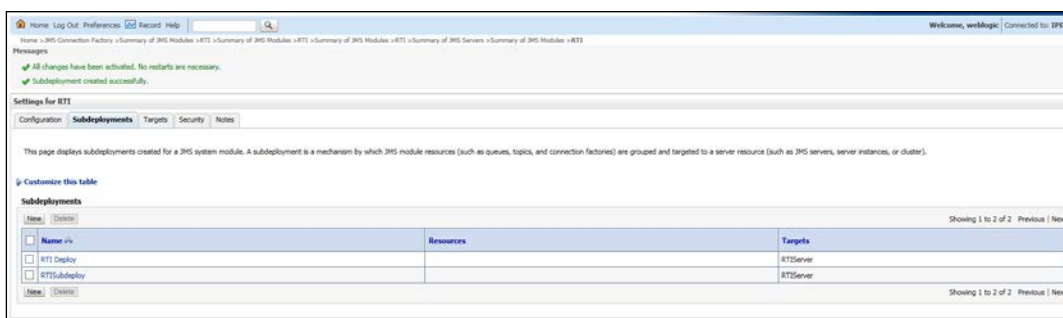
- Repeat Steps 1 - 7 from section [Create RTI Deploy](#).

## Configuring IPE in Web Application Servers for Real Time Mode

2. Enter the following details:

**Table 2: Subdeployment - Field Values**

Field	Value
Subdeployment Name	Enter RTISubdeploy as the name.
JMS Servers	Select RTIServer as the JMS Server.



**Figure 13: Subdeployments**

3. The following confirmation message is displayed: *Subdeployment is created successfully.*

## 3.1.5 Creating JMS Connection Factory

To create JMS Connection Factories, follow these steps:

1. In the Domain Structure LHS menu, click **+** to expand **Services**.
2. Click **+** to expand **Messaging**.
3. Click **JMS Modules**. The *JMS Modules* screen is displayed.

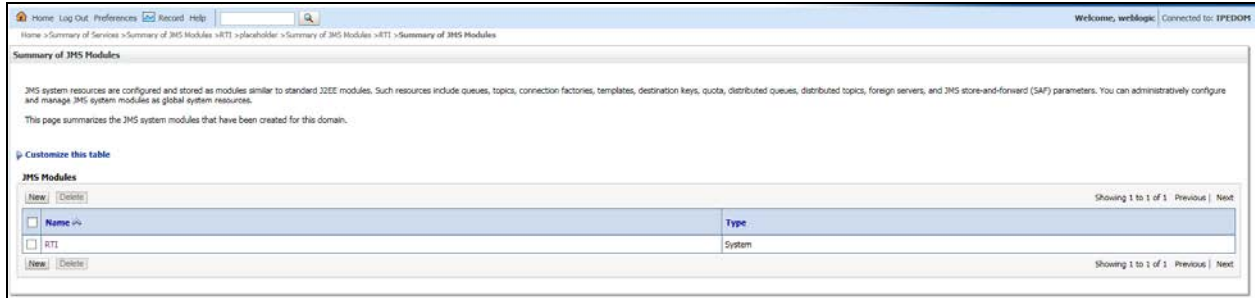


Figure 14: JMS Modules

4. Click **RTI**. The *Settings for RTI* screen is displayed.

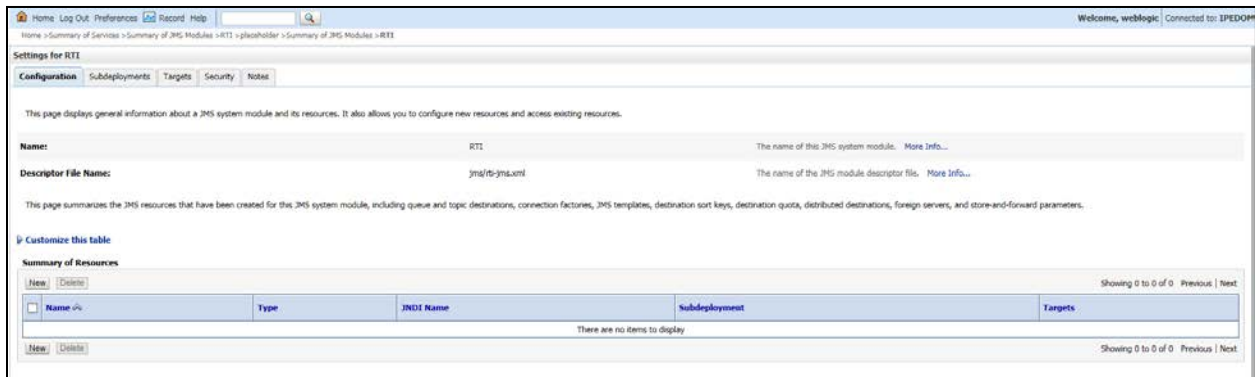
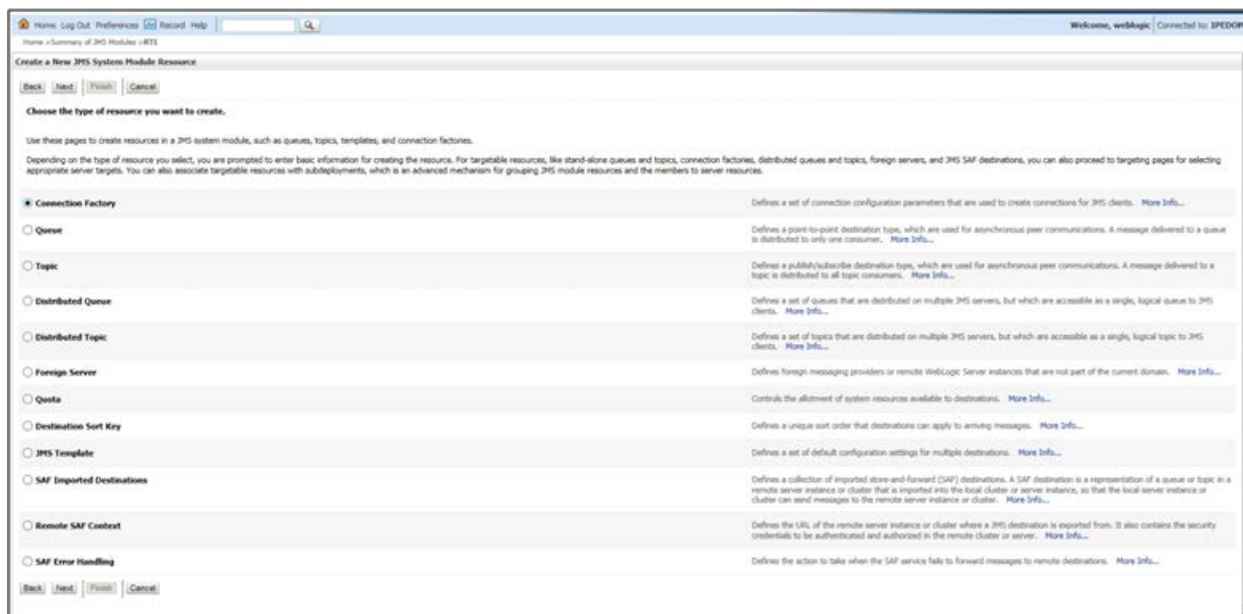


Figure 15: Settings for RTI

## Configuring IPE in Web Application Servers for Real Time Mode

5. Click **New**. The *Create a New JMS System Module* screen is displayed.



Home | Log Out | Preferences | Record | Help | Welcome, weblogic | Connected to: EPED08

### Create a New JMS System Module Resource

Choose the type of resource you want to create.

Use these pages to create resources in a JMS system module, such as queues, topics, templates, and connection factories.

Depending on the type of resource you select, you are prompted to enter basic information for creating the resource. For targetable resources, like stand-alone queues and topics, connection factories, distributed queues and topics, foreign servers, and JMS SAF destinations, you can also proceed to targeting pages for selecting appropriate server targets. You can also associate targetable resources with subdeployments, which is an advanced mechanism for grouping JMS module resources and the members to server resources.

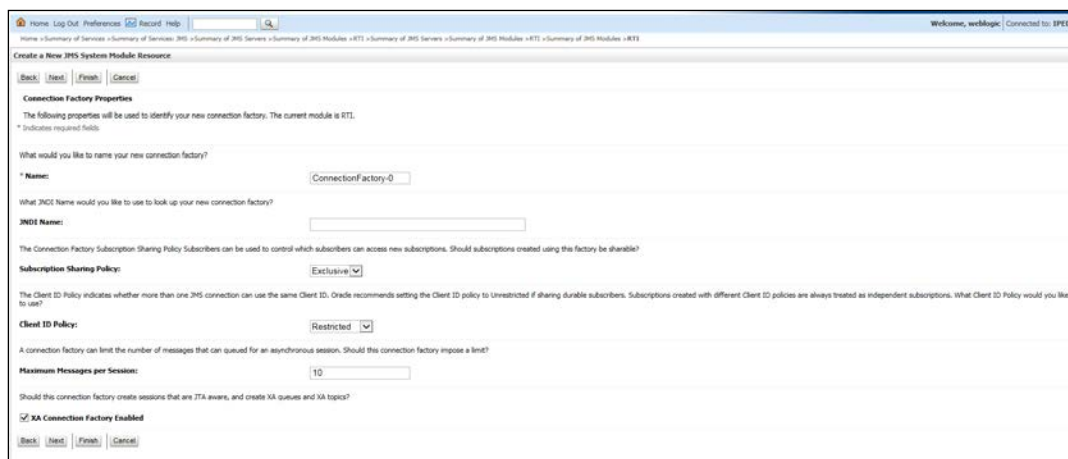
- Connection Factory** Defines a set of connection configuration parameters that are used to create connections for JMS clients. [More Info...](#)
- Queue** Defines a point-to-point destination type, which are used for asynchronous peer communications. A message delivered to a queue is distributed to only one consumer. [More Info...](#)
- Topic** Defines a publish/subscribe destination type, which are used for asynchronous peer communications. A message delivered to a topic is distributed to all topic consumers. [More Info...](#)
- Distributed Queue** Defines a set of queues that are distributed on multiple JMS servers, but which are accessible as a single, logical queue to JMS clients. [More Info...](#)
- Distributed Topic** Defines a set of topics that are distributed on multiple JMS servers, but which are accessible as a single, logical topic to JMS clients. [More Info...](#)
- Foreign Server** Defines foreign messaging providers or remote WebLogic Server instances that are not part of the current domain. [More Info...](#)
- Quota** Controls the allotment of system resources available to destinations. [More Info...](#)
- Destination Sort Key** Defines a unique sort order that destinations can apply to arriving messages. [More Info...](#)
- JMS Template** Defines a set of default configuration settings for multiple destinations. [More Info...](#)
- SAF Imported Destinations** Defines a collection of imported store-and-forward (SAF) destinations. A SAF destination is a representation of a queue or topic in a remote server instance or cluster that is imported into the local cluster or server instance, so that the local server instance or cluster can send messages to the remote server instance or cluster. [More Info...](#)
- Remote SAF Coarbit** Defines the URL of the remote server instance or cluster where a JMS destination is exported from. It also contains the security credentials to be authenticated and authorized in the remote cluster or server. [More Info...](#)
- SAF Error Handling** Defines the action to take when the SAF service fails to forward messages to remote destinations. [More Info...](#)

Back | Next | Finish | Cancel

Figure 16: Create a New JMS System Module Resource

6. Select **Connection Factory**.

7. Click **Next**. The *Create a New JMS System Module Resource* screen is displayed.



Home | Log Out | Preferences | Record | Help | Welcome, weblogic | Connected to: EPED08

### Create a New JMS System Module Resource

Connection Factory Properties

The following properties will be used to identify your new connection factory. The current module is RTI.

\* Indicates required fields.

What would you like to name your new connection factory?

\* Name:

What JMS Name would you like to use to look up your new connection factory?

JMS Name:

The Connection Factory Subscription Sharing Policy Subscribers can be used to control which subscribers can access new subscriptions. Should subscriptions created using this factory be sharable?

Subscription Sharing Policy:

The Client ID Policy indicates whether more than one JMS connection can use the same Client ID. Oracle recommends setting the Client ID policy to Unrestricted if sharing durable subscribers. Subscriptions created with different Client ID policies are always treated as independent subscriptions. What Client ID Policy would you like to use?

Client ID Policy:

A connection factory can limit the number of messages that can be queued for an asynchronous session. Should the connection factory impose a limit?

Maximum Messages per Session:

Should this connection factory create sessions that are JTA aware, and create XA queues and XA topics?

**XA Connection Factory Enabled**

Back | Next | Finish | Cancel

Figure 17: Create a New JMS System Module Resource

8. Enter the Name as **JMS Connection Factory**.

## Configuring IPE in Web Application Servers for Real Time Mode

9. Click **Next**. The *Create a New JMS System Module Resource* screen with the Target section is displayed.



Figure 18: Create a New JMS System Module Resource - Targets

10. Select **AdminServer**.
11. Click **Finish**.

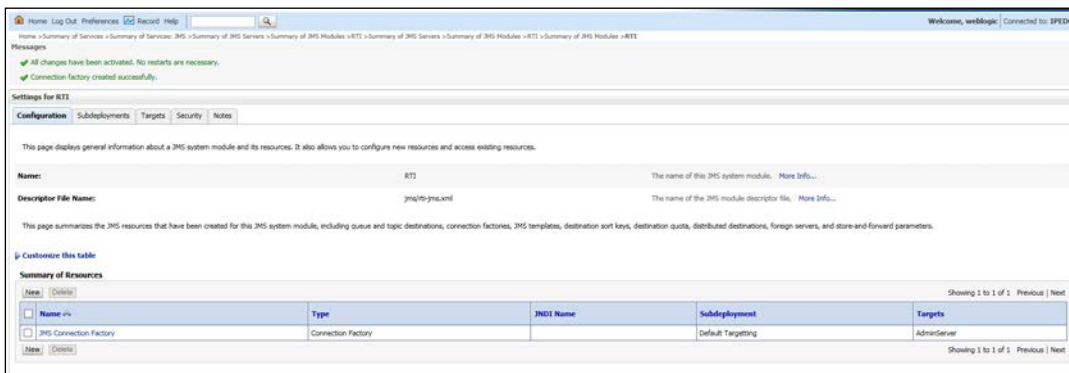


Figure 19: Settings for RTI - JMS connection Factory

## Configuring IPE in Web Application Servers for Real Time Mode

12. Click **JMS Connection Factory**. The *Settings for JMS Connection Factory* screen is displayed.

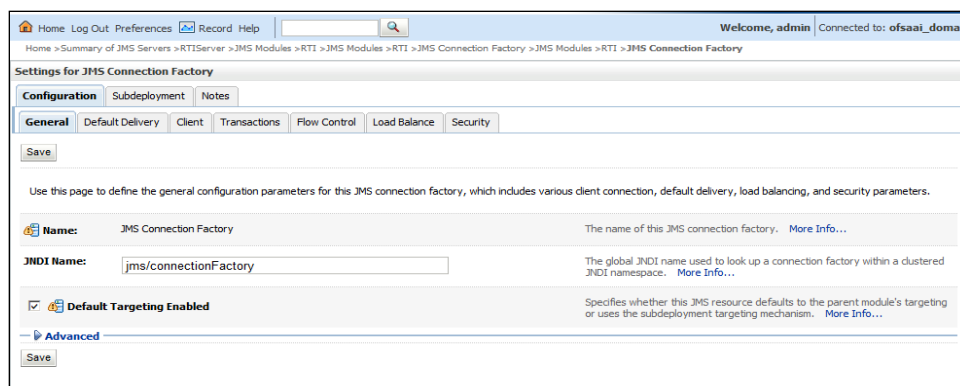


Figure 20: settings for JMS Connection Factory

13. Enter the following details:

Field	Value
Name	The name of the JMS connection factory is displayed as JMS Connection Factory.
JNDI Name	jms/connectionFactory
Default Targeting Enabled	Select the check-box to enable Default Targeting.

14. Click **Save**.

The following confirmation message is displayed.  
*JMS Connection Factory is created successfully.*



### 3.1.6 Creating JMS Topic

This section discusses the following JMS Topics to be created:

- [Creating RTI Assessment Response Destination Topic](#)
- [Creating Cache Operation Message Destination Topic](#)



## 3.1.6.1 Creating RTI Assessment Response Destination Topic

To create JMS Topic, follow these steps:

1. In the Domain Structure LHS menu, click **+** to expand **Services**.
2. Click **+** to expand **Messaging**.
3. Click **JMS Modules**. The *JMS Modules* screen is displayed.

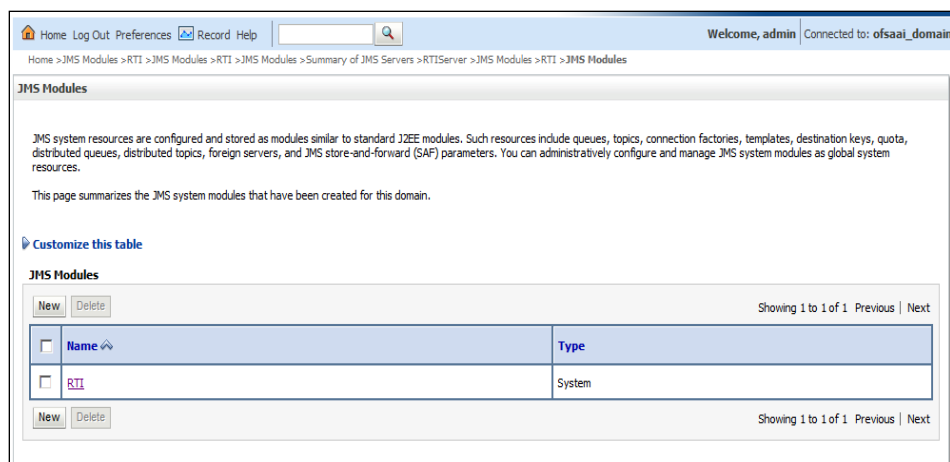


Figure 21: JMS Modules

## Configuring IPE in Web Application Servers for Real Time Mode

4. Click **RTI**. The *Settings for RTI* screen is displayed.

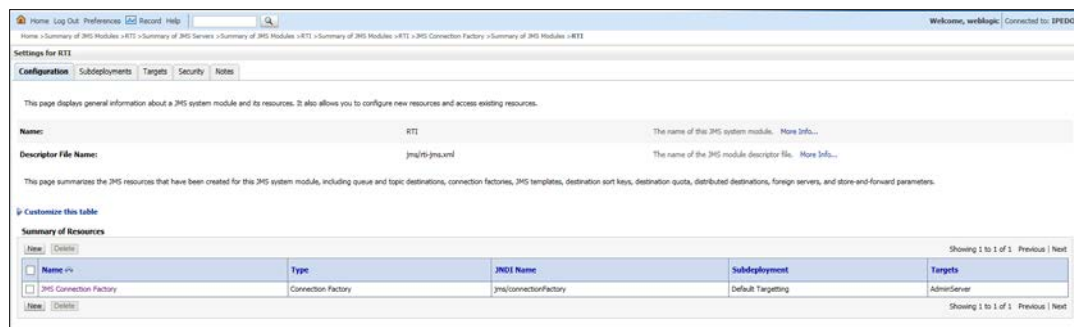


Figure 22: Settings for RTI - JMS topic

5. Click **New**. The *Settings for JMS Connection Factory* screen is displayed.

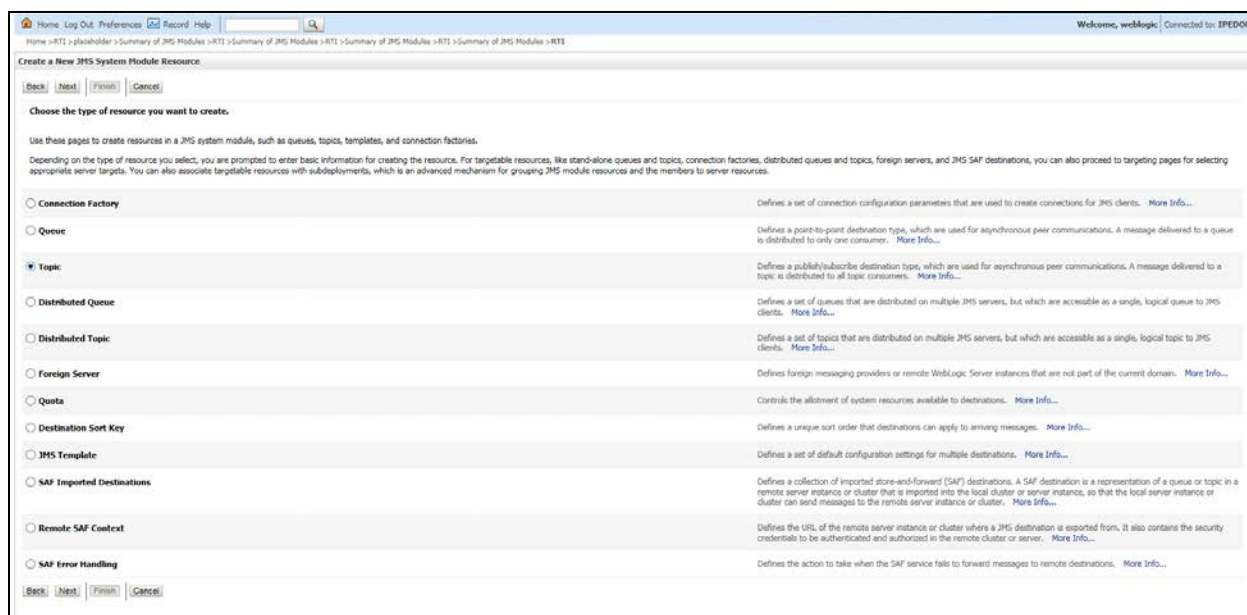


Figure 23: Select type of resource

6. Select **Topic** from the list.

## Configuring IPE in Web Application Servers for Real Time Mode

7. Click **Next**. The *Create a New JMS System Module Resource* screen is displayed.

**Figure 24: Create a New JMS System Module Resource**

8. Enter the following details:

**Table 3: JMS Topic - Field Values**

Field	Value
Name	RTI Assessment Response Destination Topic
JNDI Name	jms/assessmentResponseDestination

9. Click **Next**. The *Create a New JMS System Module Resource* screen is displayed.

**Figure 25: Create a New JMS System Module Resource**

10. Select the Subdeployments as **RTISubDeploy**.
11. Select **RTIServer**.
12. Click **Finish**.
13. The following confirmation message is displayed.  
*JMS Topic is created successfully.*

# Configuring IPE in Web Application Servers for Real Time Mode

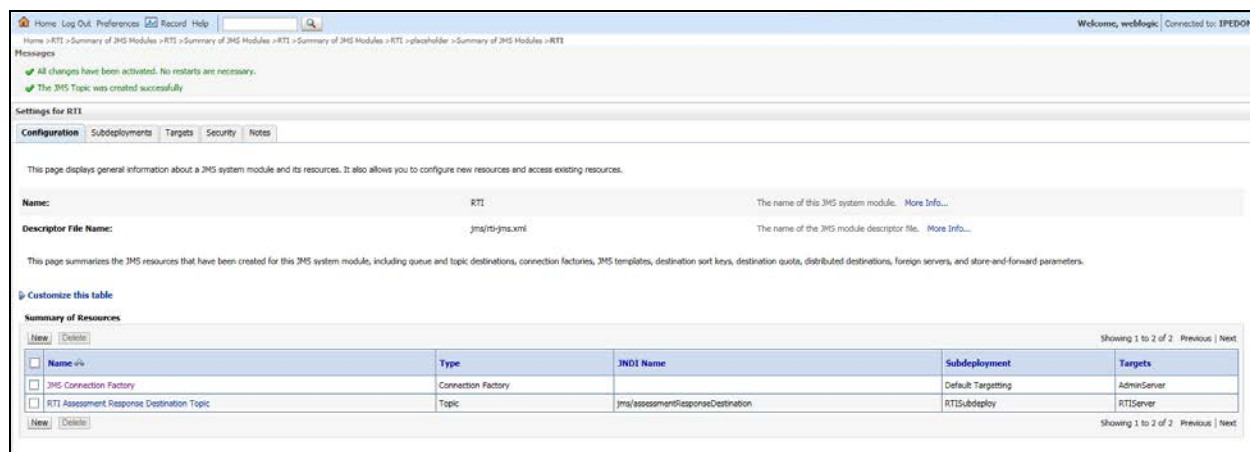


Figure 26: JMS Topic created successfully

## 3.1.6.2 Creating Cache Operation Message Destination Topic

To create **Cache Operation Message Destination Topic**, follow these steps:

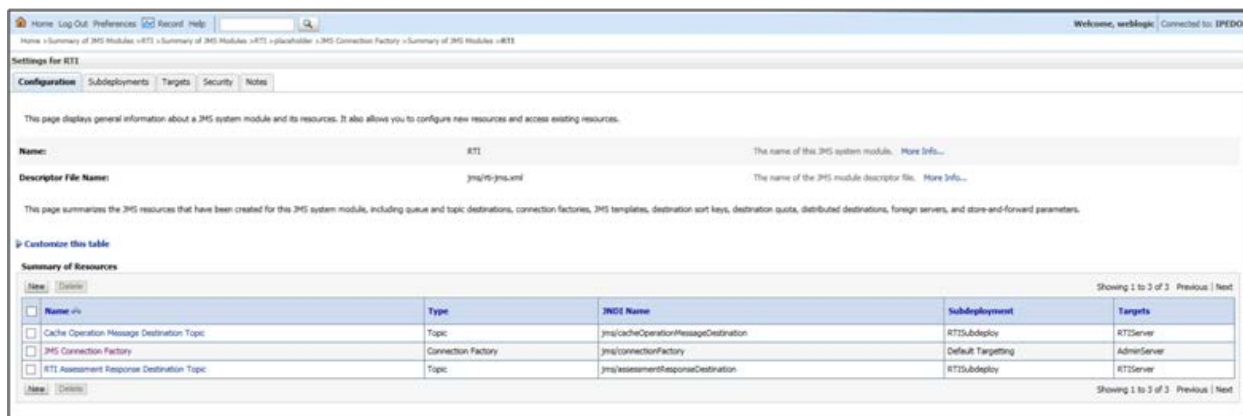
1. Repeat Steps 1 - 13 from section [Creating RTI Assessment Response Destination Topic](#).
2. Enter the following details:

Table 4: JMS Topic - Field Values

Field	Value
Name	Cache Operation Message Destination Topic
JNDI Name	jms/cacheOperationMessageDestination

## Configuring IPE in Web Application Servers for Real Time Mode

- The following confirmation message is displayed.  
*JMS Topic is created successfully.*



The screenshot shows the Oracle JMS Configuration page for a system module named 'RTI'. The page displays the configuration details for the system module and its resources. The 'Summary of Resources' table lists the following resources:

Name	Type	JMS Name	Subdeployment	Targets
Cache Operation Message Destination Topic	Topic	jms/cacheOperationMessageDestination	RTISubDeploy	RTIServer
JMS Connection Factory	Connection Factory	jms/connectionFactory	Default Targeting	AdminServer
RTI Assessment Response Destination Topic	Topic	jms/assessmentResponseDestination	RTISubDeploy	RTIServer

Figure 27: JMS Topic created

## 3.1.7 Creating JMS Queues

This section discusses the following queues to be created:

- RTI Feedback Queue
- RTI Source Entity Queue
- Wire Transaction Source Entity Queue
- RTI Hold JMS Queue

### 3.1.7.1 RTI Feedback Queue

To create the RTI Feedback Queue, follow these steps:

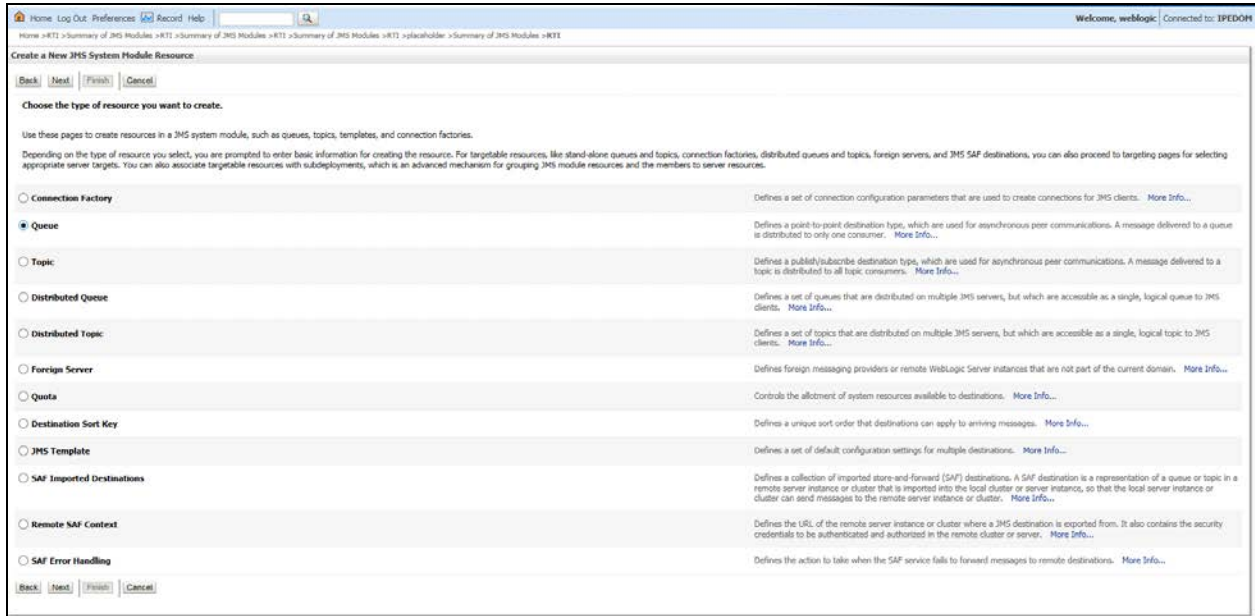
1. In the Domain Structure LHS menu, click **+** to expand **Services**.
2. Click **+** to expand **Messaging**.
3. Click **JMS Modules**.
4. Click **RTI**. The *Settings for RTI* screen is displayed.

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area displays the 'Settings for RTI' configuration page. On the left, there is a 'Domain Structure' tree with 'Services' expanded to 'Messaging' and 'JMS Modules'. The 'Summary of Resources' table is as follows:

Name	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/> Cache Operation Message Destination Topic	Topic	jms/cacheOperationMessageDestination	RTISubDeploy	RTIServer
<input type="checkbox"/> JMS Connection Factory	Connection Factory	jms/connectionFactory	Default Targeting	AdminServer
<input type="checkbox"/> RTI Assessment Response Destination Topic	Topic		RTISubDeploy	RTIServer

# Configuring IPE in Web Application Servers for Real Time Mode

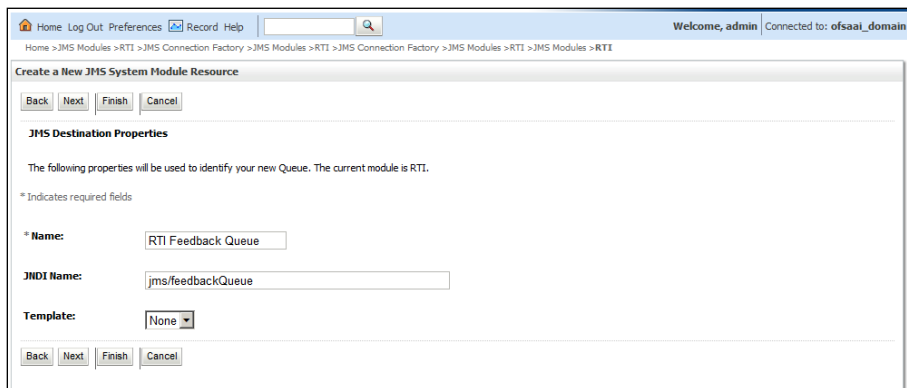
5. Click **New**. The *Create a New JMS System Module Resource* screen is displayed.



**Figure 28: JMS Queue - Create a New JMS system Module**

6. Select **Queue** from the list.

7. Click **Next**. The *Create a New JMS System Module Resource* screen is displayed.



**Figure 29: JMS Queue - Create a New JMS system Module**

8. Enter the following details:

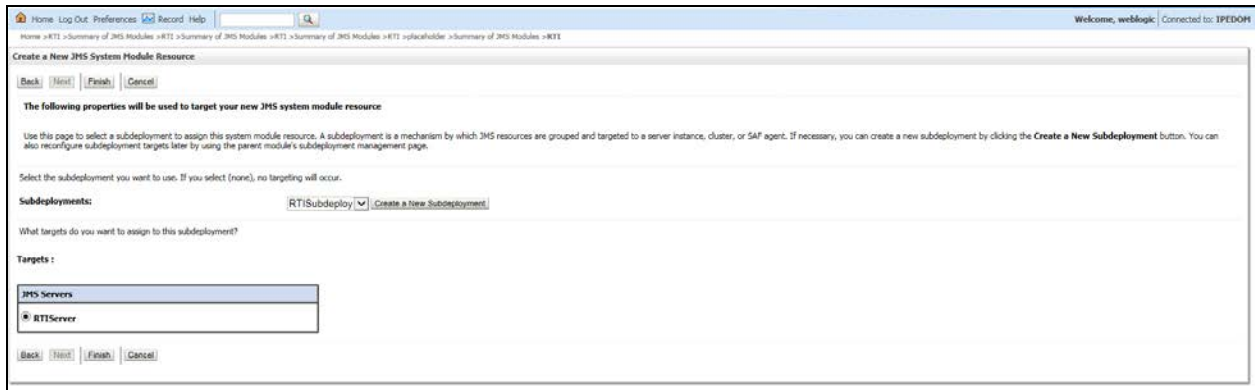
**Table 5: JMS Queue - Field Values**

Field	Value
Name	RTI Feedback Queue
JNDI Name	jms/feedbackQueue

# Configuring IPE in Web Application Servers for Real Time Mode

9. Click **Next**.

10. Select the Subdeployments as **RTISubDeploy**.



Home Log Out Preferences Record Help

Welcome, weblogic | Connected to: IPEDOH

Home > RTI > Summary of JMS Modules > RTI > Summary of JMS Modules > RTI > Create a New JMS System Module Resource

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 JMS resources are grouped and targeted to a server instance, cluster, or SAF agent. If necessary, you can create a new subdeployment by clicking the **Create a New Subdeployment** button. You can also reconfigure subdeployment targets later by using the parent module's subdeployment management page.

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

Subdeployments: RTISubDeploy | Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets:

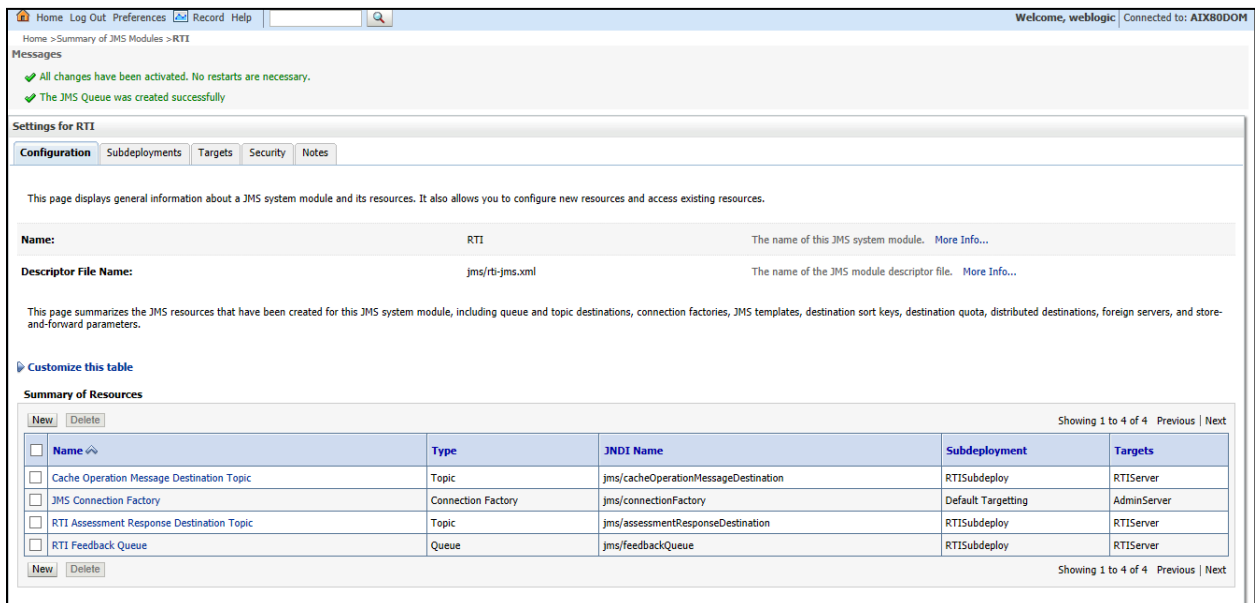
JMS Servers
<input checked="" type="radio"/> RTIServer

Back | Next | Finish | Cancel

Figure 30: JMS Queue - Create a New JMS System Module Resource

11. Click **Finish**.

12. The following confirmation message is displayed.  
RTI Feedback Queue is created *successfully*.



Home Log Out Preferences Record Help

Welcome, weblogic | Connected to: AIX80DM

Home > Summary of JMS Modules > RTI

Messages

- ✓ All changes have been activated. No restarts are necessary.
- ✓ The JMS Queue was created successfully.

Settings for RTI

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

Descriptor File Name: jms/rti-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

Name	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/> Cache Operation Message Destination Topic	Topic	jms/cacheOperationMessageDestination	RTISubdeploy	RTIServer
<input type="checkbox"/> JMS Connection Factory	Connection Factory	jms/connectionFactory	Default Targetting	AdminServer
<input type="checkbox"/> RTI Assessment Response Destination Topic	Topic	jms/assessmentResponseDestination	RTISubdeploy	RTIServer
<input type="checkbox"/> RTI Feedback Queue	Queue	jms/feedbackQueue	RTISubdeploy	RTIServer

New | Delete

Showing 1 to 4 of 4 Previous | Next

Figure 31: JMS Queue created successfully



### 3.1.7.2 Creating Remaining JMS Queues

To create the remaining JMS Queues, follow these steps:

1. Repeat Steps 1 - 11 as in section [RTI feedback Queue](#).
2. Enter the values given in the following table.

**Table 6: WebLogic JMS Queues - Field Values**

Queue Name	Fields		
	Name	JNDI name	Subdeployment
RTI Hold JMS Queue	Enter the name as <b>RTI Hold JMS Queue</b>	Enter the JNDI name as <b>jms/TransactionActionQueue</b>	Select the Subdeployment as <b>RTISubDeploy</b>
RTI Source Entity Queue	Enter the name as <b>RTI Source Entity Queue</b>	Enter the JNDI name as <b>jms/sourceEntityQueue</b>	Select the Subdeployment as <b>RTISubDeploy</b>
Wire Transaction Source Entity Queue	Enter the name as <b>Wire Transaction Source Entity Queue</b>	Enter the JNDI name as <b>jms/wireTrxnQueue</b>	Select the Subdeployment as <b>RTISubDeploy</b>

3. The following confirmation message is displayed.  
*The JMS Queue was created successfully.*

## Configuring IPE in Web Application Servers for Real Time Mode

The screenshot displays the Oracle WebLogic Administration Console interface. At the top, there is a navigation bar with 'Home', 'Log Out', 'Preferences', 'Record', and 'Help'. The user is logged in as 'weblogic' and connected to 'ADX80DOM'. The main content area shows the 'Settings for RTI' page, with tabs for 'Configuration', 'Subdeployments', 'Targets', 'Security', and 'Notes'. The 'Configuration' tab is active, showing general information about the JMS system module. Below this, there is a 'Summary of Resources' table with columns for Name, Type, JNDI Name, Subdeployment, and Targets. The table lists five resources: Cache Operation Message Destination Topic, JMS Connection Factory, RTI Assessment Response Destination Topic, RTI Feedback Queue, and RTI Source Entity Queue. Each resource has a checkbox in the Name column and a 'New' or 'Delete' button below the table.

Name	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/> Cache Operation Message Destination Topic	Topic	jms/cacheOperationMessageDestination	RTISubdeploy	RTIServer
<input type="checkbox"/> JMS Connection Factory	Connection Factory	jms/connectionFactory	Default Targetting	AdminServer
<input type="checkbox"/> RTI Assessment Response Destination Topic	Topic	jms/assessmentResponseDestination	RTISubdeploy	RTIServer
<input type="checkbox"/> RTI Feedback Queue	Queue	jms/feedbackQueue	RTISubdeploy	RTIServer
<input type="checkbox"/> RTI Source Entity Queue	Queue	jms/sourceEntityQueue	RTISubdeploy	RTIServer

Figure 32: JMS Queues

### 3.1.8 Restart Weblogic Domain

For more information, refer to the **Start/Stop Infrastructure Services** section in the *Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration Guide* available on the [OTN](#) page.

## 3.2 Configuring IPE in WebSphere

This section explains the WebSphere configuration for IPE and includes the following topics:

- [Login to WebSphere](#)
- [JMS Providers](#)
- [JMS Connection Factories](#)
- [JMS Queues](#)
- [JMS Topics](#)

### 3.2.1 Login to WebSphere

To configure IPE on WebSphere follow these steps:

1. Open the following URL in the browser window:  
`http://<ipaddress>:<administrative console port>/ibm/console.` (https if SSL is enabled). The Login window is displayed.
2. Login with the Administrator **Username** and **Password**.

### 3.2.2 Bus Creation

1. Click + to expand **Service Integration** in the LHS menu.
2. Click **Buses**. The Buses page is displayed.



Figure 33: Buses

## Configuring IPE in Web Application Servers for Real Time Mode

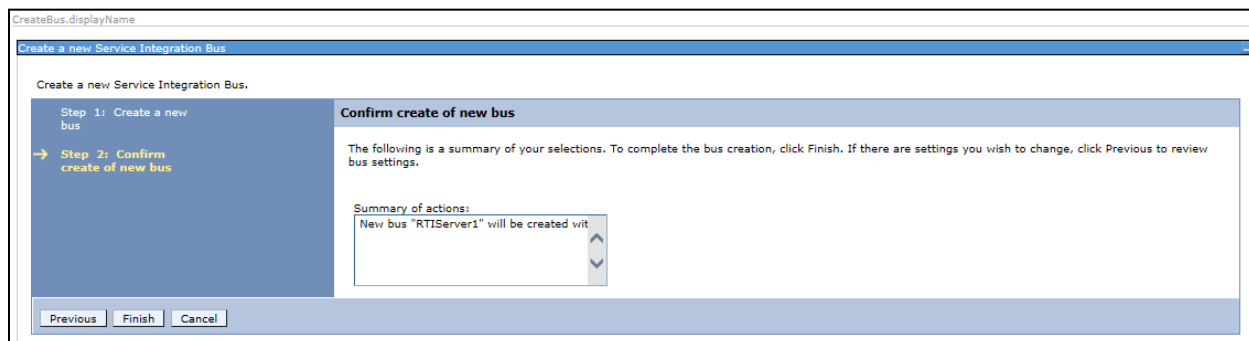
3. Click **New**. The *Create a New Service Integration Bus* screen is displayed



The screenshot shows a wizard window titled "Create a new Service Integration Bus". The left sidebar indicates "Step 1: Create a new bus" is active, with a note that the next step depends on current decisions. The main area is titled "Create a new bus" and contains the instruction "Configure the attributes of your new bus." Below this, there is a required field "Enter the name for your new bus." with the text "RTIServer" entered. A checkbox labeled "Bus security" is checked. At the bottom, there are "Next" and "Cancel" buttons.

Figure 34: Create a New Service Integration Bus

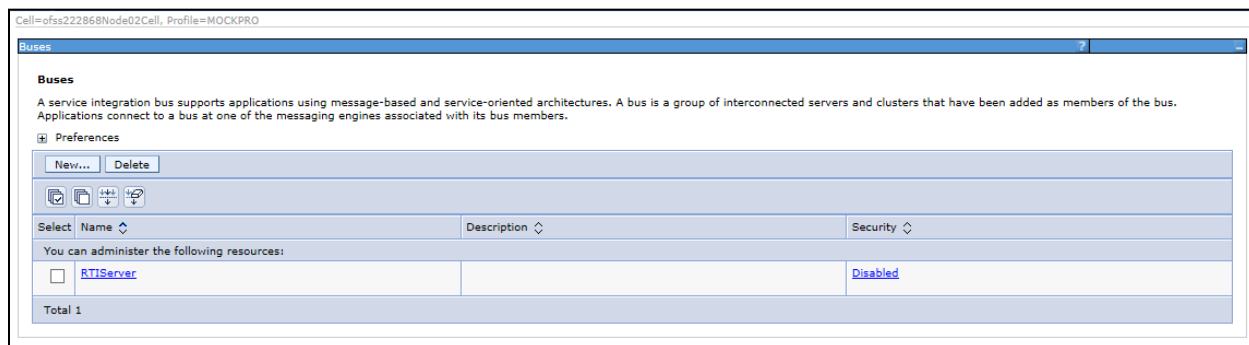
4. Enter the name as **RTIServer**.
5. Un-check **Bus security**.
6. Click **Next**.



The screenshot shows the second step of the wizard, "Confirm create of new bus". The sidebar indicates "Step 2: Confirm create of new bus" is active. The main area provides a summary of selections and instructions: "The following is a summary of your selections. To complete the bus creation, click Finish. If there are settings you wish to change, click Previous to review bus settings." Below this is a "Summary of actions:" section with a scrollable box containing the text "New bus 'RTIServer1' will be created wit". At the bottom, there are "Previous", "Finish", and "Cancel" buttons.

Figure 35: Create a New Service Integration Bus

7. Click **Finish**.
8. Click **Save**.



The screenshot shows the "Buses" configuration page. It includes a title bar with the cell name "Cell=ofss222868Node02Cell, Profile=MOCKPRO". Below the title bar, there is a description of a service integration bus and a "Preferences" section with "New..." and "Delete" buttons. A table lists the configured buses:

Select	Name	Description	Security
<input type="checkbox"/>	RTIServer		Disabled

The table shows a total of 1 bus.

Figure 36: Buses

## 3.2.3 Bus Member Creation

To create a Bus Member follow these steps:

1. Click + to expand **Service Integration** in the LHS menu.
2. Click **Buses**.
3. Click **RTIServer**. The RTI Server screen is displayed.

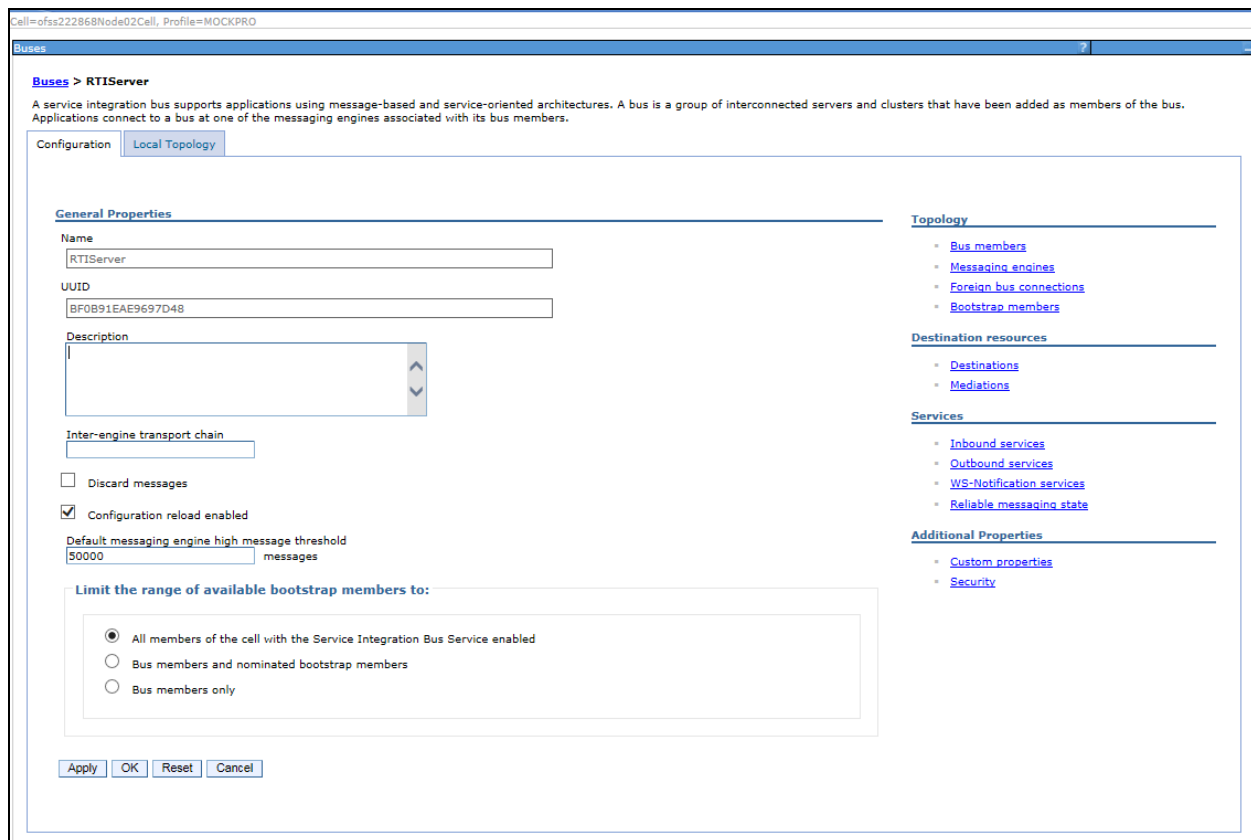


Figure 37: RTI Server

4. In the Topology section, click **Bus members**. The Bus members screen is displayed.

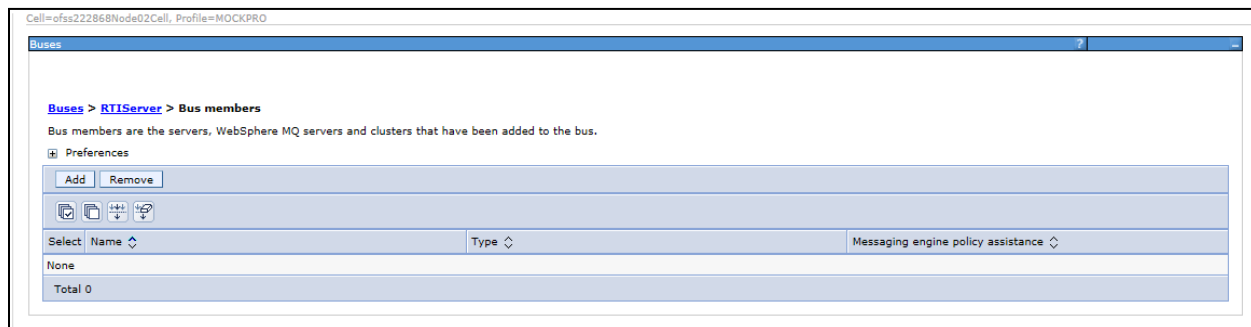


Figure 38: Bus members

## Configuring IPE in Web Application Servers for Real Time Mode

5. Click **Add**. The Add a New Bus Member screen is displayed.
6. Select **Server**.

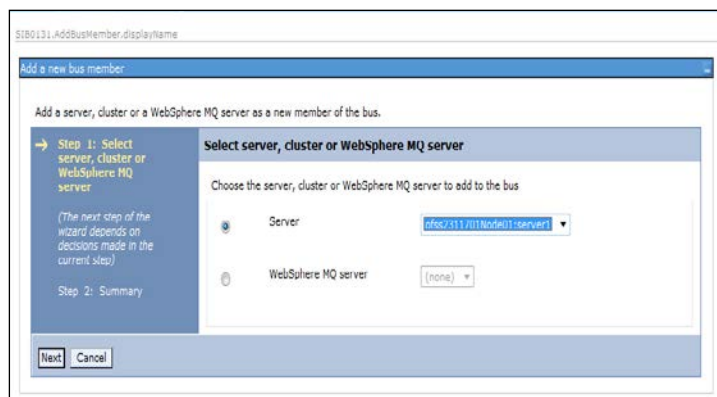


Figure 39: Add a New Bus Member

7. Click **Next**.



8. Select **File Store**.

# Configuring IPE in Web Application Servers for Real Time Mode

## 9. Click Next.

Specify file store properties

Provide the properties for the file store

Step 1: Select server, cluster or WebSphere MQ server

Step 1.1: Select the type of message store

→ Step 1.2: Configure file store

Step 1.3: Tune performance parameters

Step 2: Summary

**Configure file store**

Specify the properties for the file store

**Log**

\* Log size: 100 MB

Default log directory path

Log directory path: \_\_\_\_\_

**Store**

Same settings for permanent and temporary stores

**Permanent and temporary stores**

\* Minimum permanent store size: 200 MB

Unlimited permanent store size

\* Maximum permanent store size: 500 MB

Default permanent store directory path

Permanent store directory path: \_\_\_\_\_

Previous Next Cancel

## 10. Click Next.

Improve messaging performance

Tune application server for messaging performance.

Step 1: Select server, cluster or WebSphere MQ server

Step 1.1: Select the type of message store

Step 1.2: Configure file store

→ Step 1.3: Tune performance parameters

Step 2: Summary

**Tune performance parameters**

To improve performance of messaging within the application server, the proposed Java Virtual Machine settings are advised. By default the initial and maximum JVM settings will remain unchanged, select the 'Change heap sizes' checkbox to modify the settings to the proposed values. On machines with low amounts of physical memory size or large numbers of application server instances, it may be necessary to reduce the proposed values accordingly.

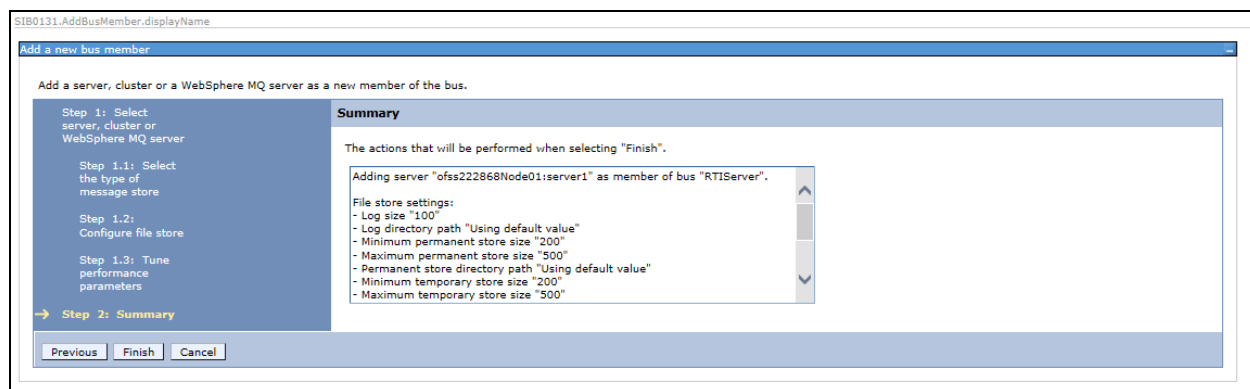
Change heap sizes

	Current heap sizes	Proposed heap sizes
Initial JVM heap size	0 MB	768 MB
Maximum JVM heap size	0 MB	768 MB

Previous Next Cancel

## 11. Click Next.

## Configuring IPE in Web Application Servers for Real Time Mode



12. Click **Finish**. The Buses screen is displayed.

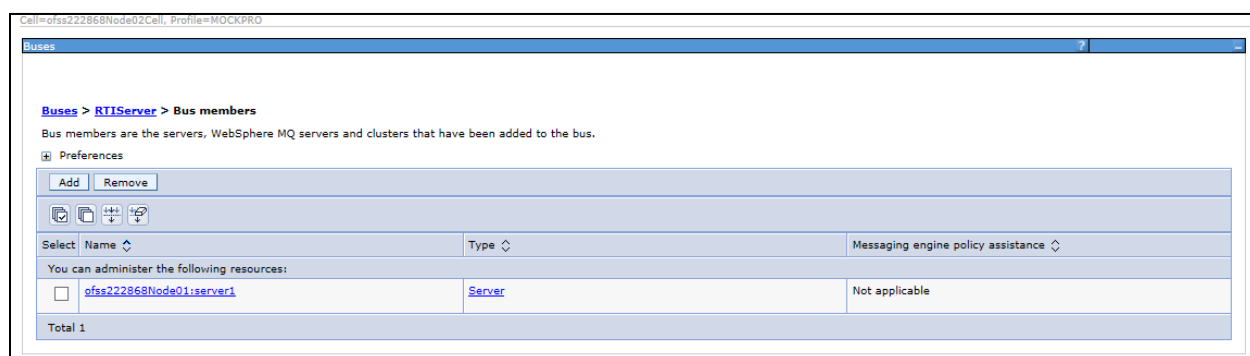


Figure 40: Bus Members created successfully

13. Click **Save**.

### 3.2.4 Configuring JMS Providers

This section discusses the configuration of JMS providers.

To navigate to JMS Providers sections, follow these steps:

1. Click **+** to expand **Resources**.
2. Click **+** to expand **JMS**.
3. Click **JMS Providers**. The JMS Providers screen is displayed.
4. Select **Cell** as Scope. ( for example, Cell=OFSA80Node02Cell)
5. Verify that the Default messaging provider exists.



## Configuring IPE in Web Application Servers for Real Time Mode

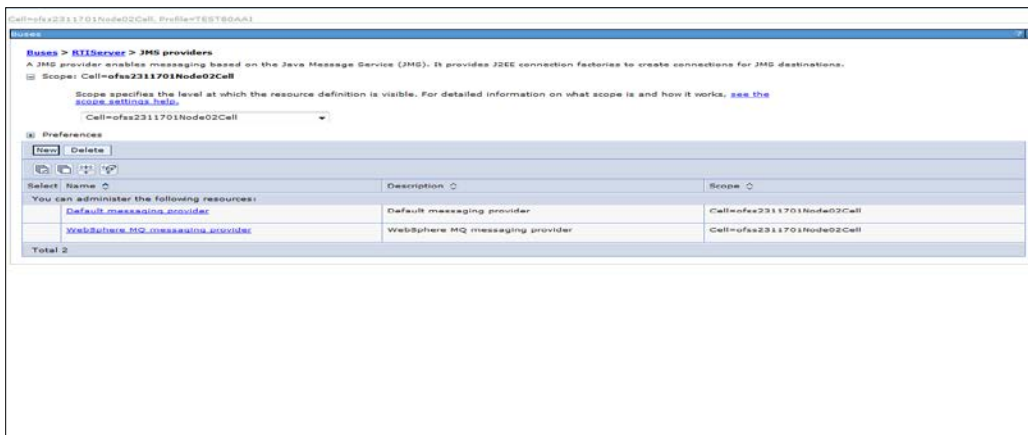


Figure 41: JMS Providers

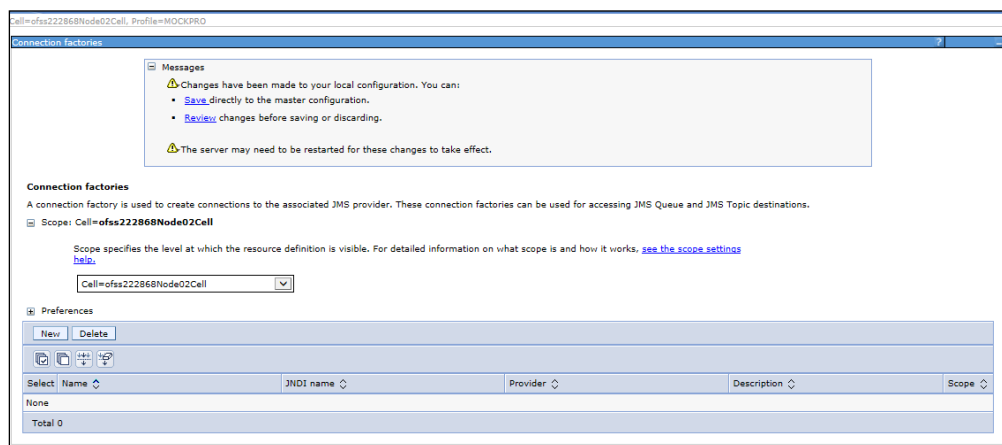
### 3.2.5 Configuring JMS Connection Factory

This section explains about configuring JMS Connection Factory.

**NOTE:** For information about the ports used, refer to section [Check Ports in WebSphere](#).

To configure JMS Connection Factory, follow these steps:

1. Click **+** to expand **Resources**.
1. Click **+** to expand **JMS**.
2. Click **Connection Factories**. The Connection Factories screen is displayed.



**Figure 42: Connection Factories**

3. Select the Scope as **Cell**. (for example, Cell=OFSA80Node02Cell)
4. Click **New**.
5. Select **Default Messaging Provider** option.
6. Click **OK**. The *JMS Connection Factory* screen is displayed.

# Configuring IPE in Web Application Servers for Real Time Mode

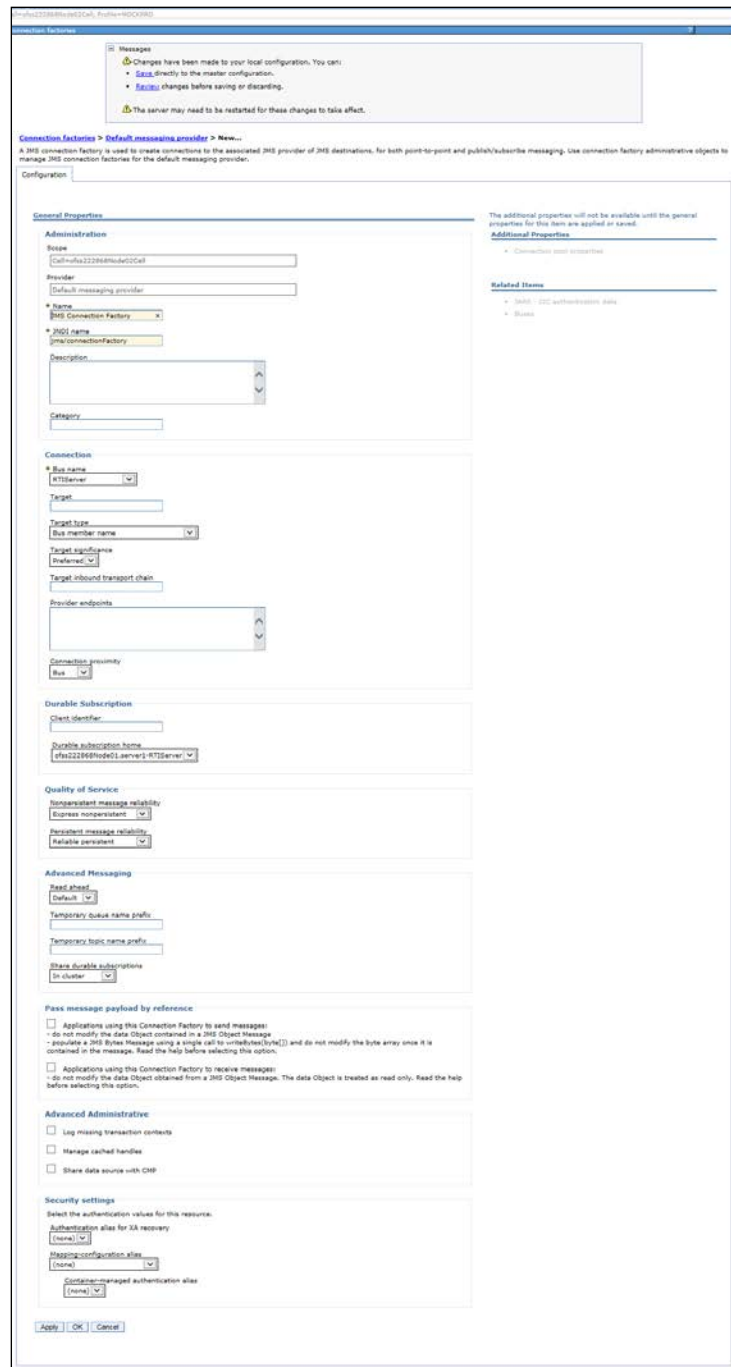


Figure 43: JMS Connection Factory

## Configuring IPE in Web Application Servers for Real Time Mode

---

7. Enter the following details:

**Table 7: JMS Connection Factory: Field Values**

Field	Value	Description
Name	<b>JMS Connection Factory</b>	Enter the name of JMS Connection Factory
JNDI name	<b>jms/connectionFactory</b>	Enter the JNDI name for the JMS connection factory
Bus Name	<b>RTIServer</b>	Select the bus name.
Target Inbound Transport Chain	<Transport Chain Name>	Enter the transport chain name. Refer <a href="#">Appendix C</a> for Transport chain name. For example: <i>InboundBasicMessaging</i>
Provider endpoints	<HOSTNAME> : <SIB_ENDPOINT_ADDRESS port>: <Transport Chain Name>	Enter the transport chain name. Refer <a href="#">Appendix C</a> for Provider endpoints. For example: ofss222868.in.oracle.com:7280:InboundBasic Messaging

# Configuring IPE in Web Application Servers for Real Time Mode

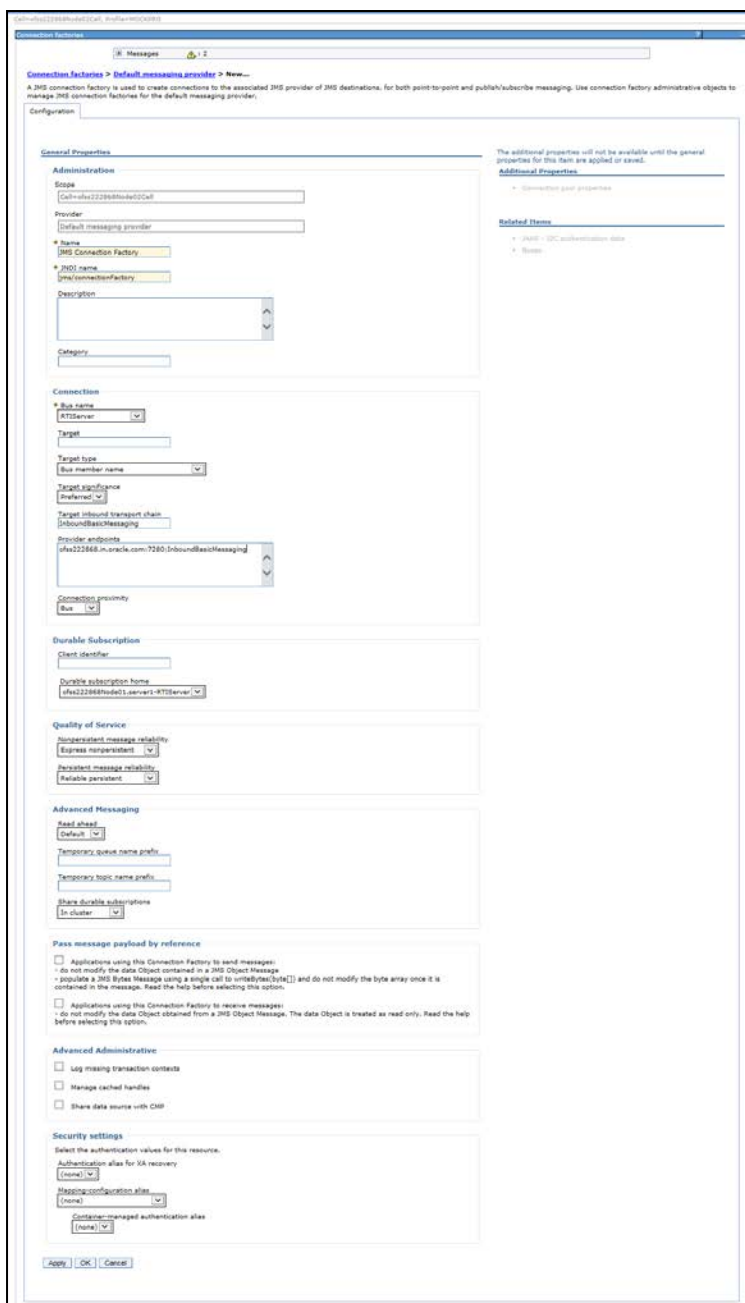


Figure 44: JMS Connection Factory – Not default port

8. Click **Apply** and save the details.

## 3.2.6 Configuring JMS Queues

This section discusses the following JMS Queues which are to be created:

- RTI Source Entity Queue
- RTI Hold JMS Queue
- RTI Feedback Queue
- Wire Transaction Source Entity Queue

### 3.2.6.1 Configuring RTI Source Entity Queue

To create RTI Source Entity Queue, follow these steps:

1. Click **+** to expand **Resources** in the LHS menu.
2. Click **+** to expand **JMS**.
3. Click **Queues**.



Figure 45: Queues

4. Select Scope as **Cell**. (For example, cell=OFSA80Node02Cell).

5. Click **New**. The *Select JMS resource provider* screen is displayed.

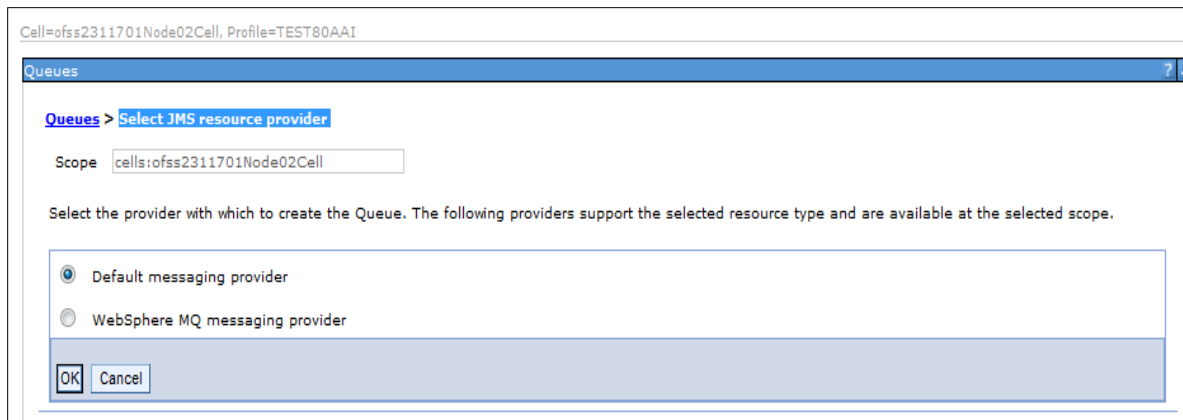


Figure 46: Select JMS resource provider

6. Select Default Messaging Provider.
7. Click **OK**. The General Properties section is displayed.

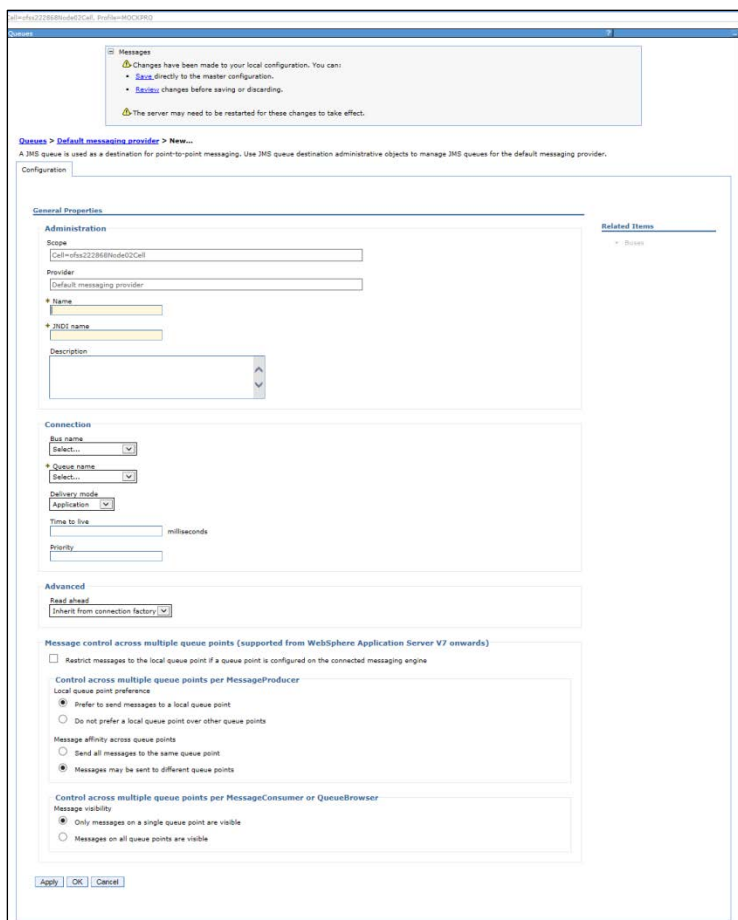


Figure 47: General Properties section

8. Enter the following details:

**Table 8: JMS Queues General Properties - Field Values**

Field	Value
Name	RTI Source Entity Queue
JNDI Name	jms/sourceEntityQueue
Bus Name	RTIServer

9. Select **Create Service Integration Bus destination** from **Queue Name**.

The screenshot shows the 'General Properties' configuration window. It is divided into two main sections: 'Administration' and 'Connection'.  
**Administration Section:**  
 - **Scope:** Cell=ofss2311701Node02Cell  
 - **Provider:** Default messaging provider  
 - **Name:** (empty field)  
 - **JNDI name:** (empty field)  
 - **Description:** (empty text area)  
**Connection Section:**  
 - **Bus name:** RTIServer (dropdown menu)  
 - **Queue name:** Create Service Integration Bus destination (dropdown menu, highlighted in blue)  
 Other options in the Queue name dropdown include: Select..., \_SYSTEM.Exception.Destination.ofss2311701Node01.server1-RTIServer, rtiSourceEntityQueue, rtiFeedbackQueue, rtiWireTrxnQueue, Queue1, rtiTransactionActionQueue, and other, please specify.

**Figure 48: Queue Name**

The *Set queue attributes* screen is displayed.



## Configuring IPE in Web Application Servers for Real Time Mode

Cell=ofss222868Node02Cell, Profile=MOCKPRO

Create new queue

Create a new queue for point-to-point messaging.

Step 1: Set queue attributes

Step 2: Assign the queue to a bus member

Step 3: Confirm queue creation

**Set queue attributes**

Configure the attributes of your new queue

\* Identifier  
rtiSourceEntityQueue

Description

Next Cancel

Figure 49: Set queue attributes

10. Enter the Identifier as **rtiSourceEntityQueue**.

11. Click **Next**.

Cell=ofss222868Node02Cell, Profile=MOCKPRO

Create new queue

Create a new queue for point-to-point messaging.

Step 1: Set queue attributes

Step 2: Assign the queue to a bus member

Step 3: Confirm queue creation

**Assign the queue to a bus member**

Assign the queue to a bus member that will store and process the messages for the queue.

Bus member  
Node=ofss222868Node01:Server=server1

Previous Next Cancel

Figure 50: Assign the queue to a bus member

12. Click **Next**.

Cell=ofss222868Node02Cell, Profile=MOCKPRO

Create new queue

Create a new queue for point-to-point messaging.

Step 1: Set queue attributes

Step 2: Assign the queue to a bus member

Step 3: Confirm queue creation

**Confirm queue creation**

To complete creation of the queue, click Finish. If you want to change any selections, click Previous.

Summary of actions:  
New queue "rtiSourceEntityQueue" will be  
A Queue point for "rtiSourceEntityQueue"

Previous Finish Cancel

Figure 51: Confirm queue creation

13. Click **Finish**. The Configuration screen is displayed.

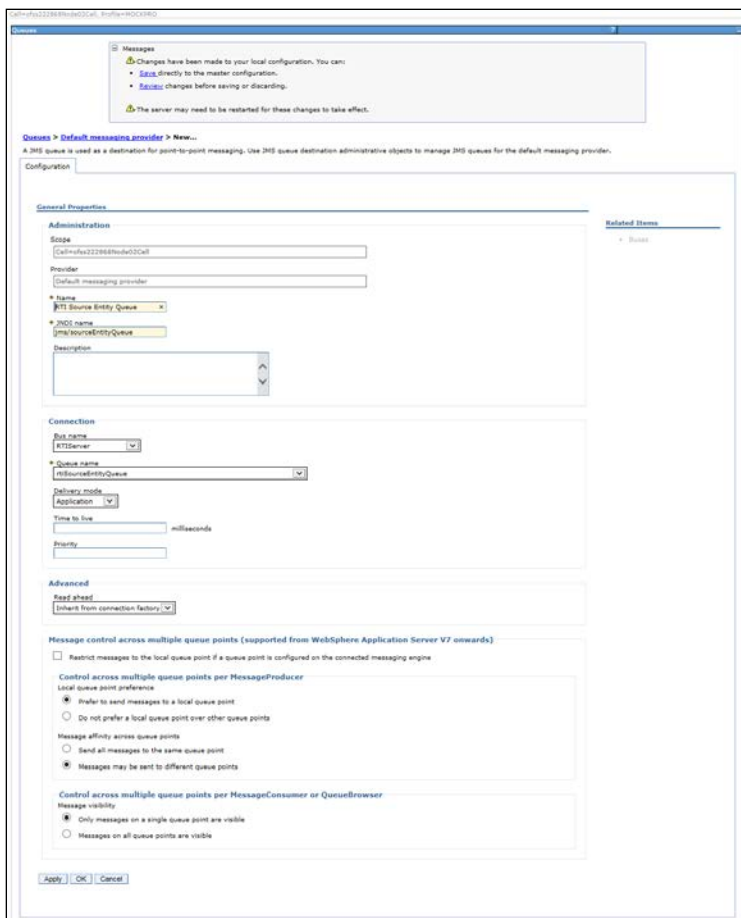


Figure 52: Configuration

14. Click **Apply** and save the details.

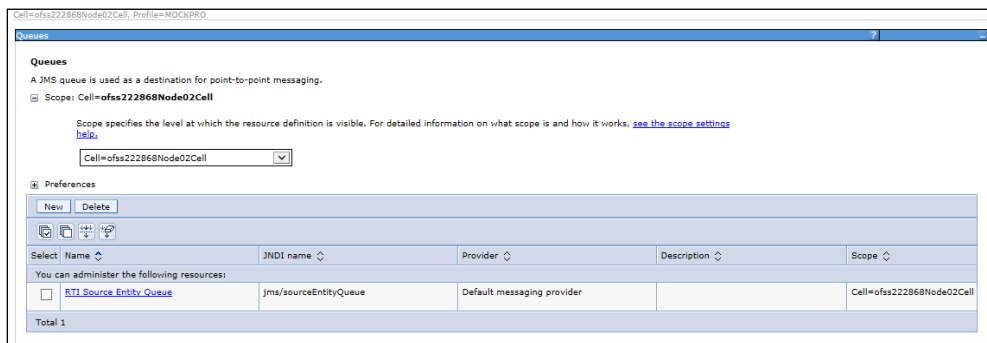


Figure 53: Queues

## Configuring IPE in Web Application Servers for Real Time Mode

### 3.2.6.2 Creating remaining JMS Queues

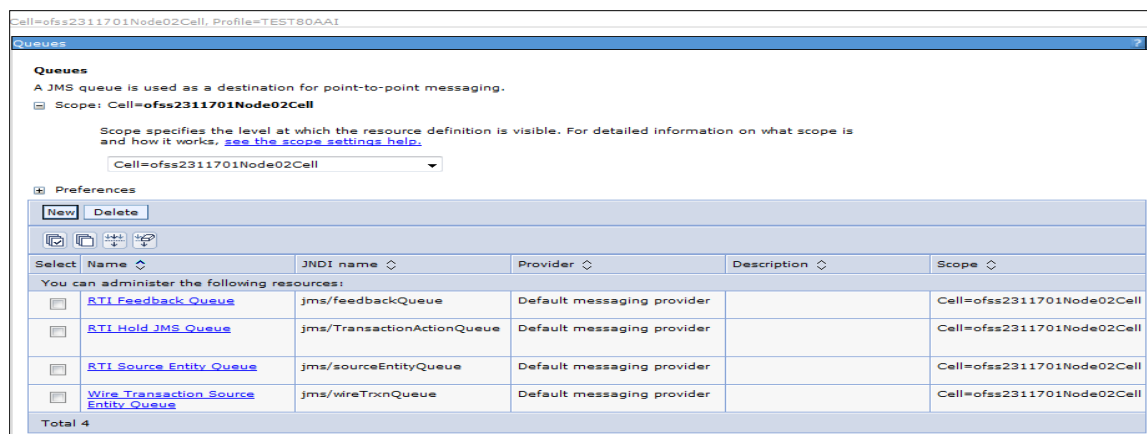
Similarly, to create the remaining queues, follow these steps:

1. Repeat Steps 1 - 15 from section [RTI Source Entity Queue](#).
2. Enter the following details:

**Table 9: WebSphere JMS Queues - Field Values**

Queue Name	Fields			
	Name	JNDI name	Bus name	Queue Identifier
<b>RTI Hold JMS Queue</b>	Enter the name as <b>RTI Hold JMS Queue</b>	Enter the JNDI name as <b>jms/TransactionActionQueue</b>	Select the Bus name as <b>RTIServer</b>	Enter the Queue as <b>rtiTransactionActionQueue</b>
<b>RTI Feedback Queue</b>	Enter the name as <b>RTI Feedback Queue</b>	Enter the JNDI name as <b>jms/feedbackQueue</b>	Select the Bus name as <b>RTIServer</b>	Enter the Queue as <b>rtiFeedbackQueue</b>
<b>Wire Transaction Source Entity Queue</b>	Enter the name as <b>Wire Transaction Source Entity</b>	Enter the JNDI name as <b>jms/wireTrxnQueue</b>	Select the Bus name as <b>RTIServer</b>	Enter the Queue as <b>rtiWireTrxnQueue</b>

3. The JMS Queues are created successfully.



**Figure 54: JMS Queue**

## 3.2.7 Configuring JMS Topics

This section discusses the following JMS Topics which are to be created:

- [Creating RTI Cache Operation Message Destination Topic](#)
- [Creating RTI Assessment Response Destination Topic](#)

### 3.2.7.1 Creating RTI Cache Operation Message Destination Topic

To create JMS topics, follow these steps:

1. Click **+** to expand **Resources** in the LHS menu.
2. Click **+** to expand **JMS**.
3. Click **Topics**.
4. Select Cell as Scope (for example Cell=OFSA80Node02Cell)

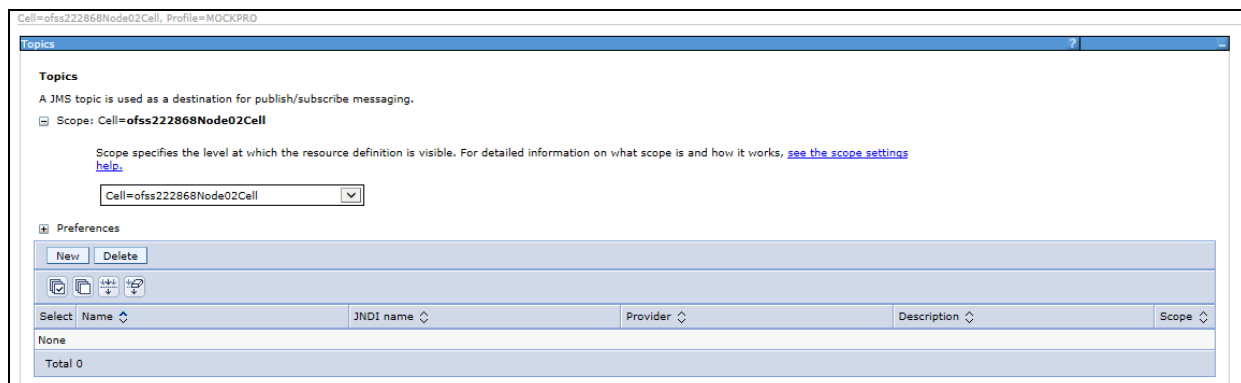


Figure 55: WebSphere - JMS Topics

5. Click **New**. The *Select JMS resource provider* screen is displayed.

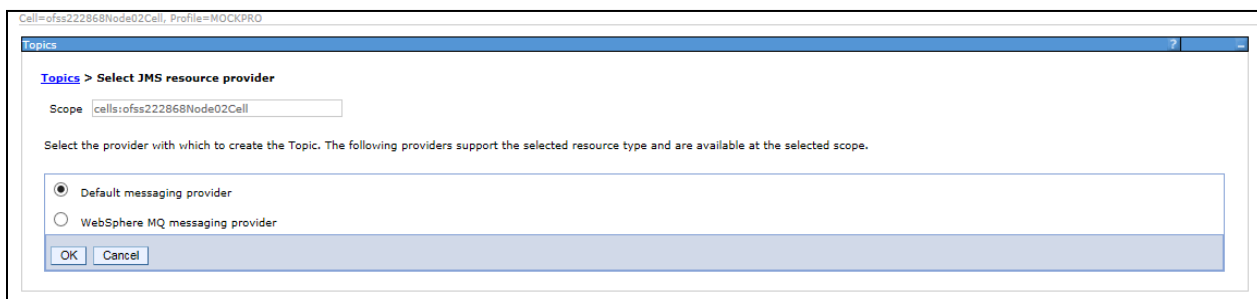


Figure 56: Select JMS resource provider

6. Select **Default messaging provider**.
7. Click **OK**. The *Configuration* screen is displayed.

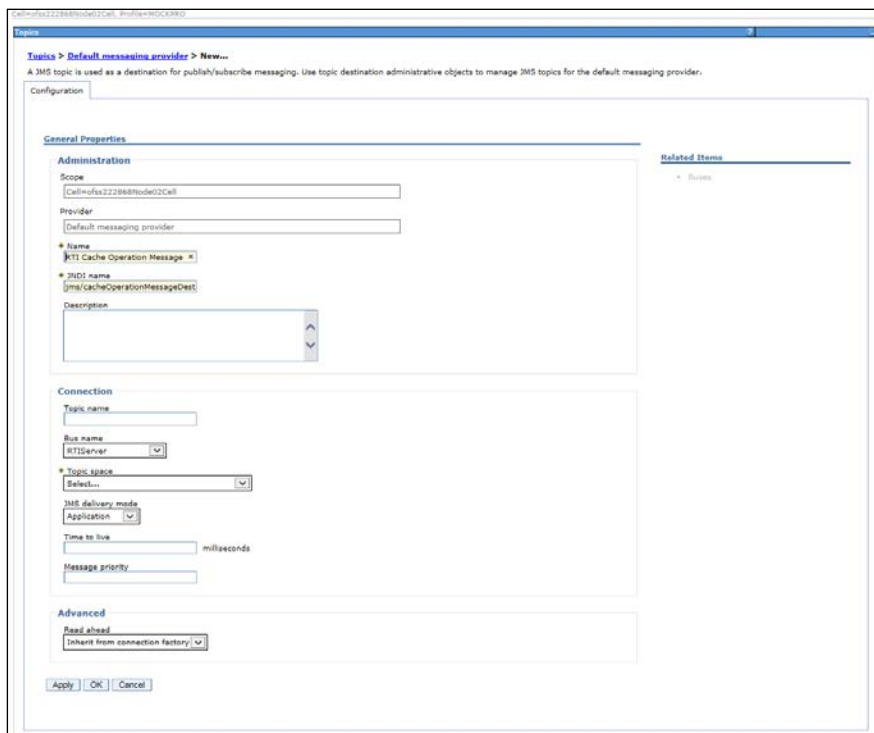


Figure 57: Configuration screen

## Configuring IPE in Web Application Servers for Real Time Mode

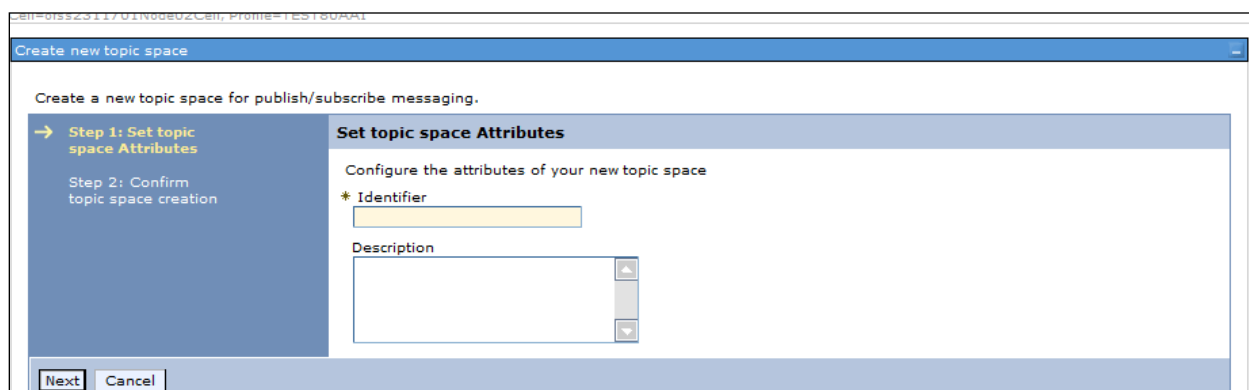
8. Enter the following details:

**Table 10: JMS Topic General Properties - Field Values**

Field	Value
Name	RTI Cache Operation Message Destination Topic
JNDI Name	jms/cacheOperationMessageDestination
Bus Name	RTIServer

9. Select **Create Service Integration Bus Destination** from **Topic space**.

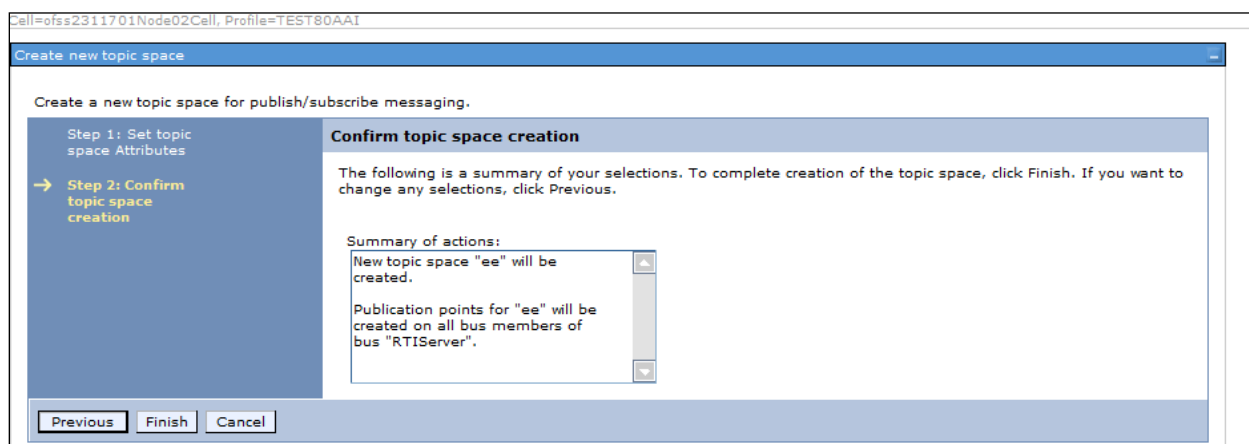
10. The *Create new topic space* screen is displayed.



**Figure 58: Create new topic space**

11. Enter the **Identifier** as **rtiCacheOperationTopic**.

12. Click **Next**.



**Figure 59: Confirm topic space creation**

13. Click **Finish**. The *Configuration* screen is displayed.

14. Click **Apply** and save details.

### 3.2.7.2 Creating RTI Assessment Response Destination Topic

To create an RTI Assessment Response Destination Topic, follow these steps:

1. Repeat Steps 1-14 from section [RTI Cache Operation Message Destination Topic](#).
2. Enter the following details:

Field	Value
Name	RTI Assessment Response Destination Topic
JNDI name	jms/assessmentResponseDestination
Bus name	RTIServer
Topic Space Identifier	rtiAssessmentResponseDestinationTopic

## 3.2.8 RMI/IOP Authentication Settings

This section describes the steps for authentication settings. For security setting, follow these steps:

1. Click **+** to expand **Security** in the LHS menu.
2. Click **+** to expand **Global Security**.
3. Click **+** to expand **RMI/IOP security** under **Authentication** section.

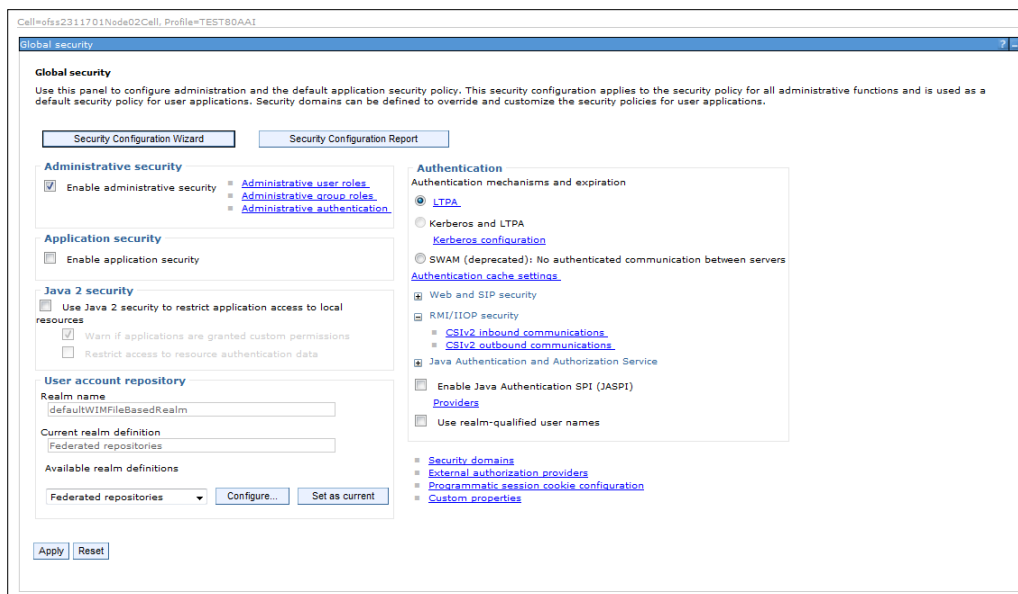


Figure 60: Global Security screen

4. Click **CSiv2 inbound communications/CSiv2 outbound communications**.
5. Select the following values:

Table 11: RMI/IOP authentication Settings

RMI/IOP Security	Client certificate authentication	Transport
<b>CSiv2 inbound communications</b>	Supported	SSL-supported
<b>CSiv2 outbound communications</b>	Supported	SSL-supported



## Configuring IPE in Web Application Servers for Real Time Mode

The screenshot shows the 'Global security' configuration page for CSIV2 inbound communications. The page is divided into several sections:

- CSIV2 Attribute Layer:** Includes checkboxes for 'Propagate security attributes' (checked) and 'Use identity assertion' (unchecked). There is a 'Trusted identities' text field.
- CSIV2 Transport Layer:** Includes 'Client certificate authentication' (Supported) and 'Transport' (SSL-supported).
- SSL settings:** Includes 'Centrally managed' (selected) and 'Use specific SSL alias' (NodeDefaultSSLSettings).
- CSIV2 Message Layer:** Includes 'Message layer authentication' (Supported) and 'Allow client to server authentication with:' (Kerberos, LTPA, Basic authentication - all checked).
- Additional Properties:** Includes 'Login configuration' (RMI\_INBOUND) and 'Stateful sessions' (checked).
- Related Items:** Includes 'Trusted authentication realms - inbound'.

Buttons at the bottom include 'Apply', 'OK', 'Reset', and 'Cancel'.

Figure 61: CSIV2 inbound communications

The screenshot shows the 'Global security' configuration page for CSIV2 outbound communications. The page is divided into several sections:

- CSIV2 Attribute Layer:** Includes checkboxes for 'Propagate security attributes' (checked) and 'Use identity assertion' (unchecked). It has options for 'Use server trusted identity' (selected) and 'Specify an alternative trusted identity' with fields for 'Trusted identity', 'Password', and 'Confirm password'.
- CSIV2 Transport Layer:** Includes 'Client certificate authentication' (Supported) and 'Transport' (SSL-supported).
- SSL settings:** Includes 'Centrally managed' (selected) and 'Use specific SSL alias' (NodeDefaultSSLSettings).
- CSIV2 Message Layer:** Includes 'Message layer authentication' (Supported) and 'Allow client to server authentication with:' (LTPA, Basic authentication - both checked).
- Additional Properties:** Includes 'Login configuration' (RMI\_OUTBOUND) and 'Stateful sessions' (checked). It also has 'Enable CSIV2 session cache limit' with fields for 'Maximum cache size' (100), 'Idle session timeout' (900), and 'seconds'.
- Custom outbound mapping:** Includes a checkbox for 'Custom outbound mapping' (unchecked).

Buttons at the bottom include 'Apply', 'OK', 'Reset', and 'Cancel'.

Figure 62: CSIV2 outbound communications

6. Click **Apply** and save details.

**Note:** RMI/IIOP Authentication Settings are not required for WebLogic.

### 3.2.9 Restart WebSphere Profile

For more information, refer to the Start/Stop Infrastructure Services section in the Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration Guide available on the [OTN](#) page.

## 4 Post data in JSON format to IPE

JSON requests are posted through REST services in IPE Realtime Mode. The subsections in this topic provides information on how to post data in JSON format using HTTP requests and receive responses from the server.

### 4.1 Prerequisites

The following are the prerequisites to post JSON requests in IPE:

1. Install a JSON client on your local computer.
2. User access for authentication on the server.
3. Knowledge about posting JSON requests.

### 4.2 Posting JSON request for REST services

The following is the procedure to post JSON requests for REST services:

1. Open the JSON client.
2. Select or enter Method as **POST**.
3. Enter the server URL in **Request URL**.
4. Enter the Header parameters as shown in the following table:

**Table 12: JSON Request Header Parameters**

No.	Header Name	Header Value	Description
1	username	Enter the user name to login to the server.	This value is used for user authentication.
2	password	Enter the password to login to the server.	This value is used for user authentication.
3	content-type	Select or enter application/json.	This value denotes that the data in JSON format.
4	accept	Select or enter application/json.	This value denotes that the data in JSON format

5. Select **application/json** for **Body content type**.
6. Enter the JSON message in the body. The following code sample is an example:

```
{
    "type": "DIM_ACCOUNT",
```

```
"domain": "FRA",
"appId": "OFS_IPE",
"runtype": 1,
"runParam": 1,
"attributes": {
  "Account Skey": 181,
  "Account Description": "ABC"
},
"additionalParams": {}
}
```

The following is the convention for the data in the fields of the preceding code sample:

```
{
  "type": <ACTIVITY Table>,
  "domain": <Processing Segment>,
  "appId": <Product ID>,
  "runtype": 1,
  "runParam": 1,
  "attributes":
  {
    <Required attributes/Business Column names of activity table>:
    <Values>
  },
  "additionalParams": {}
}
```

7. Send the JSON message from the client to the server. The server provides a response message with values for successful posting or for errors, if any.

## 5 Additional Configuration

To use IPE framework without a Sample Application, perform the following additional configuration.

### 5.1 Updating Install Properties

To update the install properties, follow these steps:

1. Login to the UNIX machine where the OFS AAAI Application Pack is installed with IPE enabled.
2. Navigate to <OFSAA Installation Directory>/realtime\_processing/WebContent/conf.
3. Edit `install.properties` and provide the following information:

Parameter Code	Value	Description
<RTI_INFODOM>	< Infodom Name >	Infodom Name used for IPE For example, OFSAAAIIINFO
<RTI_SEGMENT>	< default IPE processing segment code >	Enter the default IPE Processing Segment Code. For example, FRA

For example,

```

sql.config.datasource.jndi.name=jdbc/FICMASTER
sql.atomic.datasource.jndi.name=jdbc/OFSAAAIIINFO
sql.metadom.datasource.jndi.name=jdbc/OFSAAAIIINFOCNF
system.infodom=OFSAAAIIINFO
system.domain=FRA
deployment.assessment.execution.mode=LIVE
deployment.datastore=RDBMS
deployment.test.java.naming.initial.context.factory=
deployment.test.java.naming.provider.url=
batch.audit.backup=true
process.maxalert.count=100
    
```

### 5.1.1 IPE Caching

To perform caching in IPE, follow these steps:

1. Connect to OFSAA Configuration schema.
2. Replace the placeholders with the following information in the update queries.
3. Run the update queries.

Parameter Code	Value	Description
<INITIALFACTORY>	< initial context for app server>	Initial Context for the Web Application Server  <b>Websphere:</b> <code>com.ibm.websphere.naming.WsnInitialContextFactory</code>  <b>Weblogic:</b> <code>weblogic.jndi.WLInitialContextFactory</code>
<PROVIDER_URL>	<processing URL>	URL for accessing Queues and Topics in Web Application server. For more information, refer to <a href="#">Appendix A</a> .

4. Update configuration c set c.PARAMVALUE='<INITIALFACTORY>' where c.paramname='RTI\_PROCESSING\_INITIALCONTEXTFACTORY'  
/  
Update configuration c set c.PARAMVALUE='<PROVIDER\_URL>' where c.paramname='RTI\_PROCESSING\_PROVIDER\_URL'  
/

### 5.2 Creating ILP.ear/ ILP.war

It is mandatory to have the ILP.ear in the same profile or domain where the <contextname>.ear file of the OFS AAAI Application is deployed. To create ILP.ear/ ILP.war, follow these steps:

1. Navigate to < OFSAA Installation Directory >/realtime\_processing.
2. Execute the command:

```
./ant.sh.
```

```

/scratch/ofsaobie/AAAI_80/realtime_processing>ls
ant.sh application.xml build.xml ILP.ear ILP.war ipesampleapp WebContent
/scratch/ofsaobie/AAAI_80/realtime_processing>./ant.sh
executing "ant"
Buildfile: build.xml

createwar:

createear:

BUILD SUCCESSFUL
Total time: 0 seconds
/scratch/ofsaobie/AAAI_80/realtime_processing>

```

3. On successful execution, the ILP.ear and ILP.war files are generated under the <OFSAA Installation Directory >/realtime\_processing/ipesampleapp/bin folder.

### 5.3 Deploying ILP.ear in Weblogic

This section defines how to deploy ILP.ear in Weblogic.

---

**NOTE:** It is mandatory to have ILP.ear in the same domain where <contextname>.ear of the OFS AAI Application is deployed.

---

To deploy ILP.ear in Weblogic, follow these steps:

1. Start the Weblogic server.
2. Create an ILP.ear folder in <WEBLOGIC\_INSTALL\_DIR>/user\_projects/domains/<DOMAIN\_NAME>/applications

Copy <FIC\_HOME>/realtime\_processing/ILP.ear to  
<WEBLOGIC\_INSTALL\_DIR>/user\_projects/domains/<DOMAIN\_NAME>/applications/ILP.ear/.

3. Explode the ILP.ear file by executing the command:
 

```
jar -xvf ILP.ear
```
4. Delete the ILP.ear and IPL.war files.
5. Create an ILP.war folder in <WEBLOGIC\_INSTALL\_DIR>/user\_projects/domains/<DOMAIN\_NAME>/applications/ILP.ear

Copy <FIC\_HOME>/realtime\_processing/ILP.war to  
<WEBLOGIC\_INSTALL\_DIR>/user\_projects/domains/<DOMAIN\_NAME>/applications/ILP.ear/ILP.war

6. Explode the `ILP.war` file by executing the command:

```
jar -xvf ILP.war.
```

7. Delete the `ILP.war` file.

### 5.3.1 Installing `ILP.ear` in WebLogic using WebLogic Administrator Console.

1. Navigate to the path

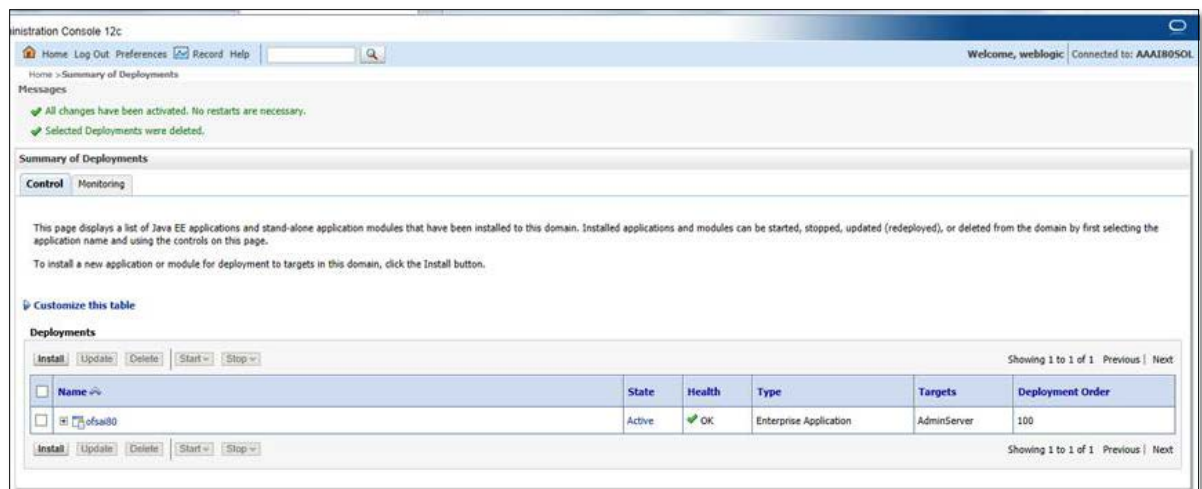
`<WEBLOGIC_INSTALL_DIR>/user_projects/domains/<DOMAIN_NAME>/bin` in the machine in which WebLogic is installed.

2. Start WebLogic by executing the command:

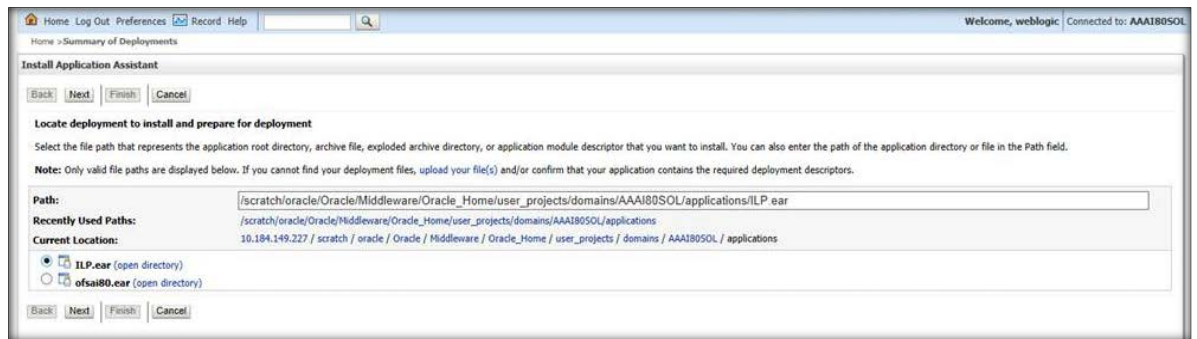
```
./startWebLogic.sh -d64 file
```

3. Open the following URL in the browser window: `http://<ipaddress>:<administrative console port>/console`. (Use `https` protocol if SSL is enabled). The *Welcome* window is displayed.

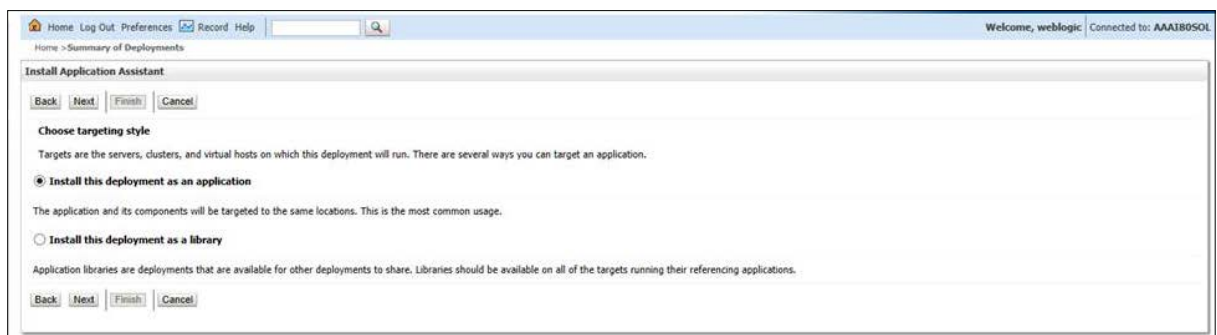
4. Login with the Administrator **Username** and **Password**. The Summary of Deployment page is displayed.



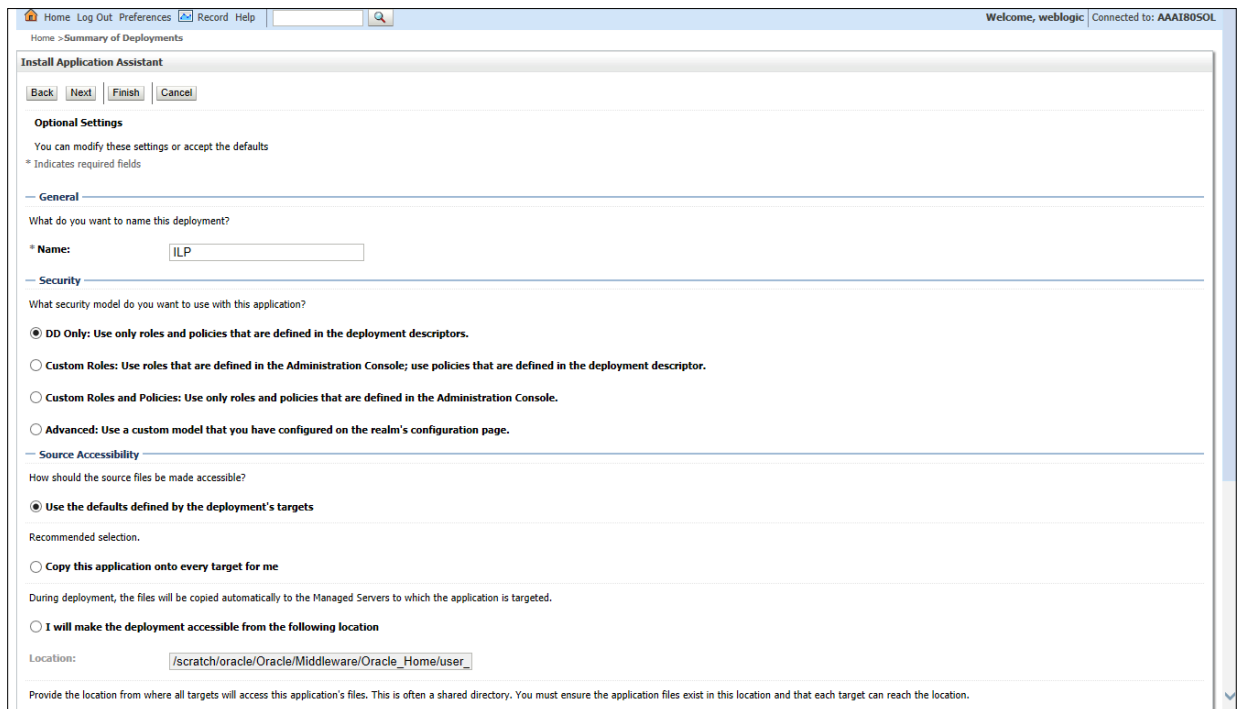
5. Click **Install**. The Install Application Assistance page is displayed.



6. Select **ILP .ear** and click **Next**. The Install Application Assistance page is displayed with the Choose targeting style section.

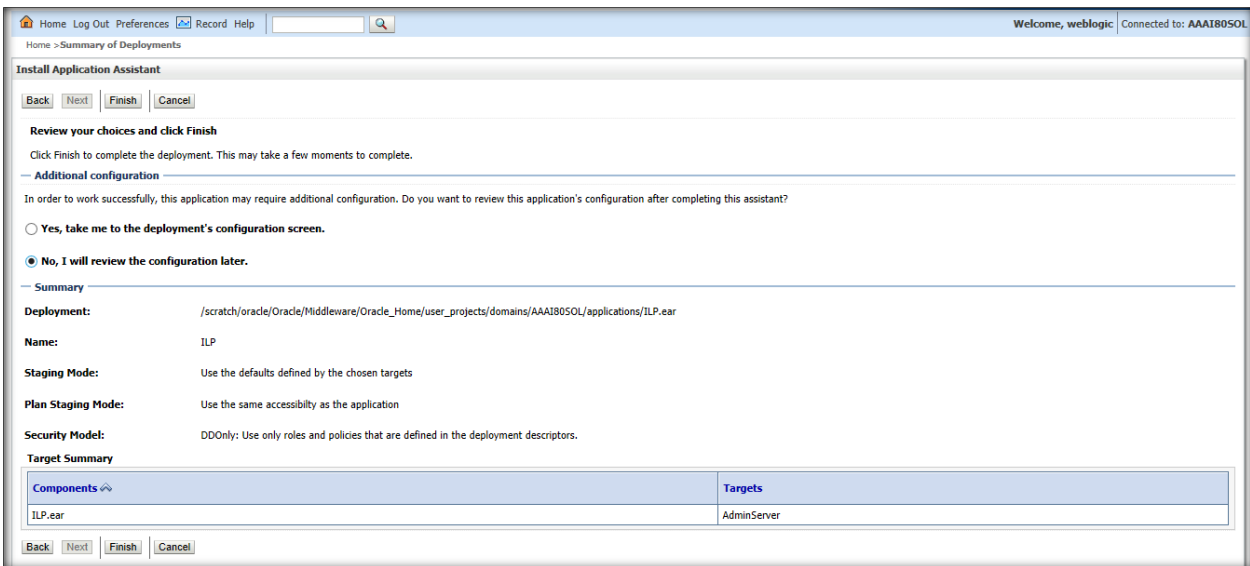


7. By default, the **Install this deployment as an application** option in the Choose targeting style section is selected. Click **Next**. The Install Application Assistance page is displayed with the Optional Settings section.

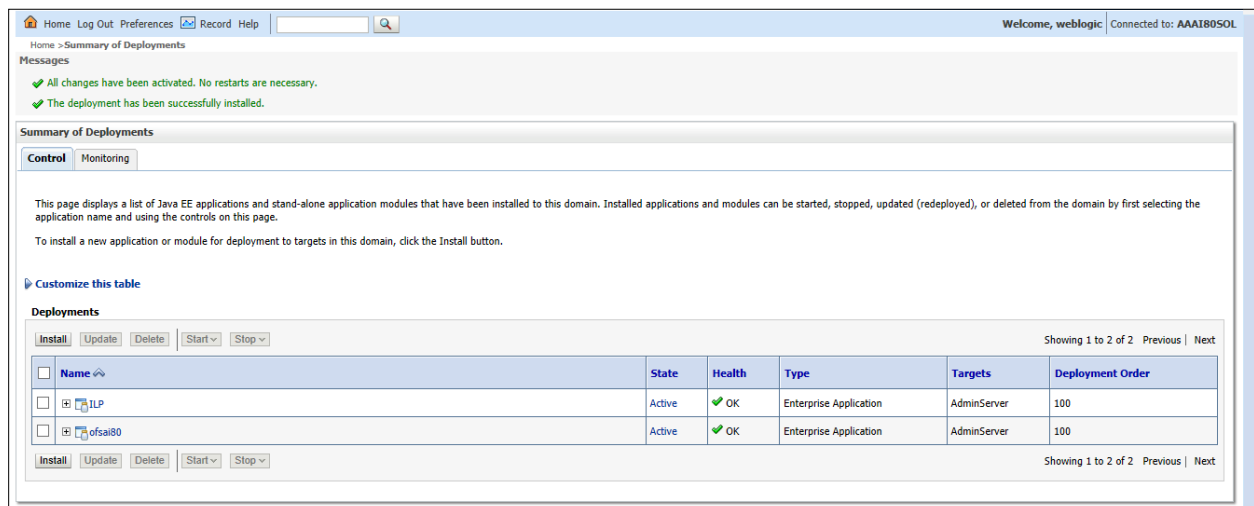




- Retain the default selections and click **Next**. The Install Application Assistance page is displayed with the Review your choices and click Finish section.



- Select **No, I will review the configuration later** in the Additional Configuration section and click **Finish**. ILP is added in the Name section of the Summary of Deployment page with following message: *The deployment has been successfully installed.*



- Restart all OFS AAI servers. For more information, refer to the *Start/Stop Infrastructure Services* section in the *Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration Guide* available on the [OTN](#) page.

### 5.3.2 Deploying ILP.ear in WebSphere

To deploy ILP.ear in WebSphere, follow these steps:

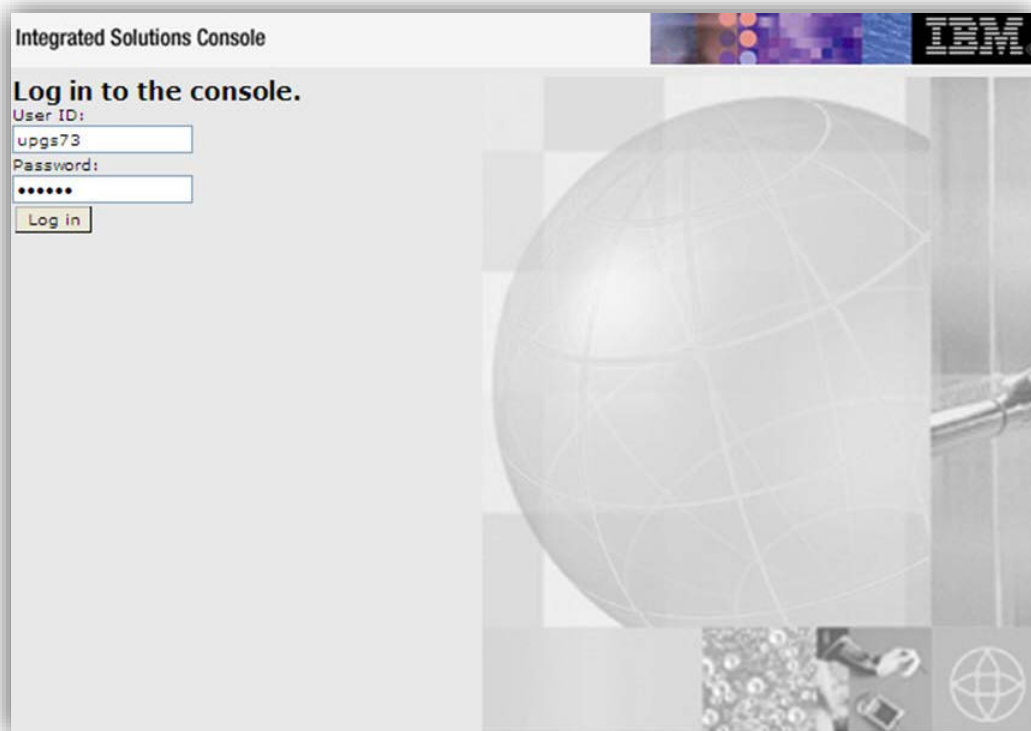
**NOTE:** It is mandatory to have `ILP.ear` in the same profile where `<contextname>.ear` of OFS AAAI Application is deployed.

---

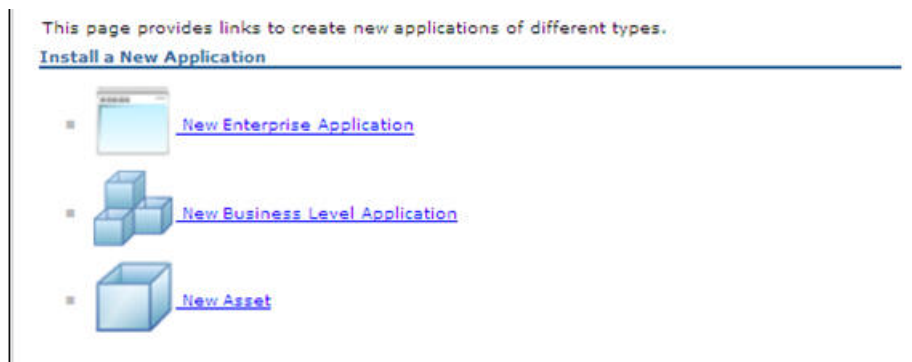
1. Start the WebSphere Profile by navigating to the path "`<Websphere_Installation_Directory>/IBM/WebSphere/AppServer/profiles/<Profile_Name>/bin/`" then execute the command:

```
./startServer.sh server1
```

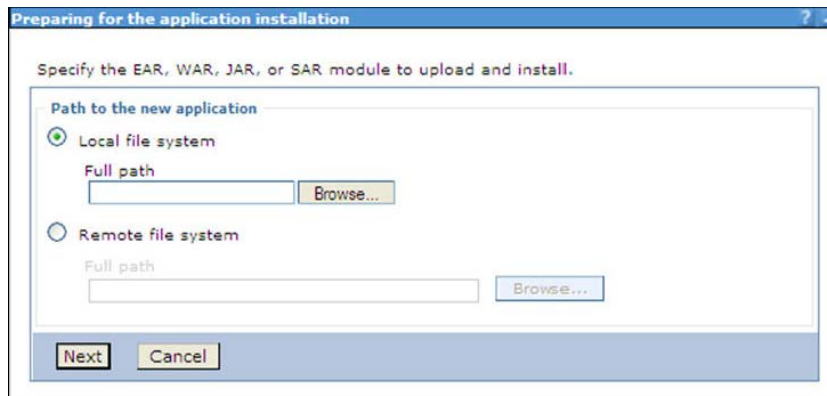
2. Open the following URL in the browser: `http://<ipaddress>:<Administrative Console Port>/ibm/console`. (use `https` protocol if `SSL` is enabled). The login screen is displayed.



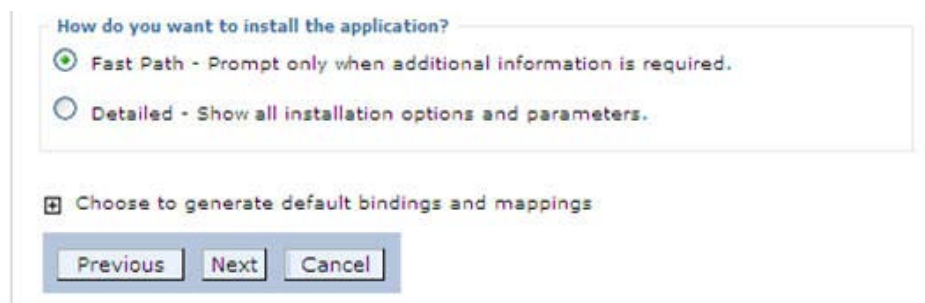
3. Enter the user credentials which have administrator rights and click **Log In**.
4. From the LHS menu, select **Applications** and click **New Application**. The New Application window is displayed.



5. Click **New Enterprise Application**. The *Preparing for the application installation* page is displayed.



6. Select **Remote File System** and click **Browse**. Select the EAR file generated for IPE to upload and install. Click **Next**.



7. Select the **Fast Path** option and click **Next**. The *Install New Application* window is displayed.

Directory to install application

Distribute application

Use Binary Configuration

Deploy enterprise beans

Application name  
ILP

Create MBeans for resources

Override class reloading settings for Web and EJB modules

Reload interval in seconds

Deploy Web services

Validate Input off/warn/fail  
warn

Process embedded configuration

**File Permission**

Allow all files to be read but not written to  
Allow executables to execute  
Allow HTML and image files to be read by everyone

.\*\..dll=755#.\*\..so=755#.\*\..a=755#.\*\..sl=755

Application Build ID  
Unknown

Allow dispatching includes to remote resources

Allow servicing includes from remote resources

Business level application name  
Create New BLA

Asynchronous Request Dispatch Type  
Disabled

Allow EJB reference targets to resolve automatically

Deploy client modules  
Client deployment mode  
Isolated

Validate schema

Next Cancel

8. Click **Next**. The *Map Modules to Servers* page is displayed.

Cell=ofss2311701Node02Cell, Profile=TEST80AAI

Welcome admin

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

→ Step 2: Map modules to servers

Step 3 Map virtual hosts for Web modules

Step 4 Metadata for modules

Step 5 Summary

**Map modules to servers**

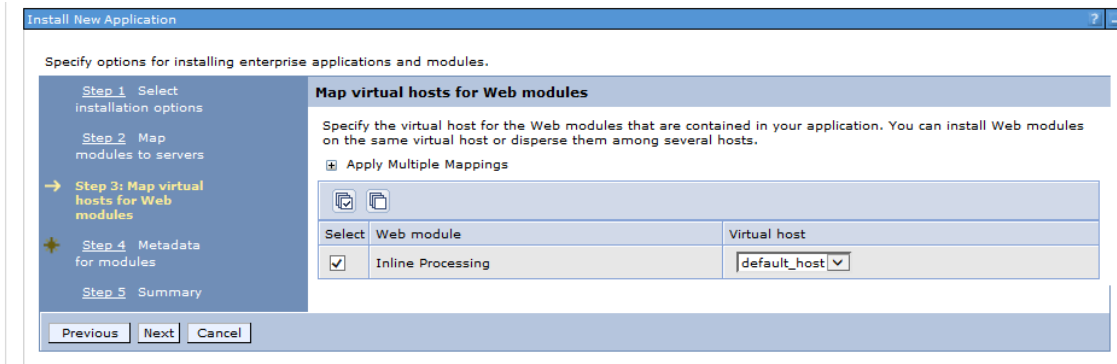
Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated, based on the applications that are routed through.

Clusters and servers:  
WebSphere:cell=ofss2311701Node02Cell,node=ofss2311701Node02,server=server1 Apply

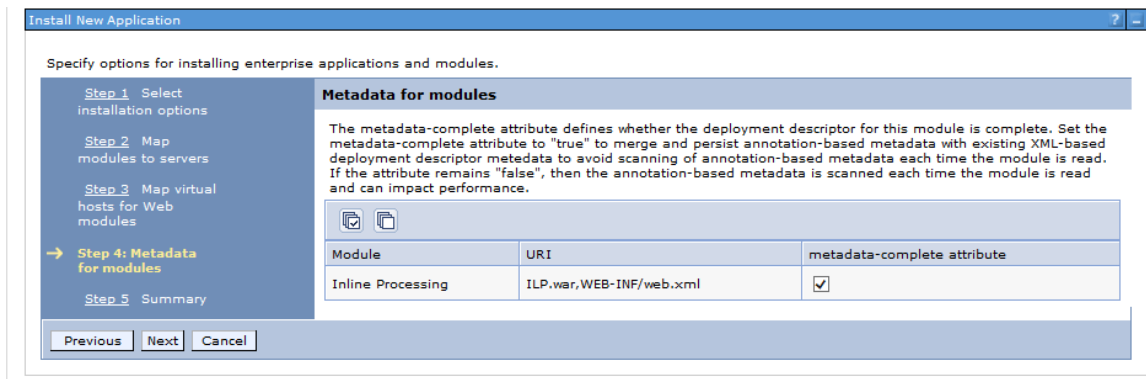
Select	Module	URI	Server
<input checked="" type="checkbox"/>	Inline Processing	ILP.war,WEB-INF/web.xml	WebSphere:cell=ofss2311701Node02Cell,node=ofss2311701Node02,server=server1

Previous Next Cancel

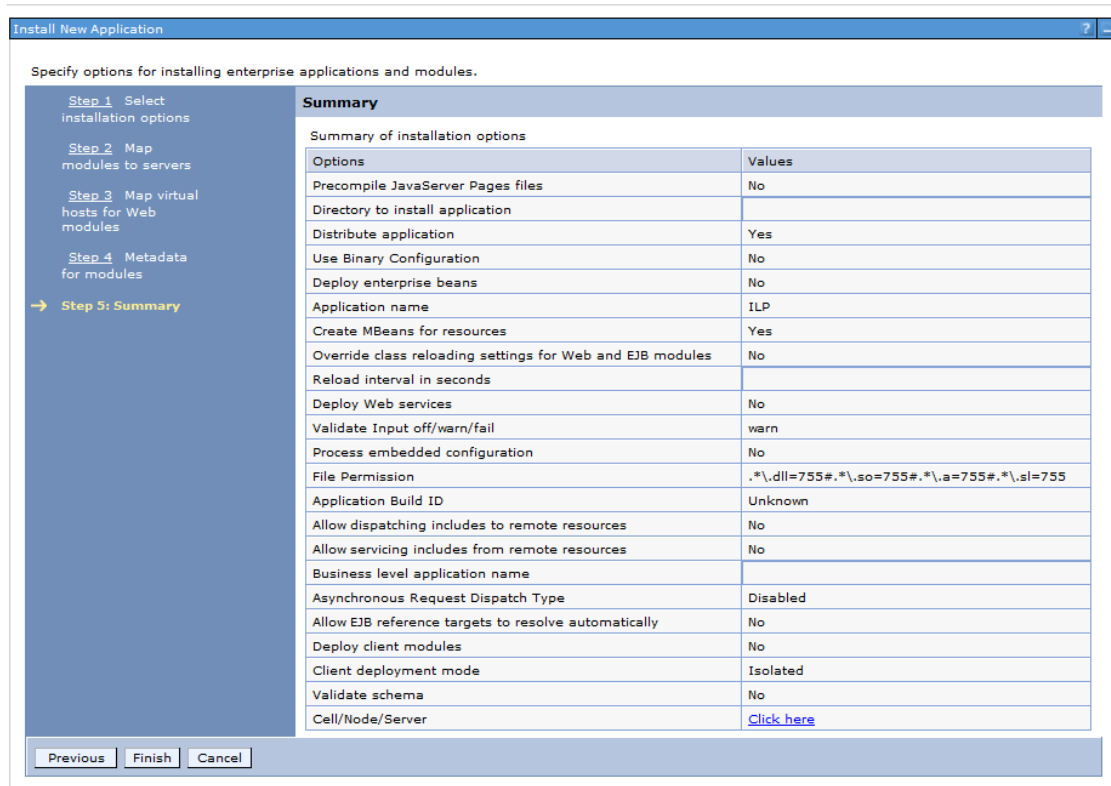
9. Select the **Inline Processing** checkbox and click **Next**. The *Map Virtual hosts for Web modules* page is displayed.



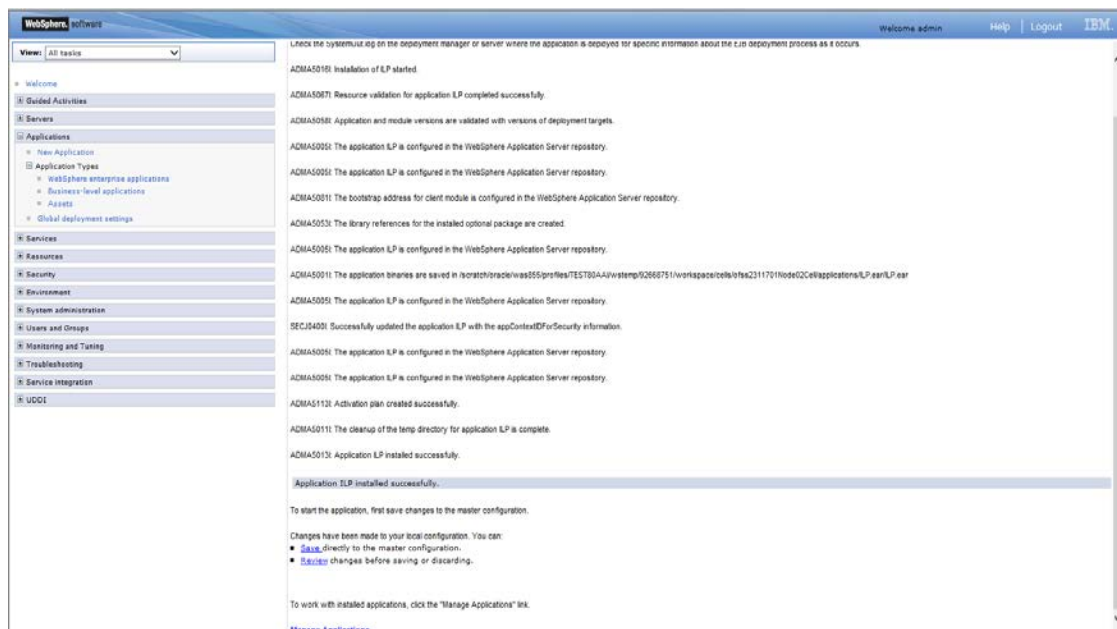
10. Select the **Inline Processing** checkbox and click **Next**. The Metadata for modules page is displayed.



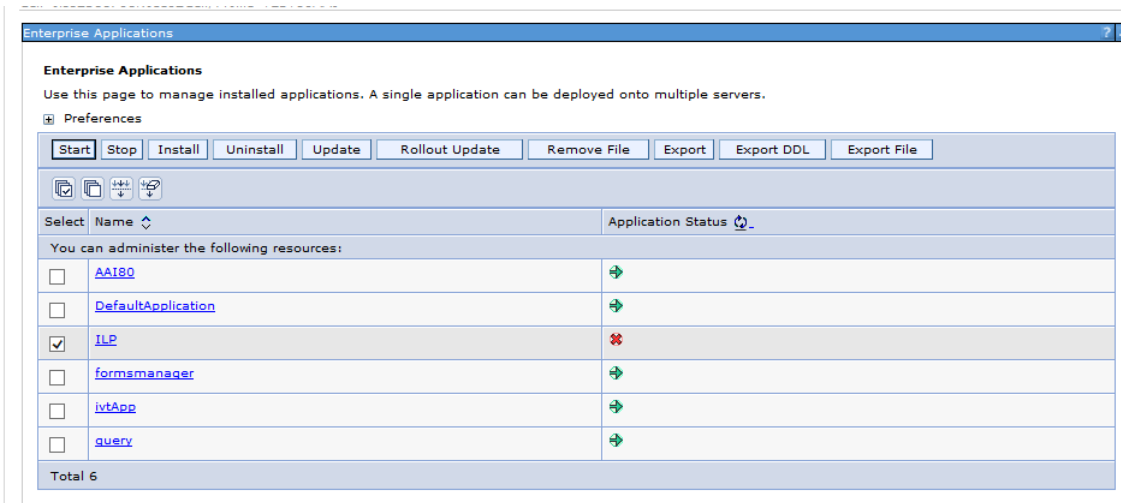
11. Select the **Metadata-complete** attribute checkbox and click **Next**. The Summary page is displayed.



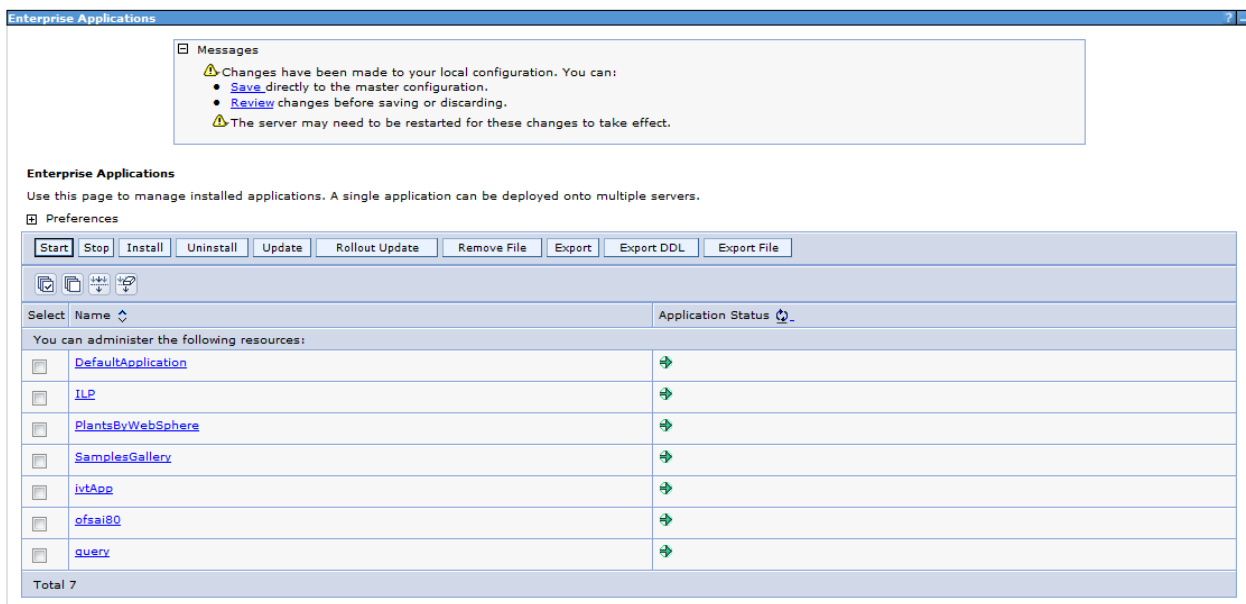
12. Click **Finish**. On successful installation, a message is displayed.



13. Click **Save** and save the master file configuration. The details are displayed in the *Master File Configuration* page.



14. Select **ILP** and click **Start**. The Enterprise Application page is displayed with confirmation message.



15. Restart all OFS AAI servers. For more information, refer to the Start/Stop Infrastructure Services section in the Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration Guide available on the [OTN](#) page.

### 5.4 Logging

Once the sample application client is triggered, the logs get written onto RTI-server.log from the path <<ILP deploy area>>/logs

By default, the log mode will be set to 'info'. If detailed logs are required then follow these steps:

1. Navigate to <FIC\_HOME>/realtime\_processing/WebContent/WEB-INF/

2. Edit the file `log4j.xml` to modify the level value of the code from 'info' to 'debug' as follows:

```
<logger name="com.ofs.aai">  
<level value="DEBUG"/>  
</logger>
```

3. Create `ilp.ear/ilp.war`. For more information, refer to the *Creating ILP.ear/ILP.war* section in the *Oracle Financial Services Inline Processing Engine Configuration Guide* available on the [OTN](#) page.
4. Deploy the ILP.ear file. For more information, refer to the *Deploying ILP.ear. in Weblogic* section or *Deploying ILP.ear. in Websphere* section in the *Oracle Financial Services Inline Processing Engine Configuration Guide* available on the [OTN](#) page.



---

## 6 HIVE Configurations

To run IPE in HIVE, perform the following configurations:

---

**NOTE:** HIVE supports only batch mode processing.

---

### 6.1 Loading UDF file in HIVE

To load the UDF file in HIVE, follow these steps:

1. Copy the JAR file  
`$FIC_HOME/realtime_processing/ipesampleapp/lib/ofsa_ipe_udf.jar` to the host on which HIVEServer2 is running.
2. Provide the HIVE user with Read, Write and Execute permissions to this directory, and make a note of the path (For example, `/opt/local/hive/lib/`).
3. Login to the Cloudera Manager Console as an admin user and navigate to Clusters menu, click on HIVE. The HIVE service window appears.
4. Click the **Configuration** tab.

---

**NOTE:** This is the Classic layout of the Cloudera Manager console.

---

5. Click Service-Wide menu and select **Advanced**.
6. Configure the HIVE Auxiliary JARs Directory property with the HIVEServer2 host path from Step 1, `/opt/local/hive/lib/`.
7. Click **Save Changes**. The JARs are added to `HIVE_AUX_JARS_PATH` environment variable.
8. Redeploy the HIVE client configuration. Follow these steps:
  - a. Navigate to the HIVE service in the Cloudera Manager Admin Console.
  - b. On the **Actions** menu, select **Deploy Client Configuration**.
  - c. Click **Deploy Client Configuration**.
9. Restart the HIVE service. If the HIVE Auxiliary JARs Directory property is configured but the directory does not exist, HIVEServer2 does not start. Follow these steps:
  - a. On the **Actions** menu, select **Restart**.
  - b. Click **Restart**.

### 6.2 Creating Result Tables

To create Result Tables for HIVE, follow these steps:

1. Login to the server where OFSAA is installed.

2. Navigate to the path `$FIC_HOME/realtime_processing/infodomscripsts/DDL/hive` and execute the scripts in `create_infodom.hql` file into the Datadom (HIVE schema).
3. The tables `RTI_ASSMNT_EVAL_RESULT` and `RTI_ASSMNT_RESULT` are created.

## 7 Appendix A

### Inline Processing URL of JMS

Construct URL for JMS as below.

- **Websphere**→`iiop://<APP_SERVER_HOST_NAME>:<BOOTSTRAP_ADDRESS>`

For example, `iiop://myhost.mydomain.com:2809`

---

**NOTE:** For more information, refer to the *Oracle Financial Services Analytical Applications Infrastructure Inline Processing Configuration Guide* available in the [OTN](#) page. Check the port in the *Websphere* section.

---

- **Weblogic**→`t3://<APP_SERVER_HOST_NAME>:<SERVLET PORT>` (Use t3s protocol for SSL)

For example, `t3://myhost.mydomain.com:7001`

---

**NOTE:** `<APP_SERVER_HOST_NAME>` is the IP or the Host Name of a server where WebLogic or WebSphere is installed.

---

## 8 Appendix B

### 8.1 Check ports in WebSphere

To check the ports in WebSphere, follow these steps:

1. Open the following URL in the browser window:  
<http://<ipaddress>:<administrative console port>/ibm/console>. (https if SSL is enabled). The Login window is displayed.
2. Login with the Administrator **Username** and **Password**.
3. Click **+** to expand **Servers**.
4. Click **+** to **Server Types**.
5. Click **WebSphere application servers**.

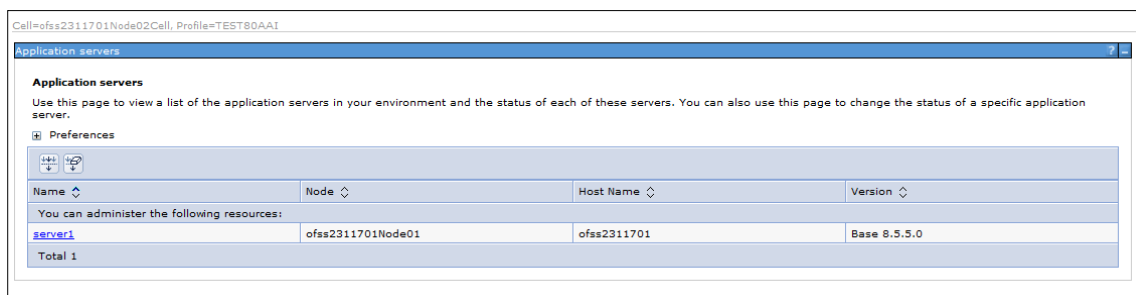


Figure 63: Application Servers

6. Click **server1**.

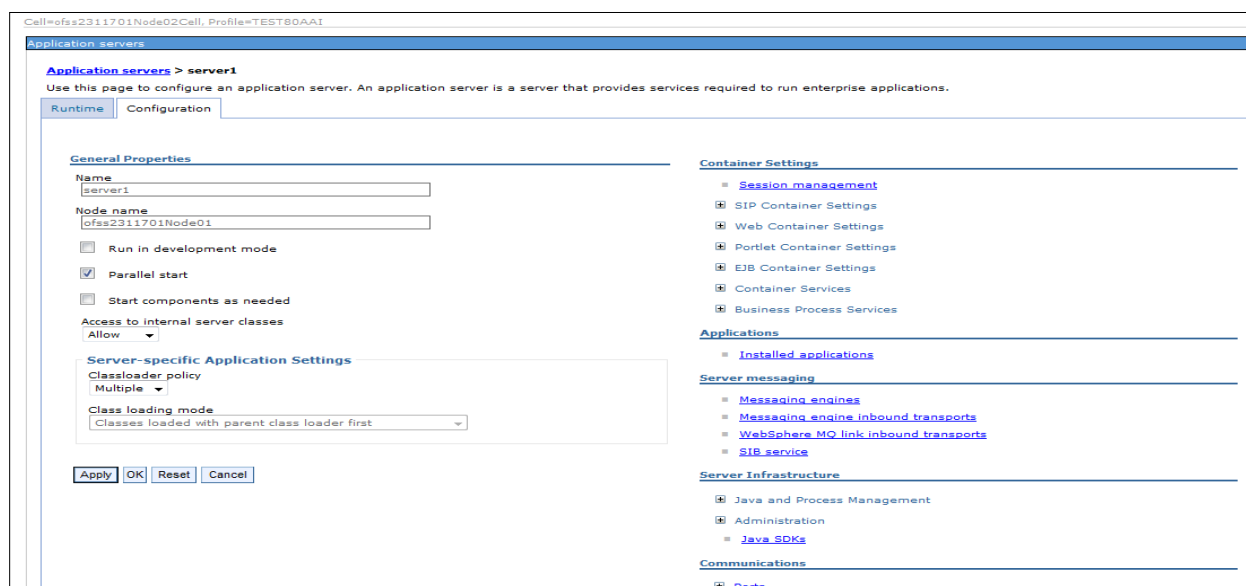


Figure 64: Application Servers

7. Click + to expand **Ports** under **Communications**.

The screenshot shows the Oracle WebCenter configuration console. On the left, there are settings for 'Classloader policy' (set to 'Multiple') and 'Class loading mode' (set to 'Classes loaded with parent class loader first'). Below these are 'Apply', 'OK', 'Reset', and 'Cancel' buttons. The main area is divided into sections: 'Server messaging' (with sub-items: Messaging engines, Messaging engine inbound transports, WebSphere MQ link inbound transports, SIB service), 'Server Infrastructure' (with sub-items: Java and Process Management, Administration, Java SDKs), and 'Communications' (with a sub-item: Ports). The 'Ports' section is expanded to show a table of port configurations.

Port Name	Port	Details
BOOTSTRAP_ADDRESS	2811	
SOAP_CONNECTOR_ADDRESS	8882	
ORB_LISTENER_ADDRESS	9102	
SAS_SSL_SERVERAUTH_LISTENER_ADDRESS	9409	
CSIV2_SSL_SERVERAUTH_LISTENER_ADDRESS	9408	
CSIV2_SSL_MUTUALAUTH_LISTENER_ADDRESS	9407	
WC_adminhost	9062	
WC_defaulthost	9083	
DCS_UNICAST_ADDRESS	9355	
WC_adminhost_secure	9045	
WC_defaulthost_secure	9445	
SIP_DEFAULTHOST	5065	
SIP_DEFAULTHOST_SECURE	5064	
SIB_ENDPOINT_ADDRESS	7278	
SIB_ENDPOINT_SECURE_ADDRESS	7288	
SIB_MQ_ENDPOINT_ADDRESS	5560	
SIB_MQ_ENDPOINT_SECURE_ADDRESS	5580	
IPC_CONNECTOR_ADDRESS	9635	
OVERLAY_UDP_LISTENER_ADDRESS	11007	
OVERLAY_TCP_LISTENER_ADDRESS	11008	

Below the table, there are additional sections: 'Messaging' (with sub-item: Communications Enabled Applications (CEA)) and 'Performance'.

Figure 65: Ports List

## 9 Appendix C

### 9.1 Checking Target Inbound transport chain and Provider endpoints values

To check the values, follow these steps:

1. Open the following URL in the browser window:  
<http://<ipaddress>:<administrative console port>/ibm/console>. (https if SSL is enabled). The Login window is displayed.
2. Login with the Administrator **Username** and **Password**.
3. Click **+** to expand **Servers** in the LHS menu.
4. Click **+ Server Types**.
5. Click **WebSphere application servers**. The Application servers screen is displayed.

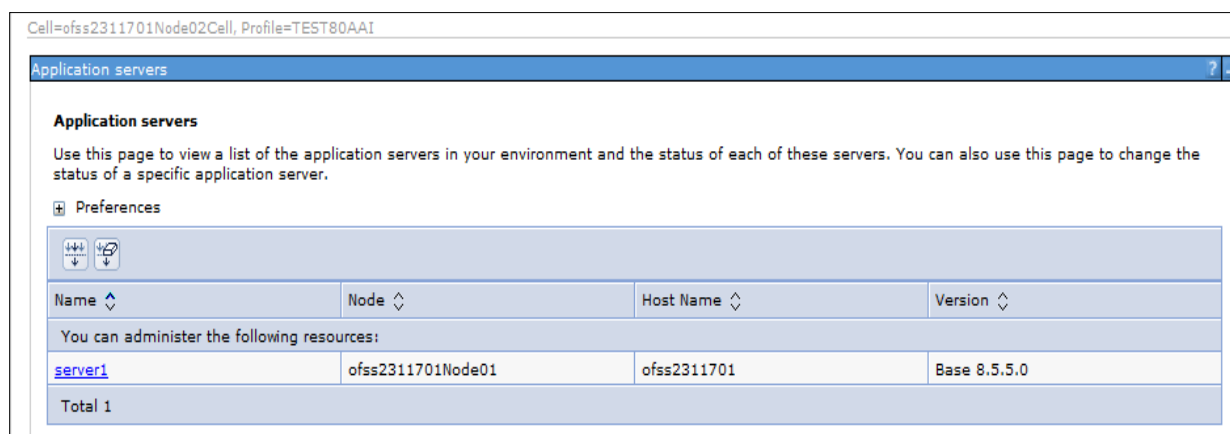


Figure 66: Application servers

6. Click **server1**.
7. Navigate to **Configuration** tab.

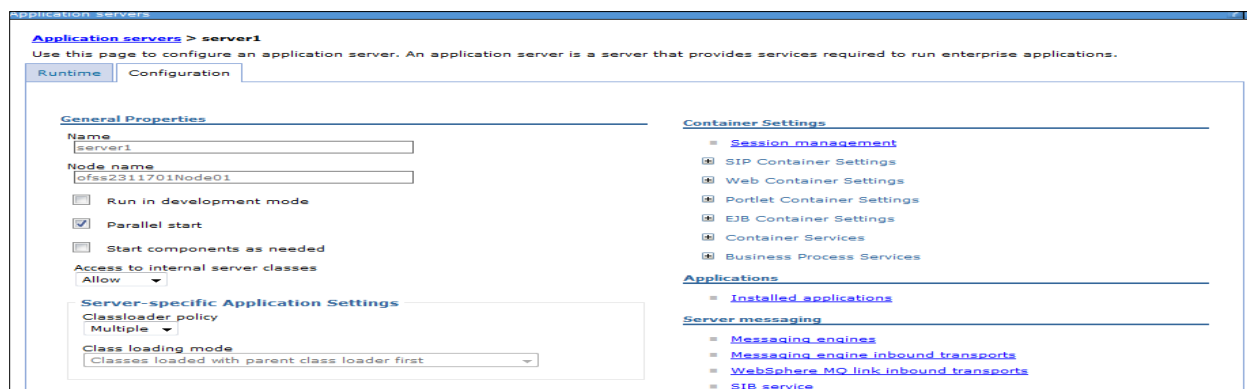
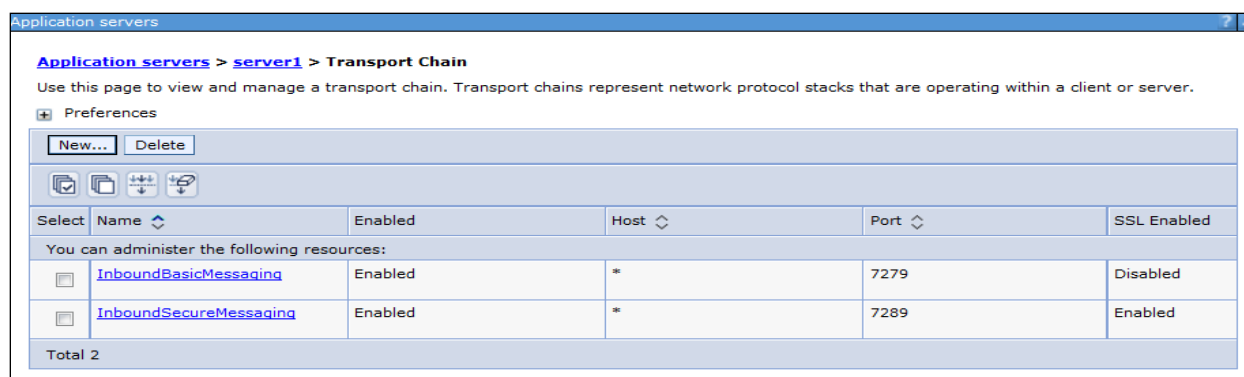


Figure 67: Configuration

8. Under **Server messaging**, select **Messaging engine inbound transports**. The *Transport Chain* screen is displayed.



**Figure 68: Transport Chain**

9. Note the Transport chain name `InboundBasicMessaging` for Target Inbound Transport Chain.
10. Use the following **Provider endpoints** format: `<WebSphere_HostName> : <SIB_ENDPOINT_ADDRESS port>: <Transport Chain Name>`
- `<WebSphere_HostName>`: The hostname of the server where WebSphere is installed.
  - `<SIB_ENDPOINT_ADDRESS port>`: The transport chain port corresponding for Transport chain name as `InboundBasicMessaging`.
  - `<Transport Chain Name>`: The Transport chain name as `InboundBasicMessaging`.

For example: `ofss222868.in.oracle.com:7279:InboundBasicMessaging`

**NOTE:** The transport chain name and Provider endpoints should be entered during configuration of JMS Connection Factory. Refer to section [Configuring JMS Connection Factory](#) for more details.



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8.0.4.0.0 Configuration Guide

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