Oracle Financial Services Inline Processing Engine

Configuration Guide

Release 8.0.2.0.0

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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

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 8.0.2 (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:

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 IPEADMN (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:

NOTE: IPE does not support Tomcat Web Application Server.

3.1 Configuring IPE in WebLogic

To configure IPE in WebLogic, follow these topics:

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.

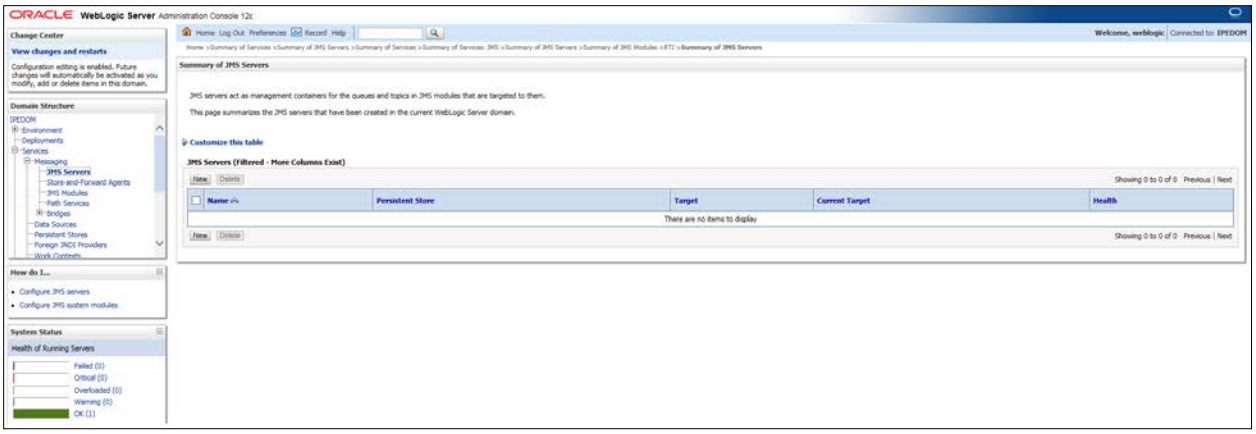


Figure 1: Summary of JMS Server

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

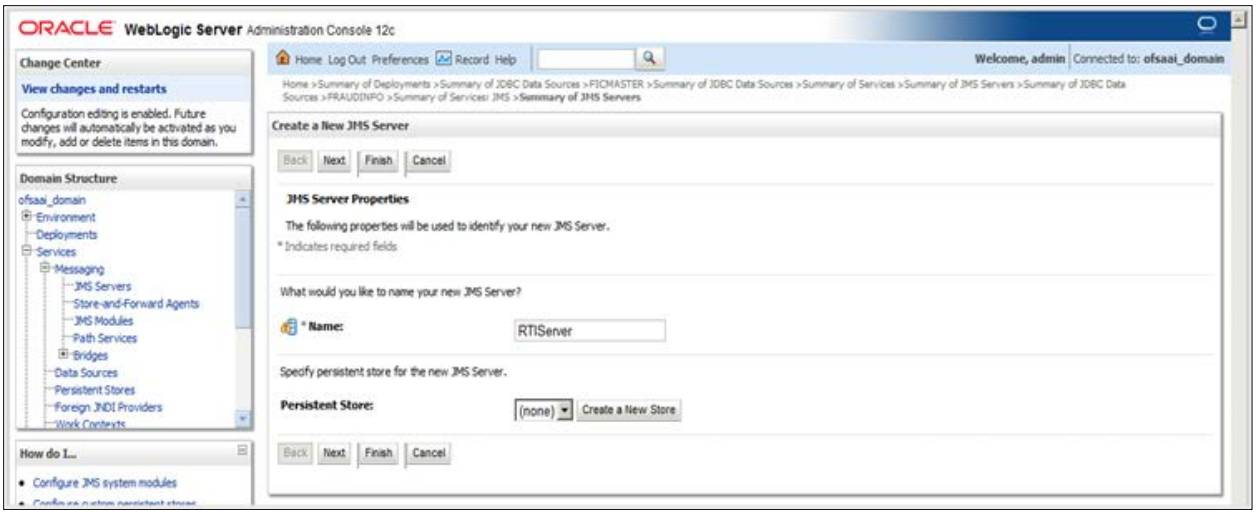


Figure 2: Create a New JMS Server

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

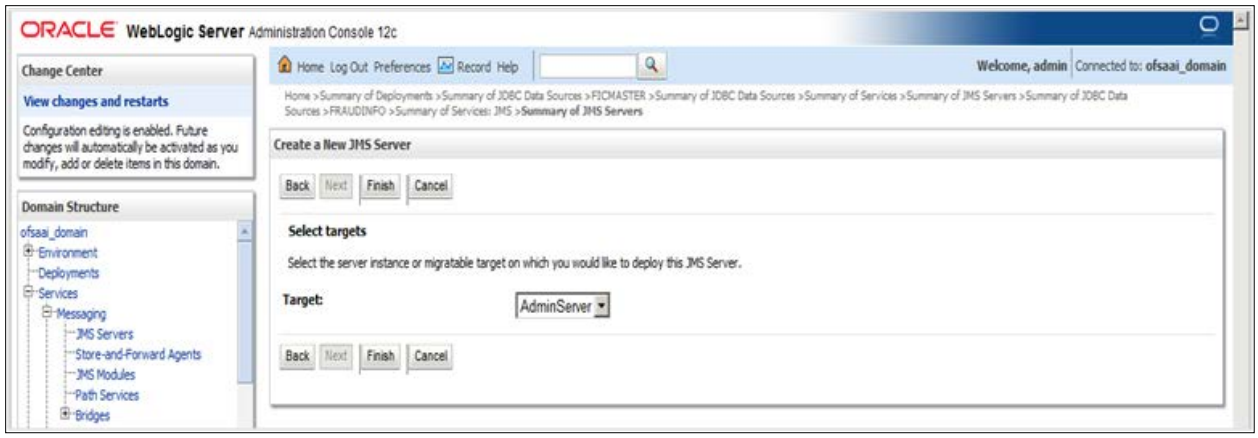


Figure 3: Create a New JMS Server – Select Targets

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

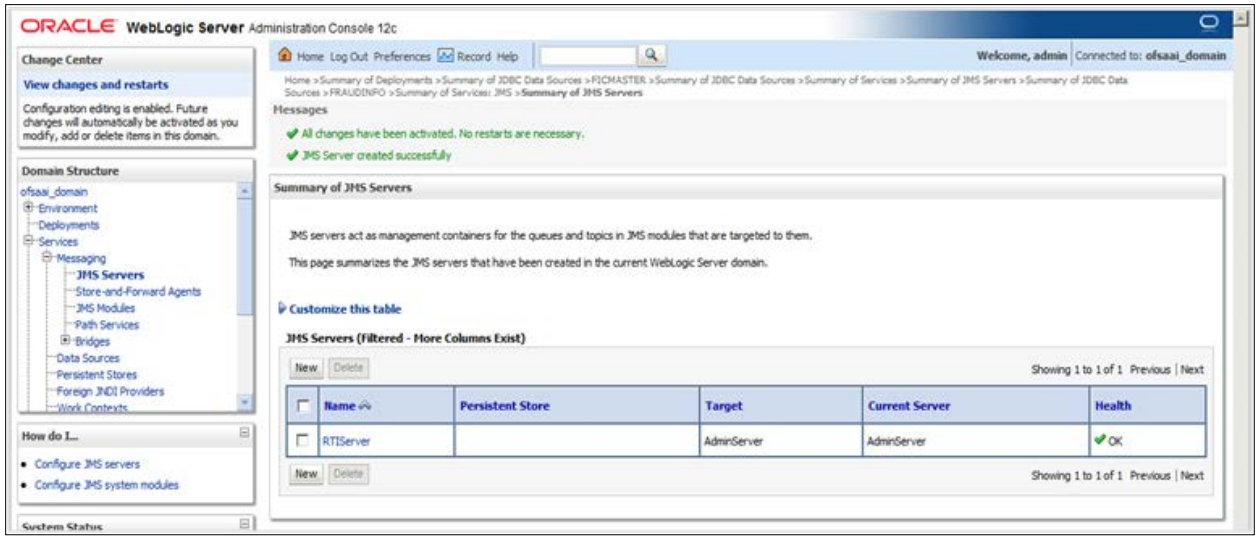


Figure 4: Summary of JMS Servers

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.

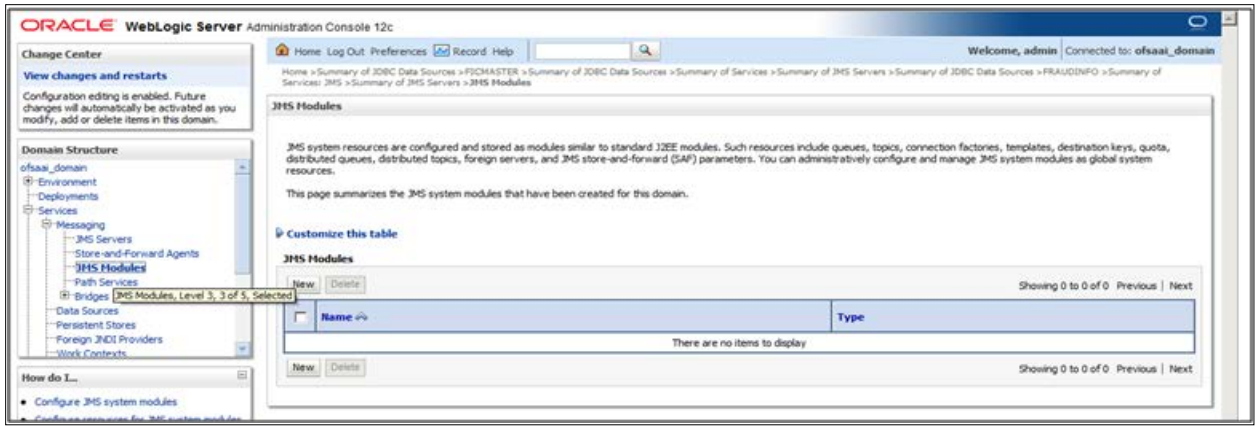
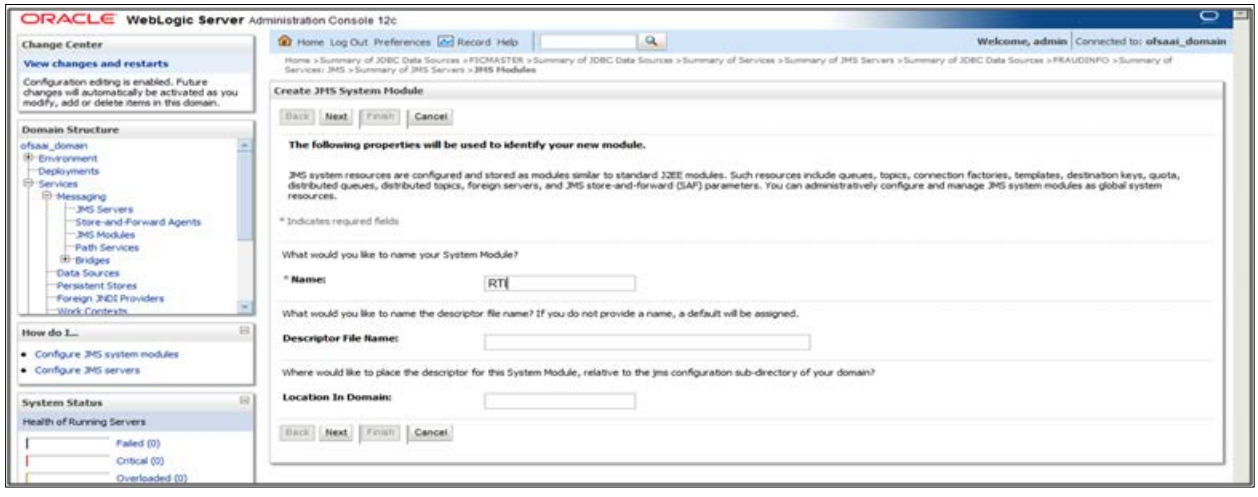


Figure 5: JMS Module

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.

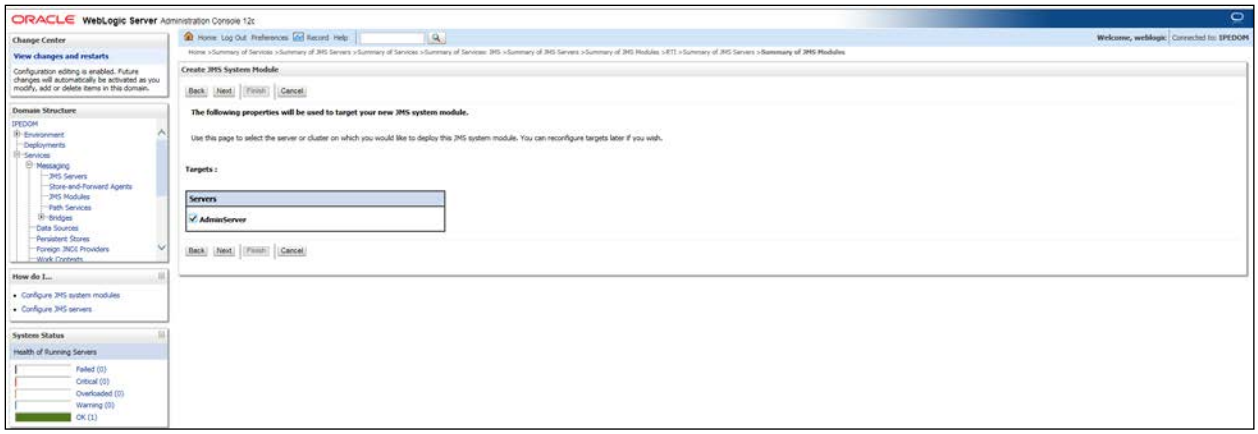


Figure 6: Create JMS System Module

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

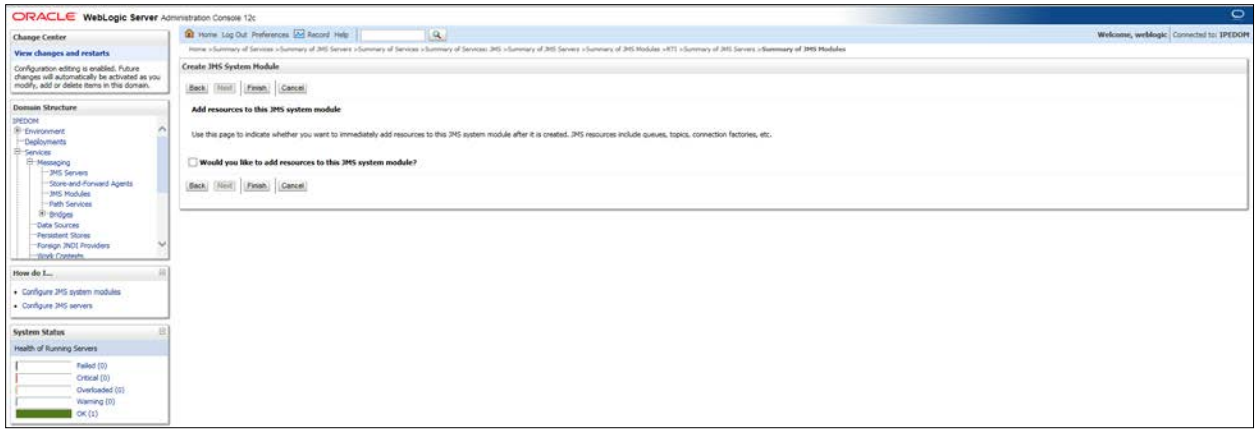


Figure 7: Create JMS System Module

9. Click **Finish**.

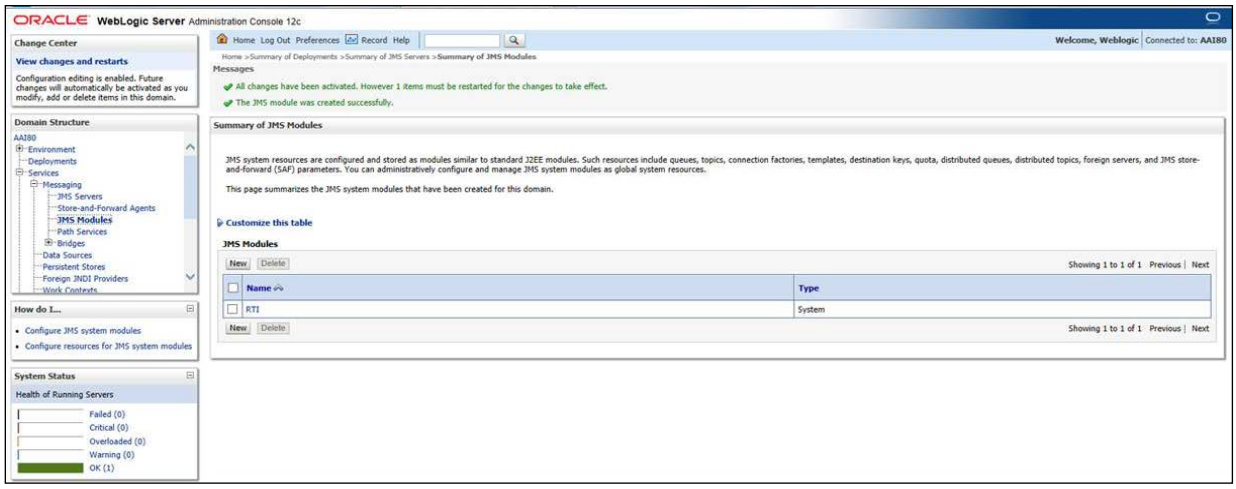


Figure 8: Summary of JMS Modules

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.

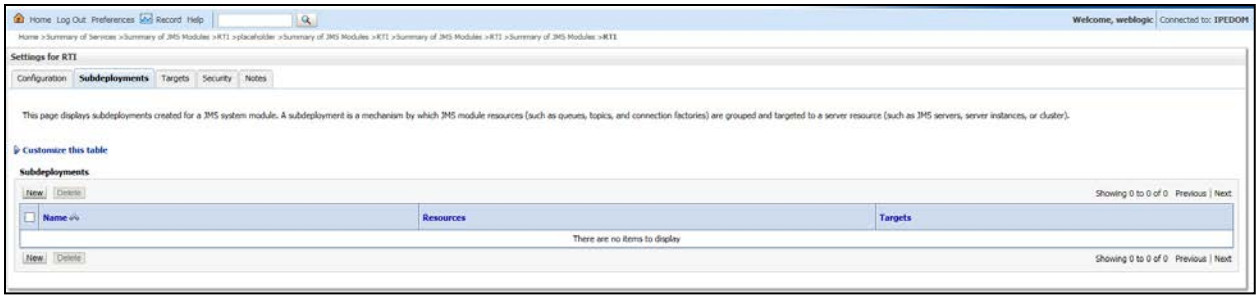


Figure 9: Setting for RTI

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

Figure 10: Create a New Subdeployment

7. Enter the Subdeployment Name as **RTI Deploy**.
8. Click **Next**.

Figure 11: Create a New Subdeployment

9. Select the JMS Servers as **RTIServer**.
10. 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:

1. Repeat Steps 1 - 7 from section Create RTI Deploy.

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.

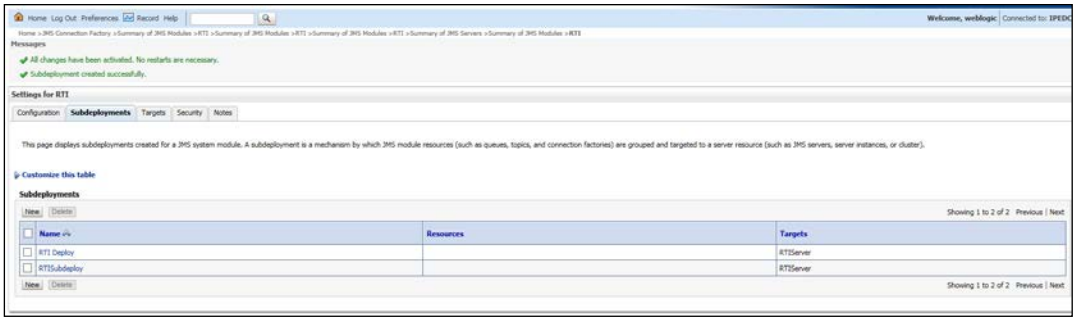


Figure 13: Subdeployments

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.

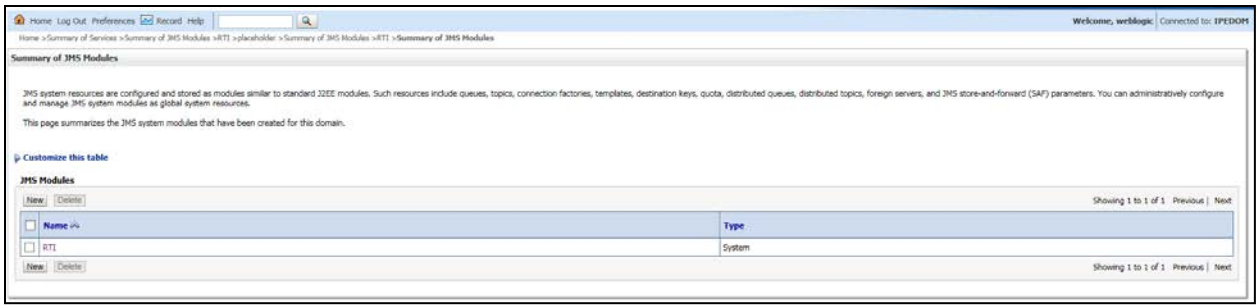


Figure 14: JMS Modules

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

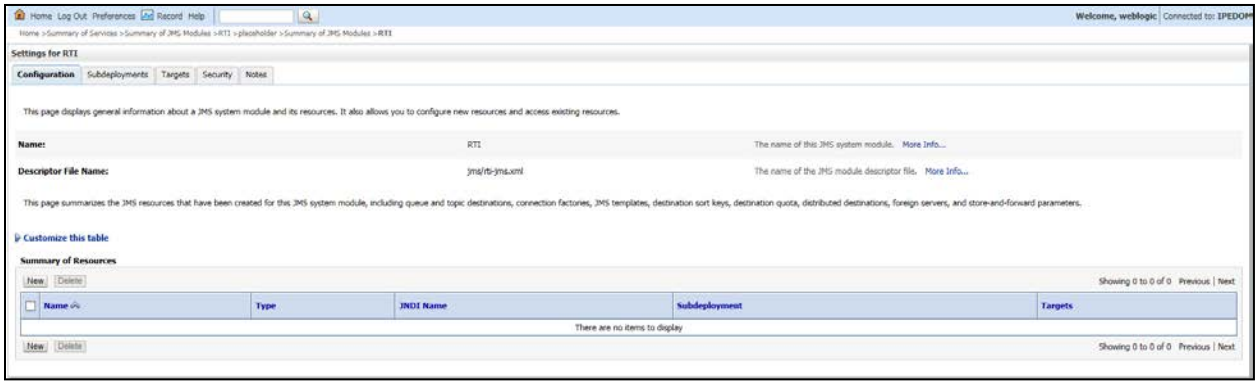


Figure 15: Settings for RTI

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

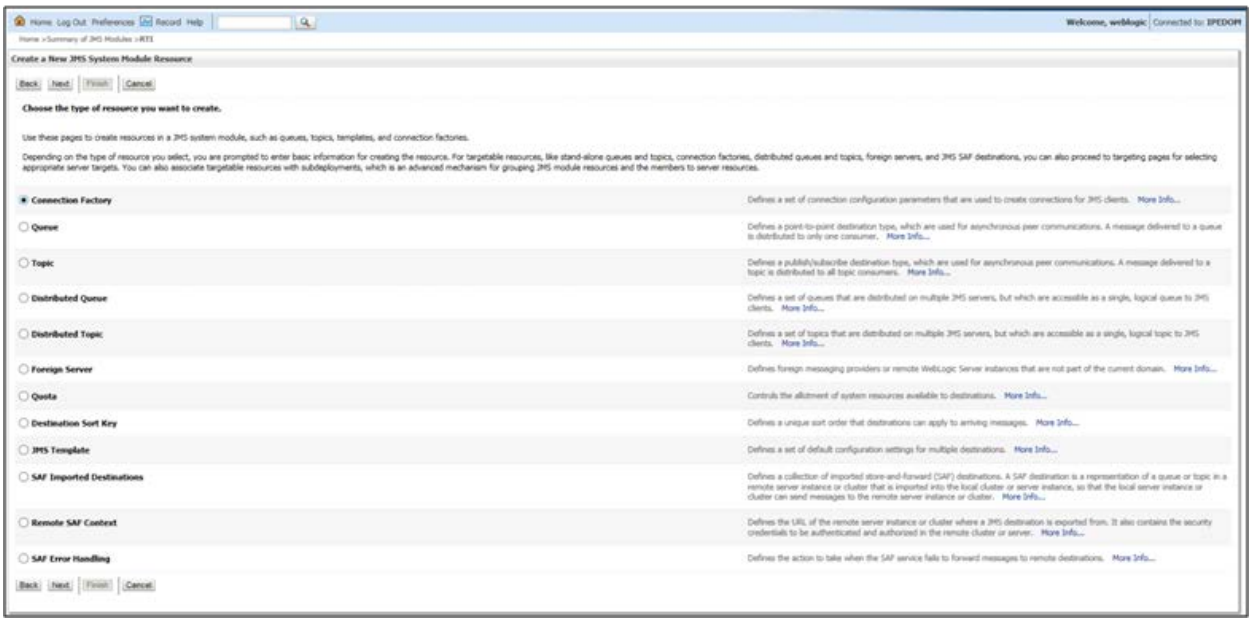


Figure 16: Create a New JMS System Module Resource

6. Select **Connection Factory**.

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

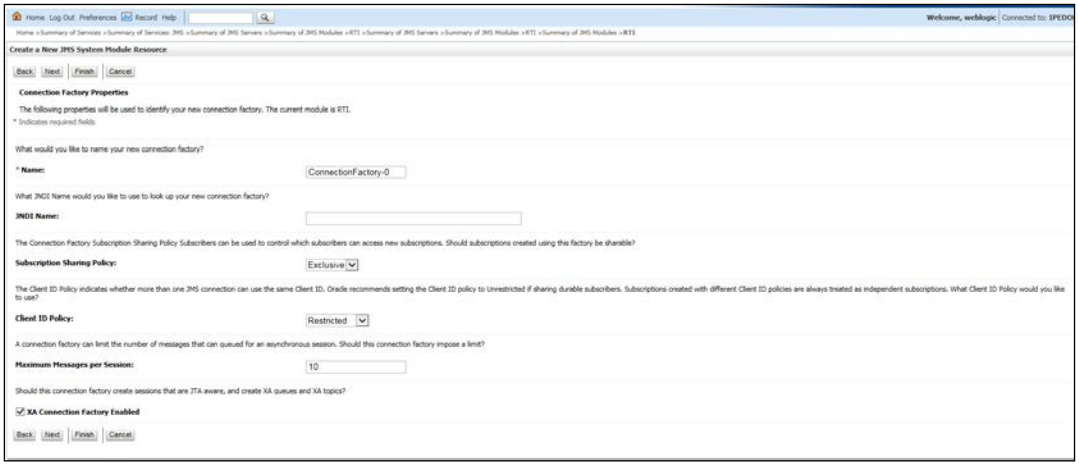


Figure 17: Create a New JMS System Module Resource

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

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**.

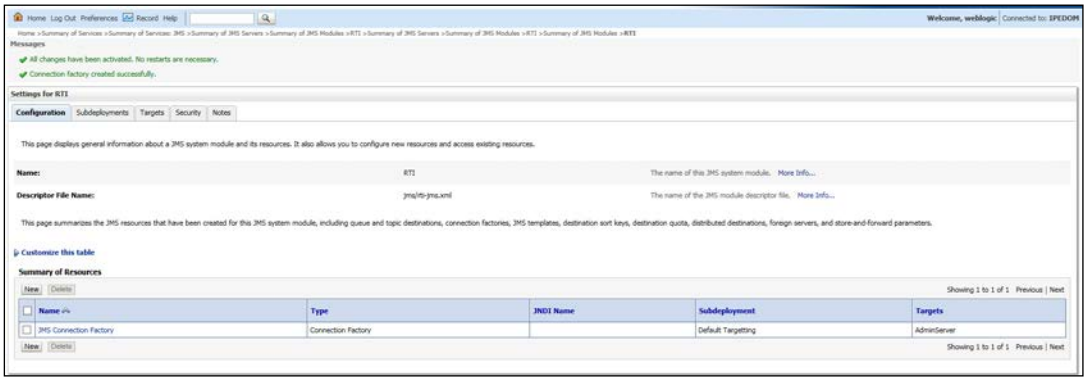


Figure 19: Settings for RTI - JMS connection Factory

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

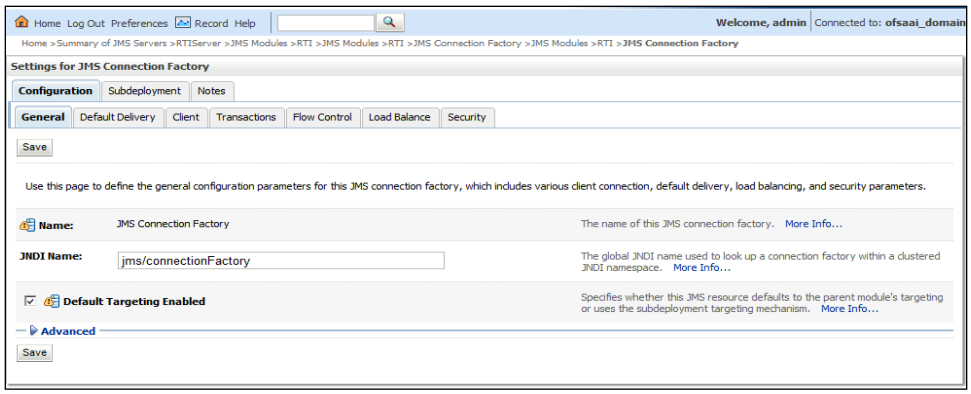


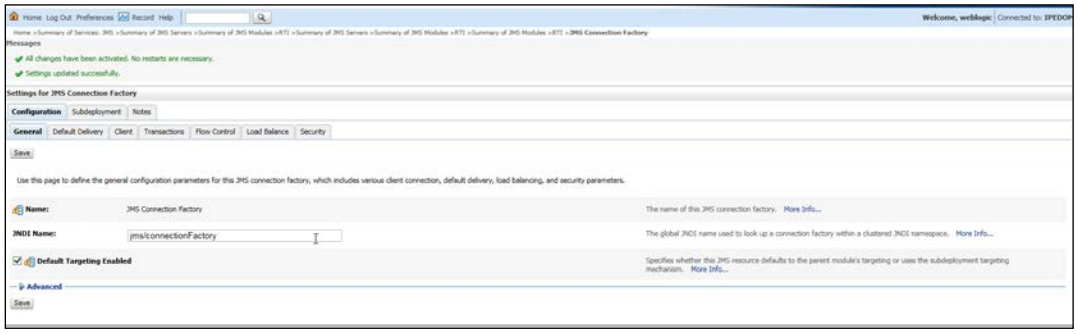
Figure 20: settings for JMS Connection Factory

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 Eanbled	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.

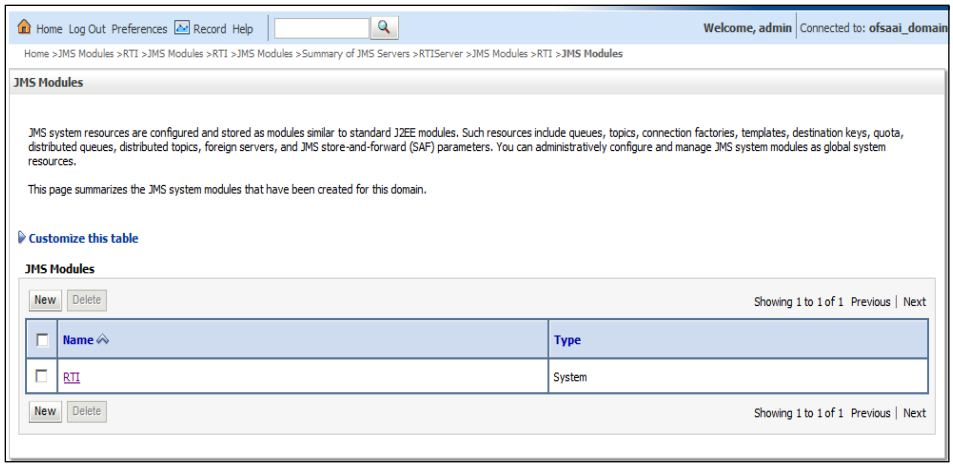


Figure 21: JMS Modules

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.

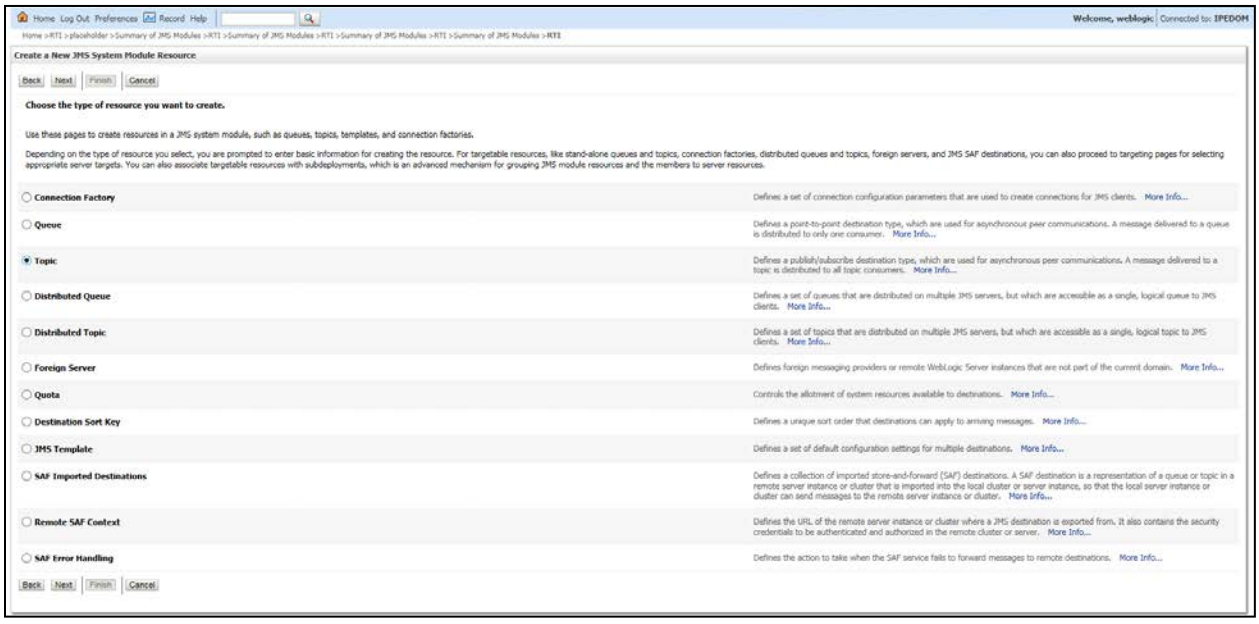


Figure 23: Select type of resource

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

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

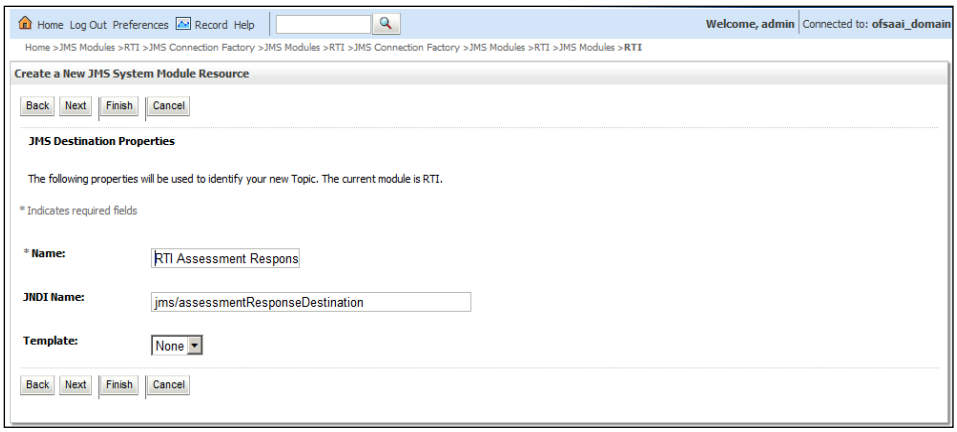


Figure 24: Create a New JMS System Module Resource

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.

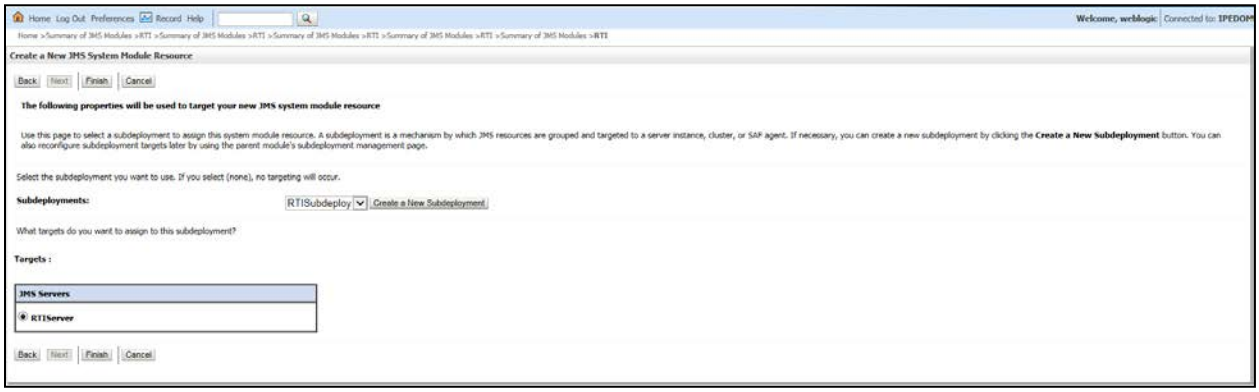


Figure 25: Create a New JMS System Module Resource

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

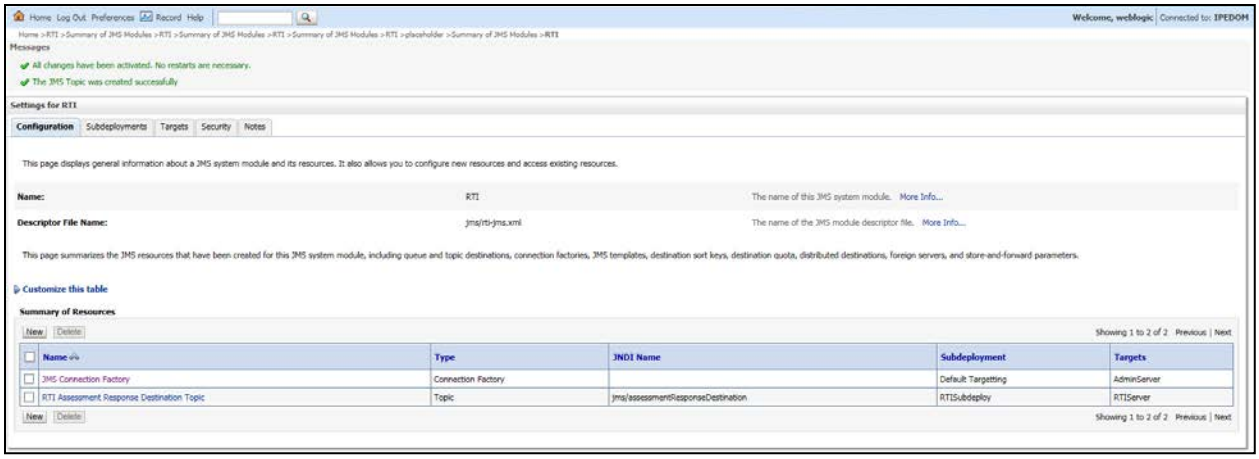


Figure 26: JMS Topic created successfully

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

3. The following confirmation message is displayed.
   JMS Topic is created successfully.

Figure 27: JMS Topic created

3.1.7 Creating JMS Queues

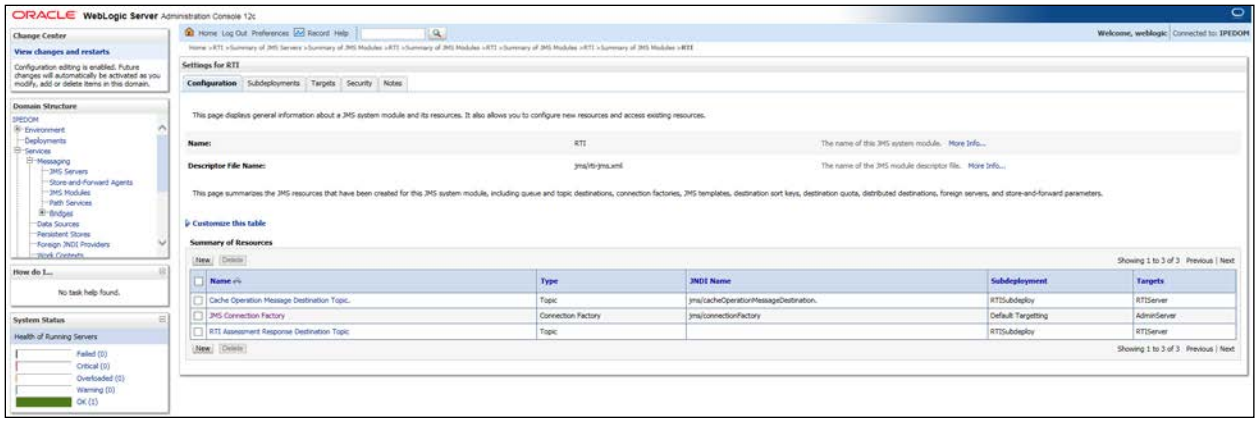
This section discusses the following queues to be created:

- 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.



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

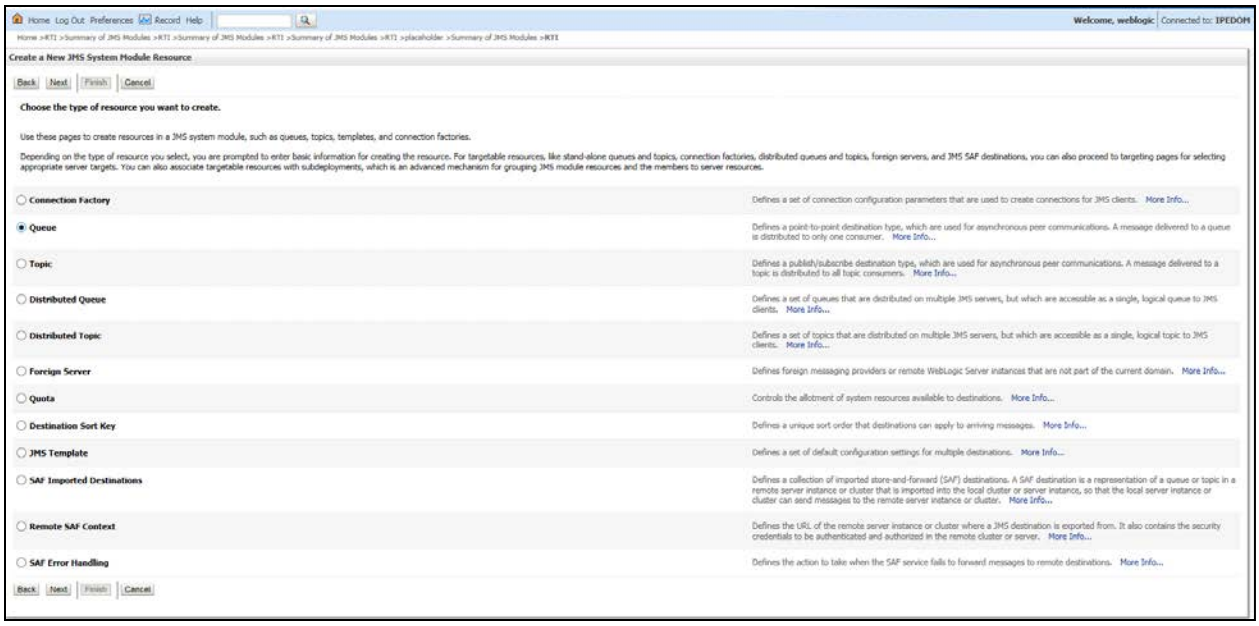


Figure 28: JMS Queue - Create a New JMS system Module

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

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

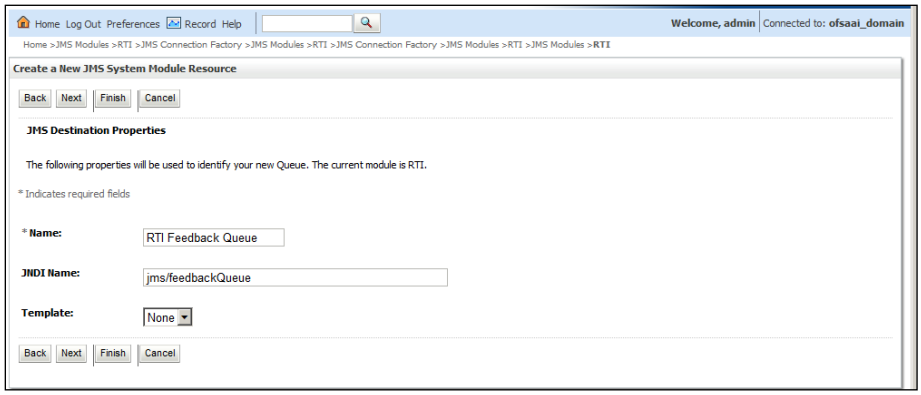


Figure 29: JMS Queue - Create a New JMS system Module

8. Enter the following details:

Table 5: JMS Queue - Field Values

Field	Value
Name	RTI Feedback Queue
JNDI Name	jms/feedbackQueue

9. Click **Next**.
10. Select the Subdeployments as **RTISubDeploy**.

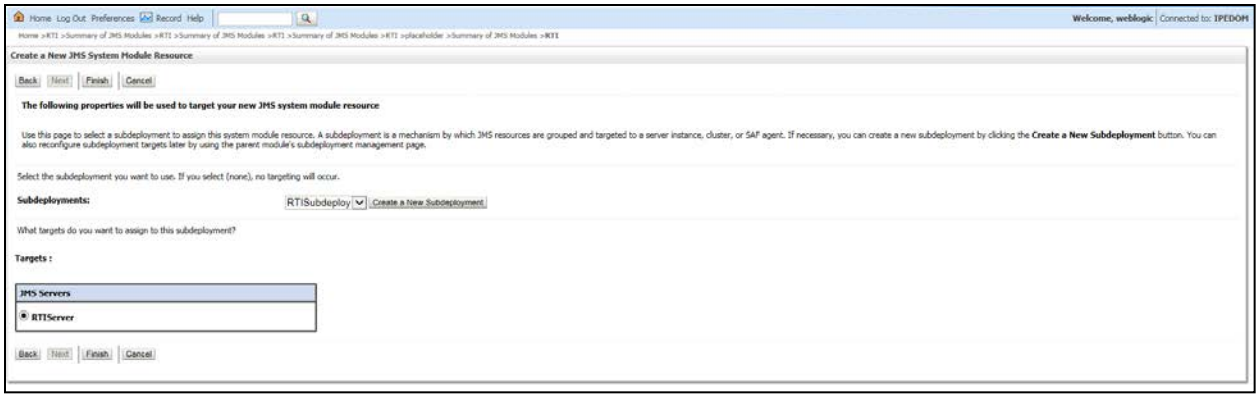


Figure 30: JMS Queue - Create a New JMS System Module Resource

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

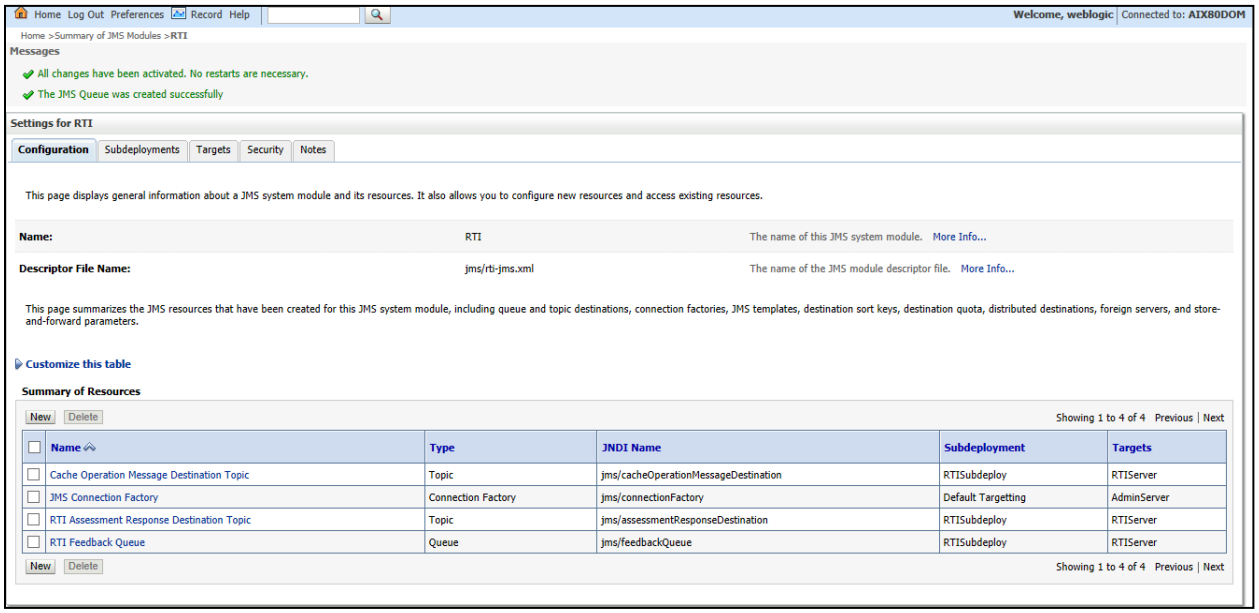


Figure 31: JMS Queue created successfully

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 **RTI Hold JMS Queue**	Enter the JNDI name as **jms/TransactionActionQueue**	Select the Subdeployment as **RTISubDeploy**
RTI Source Entity Queue	Enter the name as **RTI Source Entity Queue**	Enter the JNDI name as **jms/sourceEntityQueue**	Select the Subdeployment as **RTISubDeploy**
Wire Transaction Source Entity Queue	Enter the name as **Wire Transaction Source Entity Queue**	Enter the JNDI name as **jms/wireTrxnQueue**	Select the Subdeployment as **RTISubDeploy**

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

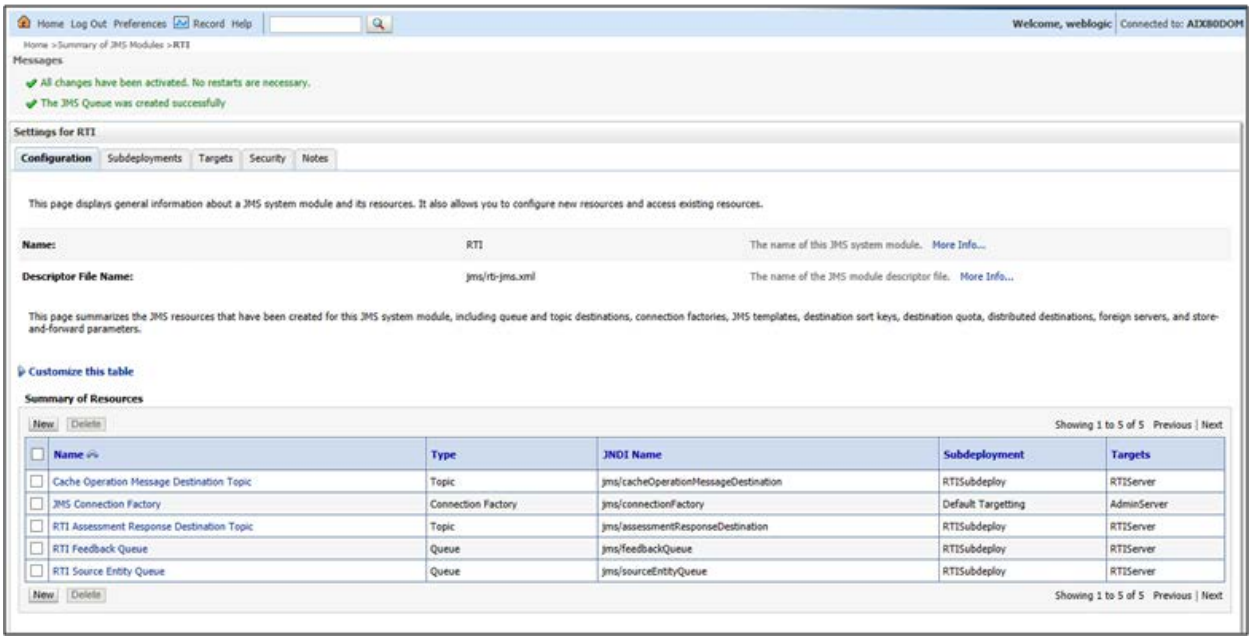


Figure 32: JMS Queues

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.

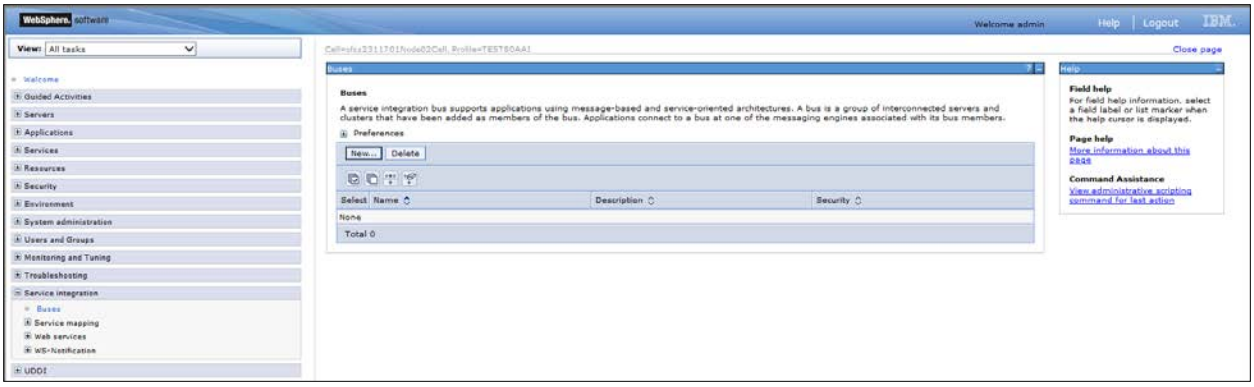


Figure 33: Buses

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

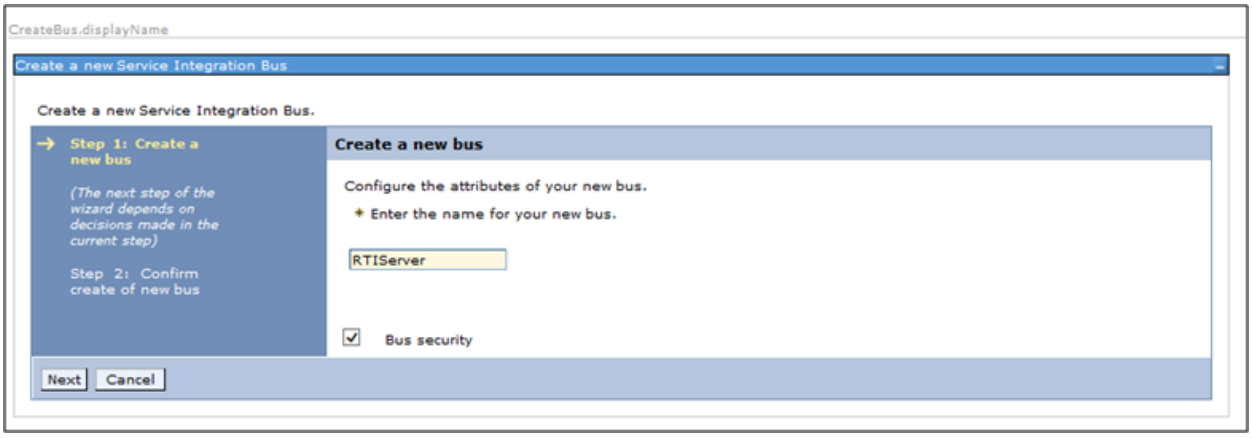


Figure 34: Create a New Service Integration Bus

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

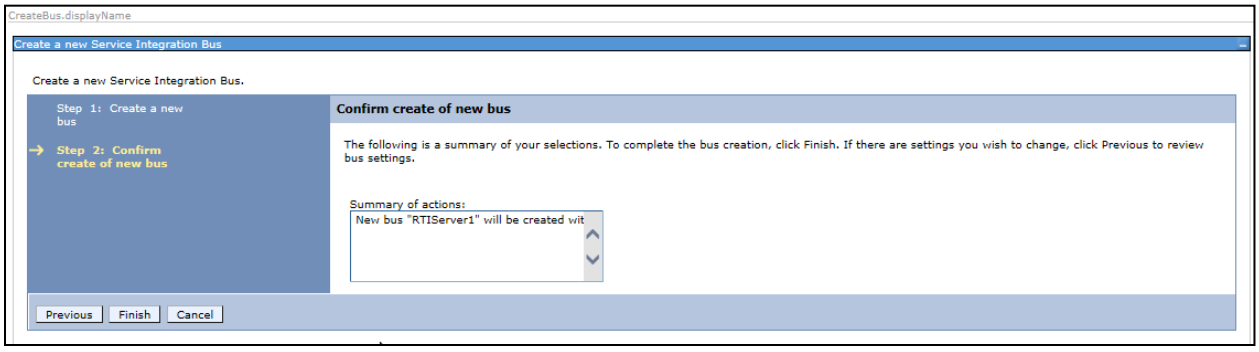


Figure 35: Create a New Service Integration Bus

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

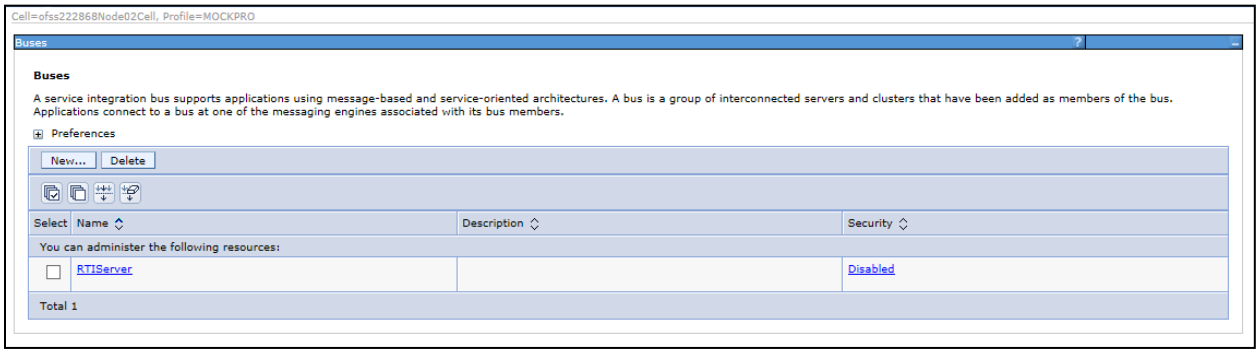


Figure 36: Buses

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.

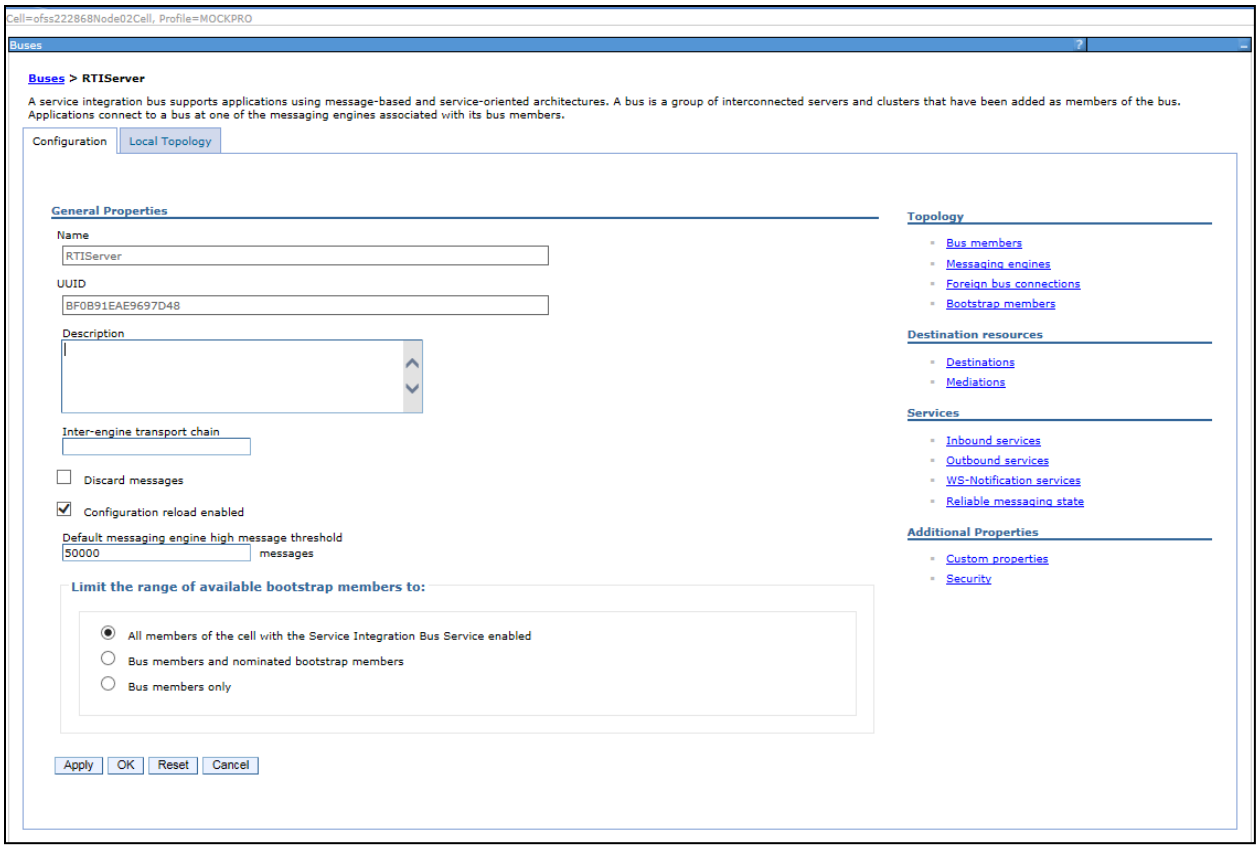


Figure 37: RTI Server

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

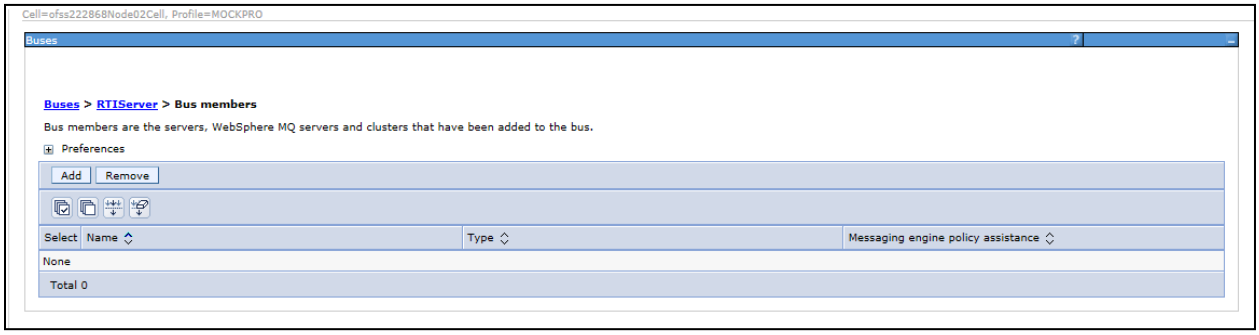


Figure 38: Bus members

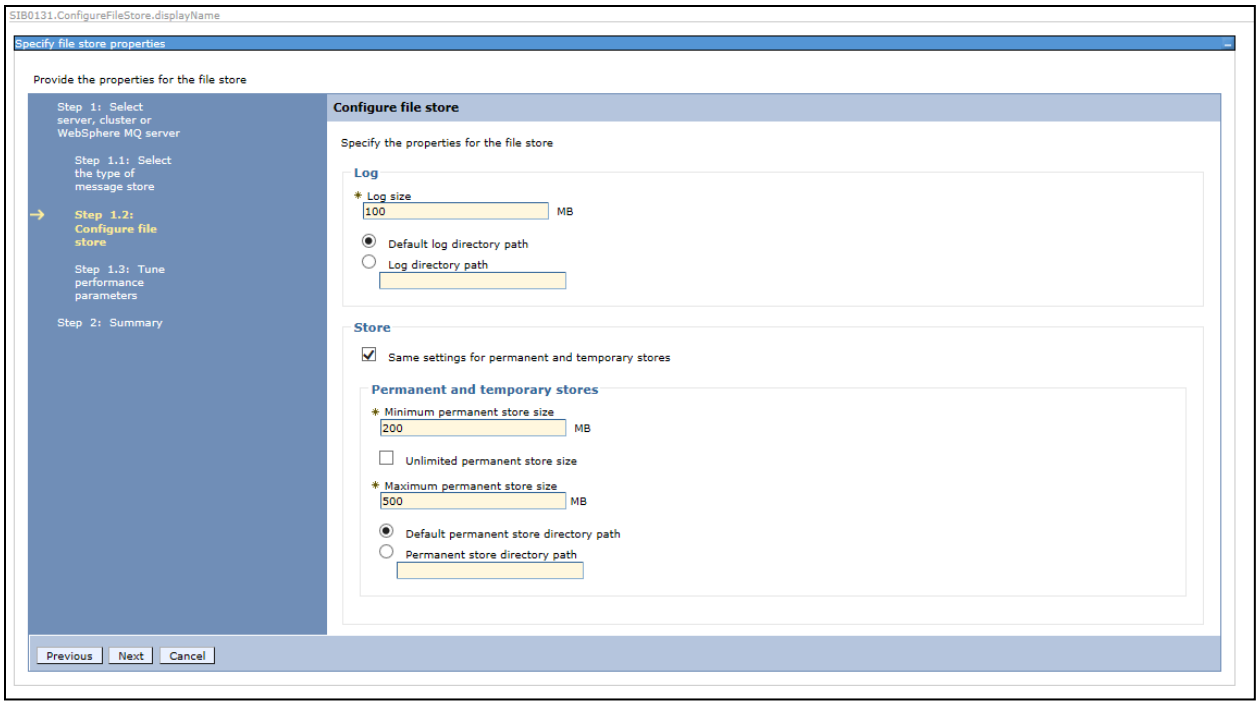
5. Click **Add**. The Add a New Bus Member screen is displayed.
6. Select **Server**.

Figure 39: Add a New Bus Member

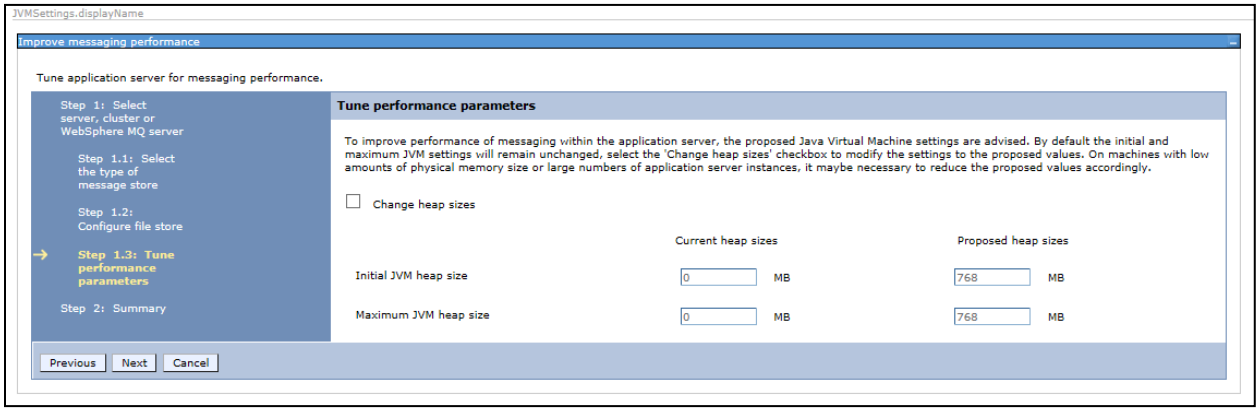
7. Click **Next**.

8. Select **File Store**.

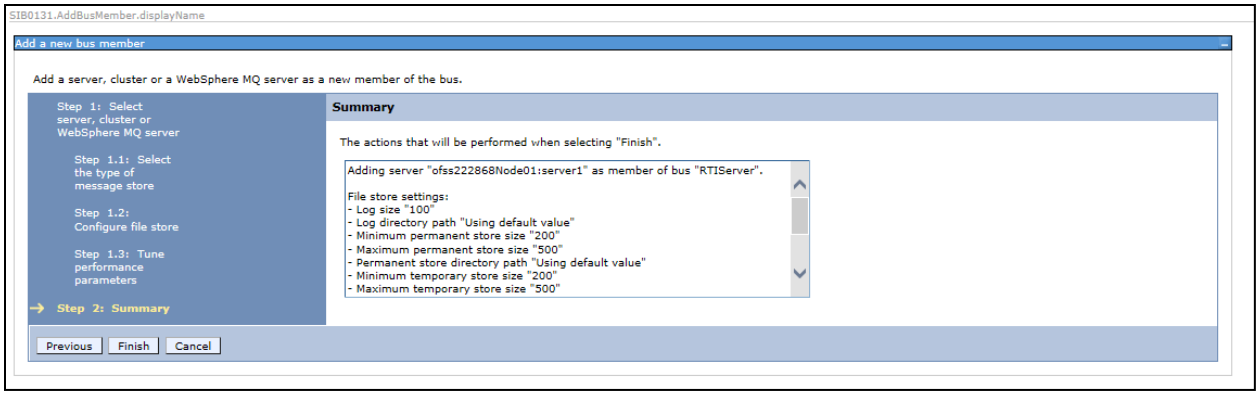
9. Click **Next**.



10. Click **Next.**



11. Click **Next.**



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

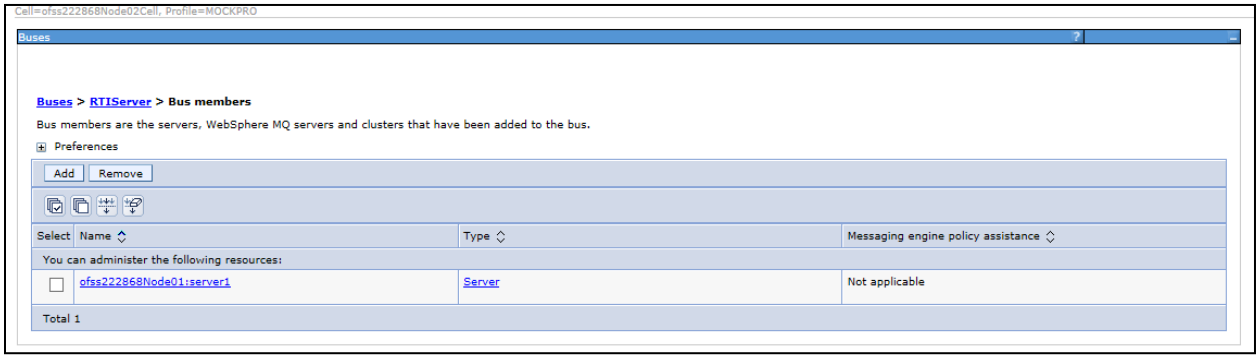


Figure 40: Bus Members created successfully

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.

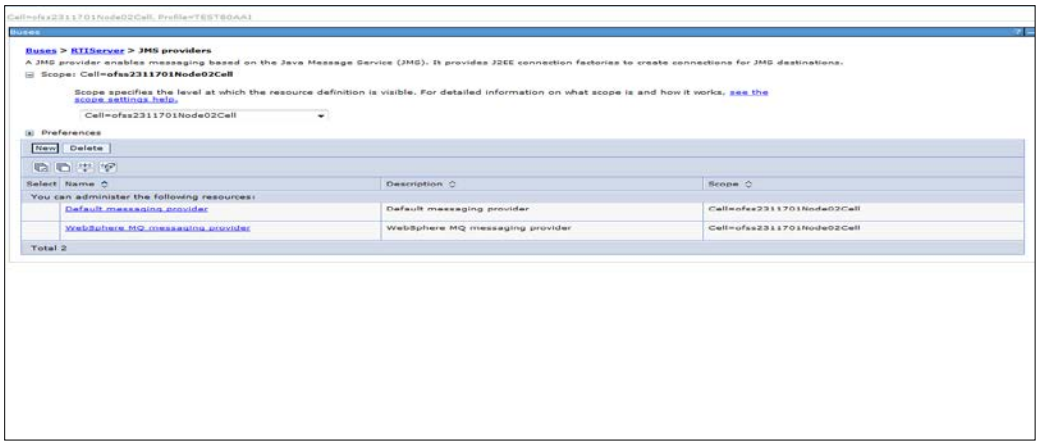


Figure 41: JMS Providers

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.

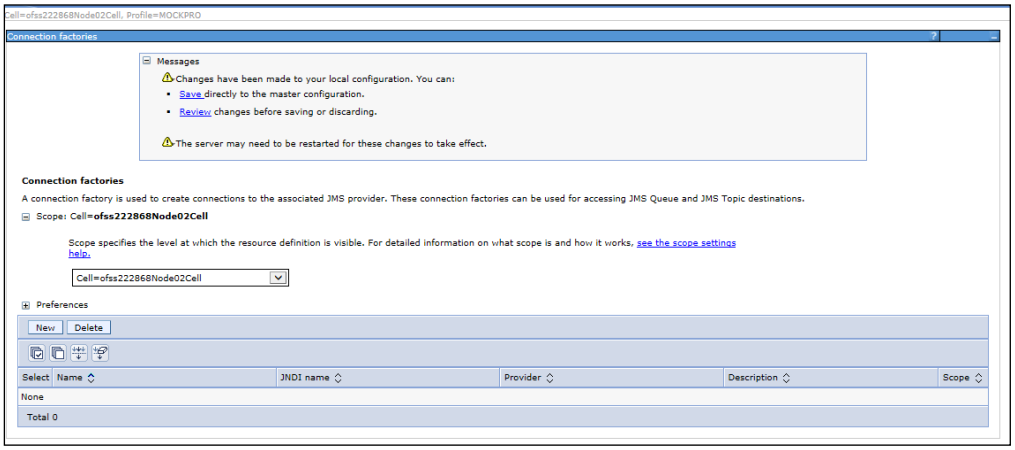


Figure 42: Connection Factories

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.

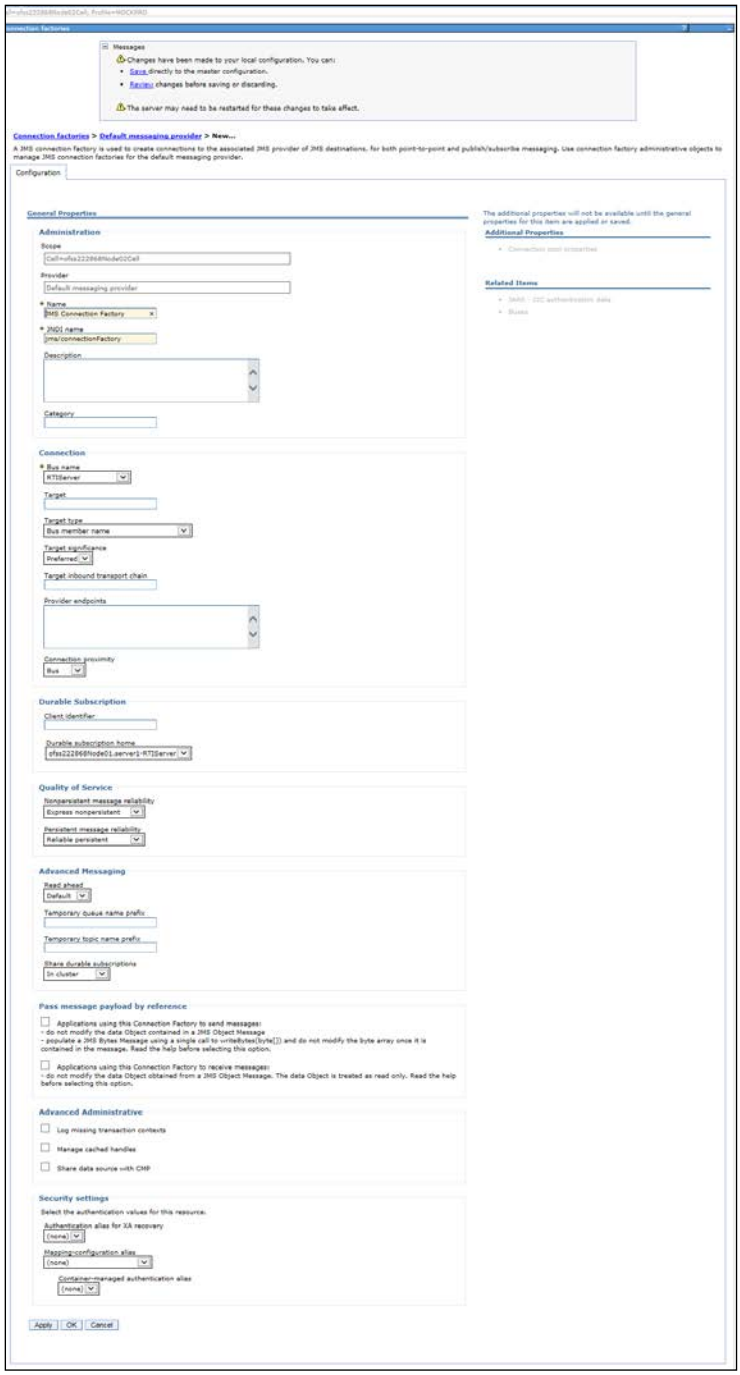


Figure 43: JMS Connection Factory

7. Enter the following details:

Table 7: JMS Connection Factory: Field Values

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

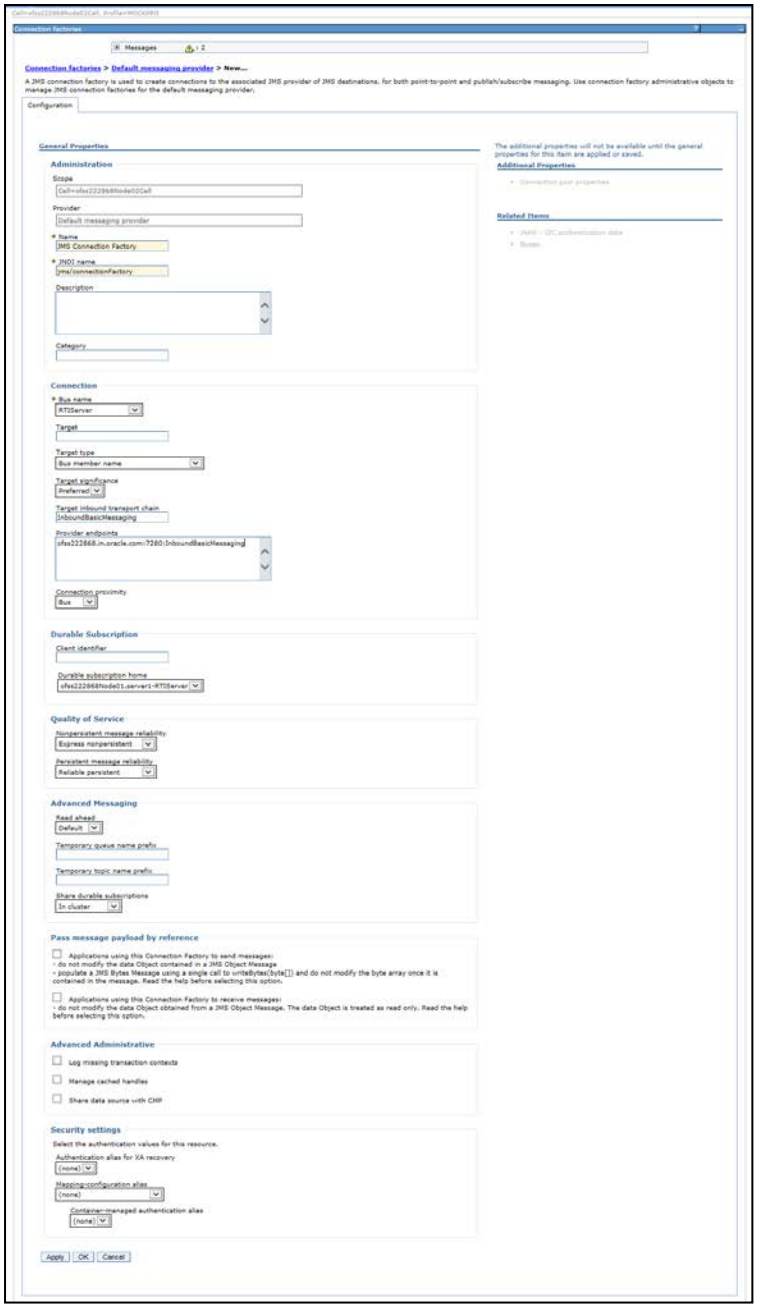


Figure 44: JMS Connection Factory – Not default port

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**.

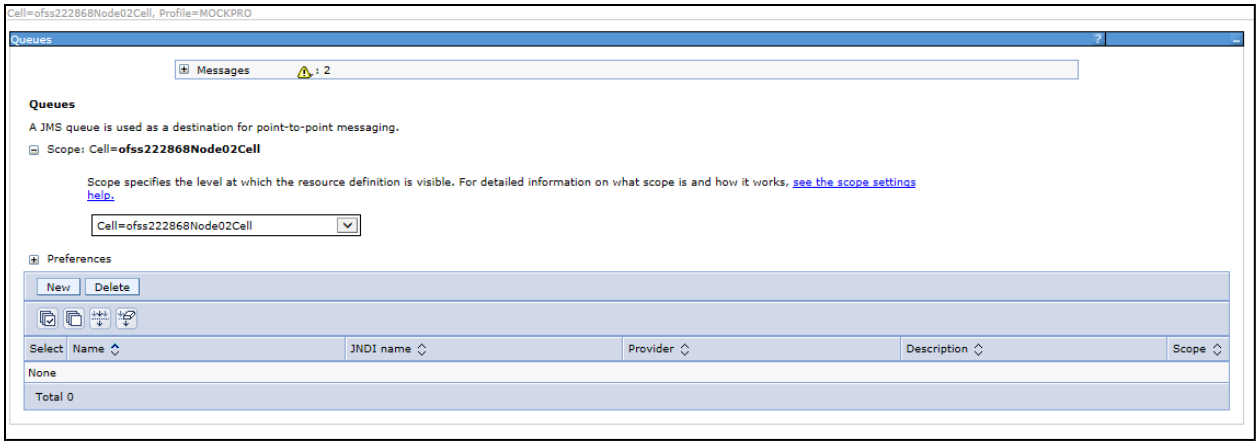


Figure 45: Queues

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

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

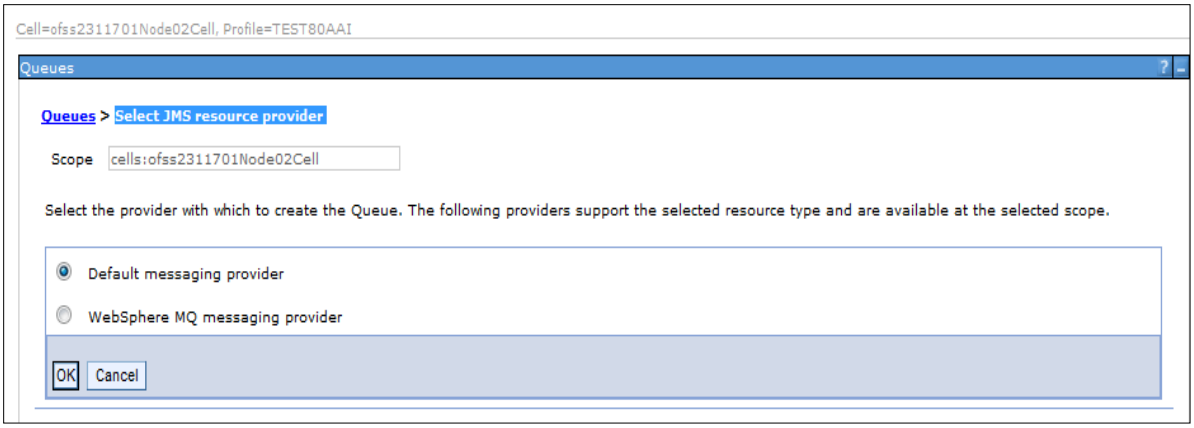


Figure 46: Select JMS resource provider

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

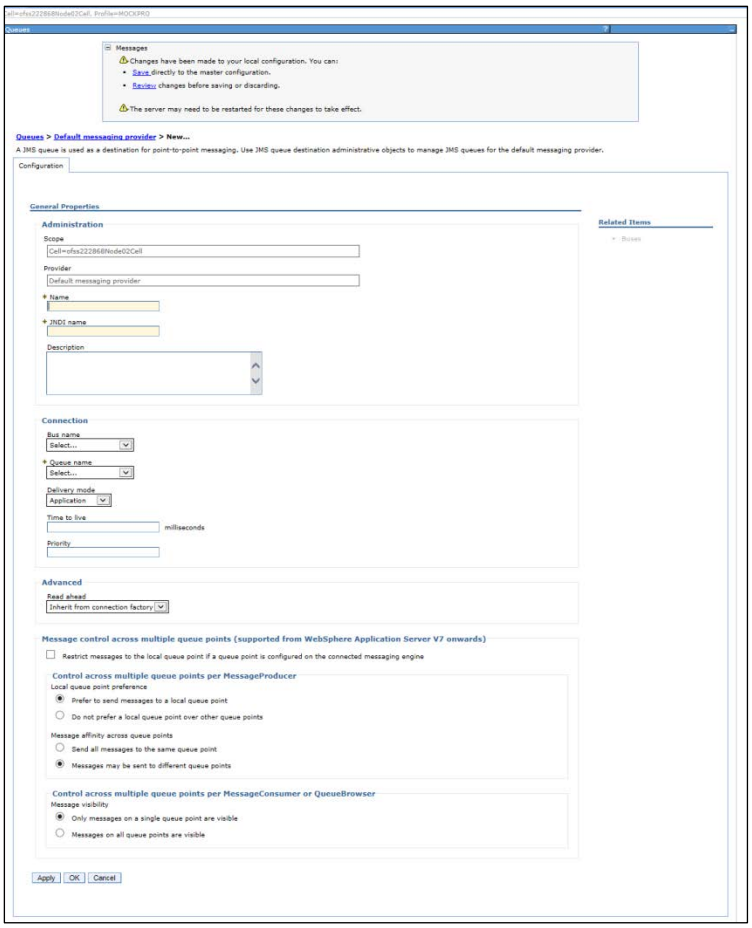


Figure 47: General Properties section

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**.

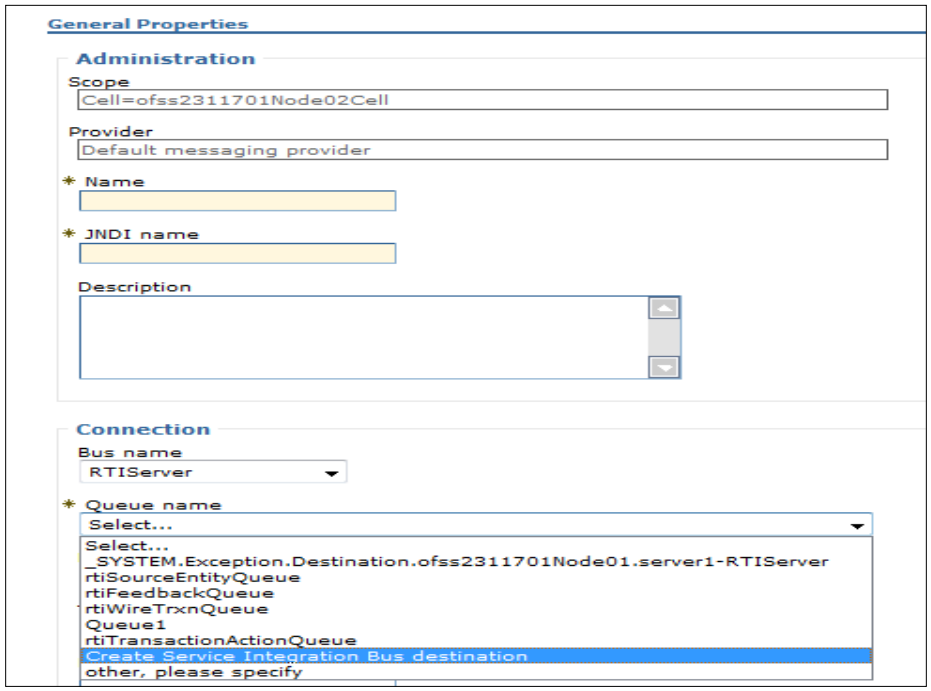


Figure 48: Queue Name

The *Set queue attributes* screen is displayed.

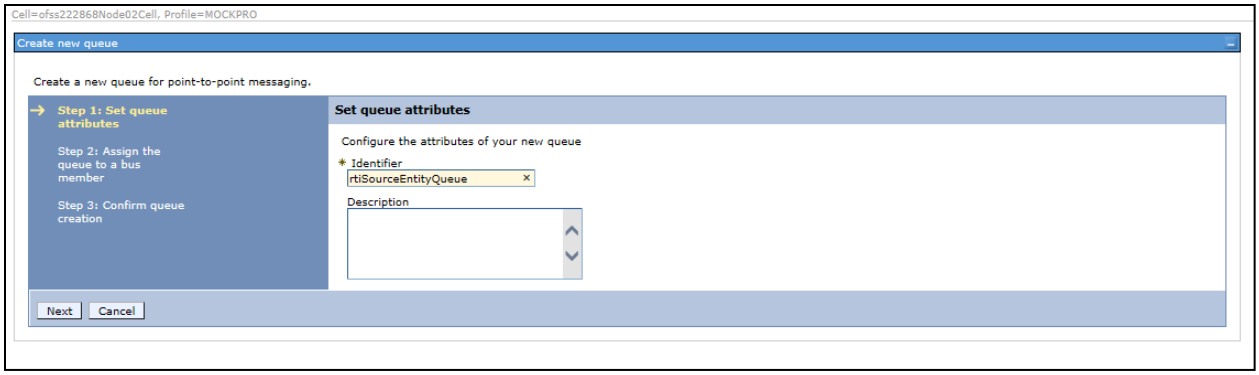


Figure 49: Set queue attributes

10. Enter the Identifier as **rtiSourceEntityQueue**.
11. Click **Next**.

Figure 50: Assign the queue to a bus member

12. Click **Next**.

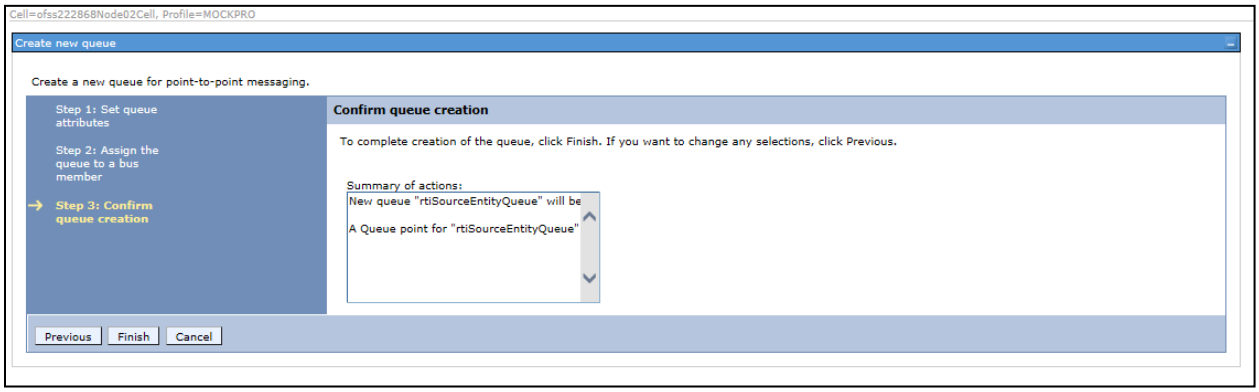


Figure 51: Confirm queue creation

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

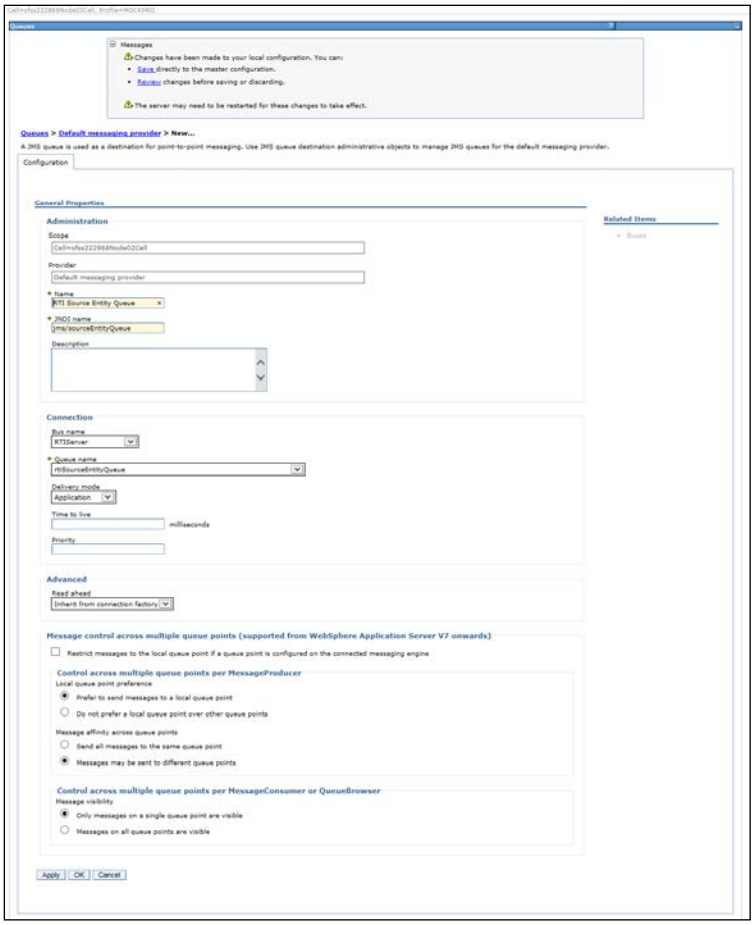


Figure 52: Configuration

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

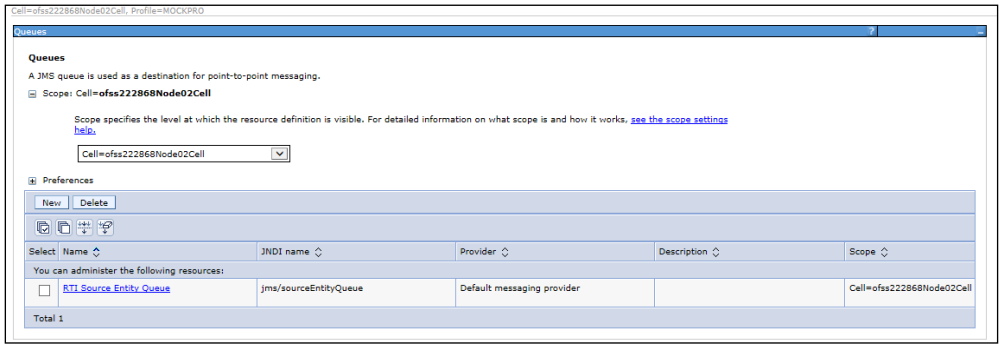


Figure 53: Queues

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**
RTI Hold JMS Queue	Enter the name as **RTI Hold JMS Queue**	Enter the JNDI name as **jms/TransactionActionQueue**	Select the Bus name as **RTIServer**	Enter the Queue as **rtiTransactionActionQueue**
RTI Feedback Queue	Enter the name as **RTI Feedback Queue**	Enter the JNDI name as **jms/feedbackQueue**	Select the Bus name as **RTIServer**	Enter the Queue as **rtiFeedbackQueue**
Wire Transaction Source Entity Queue	Enter the name as **Wire Transaction Source Entity**	Enter the JNDI name as **jms/wireTrxnQueue**	Select the Bus name as **RTIServer**	Enter the Queue as **rtiWireTrxnQueue**

3. The JMS Queues are created successfully.

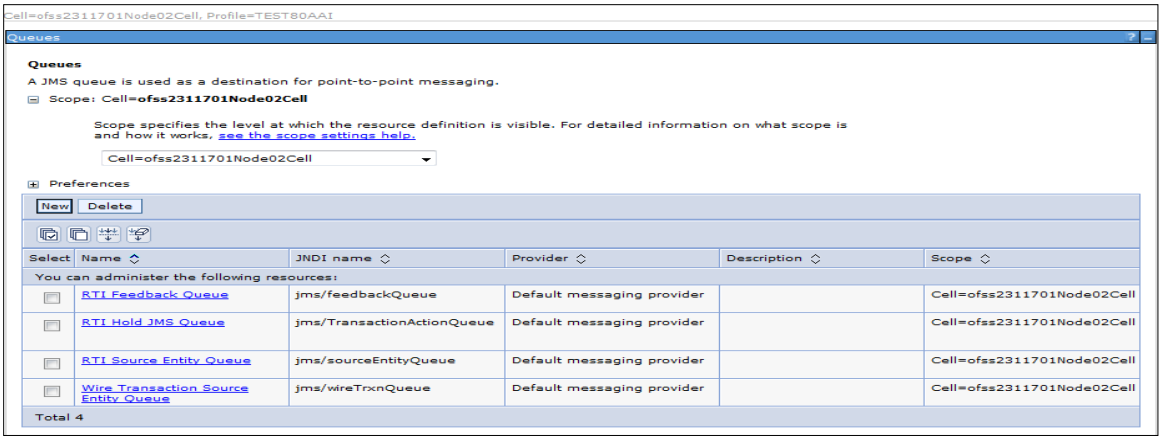


Figure 54: JMS Queue

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.

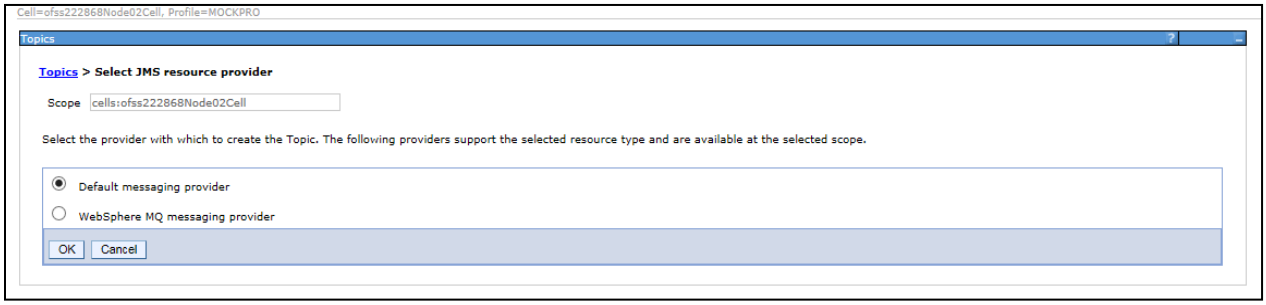


Figure 56: Select JMS resource provider

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

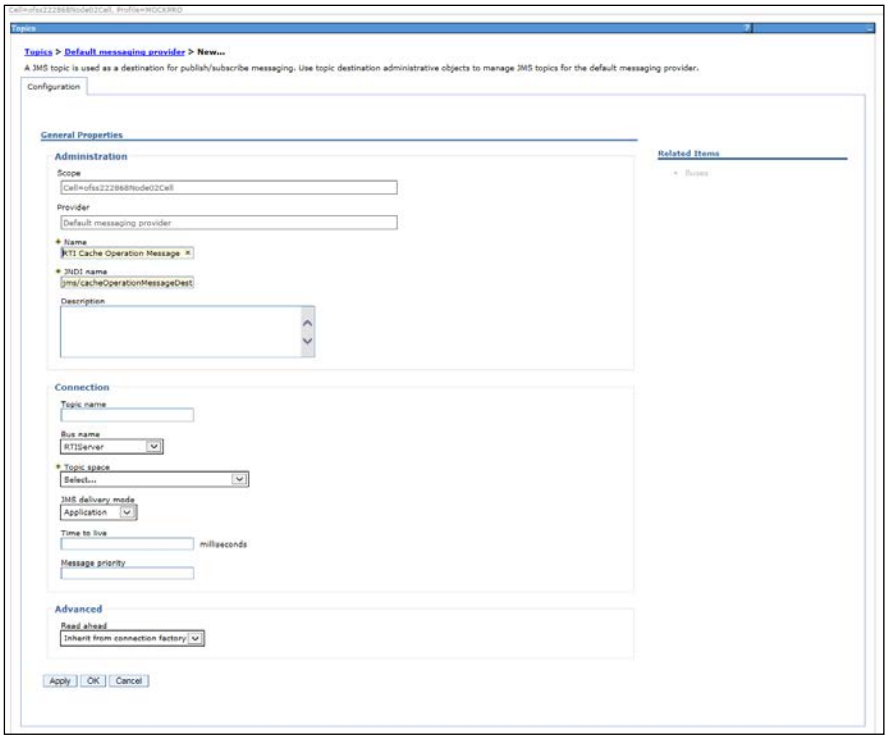


Figure 57: Configuration screen

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.

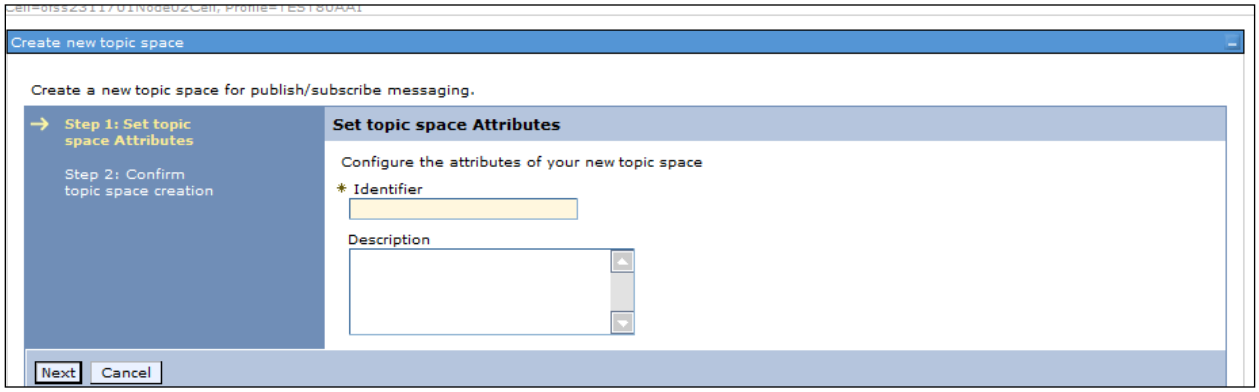


Figure 58: Create new topic space

11. Enter the **Identifier** as **rtiCacheOperationTopic**.
12. Click **Next**.

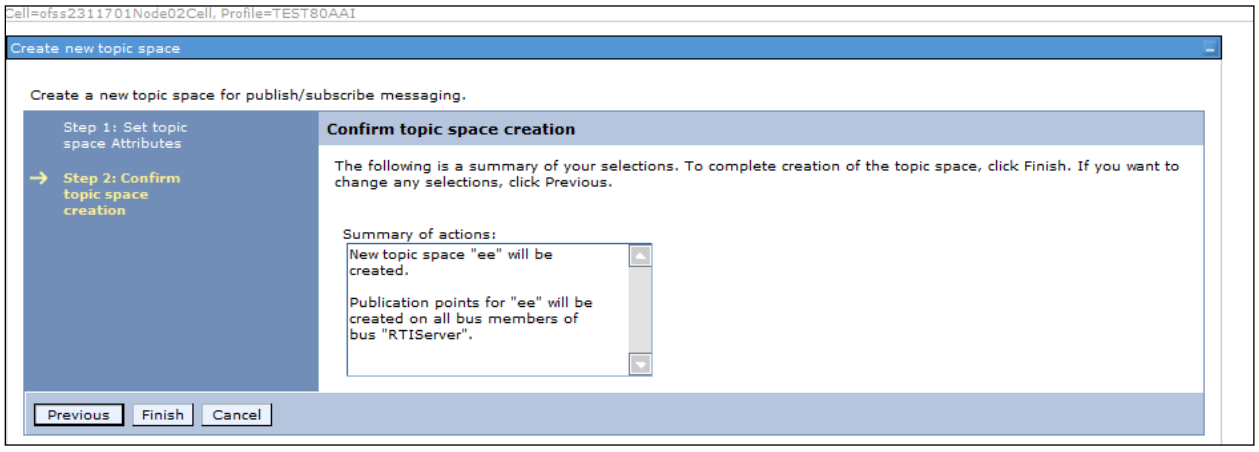


Figure 59: Confirm topic space creation

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/IIOP 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/IIOP security** under **Authentication** section.

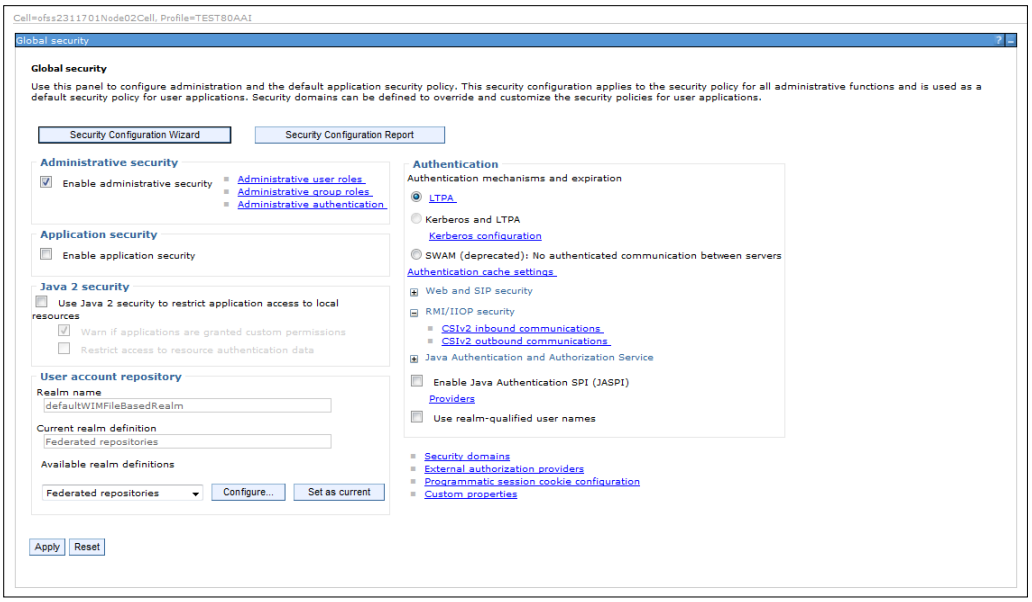


Figure 60: Global Security screen

4. Click **CSIv2 inbound communications/CSIv2 outbound communications.**
5. Select the following values:

Table 11: RMI/IIOP authentication Settings

RMI/IOP Security	Client certificate authentication	Transport
CSIv2 inbound communications	Supported	SSL-supported
CSIv2 outbound communications	Supported	SSL-supported

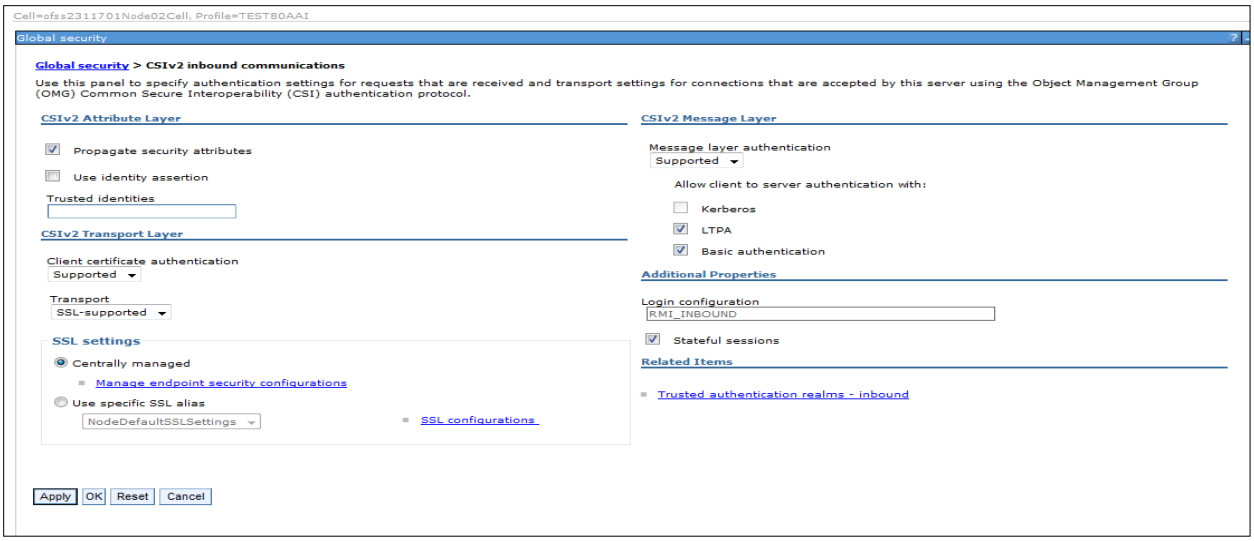


Figure 61: CSIv2 inbound communications

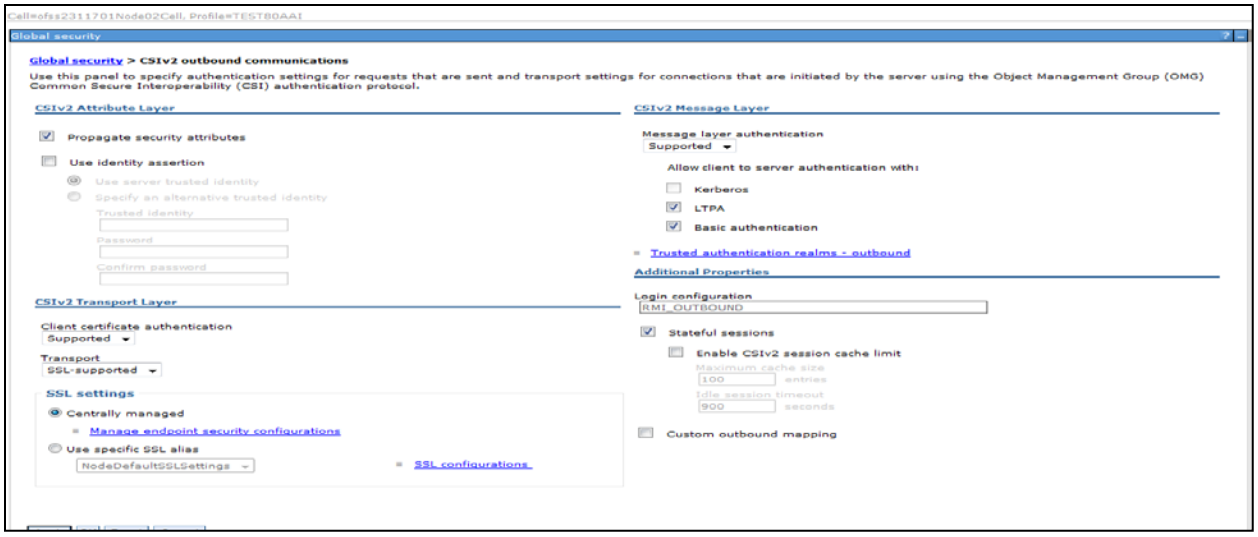


Figure 62:CSIv2 outbound communications

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 Additional Configuration

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

4.1 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, OFSAAAIINFO
<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/OFSAAAIINFO

sql.metadom.datasource.jndi.name=jdbc/OFSAAAIINFOCNF

system.infodom=OFSAAAIINFO

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

4.1.1 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
		
		Websphere:
		
		`com.ibm.websphere.naming.WsnInitialContextFactory`
		
		Weblogic:
		
		`weblogic.jndi.WLInitialContextFactory`

<PROVIDER_URL>	<processing URL>	URL for accessing Queues and Topics in Web Application server. For more information, refer to Appendix A.

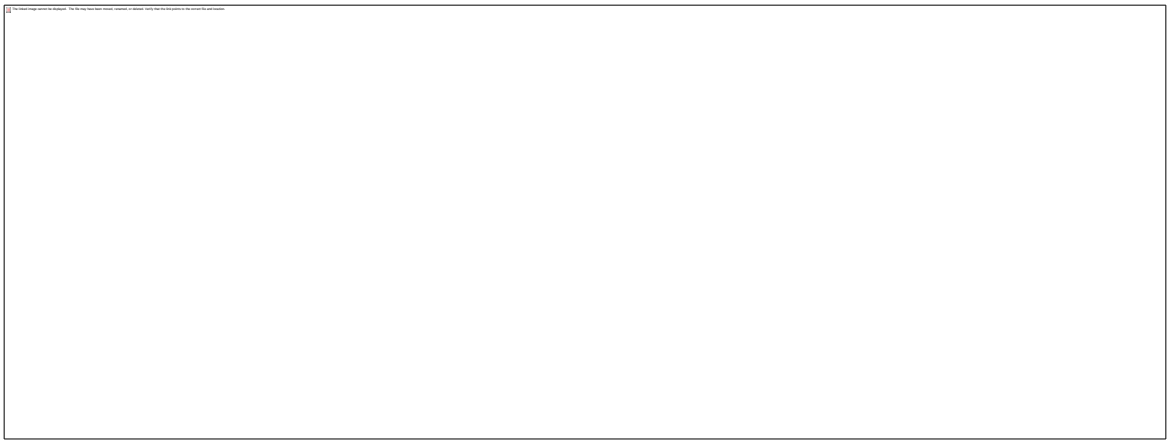
4. **Update configuration c set c.PARAMVALUE='<INITIALFACTORY>' where c.paramname ='RTI_PROCESSING_INITIALCONTEXTFACTORY'**
   /
   Update configuration c set c.PARAMVALUE='<PROVIDER_URL>' where c.paramname ='RTI_PROCESSING_PROVIDER_URL'
   /

4.2 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.



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

4.3 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 AAAI 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.

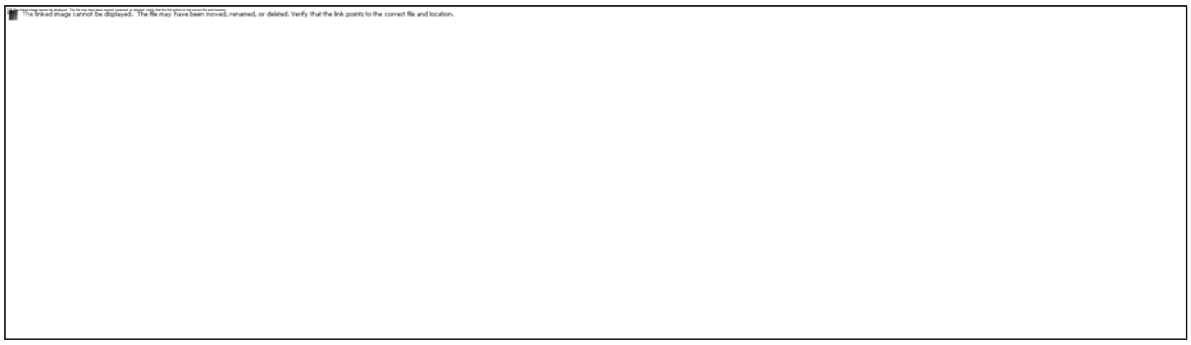
4.3.1 Installing ILP.ear in WebLogic using WebLogic Administrator Console.

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:

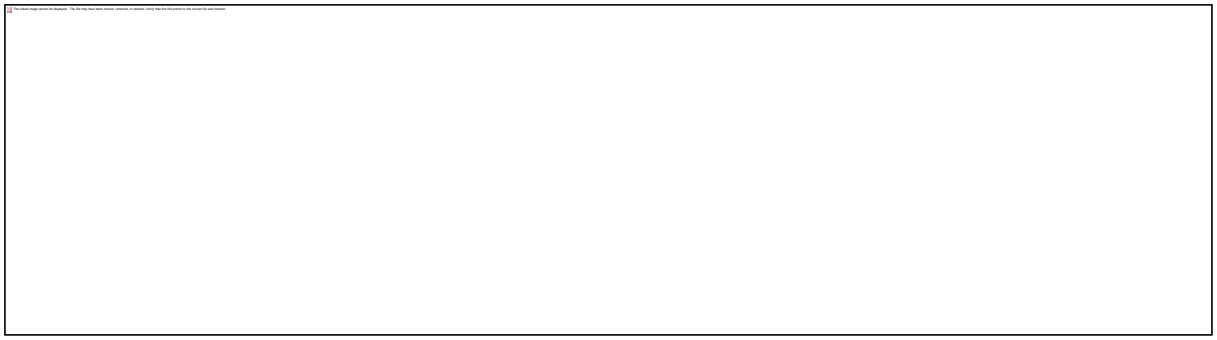
```
./startWebLogic.sh -d64 file
```

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.

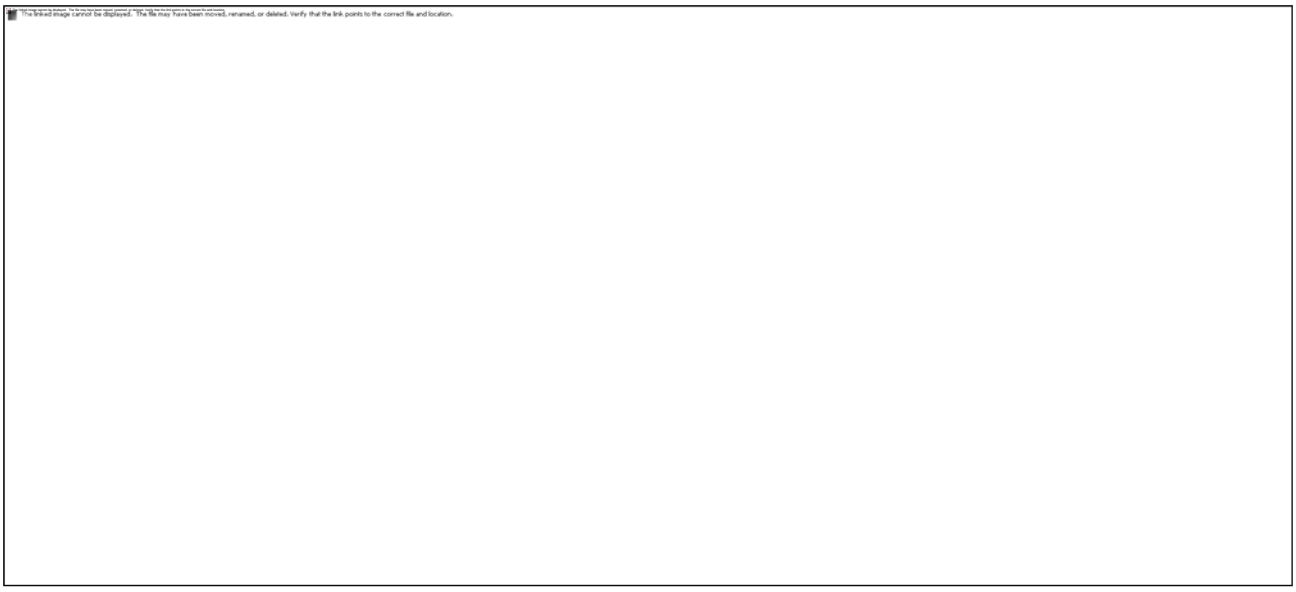


6. Select **ILP .ear** and click **Next**. The Install Application Assistance page is displayed with the Choose targeting style section.

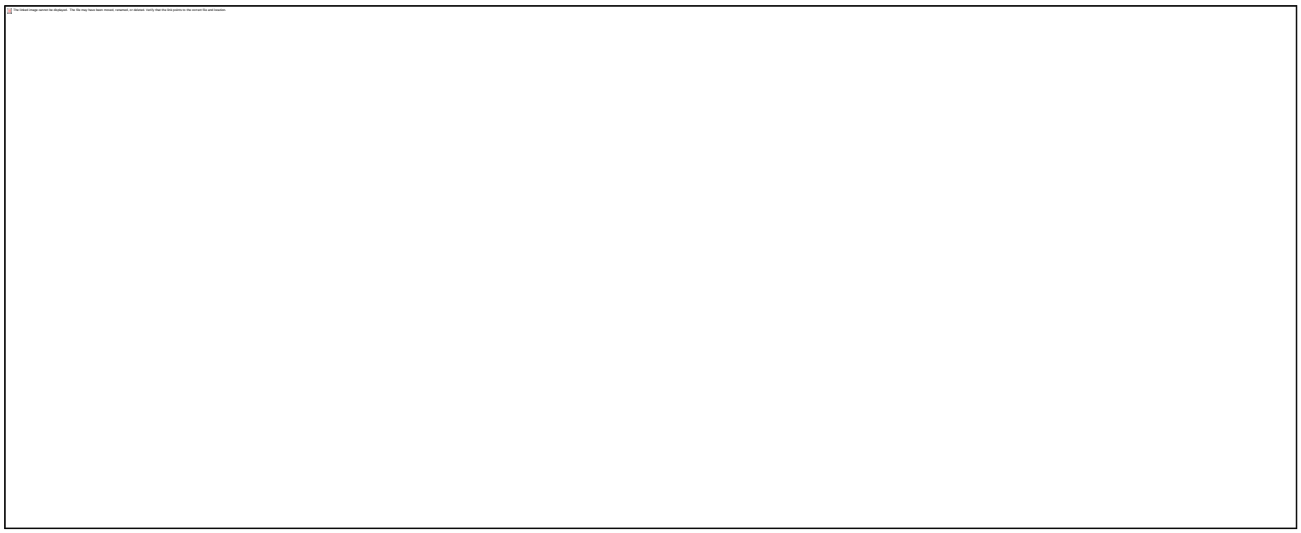


7. By default, the **Install this deployment as an application** option in the Choose targeting style section is selected. Click **Next**. The Install Application Assistance page is displayed with the Optional Settings section.

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



9. 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.*



10. Restart all OFS AAAI 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.

4.3.2 Deploying ILP.ear in WebSphere

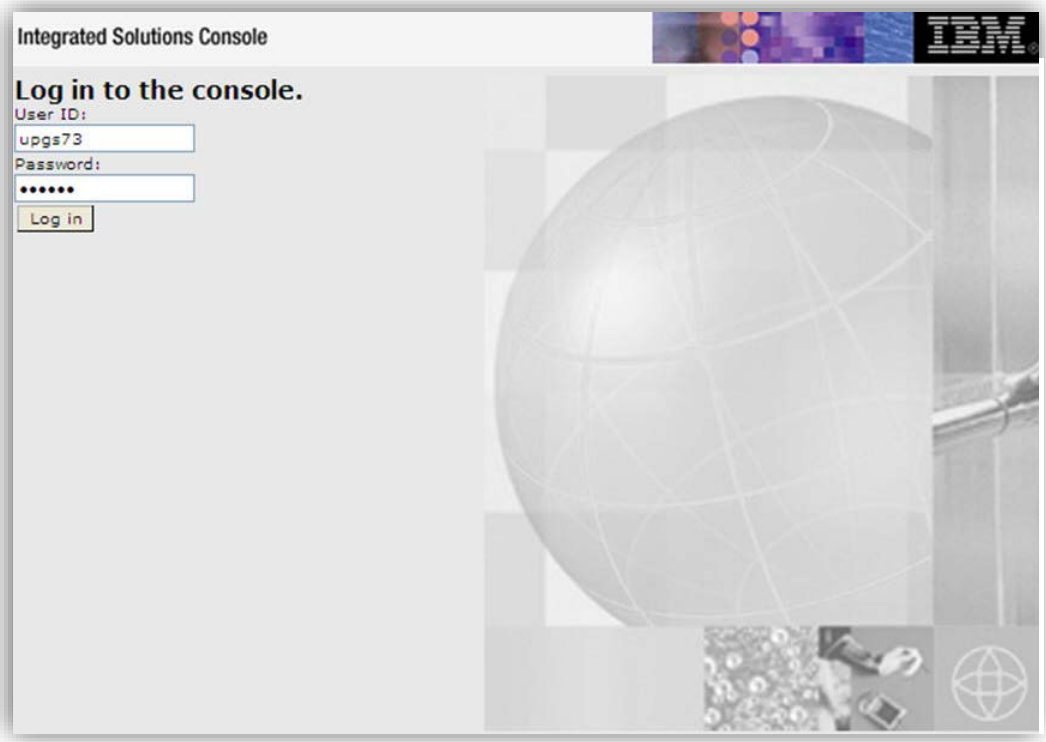
To deploy `ILP.ear`. in WebSphere, follow these steps:

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

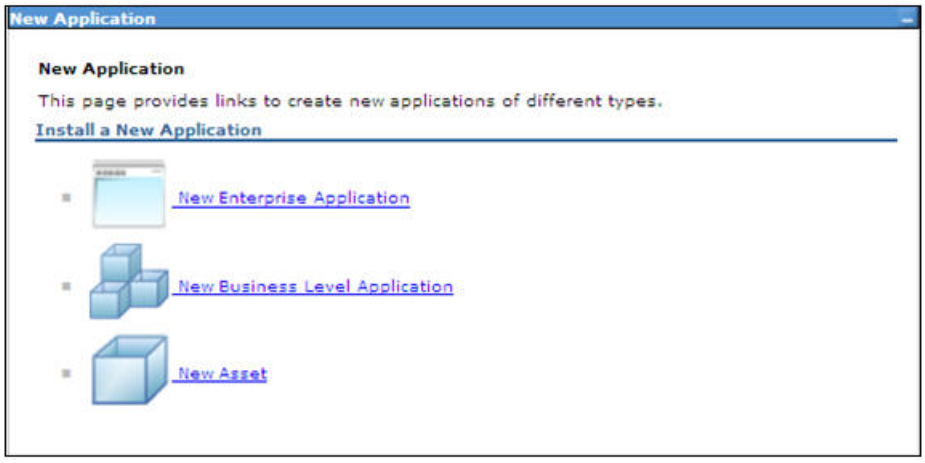
1. Start the WebSphere Profile by navigating to the path "/<Websphere_Installation_Directory>/IBM/WebSphere/AppServer/profiles/<Profile_Name>/bin/" then execute the command:

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

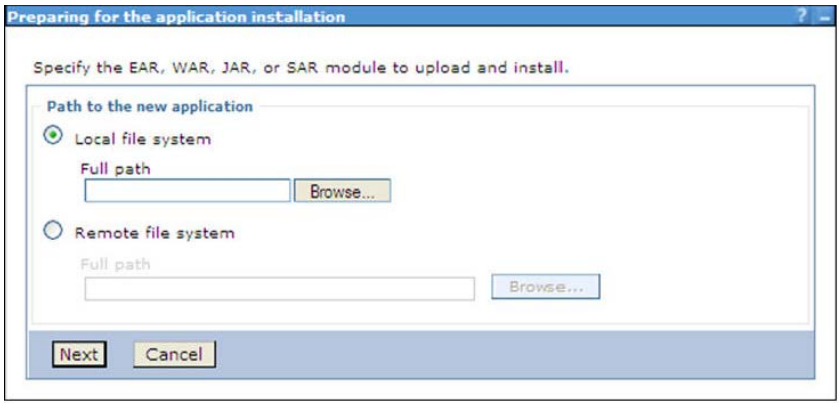
2. Open the following URL in the browser: `http://<ipaddress>:<Administrative Console Port>/ibm/console`. (use https protocol if SSL is enabled). The login screen is displayed.



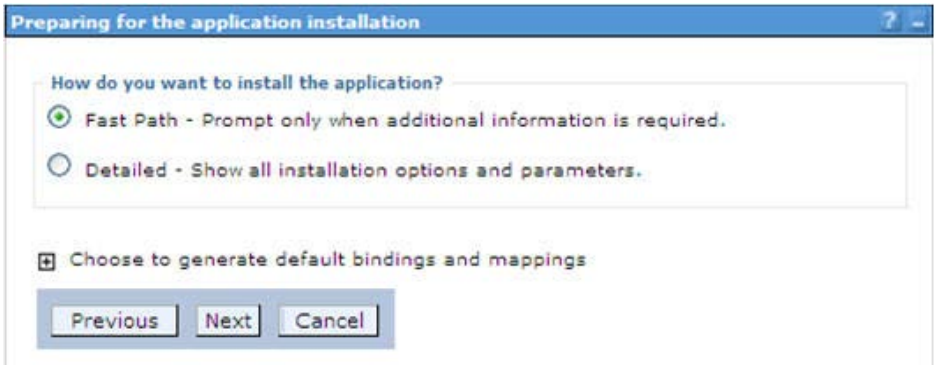
3. Enter the user credentials which have administrator rights and click **Log In**.
4. From the LHS menu, select **Applications** and click **New Application**. The New Application window is displayed.



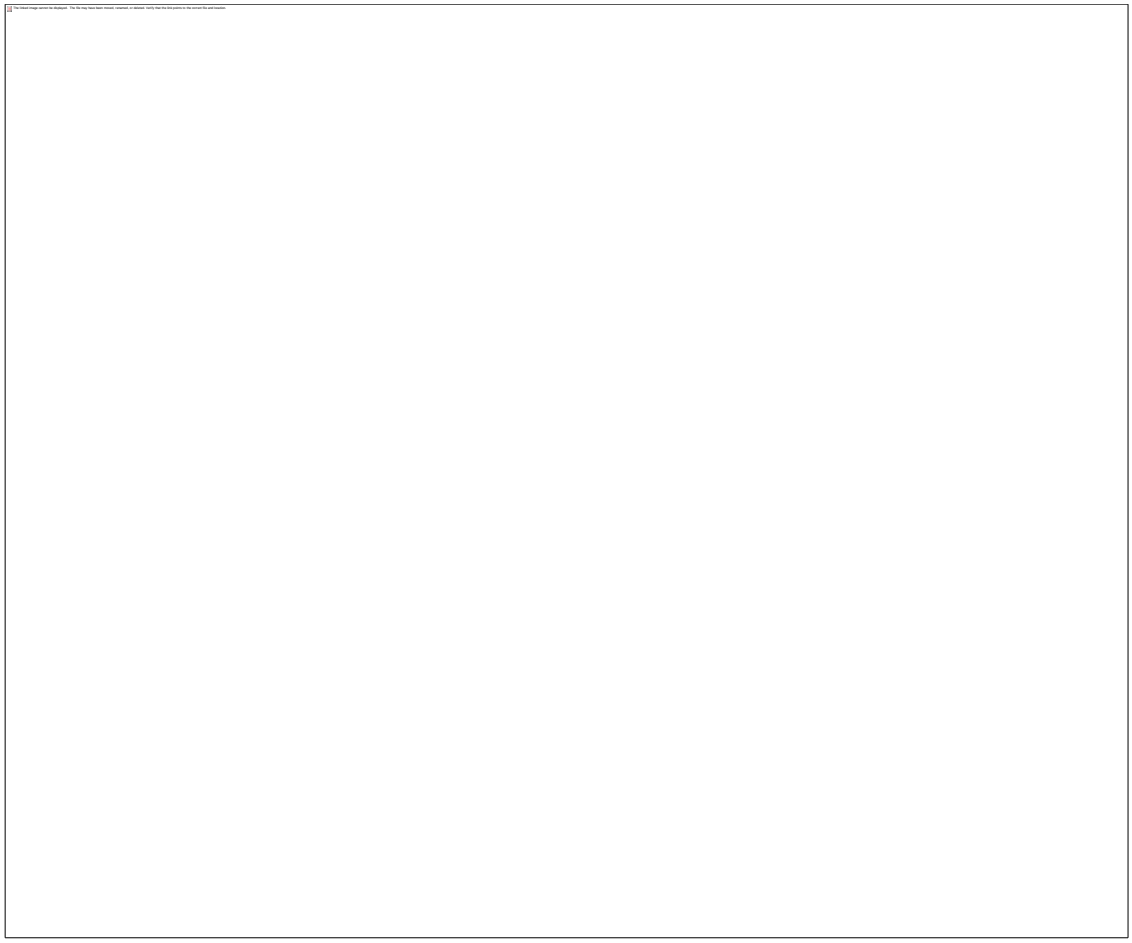
5. Click **New Enterprise Application**. The *Preparing for the application installation* page is displayed.



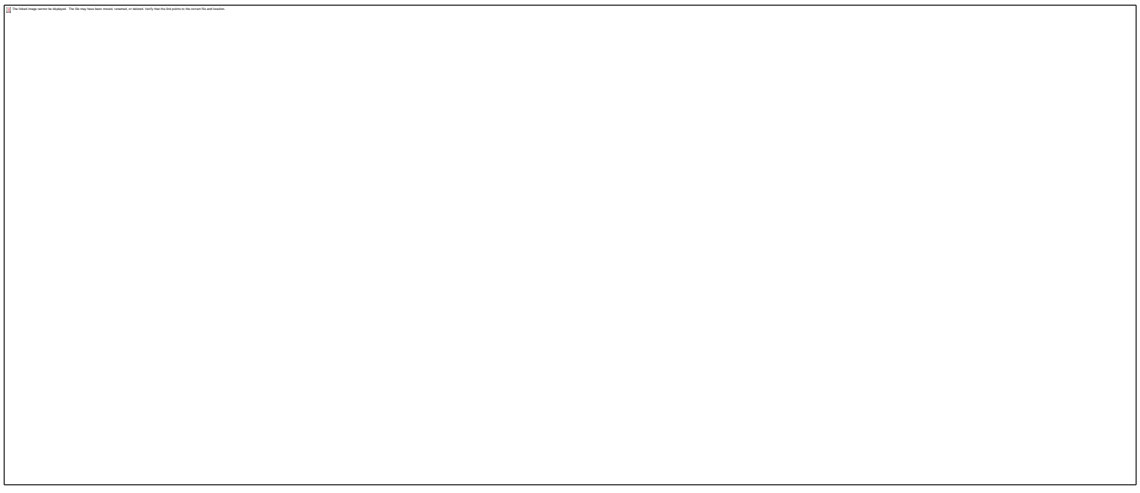
6. Select **Remote File System** and click **Browse**. Select the EAR file generated for IPE to upload and install. Click **Next**.



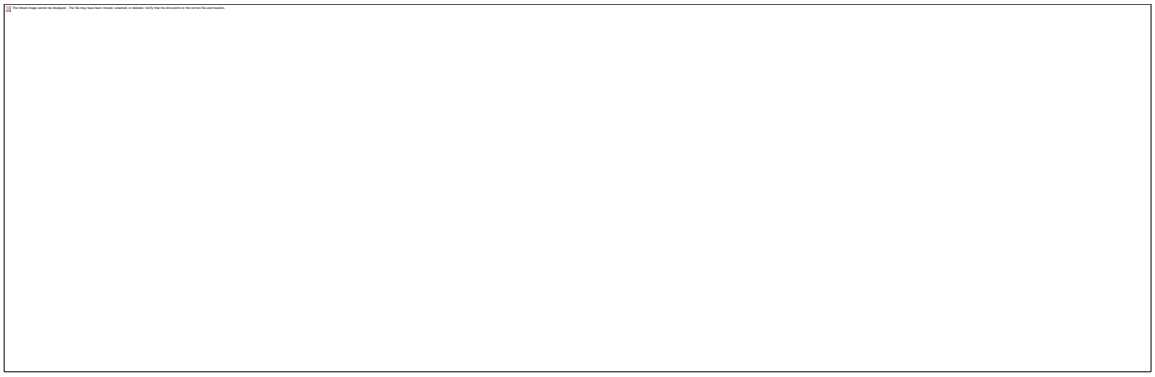
7. Select the **Fast Path** option and click **Next**. The *Install New Application* window is displayed.



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



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



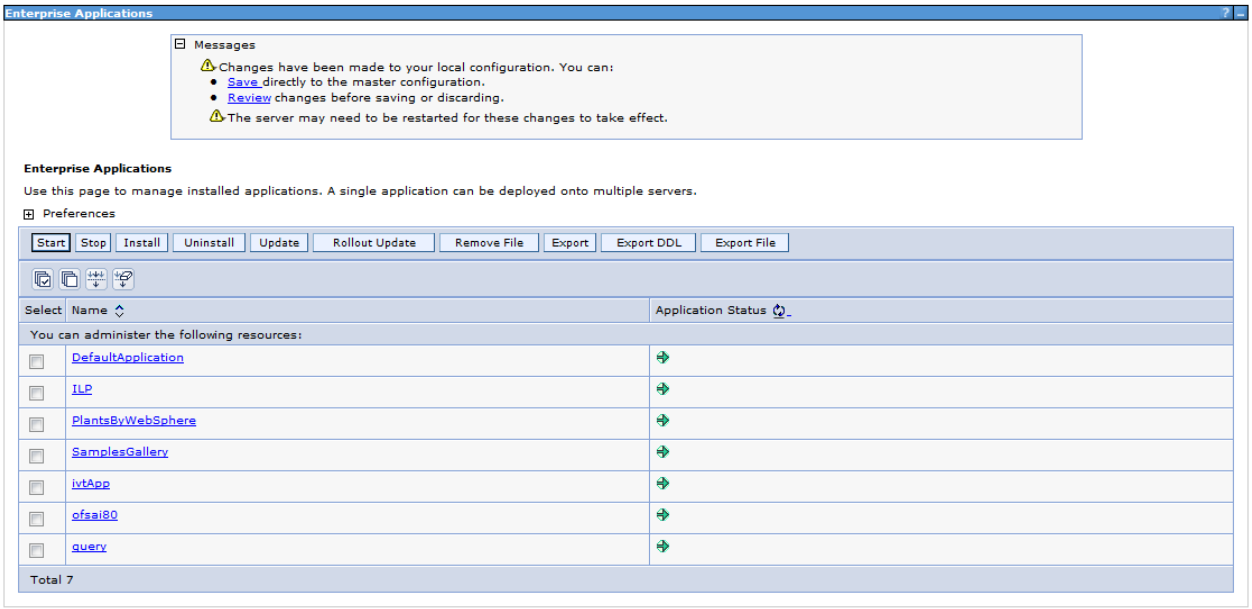
10. Select the **Inline Processing** checkbox and click **Next**. The Metadata for modules page is displayed.

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 AAAI 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.

4.4 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.

5 HIVE Configurations

To run IPE in HIVE, perform the following configurations:

NOTE: HIVE supports only batch mode processing.

5.1 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/ofsaa_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**.

5.2 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/infodomscripts/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.

6 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.

7 Appendix B

7.1 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**.

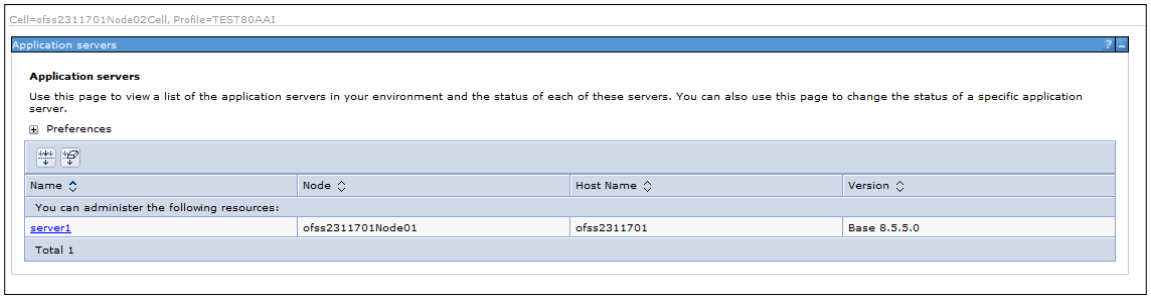


Figure 63: Application Servers

6. Click **server1**.

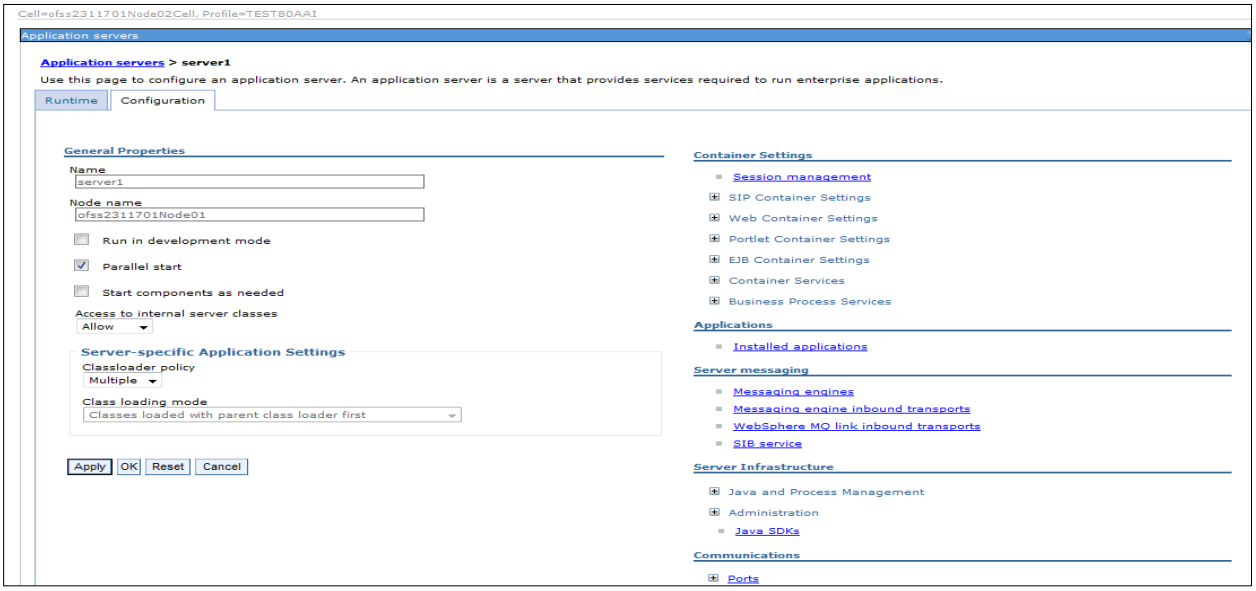


Figure 64: Application Servers

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

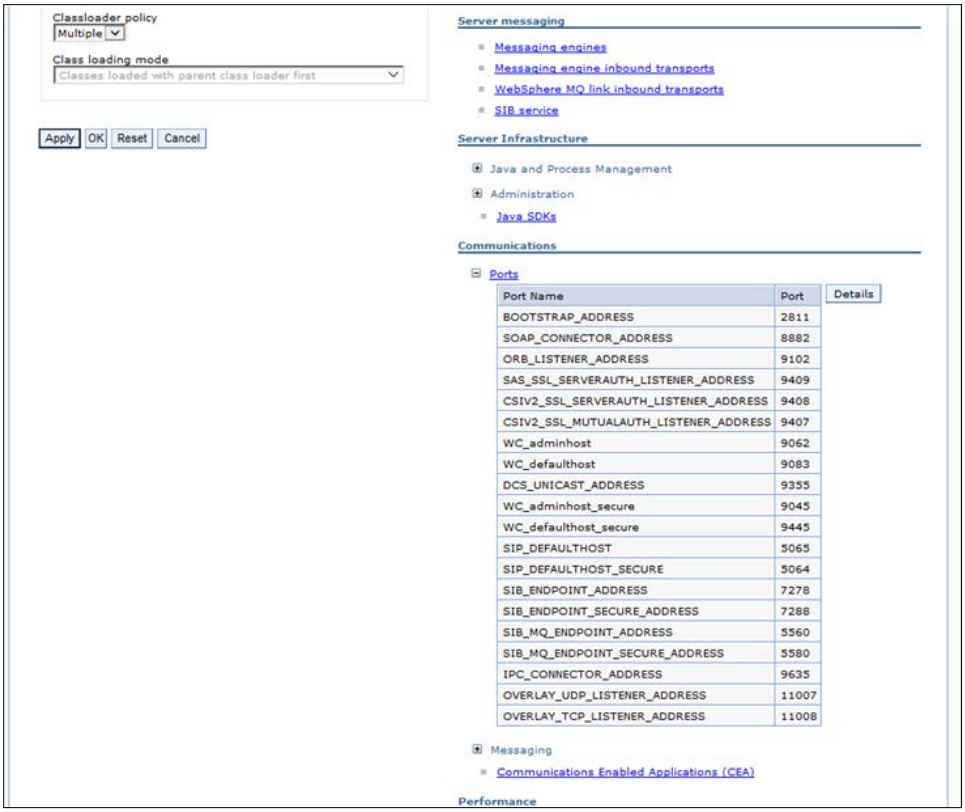


Figure 65: Ports List

8 Appendix C

8.1 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.

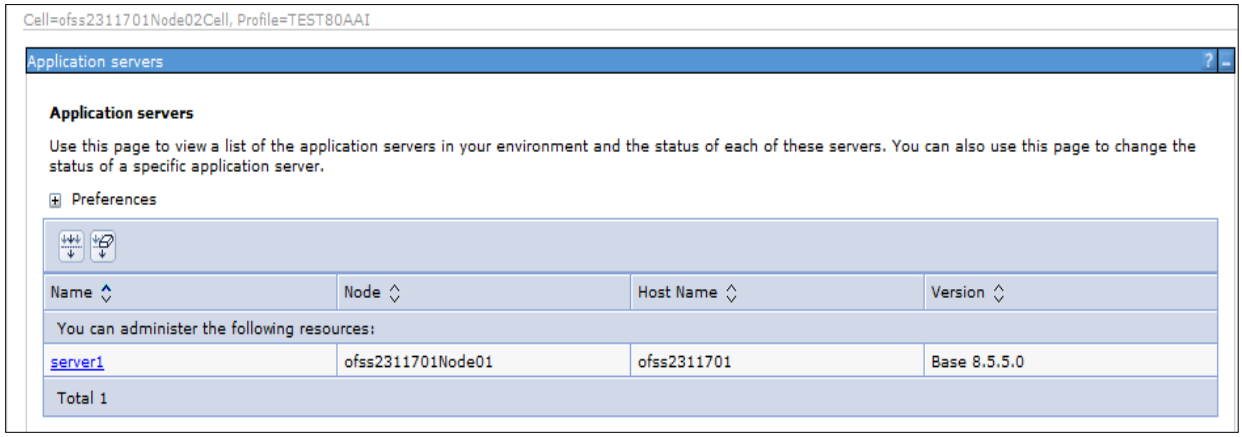


Figure 66: Application servers

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

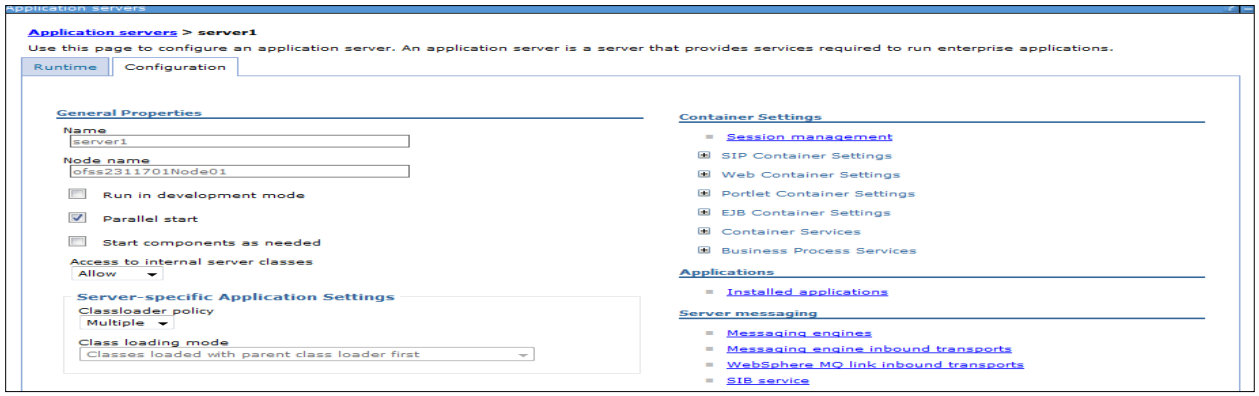


Figure 67: Configuration

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

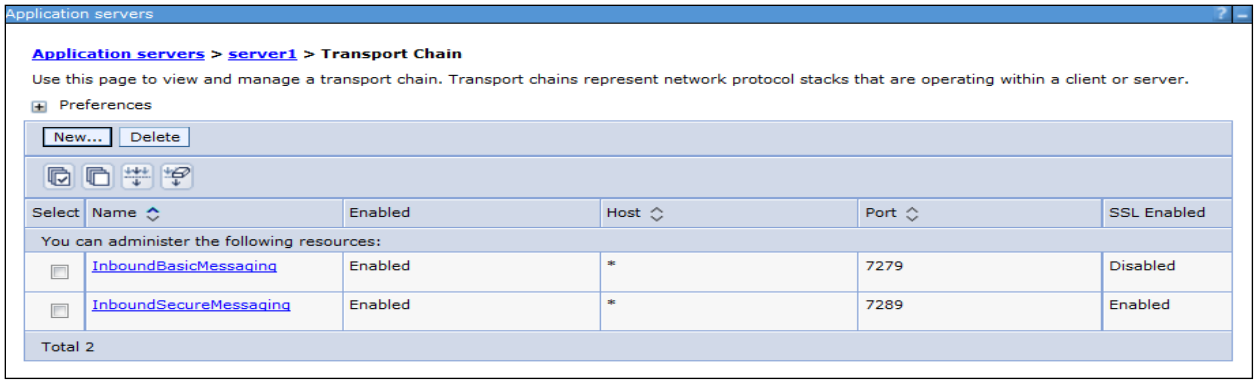


Figure 68: Transport Chain

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.

OFS AAA IPE

8.0.2.0.0 Configuration Guide

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