Oracle® Healthcare Master Person Index

WebLogic User's Guide

Release 1.1

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Oracle Healthcare Master Person Index WebLogic User's Guide, Release 1.1

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3 Using MPI and IHE Profile Applications on WebLogic

Preface

Oracle WebLogic Server is a Java Platform, Enterprise Edition (Java EE), application server that supports the deployment the Oracle Healthcare Master Person Index (OHMPI) applications in a runtime environment on a multitude of operating systems. This user's guide provides the information necessary to create an instance of an Oracle WebLogic Server, configure the WebLogic Server, and then deploy and run an MPI Application or an IHE Profile Application on the WebLogic Server.

Audience

This document is intended for Oracle Healthcare Master Person Index users that intend to use an MPI Application or an IHE Profile Application with the Oracle Weblogic Server.

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Related Documents

For more information and instructions for implementing and using a master index application, see the following documents in the Oracle Healthcare Master Person Index Release 1.1 documentation set:

- *Oracle Healthcare Master Person Index Installation Guide*
- *Oracle Healthcare Master Person Index Release Notes*
- *Oracle Healthcare Master Person Index User's Guide*
- *Oracle Healthcare Master Person Index Data Manager's Guide*
- *Oracle Healthcare Master Person Index Configuration Guide*
- *Oracle Healthcare Master Person Index Configuration Reference*
- *Oracle Healthcare Master Person Index Match Engine Reference*
- *Oracle Healthcare Master Person Index Standardization Engine Reference*
- *Oracle Healthcare Master Person Index Analyzing and Cleansing Data User's Guide*
- *Oracle Healthcare Master Person Index Command Line Reports and Database Maintenance User's Guide*
- *Oracle Healthcare Master Person Index Loading the Initial Data Set User's Guide*
- *Oracle Healthcare Master Person Index Working With IHE Profiles*

Note: These documents are designed to be used together when implementing a master index application.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Getting Started With Oracle WebLogic Server

This chapter provides the procedures for creating an instance of an Oracle WebLogic Server. It includes creating an Oracle Healthcare Master Person Index (OHMPI) project; starting the OHMPI wizard; adding the WebLogic Server; and a listing of where instructions for creating, configuring, and building a Master Person Index application are located.

This chapter includes the following section:

- "Creating an Instance of an Oracle WebLogic Server"

Creating an Instance of an Oracle WebLogic Server

The OHMPI 1.1 wizard provides a simple and transparent method for you to create your master person index application on the Oracle WebLogic Server. You have to add an Oracle WebLogic Server Instance or select an Oracle WebLogic Server Instance if you already have one or more instances. This process is divided into three individual steps, listed below.

- "Creating a Project and Starting the OHMPI Wizard"
- "Adding an Oracle WebLogic Server"
- "Creating, Configuring, and Building a Master Person Index Application"

Related Documentation

For additional information on the Oracle WebLogic Server, go to the Oracle WebLogic Server Documentation Library, 11g Release 1 (11.1.1) at `http://download.oracle.com/docs/cd/E14571_01/wls.htm`.

Oracle WebLogic Server Requirements

The Oracle WebLogic Server required environments include:

- NetBeans IDE 6.9.1
- JDK 1.6.0_20 and later
- WebLogic 11gR1 and later

Creating a Project and Starting the OHMPI Wizard

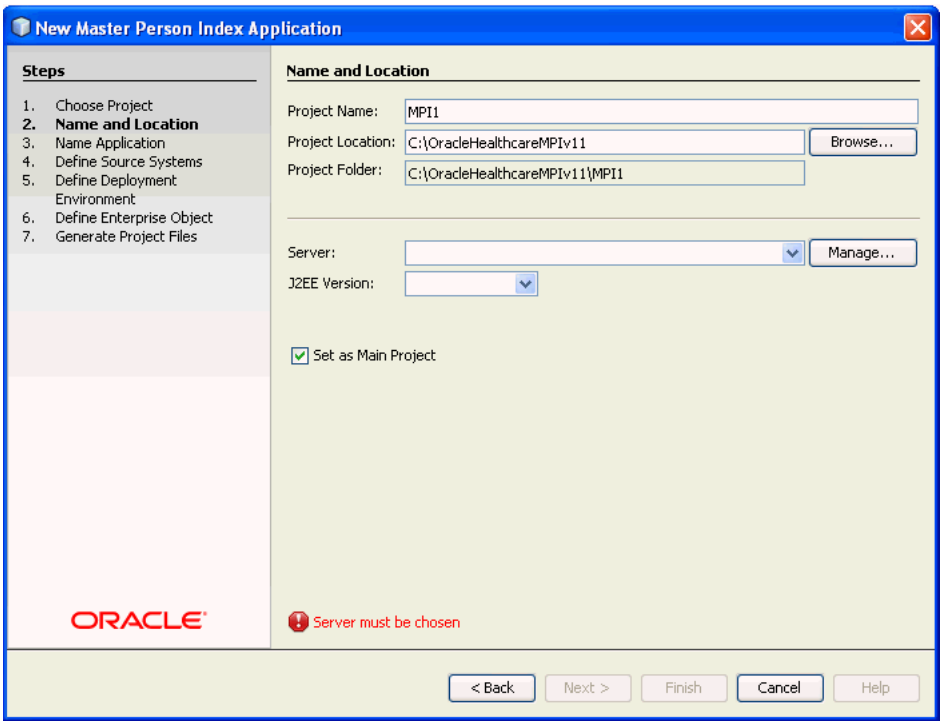
This section documents the steps to create an OHMPI project and start the OHMPI wizard.

To Create a Project and Start the OHMPI Wizard

1. On the NetBeans toolbar, click **New Project**.
2. Under Categories, choose **OHMPI**.
3. Under Projects, choose **Master Person Index Application** and then click **Next**.
4. Type the project name and the path where you want to store the project files in the upper portion of the window.

   The New Master Person Index Application page appears.

Figure 1–1 New Master Person Index Application Page



Adding an Oracle WebLogic Server

This section provides the steps for adding an instance of an Oracle WebLogic Server.

To Add an Oracle WebLogic Server

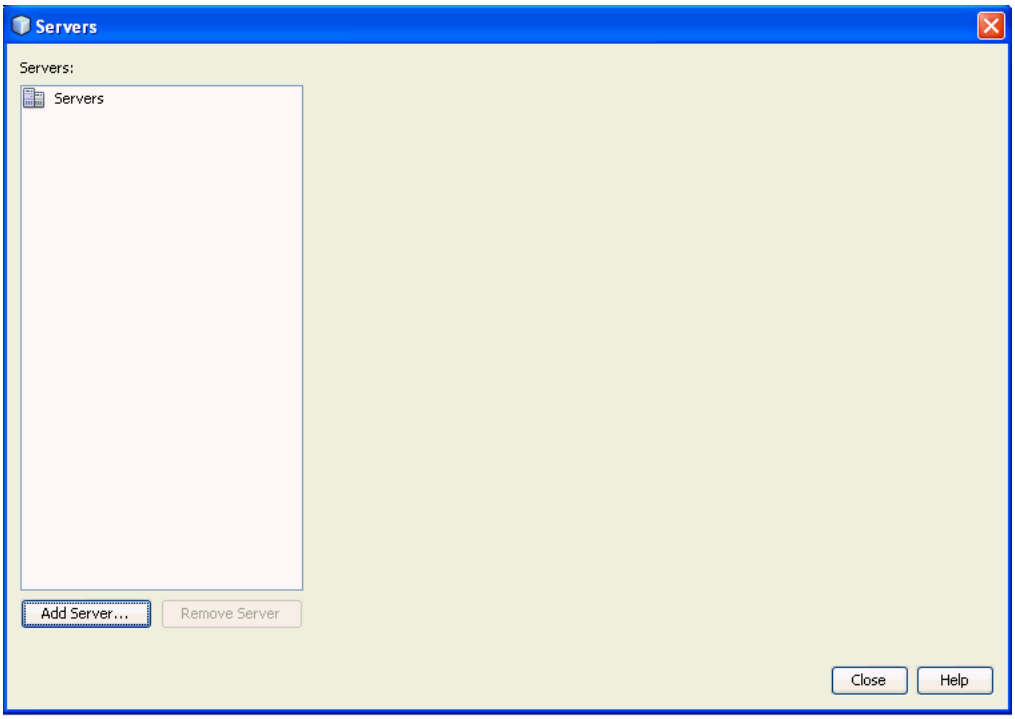
1. If an Oracle WebLogic Server instance is not listed in the Server field drop-down list, click **Manage** to add it.

   Note: If an Oracle WebLogic Server instance is listed in the Server field, or if you can select it from the drop-down list, click **Next** to continue to "Creating, Configuring, and Building a Master Person Index Application".

   The Servers page appears (see Figure 1-2, below) without the WebLogic Server listed under Servers.

Note: If there is a server listed, its properties display on the right side of the page.

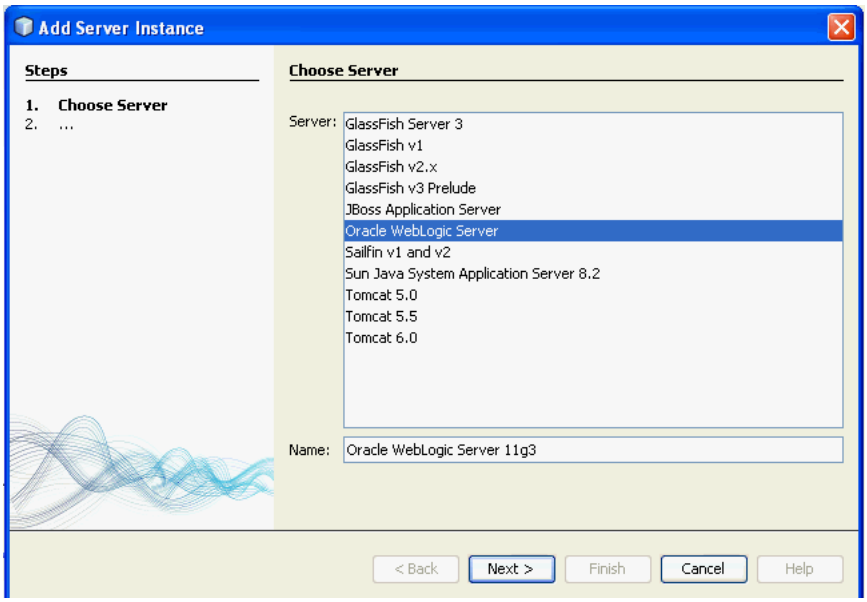
Figure 1–2 The Servers Page



2. On the Servers page, click **Add Server**.

   The Add Server Instance page appears.

Figure 1–3



3. In the Server list in the upper portion of the Choose Server panel, choose **Oracle WebLogic Server**.
4. In the Name field in the lower portion of the Choose Server panel, type the instance name of your Oracle WebLogic Server (for example: `Oracle WebLogic Server 11gR1`).
5. Click **Next**.

   The Add Server Instance page moves to the second step.
6. Under Server Location in the upper portion of the window, browse to the root location of your Oracle WebLogic Server instance.

   Note: Optionally, you can type the root location of your Oracle WebLogic Server instance (for example, `C:\Oracle\Weblogic11gR1\wlserver_10.3`).
7. Click **Next**.

   The Add Server Instance Properties page moves to the third step, Instance Properties. The fields have been populated except for the password.
8. Type a password for your Oracle WebLogic Server Instance.

   Note: Do not change the Instance Properties that were populated for you.
9. Click **Finish**.

   The Servers page reappears with the WebLogic Server you created listed on the left side of the page. Its properties are displayed on the right side of the page.

   Note: If there is more than one server in the list, select the server you created to display its properties.
10. Click **Close**.

    The name of the Oracle WebLogic Server instance you defined should appear in the Server field under Name and Location on the right side of the New Master Index Application page.
11. Do one of the following:
    - If the Oracle WebLogic Server instance is listed in the Server field, click **Next**.
    - If the Oracle WebLogic Server instance is not listed in the Server field, select it from the drop-down list and click **Next**.

You are now ready to move on to the third step of this process, "Creating, Configuring, and Building a Master Person Index Application".

Creating, Configuring, and Building a Master Person Index Application

The generic instructions to create, configure, and build a master person index application are documented elsewhere. To perform these tasks see:

- "Creating a Master Person Index Application" in *Oracle Healthcare Master Person Index User's Guide* (Part Number E18468-01)
- "Configuring the Master Person Index Object Structure" and "Configuring Master Person Index Processing Options" in *Oracle Healthcare Master Person Index Configuration Guide* (Part Number E18473-01)
- "Generating a Master Person Index Application" in *Oracle Healthcare Master Person Index User's Guide* (Part Number E18468-01)

There is nothing for you to do as there are no specific procedures that are relevant to the Oracle WebLogic Server that you need to perform. The OHMPI 1.1 wizard automatically generates and packages the artifacts of Oracle WebLogic Server for you.

2

Oracle WebLogic Server Configuration

This chapter provides procedures for configuring an Oracle WebLogic Server, including installing a database driver, creating JDBC data resources, creating JMS resources, and setting up a user.

This chapter includes the following section:

- "Configuring an Oracle WebLogic Server"

Configuring an Oracle WebLogic Server

Before using your Oracle WebLogic Server you must prepare it to host your Master Person Index (MPI) Application or your IHE Profiles Application, using the following procedures:

- "Configuring the HL7 v2 Server (only for IHE Profiles Application)"
- "Configuring the Audit Client (only for IHE Profiles Application)"
- "Installing a Database Driver for MySQL"
- Specific to an IHE Profiles Application project
  - "Creating JDBC Data Resources for an IHE Profile Application Project"
  - "Creating JMS Resources for an IHE Profile Application Project"
- Specific to an MPI Application project
  - "Creating JDBC Data Resources for an MPI Application Project"
  - "Creating JMS Resources for an MPI Application Project"
- "Setting Up the User"

Configuring the HL7 v2 Server (only for IHE Profiles Application)

1. After building an IHE Profiles Application project, unzip **hl7v2.zip** to a directory of your choice (for example, your OHMPI installation directory).
2. Set the **OHMPI_IHE_HL7V2_HOME** environment variable to the unzipped `hl7v2` directory from the previous step.
3. Follow the existing instructions to configure and deploy the IHE Profiles Application to the WebLogic Server.

Note: The rest of the HL7 v2 server configuration and the SSL configuration for WebLogic is the same as for GlassFish. For detailed information, see "Configuring an IHE Profiles Application Project" in Chapter 2 in *Oracle Healthcare Master Person Index Working With IHE Profiles* (Part Number E18591-01).

To Install the WebLogic Application Lifecycle Listener

You do not have to install the WebLogic Application Lifecycle Listener as it is automatically installed when you deploy an IHE Profiles Application.

Configuring the Audit Client (only for IHE Profiles Application)

When you build the IHE Profiles Application project for WebLogic, five artifacts are created:

- *<Project_Name>*.ear: The IHE Profiles Application.
- hl7v2.zip: The HL7 v2 lifecycle module.

  The hl7v2.zip is an HL7 v2 server package that includes all artifacts required to run the IHE OHMPI HL7 v2 server and HL7 v2 lifecycle model which manages the server. You unzip it to the location where you run the server. The unzipped folder includes:

  hl7v2

  - config

    The config sub folder includes all the configuration files.

  - lib

    The lib sub folder includes all the required jar files.
- audit-repo-syslog-client.jar
- ihe-atna-audit-client.jar
- ohmpi_audit_client.properties

After building a WebLogic-targeted IHE Profiles Application project (and before starting WebLogic Application Server), manually copy the following three files from the IHE Profiles Application project's dist directory to the appropriate WebLogic domain's lib directory (for example, user_projects\domains*<domain_name>*\lib):

- audit-repo-syslog-client.jar: The JAR file that contains the functionality of the audit repository syslog client.
- ihe-atna-audit-client.jar: The JAR file that contains the functionality of the IHE ATNA audit client.
- ohmpi_audit_client.properties: The property file used to configure where the audit server is located.

Installing a Database Driver for MySQL

The section provides instructions for installing a database driver if you are using a non-Oracle database.

To Install a Database Driver

1. Find your database driver in your database installation (for example: `mysql-connector-java-5.1.12-bin.jar` for MySQL).
2. Copy your database driver to your Oracle WebLogic Server `wlserver_10.3\server\lib`.

Creating JDBC Data Resources for an IHE Profile Application Project

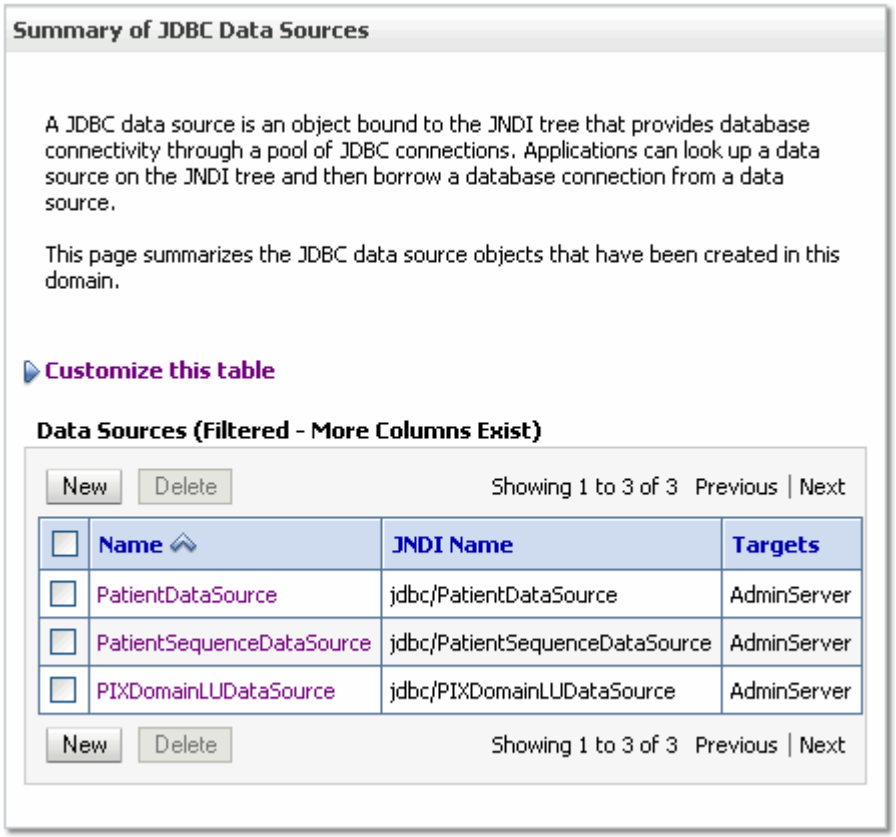
This section provides instructions for creating the JDBC data resources and defining the JDBC connections for an IHE Profile Application Project.

To Create JDBC Data Resources for an IHE Profiles Application Project for MySQL

1. For instructions on how to start and stop your Oracle WebLogic Server, see *Starting and Stopping Servers: Quick Reference* at `http://download.oracle.com/docs/cd/E14571_01/wls.htm`.
2. Launch the **Oracle WebLogic Server Administration Console**.
3. Log in using the default user Name (**weblogic**) and Password (**welcome1**).

   The Oracle WebLogic Administration Console appears.
4. On the left panel, under Domain Structure, expand **Services**, click **JDBC**, and then choose **Data Sources**.

Figure 2–1 WebLogic Administration Console - Summary of JDBC Data Sources

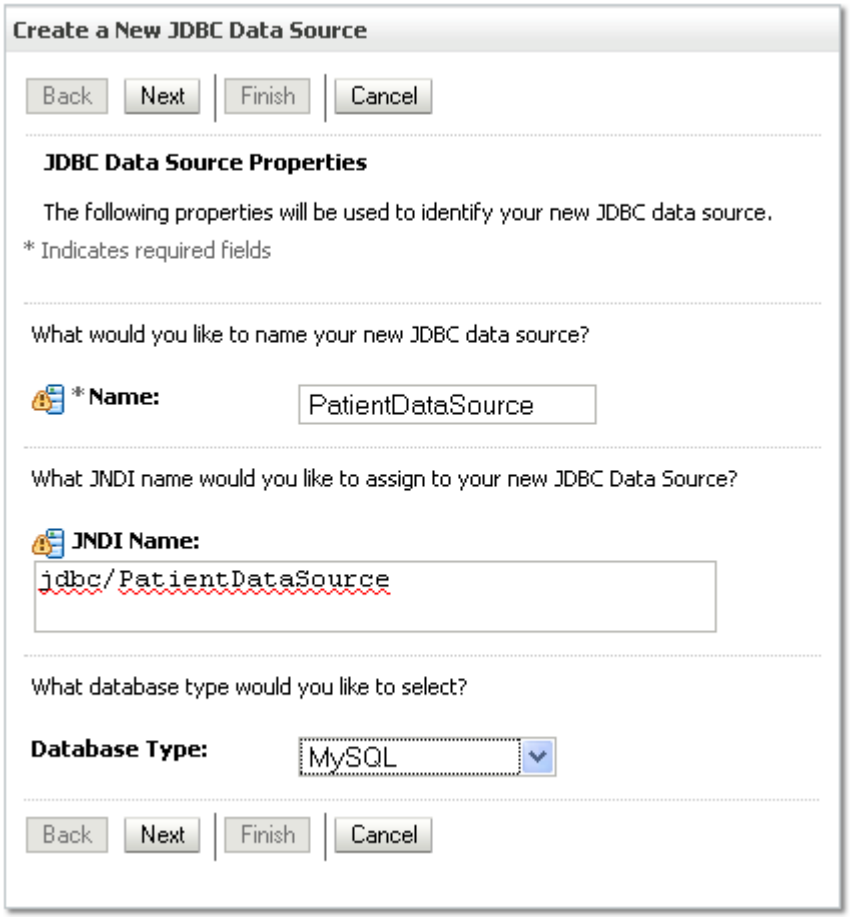


A Summary of JDBC Data Sources appears in the right panel.

5. To create a new JDBC Data Source click **New** at the bottom of the right panel.

   Settings for a new JDBC Data Source appears in the right panel of the page. It is here that you will create a new JDBC Data Source.

Figure 2–2 Create a New JDBC Data Source Panel



6. In the Name field, type <*name*>`DataSource`.

   The name you enter here will propagate elsewhere, so choose a name that is meaningful (for example, PatientDataSource).

7. In the JNDI Name field, type `jdbc/`<*name*>`DataSource`.

   Use the name you entered in step 6 here (for example, **jdbc/PatientDataSource**).

8. Click **Save**.

   A new page appears in the right panel which is for setting the Database Type.

9. In the Database Type drop-down list, choose the appropriate type (for example: **MySQL**).

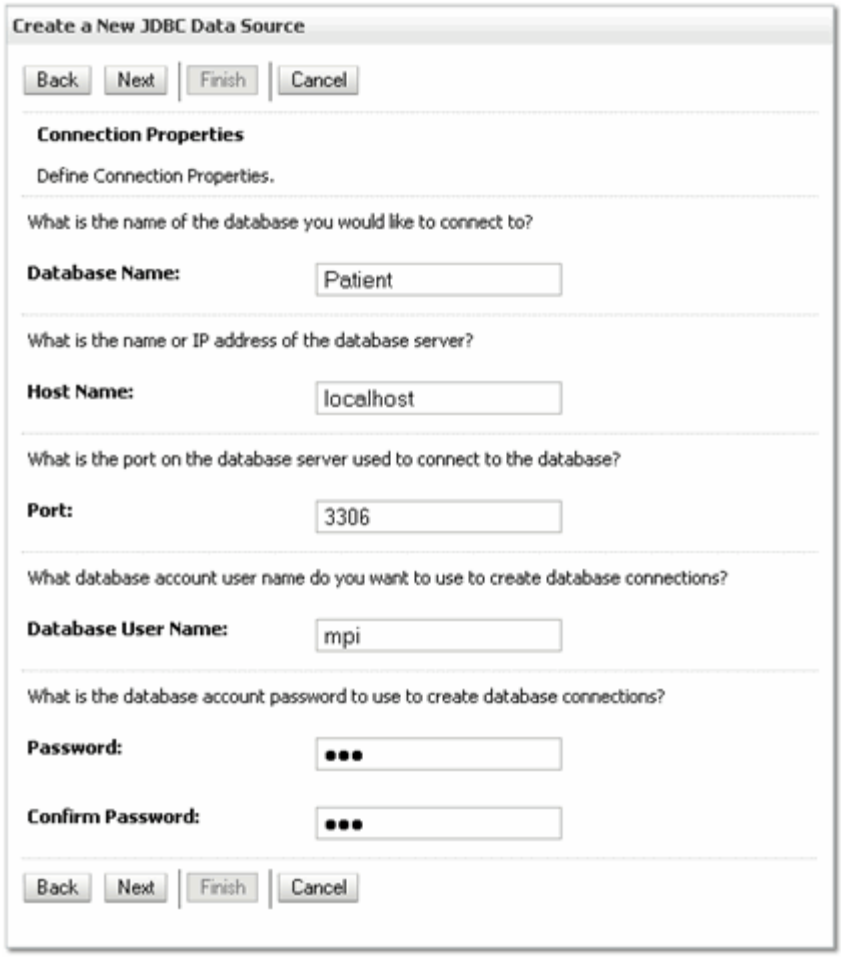
10. In the Database Driver drop-down list, choose the appropriate driver; for example: **MySQL's Driver (Type 4) Versions:using com.mysql.jdbc.Driver**.

11. Make sure that your data source supports Global Transactions.

    - At this step, for MySQL *only*, select **Emulate Two-Phase Commit**.

12. Click **Next**.

Figure 2–3 Create a New JDBC Data Source Panel - Connection Properties



13. In the Database Name field, type a name for the database to which you want to connect (for example: `Patient`).
14. In the Host Name field, type the name or the IP address of the database server (for example: `localhost`).
15. In the Port field, type the port on the database server that is used to connect to the database (for example: `3306`).
16. In the Database User Name field, type the database account user name you want to use to create database connections (for example: `root`).
17. In the Password field, type a password for your database account to use to create database connections.
18. In the Confirm Password field, re-type the password to confirm it.
19. Click **Next**.

    The Settings for PatientDataSource page appears in the right panel.
20. Click the **Connection Pool** tab, click **Test Configuration**, and then click **Next**.

    Select Targets appears on the Create a New JDBC Data Source page in the right panel. Here you select one or more targets to deploy the new JDBC data source.
21. In the Servers check list, select one or more target servers and click **Finish**.

Note: If you do not select a target, the data source will be created but not deployed. You will need to deploy the data source at a later time.

22. Repeat the above steps to create jdbc/PatientSequenceDataSource.
23. Repeat the above steps to create jdbc/PIXDomainLUDataSource. However, this time, make sure that you *do not* select **Support Global Transactions**, for it should *not* be checked.
24. Repeat the above steps to create jdbc/PIMPendingLinksDataSource.

To Create JDBC Data Resources for an IHE Profiles Application Project for Oracle

1. For instructions on how to start and stop your Oracle WebLogic Server, see *Starting and Stopping Servers: Quick Reference* at `http://download.oracle.com/docs/cd/E14571_01/wls.htm`.
2. Launch the **Oracle WebLogic Server Administration Console**.
3. Log in using the default user Name (**weblogic**) and Password (**welcome1**).

   The Oracle WebLogic Administration Console appears.
4. On the left panel, under Domain Structure, expand **Services**, click **JDBC**, and then choose **Data Sources**.

   A Summary of JDBC Data Sources appears in the right panel.
5. To create a new JDBC Data Source click **New** at the bottom of the right panel.

   Settings for a new JDBC Data Source appears in the right panel of the page. It is here that you will create a new JDBC Data Source.
6. In the Name field, type <*name*>`DataSource`.

   The name you enter here will propagate elsewhere, so choose a name that is meaningful (for example, PatientDataSource).
7. In the JNDI Name field, type `jdbc/`<*name*>`DataSource`.

   Use the name you entered in step 6 here (for example, **jdbc/PatientDataSource**).
8. Click **Save**.

   A new page appears in the right panel which is for setting the Database Type.
9. In the Database Type drop-down list, choose the appropriate type (for example: **Oracle**).
10. In the Database Driver drop-down list, choose the appropriate driver; for example: **Oracle's Driver (Thin XA) for Instance Connections; Versions: 9.0.1; 9.2.0; 10, 11**.
11. Click **Next**.
12. Click **Next**.

    Connection Properties appears on the Create a New JDBC Data Source panel. Use it to define the connection properties.
13. In the Database Name field, type a name for the database to which you want to connect (for example: `Patient`).
14. In the Host Name field, type the name or the IP address of the database server (for example: `localhost`).

15. In the Port field, type the port on the database server that is used to connect to the database (for example: `1521`).
16. In the Database User Name field, type the database account user name you want to use to create database connections (for example: `sys`).
17. In the Password field, type a password for your database account to use to create database connections.
18. In the Confirm Password field, re-type the password to confirm it.
19. Click **Next**.

    The Settings for PatientDataSource page appears in the right panel.
20. Click the **Connection Pool** tab, click **Test Configuration**, and then click **Next**.

    Select Targets appears on the Create a New JDBC Data Source page in the right panel. Here you select one or more targets to deploy the new JDBC data source.
21. In the Servers check list, select one or more target servers and click **Finish**.

    Note: If you do not select a target, the data source will be created but not deployed. You will need to deploy the data source at a later time.
22. Repeat the above steps to create jdbc/PatientSequenceDataSource.
23. Repeat the above steps to create jdbc/PIXDomainLUDataSource.
24. Repeat the above steps to create jdbc/PIMPendingLinksDataSource.

Creating JMS Resources for an IHE Profile Application Project

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

The following procedure includes instructions for creating JMS resources, which includes a:

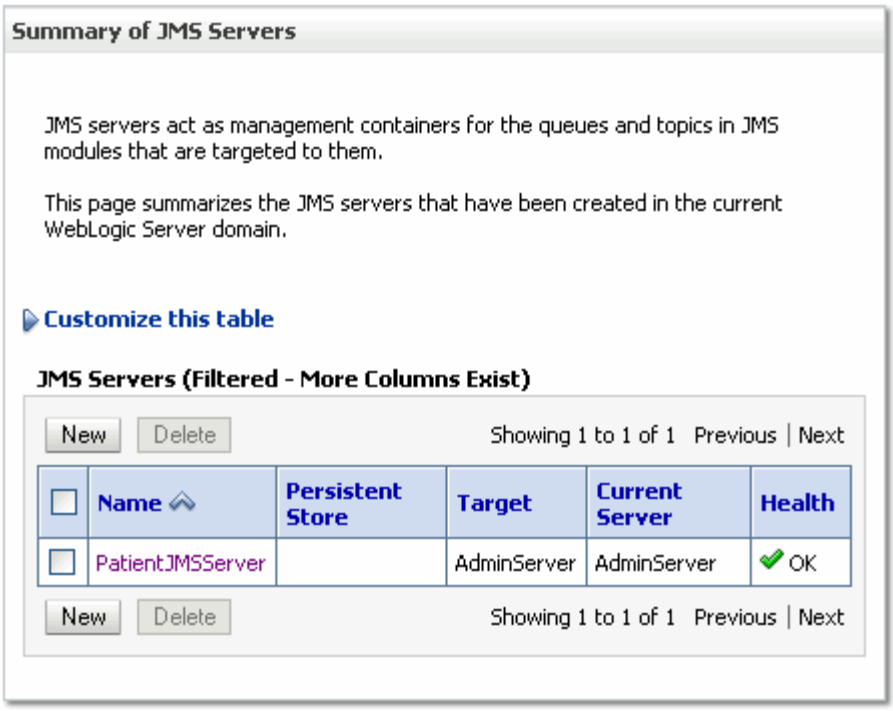
- JMS Server
- JMS Module
- JMS Connection Factory in the specific JMS Module
- JMS Topic in the specific JMS Module

To Create JMS Server

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Servers**.

   A Summary of JMS Servers appears in the right panel. It includes a table that summarizes the JMS servers that have been created in the current WebLogic Server domain.

Figure 2–4 Summary of JMS Servers Panel



Note: The JDNI name you created in "To Create JDBC Data Resources for an IHE Profiles Application Project for MySQL" on page 2-3 appears in the table of previously created JMS Servers; that is, **PatientJMSServer**.

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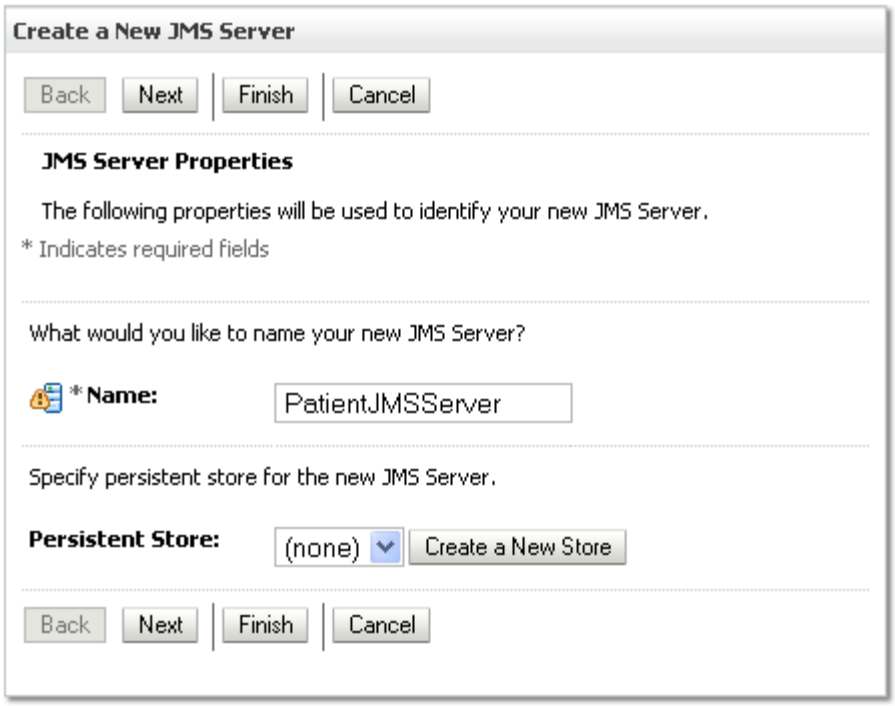
2. In the table of previously created JMS Servers, click **New**.

   The Create a New JMS Server panel appears.

Figure 2–5 Create a New JMS Server Panel



3. In the Name field, type the name for your new JMS Server.

   Note: This name already exists in the table of previously created JMS Servers (in the example, **PatientJMSServer**).

4. Click **Next**.

   Select targets appears in the right panel under Create a New JMS Server.

5. From the Target drop-down list select a target server instance or migratable target on which you want to deploy the JMS Server.

   Note: The default server instance is exampleServer.

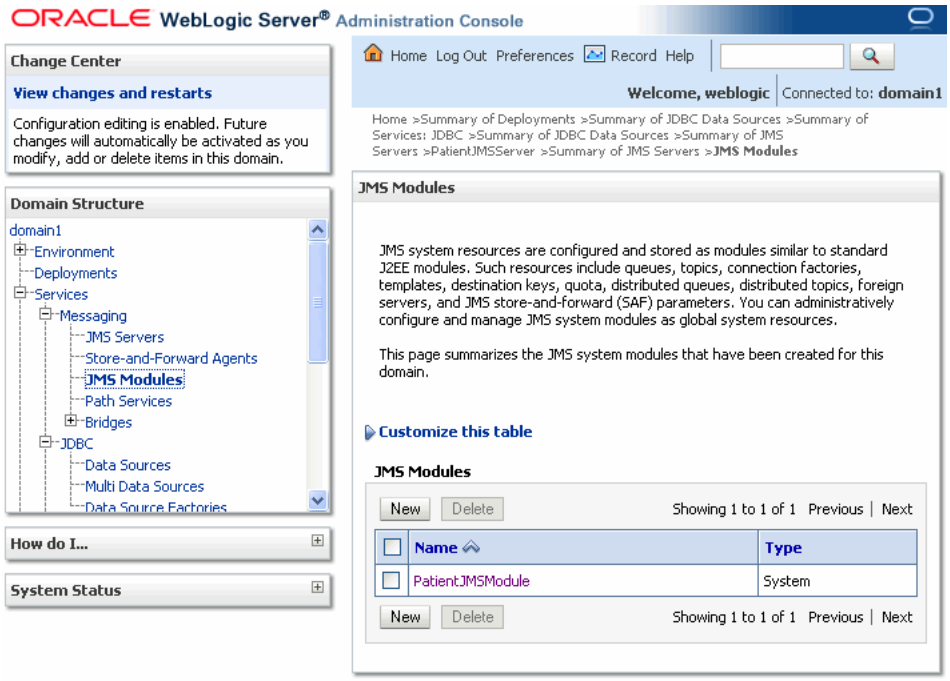
6. Click **Finish**.

To Create JMS Module

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Modules**.

   The JMS Modules panel appears.

Figure 2–6 MS Modules Panel Summary



2. In the JMS Modules table, click **New** to add a new JMS Module.

   The Create JMS System Module panel appears.

3. In the Name field, type the new JMS Module name.

   Note: Again, remain consistent to the name chosen for the JDBC Data Source and the JMS Server (in the previous examples the key word was "Patient," making this name **PatientJMSModule**).

4. Click **Next**.

   Targets appears in the right panel under Create a New JMS System Module.

5. In the Servers area, select the server or cluster on which you want to deploy this JMS system module.

   Note: Retain the default, examplesServer.

6. Click **Finish**.

To Create JMS Connection Factory

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Modules**.
2. Choose the JMS Module (in the example, **PatientJMSModule**) from the table of JMS Modules.

   The Settings for PatientJMSModule page appears in the right panel.

3. In the Summary of Resources table, click **New**.

4. Under the Type column in the Summary of Resources table choose **Connection Factory** and click **Next**.

   Another panel of Create a New JMS System Module Resource appears.

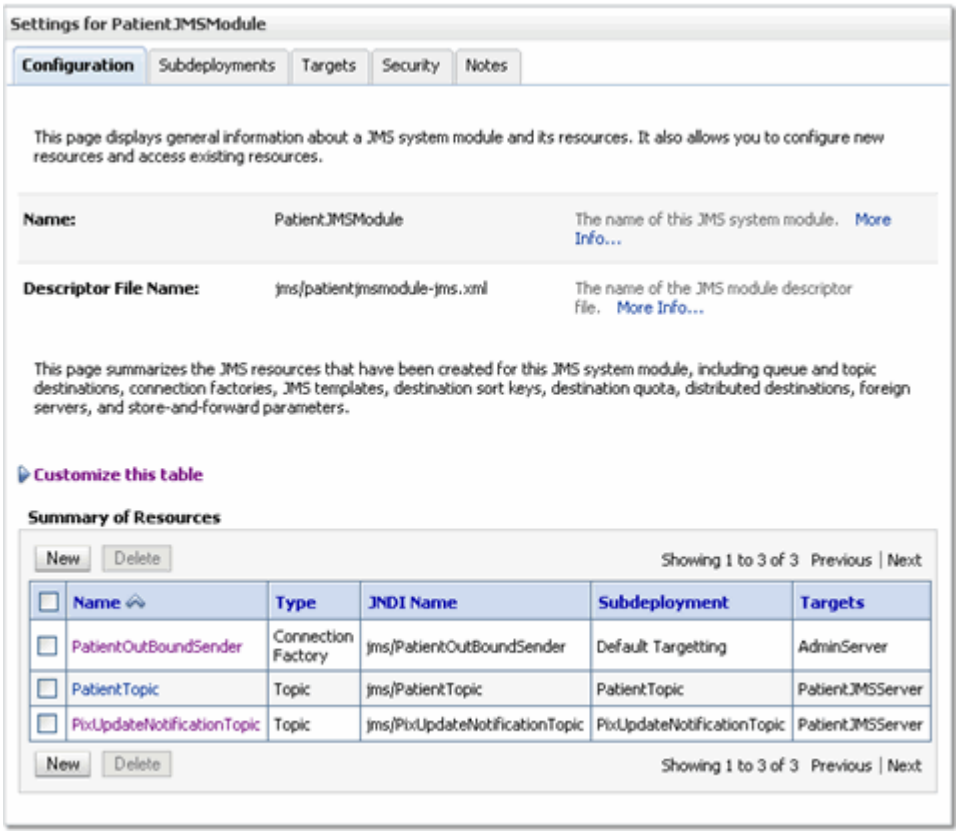
5. In the Name field, type `PatientOutBoundSender`.
6. In the JNDI Name field, type `jms/PatientOutBoundSender`.
7. Click **Next**
8. In the Target field, retain the default server instance, which is exampleServer, and click **Finish**.
9. Click the **Transaction** tab for a newly created connection factory.
10. Select **XA Transaction Enabled** and click **Save**.

To Create JMS Topic

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Modules**.
2. In the right panel, choose the JMS Module you created (in the example, **PatientJMSModule**) from the table of JMS Modules.

   Settings for PatientJMSModule appears in the right panel with a Summary of Resources table.

Figure 2–7 JMS Module Panel - Summary of Resources



3. In the Summary of Resources table, click **New**, select **Topic**, and then click **Next**.

The Create a New JMS System Module Resource panel appears on the right side of the window. Use this panel to set the properties that identify the new topic.

4. In the Name field, under JMS Destination Properties, type `<name>Topic` (for example, `PatientTopic`).
5. Set **jms/PatientTopic** as the JNDI Name and click **Next**.

   The Create a New JMS System Module Resource page appears in the right panel. Use this page to set the properties that will be used to target your new JMS system module resource.
6. In the Subdeployments drop-down list, select the topic name you just created (for example, Patient Topic) and click **Create a New Subdeployment**.
7. In the Subdeployment Name field, type *<name>*`Topic` (for example, `PatientTopic`), and click **OK**.
8. In the Targets table of JMS Servers, select **<name>JMSServe**r (for example, **PatientJMSServer**).
9. Click **Finish**.

To Create PixUpdateNotificationTopic

1. In the Summary of Resources table (see Figure 2–8, "WebLogic Administration Console - Summary of JDBC Data Sources"), click **New**, select **Topic**, and then click **Next**.

   The Create a New JMS System Module Resource panel appears on the right side of the window. Use this panel to set the properties that identify the new topic.
2. In the Name field, under JMS Destination Properties, type `<name>Topic` (for example, `PixUpdateNotificationTopic`).
3. Set **jms/PixUpdateNotificationTopic** as the JNDI Name and click **Next**.

   The Create a New JMS System Module Resource page appears in the right panel. Use this page to set the properties that will be used to target your new JMS system module resource.
4. In the Subdeployments drop-down list, select the topic name you just created (for example, PixUpdateNotification Topic) and click **Create a New Subdeployment**.
5. In the Subdeployment Name field, type *<name>*`Topic` (for example, `PixUpdateNotificationTopic`), and click **OK**.
6. In the Targets table of JMS Servers, select **<name>JMSServe**r (for example, **PatientJMSServer**).
7. Click **Finish**.

Creating JDBC Data Resources for an MPI Application Project

This section provides instructions for creating the JDBC data resources and defining the JDBC connections for an MPI Application Project.

To Create JDBC Data Resources for an MPI Application Project for MySQL

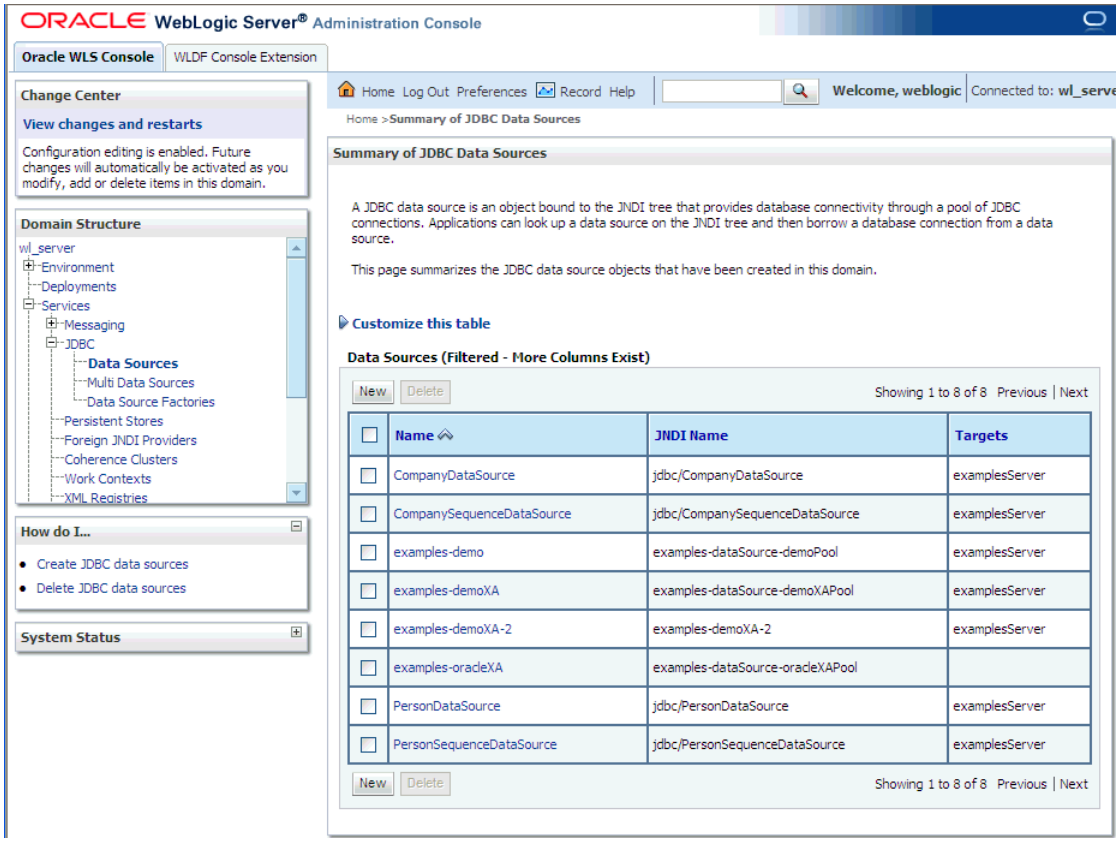
1. For instructions on how to start and stop your Oracle WebLogic Server, see *Starting and Stopping Servers: Quick Reference* at `http://download.oracle.com/docs/cd/E14571_01/wls.htm`.
2. Launch the **Oracle WebLogic Server Administration Console**.

3. Log in using the default user Name (**weblogic**) and Password (**welcome1**).

   The Oracle WebLogic Administration Console appears.

4. On the left panel, under Domain Structure, expand **Services**, click **JDBC**, and then choose **Data Sources**.

Figure 2–8 WebLogic Administration Console - Summary of JDBC Data Sources

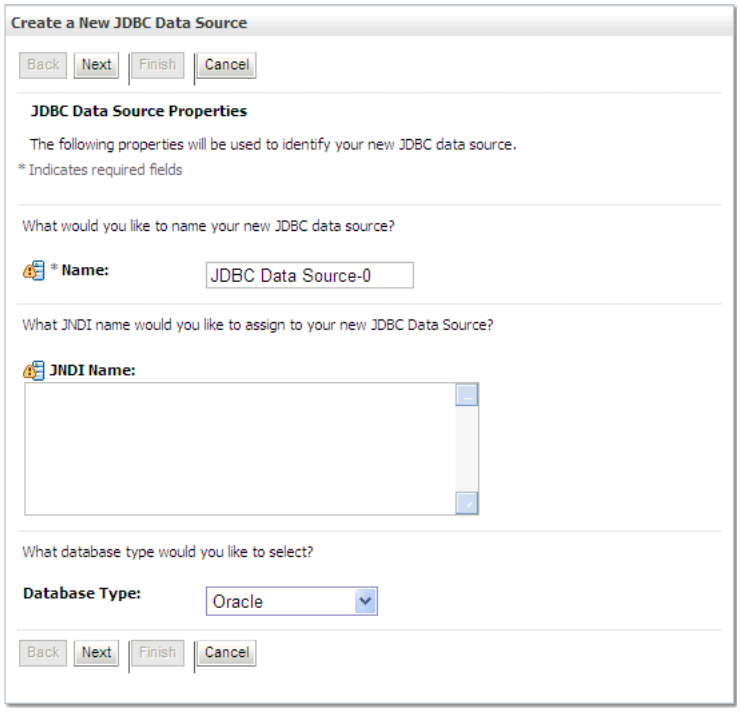


   A Summary of JDBC Data Sources appears in the right panel.

5. To create a new JDBC Data Source click **New** at the bottom of the right panel.

   Settings for a new JDBC Data Source appears in the right panel of the page. It is here that you will create a new JDBC Data Source.

Figure 2–9 Create a New JDBC Data Source Panel



6. In the Name field, type <*name*>`DataSource`.

   The name you enter here will propagate elsewhere, so choose a name that is meaningful (for example, PersonDataSource).

7. In the JNDI Name field, type `jdbc/`<*name*>`DataSource`.

   Use the name you entered in step 6 here (for example, **jdbc/PersonDataSource**).

8. Click **Save**.

   A new page appears in the right panel which is for setting the Database Type.

9. In the Database Type drop-down list, choose the appropriate type (for example: **MySQL**).

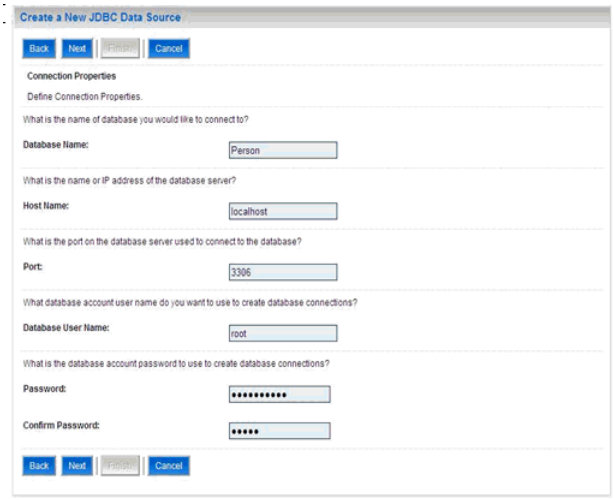
10. In the Database Driver drop-down list, choose the appropriate driver; for example: **MySQL's Driver (Type 4) Versions:using com.mysql.jdbc.Driver**.

11. Make sure that your data source supports Global Transactions.

12. Click **Next**.

    Connection Properties appears on the Create a New JDBC Data Source panel. Use it to define the connection properties.

Figure 2–10 Create a New JDBC Data Source Panel - Connection Properties



13. In the Database Name field, type a name for the database to which you want to connect (for example: `Person`).
14. In the Host Name field, type the name or the IP address of the database server (for example: `localhost`).
15. In the Port field, type the port on the database server that is used to connect to the database (for example: `3306`).
16. In the Database User Name field, type the database account user name you want to use to create database connections (for example: `root`).
17. In the Password field, type a password for your database account to use to create database connections.
18. In the Confirm Password field, re-type the password to confirm it.
19. Click **Next**.

    The Settings for PersonDataSource page appears in the right panel.
20. Click the **Connection Pool** tab, click **Test Configuration**, and then click **Next**.

    Select Targets appears on the Create a New JDBC Data Source page in the right panel. Here you select one or more targets to deploy the new JDBC data source.
21. In the Servers check list, select one or more target servers and click **Finish**.

> **Note:** If you do not select a target, the data source will be created but not deployed. You will need to deploy the data source at a later time.

22. Repeat the above steps to create jdbc/PersonSequenceDataSource.

To Create JDBC Data Resources for an MPI Application Project for Oracle

1. For instructions on how to start and stop your Oracle WebLogic Server, see *Starting and Stopping Servers: Quick Reference* at `http://download.oracle.com/docs/cd/E14571_01/wls.htm`.
2. Launch the **Oracle WebLogic Server Administration Console**.

3. Log in using the default user Name (**weblogic**) and Password (**welcome1**).

   The Oracle WebLogic Administration Console appears.

4. On the left panel, under Domain Structure, expand **Services**, click **JDBC**, and then choose **Data Sources**.

   A Summary of JDBC Data Sources appears in the right panel.

5. To create a new JDBC Data Source click **New** at the bottom of the right panel.

   Settings for a new JDBC Data Source appears in the right panel of the page. It is here that you will create a new JDBC Data Source.

6. In the Name field, type <*name*>`DataSource`.

   The name you enter here will propagate elsewhere, so choose a name that is meaningful (for example, PersonDataSource).

7. In the JNDI Name field, type `jdbc/`<*name*>`DataSource`.

   Use the name you entered in step 6 here (for example, **jdbc/PersonDataSource**).

8. Click **Save**.

   A new page appears in the right panel which is for setting the Database Type.

9. In the Database Type drop-down list, choose the appropriate type (for example: **Oracle**).

10. In the Database Driver drop-down list, choose the appropriate driver; for example: **Oracle's Driver (Thin XA) for Instance Connections; Versions: 9.0.1; 9.2.0; 10, 11**.

11. Click **Next**.

12. Click **Next**.

    Connection Properties appears on the Create a New JDBC Data Source panel. Use it to define the connection properties.

13. In the Database Name field, type a name for the database to which you want to connect (for example: `Person`).

14. In the Host Name field, type the name or the IP address of the database server (for example: `localhost`).

15. In the Port field, type the port on the database server that is used to connect to the database (for example: `1521`).

16. In the Database User Name field, type the database account user name you want to use to create database connections (for example: `root`).

17. In the Password field, type a password for your database account to use to create database connections.

18. In the Confirm Password field, re-type the password to confirm it.

19. Click **Next**.

    The Settings for PersonDataSource page appears in the right panel.

20. Click the **Connection Pool** tab, click **Test Configuration**, and then click **Next**.

    Select Targets appears on the Create a New JDBC Data Source page in the right panel. Here you select one or more targets to deploy the new JDBC data source.

21. In the Servers check list, select one or more target servers and click **Finish**.

Note: If you do not select a target, the data source will be created but not deployed. You will need to deploy the data source at a later time.

22. Repeat the above steps to create jdbc/PersonSequenceDataSource.

Creating JMS Resources for an MPI Application Project

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

The following procedure includes instructions for creating JMS resources, which includes a:

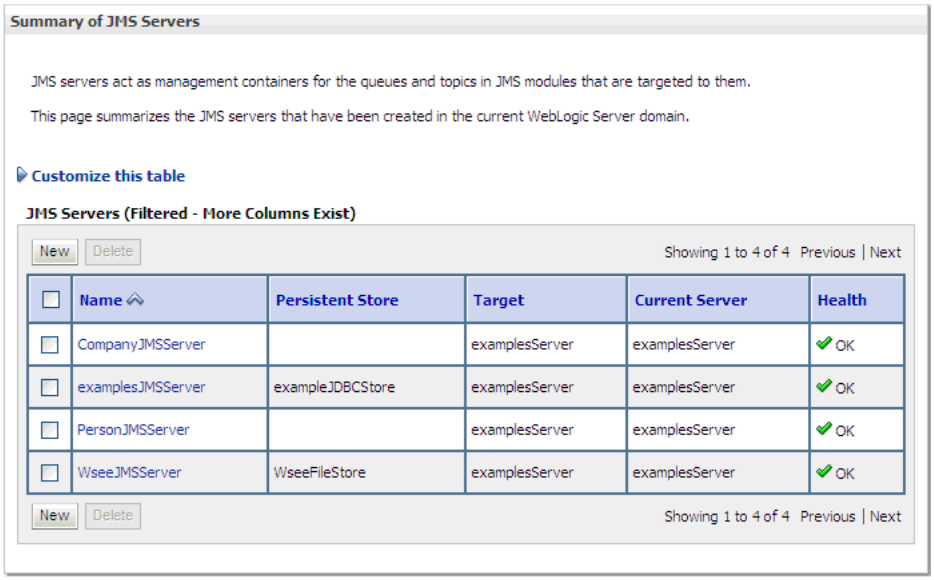
- JMS Server
- JMS Module
- JMS Connection Factory in the specific JMS Module
- JMS Topic in the specific JMS Module

To Create JMS Server

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Servers**.

   A Summary of JMS Servers appears in the right panel. It includes a table that summarizes the JMS servers that have been created in the current WebLogic Server domain.

Figure 2–11 Summary of JMS Servers Panel

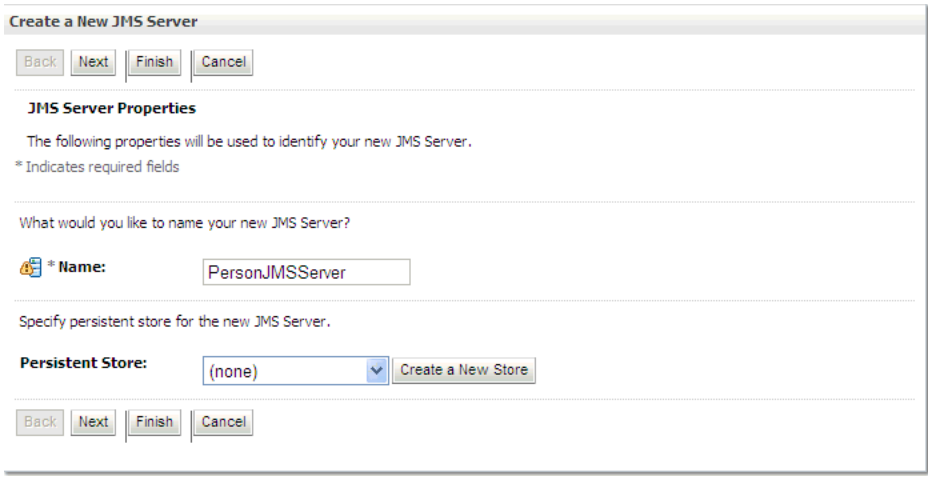


Note: The JDNI name you created in "To Create JDBC Data Resources for an MPI Application Project for MySQL" appears in the table of previously created JMS Servers; that is, **PersonJMSServer**.

2. In the table of previously created JMS Servers, click **New**.

   The Create a New JMS Server panel appears.

Figure 2–12 Create a New JMS Server Panel



3. In the Name field, type the name for your new JMS Server.

   Note: This name already exists in the table of previously created JMS Servers (in the example, **PersonJMSServer**).

4. Click **Next**.

   Select targets appears in the right panel under Create a New JMS Server.

5. From the Target drop-down list select a target server instance or migratable target on which you want to deploy the JMS Server.

   Note: The default server instance is exampleServer.

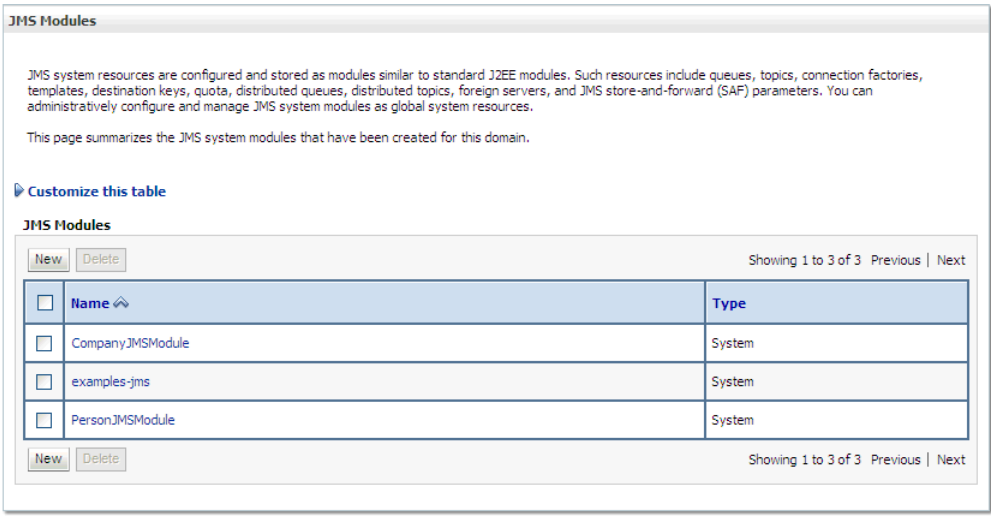
6. Click **Finish**.

To Create JMS Module

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Modules**.

   The JMS Modules panel appears.

Figure 2–13 JMS Modules Panel - JMS Modules Table



2. In the JMS Modules table, click **New** to add a new JMS Module.

   The Create JMS System Module panel appears.

3. In the Name field, type the new JMS Module name.

   Note: Again, remain consistent to the name chosen for the JDBC Data Source and the JMS Server (in the previous examples the key word was "Person," making this name **PersonJMSModule**).

4. Click **Next**.

   Targets appears in the right panel under Create a New JMS System Module.

5. In the Servers area, select the server or cluster on which you want to deploy this JMS system module.

   Note: Retain the default, examplesServer.

6. Click **Finish**.

To Create JMS Connection Factory

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Modules**.
2. Choose the JMS Module (in the example, **PersonJMSModule**) from the table of JMS Modules.

   The Settings for PersonJMSModule page appears in the right panel.

3. In the Summary of Resources table, click **New**.
4. Under the Type column in the Summary of Resources table choose **Connection Factory** and click **Next**.

   Another panel of Create a New JMS System Module Resource appears.

5. In the Name field, type `PersonOutBoundSender`.

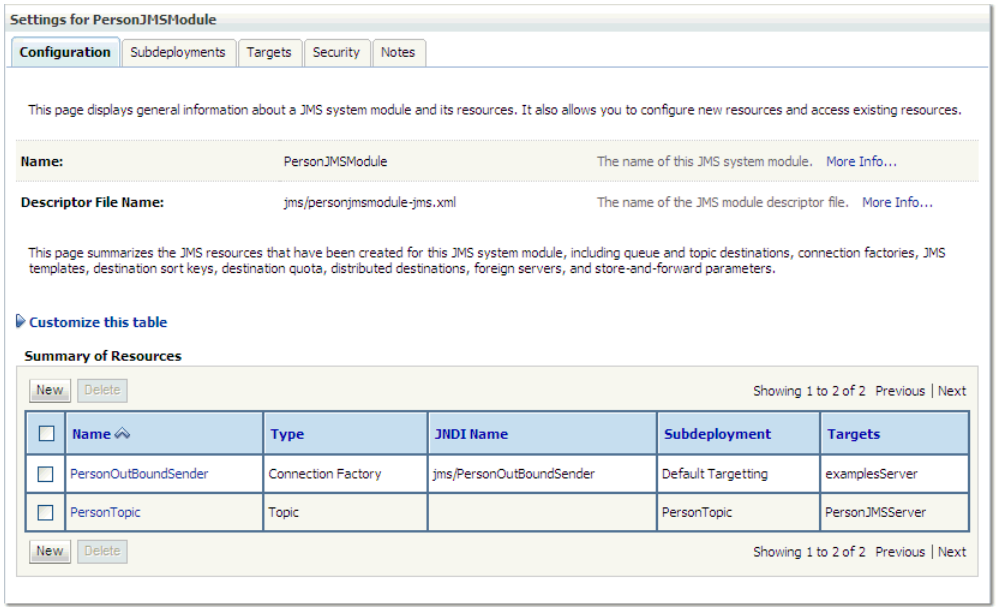
6. In the JNDI Name field, type `jms/PersonOutBoundSender`.
7. Click **Next**
8. In the Target field, retain the default server instance, which is exampleServer, and click **Finish**.
9. Click the **Transaction** tab for a newly created connection factory.
10. Select **XA Transaction Enabled** and click **Save**.

To Create JMS Topic

1. On the left panel, under Domain Structure, expand **Services**, click **Messaging**, and then choose **JMS Modules**.
2. In the right panel, choose the JMS Module you created (in the example, **PersonJMSModule**) from the table of JMS Modules.

   Settings for PersonJMSModule appears in the right panel with a Summary of Resources table.

Figure 2–14 Settings for PersonJMSModule Panel - Summary of Resources Table



3. In the Summary of Resources table, click **New**, select **Topic**, and then click **Next**.

   The Create a New JMS System Module Resource panel appears on the right side of the window. Use this panel to set the properties that identify the new topic.
4. In the Name field, under JMS Destination Properties, type `<name>Topic` (for example, `PersonTopic`).
5. Set **jms/PersonTopic** as the JNDI Name and click **Next**.

   The Create a New JMS System Module Resource page appears in the right panel. Use this page to set the properties that will be used to target your new JMS system module resource.
6. In the Subdeployments drop-down list, select the topic name you just created (for example, `PersonTopic`) and click **Create a New Subdeployment**.

7. In the Subdeployment Name field, type `<name>Topic` (for example, `PersonTopic`), and click **OK**.
8. In the Targets table of JMS Servers, select **<name>JMSServer** (for example, **PersonJMSServer**).
9. Click **Finish**.

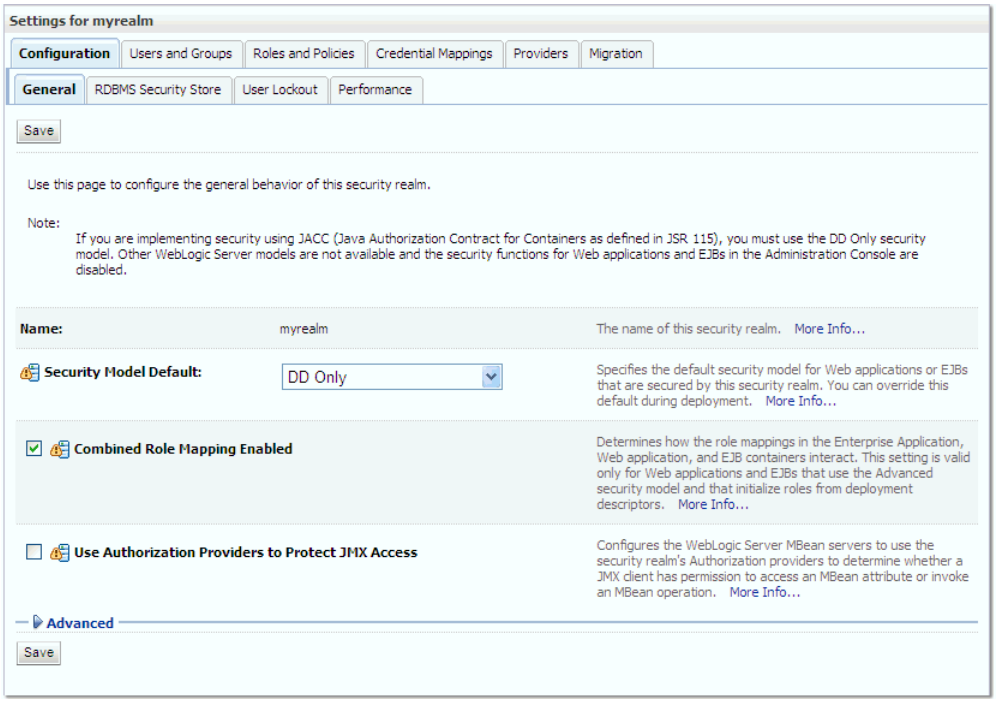
Setting Up the User

In this step you create the MasterIndex.Admin and Administrator groups, and then create a new user within the two groups.

1. On the left panel, under Domain Structure, expand **Services**, and then choose **Security Realms**.
2. In the table on the Summary of Security Realms panel, click **myrealm**, which is the name of the realm.

   The Settings for myrealm panel appears.

Figure 2–15 Settings for myrealm Panel



3. Select the **Users and Groups** tab and then click **Groups**.
4. In the Groups table, click **New**.
5. In the Name field, type `MasterIndex.Admin` and click **OK**.
6. In the Groups table, click **New**.
7. In the Name field, type `Administrator` and click **OK**.
8. On the Settings for myrealm panel, select **Users and Groups** and then **Users**.
9. In the Users table, click **New**.
10. Type a name and a password for the new user you are creating and click **OK**.

11. Select **User Group**.
12. To add the two groups you created to the user you created, from the Available list, drag **MasterIndex.Admin** to the **Chosen** list, and then drag Administrator to the **Chosen** list.

3

Using MPI and IHE Profile Applications on WebLogic

This chapter provides procedures that explain how to deploy and run an MPI Application or an IHE Profile Application on an Oracle WebLogic Server.

This chapter includes the following section:

- "Deploying and Running Applications on Oracle WebLogic Server"

Deploying and Running Applications on Oracle WebLogic Server

This procedure leads you through the steps to deploy and run an IHE Profiles Application and an MPI Application on Oracle WebLogic Server.

To Deploy and Run Applications on an Oracle WebLogic Server

The procedure is the same for an IHE Profiles Application and an MPI Application, except step 7, and the differences are pointed out.

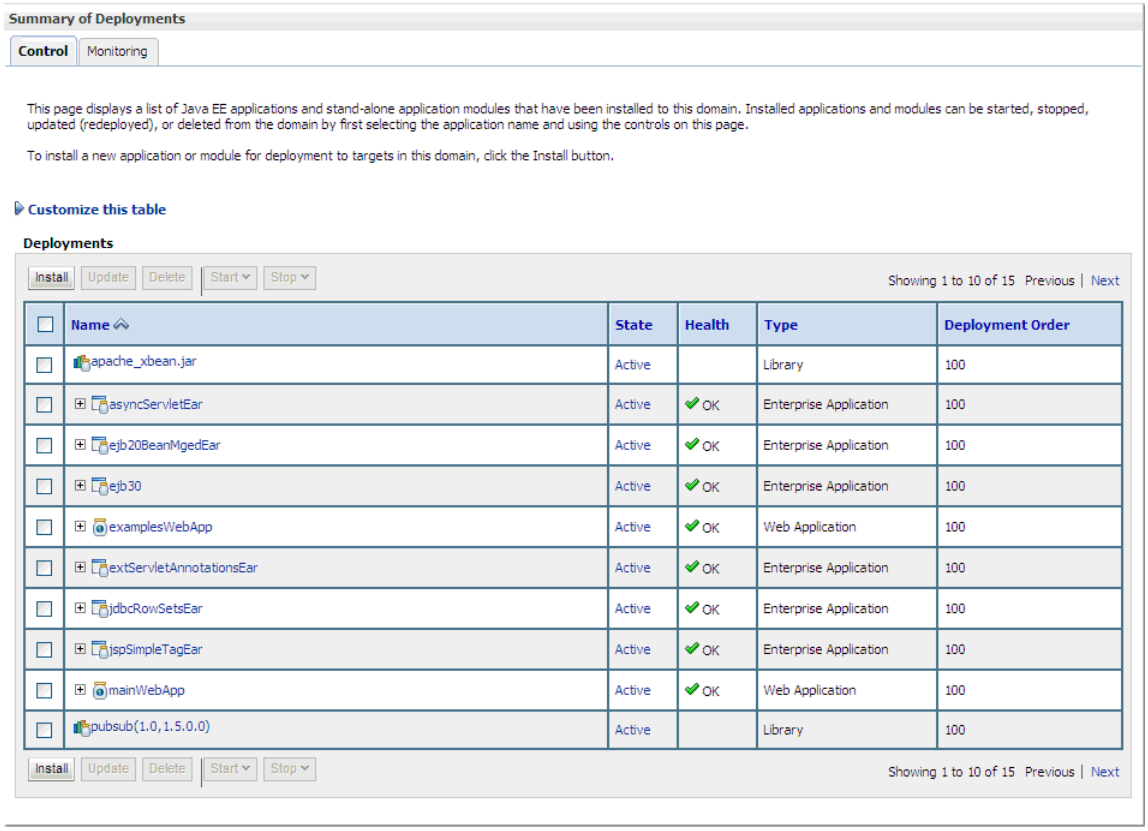
1. On the left panel of the WebLogic Server Administration Console, under Domain Structure, select **Environment** and then choose **Deployments**.

   The Summary of Deployments panel appears.

2. On the right side of the panel under Deployments, click **Install**.

   A Summary of Deployments panel with a Deployments table containing a list of EAR files appears.

Figure 3–1 Summary of Deployments Panel - Deployments Table



3. Locate your application EAR and click **Next** (in the procedures in Chapter 2, "Oracle WebLogic Server Configuration."

   The Install Application Assistant page appears in the right panel.

4. Locate the deployment you want to install and prepare for deployment.

   Tip: Select the file path that represent the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You can also enter the path of the application directory or file in the Path field.

   Note: Only valid file paths are displayed. If you cannot find your deployment files, upload your file(s) and/or confirm that your application contains the required deployment descriptors.

5. Click **Next**.

   Note: When deploying an MPI EAR file through the WebLogic Admin Console, under Security make sure that you choose **DD Only**. If you choose one of the other options, you will not be able to log into the MIDM.

6. Click **Finish**.

7. Launch **Master Index Data Manager** (MIDM).
8. From a web browser, enter the following:
   - For IHE Profiles Application: `http://localhost:7001/PatientMIDM`
   - For MPI Application: `http://localhost:7001/PersonMIDM`
9. Log in using your user name and password.