Oracle® Healthcare Master Person Index

Provider Index User's Guide

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Oracle Healthcare Master Person Index Provider Index User's Guide, Release 4.0

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Contents

Preface

The Provider Indexes were created to help you solve a business problem by providing you with templates that are configurable to your specific provider healthcare requirements. They enable you to set up a skeleton of an individual or organizational provider application without having to create everything from scratch, allowing you to avoid trial and error. But this does not mean your application is immediately a fully-functioning project for you will need to configure it as well as set various parameters that are specific to your healthcare needs, such as standardization and matching. This guide points to OHMPI documents that provide the information you need to complete these tasks.

Audience

This document is intended for users of the Oracle Healthcare Master Person Index (OHMPI) that want to set up an application for their specific Provider Index needs from a template.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

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

Related Documents

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

- *Oracle Healthcare Master Person Index Analyzing and Cleansing Data User's Guide*

- *Oracle Healthcare Master Person Index Australia Patient Solution User's Guide*

- *Oracle Healthcare Master Person Index Command Line Reports and Database Management User's Guide*

- *Oracle Healthcare Master Person Index Configuration Guide*

- *Oracle Healthcare Master Person Index Configuration Reference*

- *Oracle Healthcare Master Person Index Data Manager User's Guide*

- *Oracle Healthcare Master Person Index Installation Guide*

- *Oracle Healthcare Master Person Index Loading the Initial Data Set User's Guide*

- *Oracle Healthcare Master Person Index Match Engine Reference*

- *Oracle Healthcare Master Person Index Message Processing Reference*

- *Oracle Healthcare Master Person Index Provider Index User's Guide*

- *Oracle Healthcare Master Person Index Real-time Loader User's Guide*

- *Oracle Healthcare Master Person Index Relationship Management Data Manager User's Guide*

- *Oracle Healthcare Master Person Index Relationship Management REST APIs Reference Guide*

- *Oracle Healthcare Master Person Index Relationship Management User's Guide*

- *Oracle Healthcare Master Person Index Release Notes*

- *Oracle Healthcare Master Person Index Security Guide*

- *Oracle Healthcare Master Person Index Standardization Engine Reference*

- *Oracle Healthcare Master Person Index Third Party Licenses and Notices*

- *Oracle Healthcare Master Person Index United Kingdom Patient Solution User's Guide*

- *Oracle Healthcare Master Person Index United States Patient Solution User's Guide*

- *Oracle Healthcare Master Person Index User's Guide*

- *Oracle Healthcare Master Person Index Working With HPD Profile Application User's Guide*

- *Oracle Healthcare Master Person Index Working With IHE Profiles User's Guide*

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

Finding Information and Patches on My Oracle Support

Your source for the latest information about Oracle Healthcare Master Person Index is Oracle Support's self-service Web site My Oracle Support (formerly MetaLink).

Before you install and use Oracle Healthcare Master Person Index, always visit the My Oracle Support Web site for the latest information, including alerts, White Papers, installation verification (smoke) tests, bulletins, and patches.

Creating a My Oracle Support Account

You must register at My Oracle Support to obtain a user name and password account before you can enter the Web site.

To register for My Oracle Support:

1. Open a Web browser to https://support.oracle.com.

2. Click the **Register here** link to create a My Oracle Support account. The registration page opens.

3. Follow the instructions on the registration page.

Signing In to My Oracle Support

To sign in to My Oracle Support:

1. Open a Web browser to https://support.oracle.com.

2. Click **Sign In.**

3. Enter your user name and password.

4. Click **Go** to open the My Oracle Support home page.

Finding Information on My Oracle Support

There are many ways to find information on My Oracle Support.

Searching by Article ID

The fastest way to search for information, including alerts, White Papers, installation verification (smoke) tests, and bulletins is by the article ID number, if you know it.

To search by article ID:

1. Sign in to My Oracle Support at https://support.oracle.com.

2. Locate the Search box in the upper right corner of the My Oracle Support page.

3. Click the sources icon to the left of the search box, and then select **Article ID** from the list.

4. Enter the article ID number in the text box.

5. Click the magnifying glass icon to the right of the search box (or press the Enter key) to execute your search.

   The Knowledge page displays the results of your search. If the article is found, click the link to view the abstract, text, attachments, and related products.

Searching by Product and Topic

You can use the following My Oracle Support tools to browse and search the knowledge base:

- Product Focus — On the Knowledge page under Select Product, type part of the product name and the system immediately filters the product list by the letters you have typed. (You do not need to type "Oracle.") Select the product you want from the filtered list and then use other search or browse tools to find the information you need.

- Advanced Search — You can specify one or more search criteria, such as source, exact phrase, and related product, to find information. This option is available from the **Advanced** link on almost all pages.

Finding Patches on My Oracle Support

Be sure to check My Oracle Support for the latest patches, if any, for your product. You can search for patches by patch ID or number, or by product or family.

To locate and download a patch:

1. Sign in to My Oracle Support at https://support.oracle.com.

2. Click the **Patches & Updates** tab. The Patches & Updates page opens and displays the Patch Search region. You have the following options:

- In the **Patch ID or Number is** field, enter the number of the patch you want. (This number is the same as the primary bug number fixed by the patch.) This option is useful if you already know the patch number.

- To find a patch by product name, release, and platform, click the **Product or Family** link to enter one or more search criteria.

3. Click **Search** to execute your query. The Patch Search Results page opens.

4. Click the patch ID number. The system displays details about the patch. In addition, you can view the Read Me file before downloading the patch.

5. Click **Download.** Follow the instructions on the screen to download, save, and install the patch files.

Finding Oracle Documentation

The Oracle Web site contains links to all Oracle user and reference documentation. You can view or download a single document or an entire product library.

Finding Oracle Health Sciences Documentation

To get user documentation for Oracle Health Sciences applications, go to the Oracle Health Sciences documentation page at:

http://www.oracle.com/technetwork/documentation/hsgbu-154445.html

> **Note:** Always check the Oracle Health Sciences Documentation page to ensure you have the latest updates to the documentation.

Finding Other Oracle Documentation

To get user documentation for other Oracle products:

1. Go to the following Web page:

   http://www.oracle.com/technology/documentation/index.html

   Alternatively, you can go to http://www.oracle.com, point to the Support tab, and then click **Documentation**.

2. Scroll to the product you need and click the link.

3. Click the link for the documentation you need.

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

Creating a Provider Index Using OHMPI

This chapter introduces you to the Oracle Healthcare Master Person Index (OHMPI) Provider Indexes. It also provides instructions that help you to use a solution template to create and generate a provider index application using OHMPI, set up a database, set resources in an application server, and then build and deploy the application. But it goes beyond this, for you will need to set your matching and standardization levels to ensure that your project is set up to function per your specifications. You will also need to configure your application specifically to your healthcare enterprise. This guide will provide pointers to OHMPI documents that contain detailed information on what you need to know to perform these tasks.

This chapter is divided into:

- What you Need to Know

- What You Need to Do

These sections provide information about the Provider Indexes, why you should use them, and an overview on how to use it. The purpose of a solution is to help you solve a business problem of creating an individual or organizational provider index in short amount of time.

What You Need to Know

The following section provides conceptual information about a Provider Index.

- Introducing Healthcare Providers and Provider Index Solutions on page 1-2

- Understanding the Benefits of Provider Index Solutions on page 1-2

What You Need to Do

The first section provides a procedure that leads you through using a Provider Index Solution with OHMPI to create an application, configure it, and then deploy it. The second details setting-up a database (if one is not in place) and setting resources in an application server. The final section presents an overview procedure for using the Master Index Data Manger (MIDM) to manage a Provider Index project.

- Creating a Provider Index Application Using a Template in OHMPI on page 1-3

  This section includes the following sections:

  - Creating and Configuring a Provider Index Application on page 1-4

  - Setting Up a Database and the Application Server on page 1-7

  - Deploying the OHMPI Application on page 1-10

  - Opening and Using the Master Index Data Manager on page 1-10

Introducing Healthcare Providers and Provider Index Solutions

Healthcare providers are individuals or organizations that identify, prevent, or treat illnesses and disabilities. That is, they are individual or organizational providers of health or medical services. There are many terms associated with these professionals and organizations, such as primary care provider, health professional, caregiver, and they are associated with all facets of the healthcare industry ranging from, but not limited to, the following:

- Individual Medical Practitioners

    - Physicians, nurses, and so on

    - Surgical and other medical specialists

    - Dental care

    - Public health

    - Mental health

    - Maternal and newborn care

    - ...

- Organizations and Institutions

    - Hospitals

    - Medical Laboratories

    - Medical nursing homes

    - Health care centers

    - Pharmacies

    - ...

The Provider Indexes are out-of-the-box solutions that leverage the framework and services of OHMPI and provide preconfigured data models and matching configurations, which you can quickly customize. The OHMPI-based solutions also allow you to create cross-references on provider data across the source systems in your healthcare network. They also support de-duplication of healthcare provider data.

Understanding the Benefits of Provider Index Solutions

This section introduces you to the Provider Index templates. The purpose is to help you solve a business problem by providing you with templates that are configurable to your specific requirements, enabling you to create single provider index solutions that include all required and optional bits of information that are specific to each and every provider in your healthcare system. After the database is completed and operational, you will have organizational and/or individual provider models that eliminate errors inherent in systems that have provider information spread throughout a number of hard copy and electronic systems that are easy to access and use.

The provider index templates come with an object model, code modules in `codelist.sql`, a set of match fields, and block searches.

> **Note:** In reality, all OHMPI projects require much more fine-tuning and custom plug-ins to satisfy site specific requirements.

As these templates were specifically designed as Provider Index solutions to healthcare needs, they allow you to create an OHMPI projects in a reasonably short amount of time. With the Oracle database in place, the projects created with these templates can be generated, deployed and run.

You can specify that a sub-object becomes a required object. For example, **IndProvider** is a primary object and it has a **Names** sub-object. As an IndProvider object has at least one name, and it is impossible to create an IndProvider without a name, the Names sub-object can now be set as required. Use the OHMPI Configuration Editor to specify whether a sub-object is required. When you set this information, it is saved to the `object.xml` file.

Benefits for using the solution include:

- Set up of provider index solution templates using Oracle Healthcare Master Person Index:

    - Enables easy alteration of the templates to suit your requirements

    - Provides a data model for individual and organizational providers

    - Provides preconfigured matching and standardization for out-of-the-box use

    - Provides a pre-populated code list

- Completed Provider Index application:

    - Provides easy integration through web services or the Java API

    - Reduces healthcare provider identity errors

    - Increases reliability while reducing cost

Creating a Provider Index Application Using a Template in OHMPI

If you are new to OHMPI, see the *Oracle Healthcare Master Person Index User's Guide* for it gives you an overview and provides detailed steps for setting up a master person index application. For information on how to start and use the Master Index Data Manager (MIDM), see the *Oracle Healthcare Master Person Index Data Manager User's Guide*. These guides feature the following:

- Create the OHMPI application

- Configure code lists

- Create the database

- Define the database connection

- Define security

- Build and deploy the project

- Launch Master Index Data Manager

The purpose of the previously mentioned guides is to give you an overall view of the steps involved to create a master person index application. However, and this is important, if you decide to use a Provider Index Solution as your model, you do not need to create it from scratch. From within NetBeans IDE use OHMPI's project wizard to navigate to and select the Provider project icon and then select Organization or Individual. As the project has already been created and the object structure is in place, all you have to do is move through a number of steps and set-up the template so that it serves your company's requirements.

The following sections provide the information you need to create an OHMPI application from a Provider Index template, set-up a database (if you have not done so already), setting your resources in an application server, and using the MIDM to manage your project:

- Creating and Configuring a Provider Index Application on page 1-4
- Setting Up a Database and the Application Server on page 1-7
- Deploying the OHMPI Application on page 1-10
- Opening and Using the Master Index Data Manager on page 1-10

Creating and Configuring a Provider Index Application

Before You Begin

Ensure that OHMPI is installed before beginning this procedure.

To Create an MPI Application

1. On the NetBeans toolbar, click **New Project**.

    The New Project wizard appears, and opens on the Choose Project window.

2. Under Categories select **OHMPI**, under Projects select **Master Person Index Application**, and then click **Next**.

    The Name and Location window appears with default NetBeans project name and directory paths.

3. Enter a NetBeans project name and the path where you want to store the project files in the upper portion of the window or accept the defaults.

4. Select the application server you are using from the drop-down list.

    a. If no application servers appear in the list, click **Manage**.

        The Servers window appears.

    b. Click **Add Server**.

        The Add Servers Instance window appears.

    c. Select the Oracle WebLogic Server, and click **Next**.

    d. Under Server Location, browse to the location of your application server, or accept the defaults and click **Finish**.

        You are returned to the Servers window with the application server you selected listed under Servers in the left pane.

    e. Click **Close**.

        The Name and Location window reappears.

5. The J2EE field has been populated.

6. The **Set as Main Project** is selected; if you do not want this master person index to be the main project, deselect the option.

7. Click **Next**.

    The Name Application window appears with a default application name.

    Before you can configure a new master person index application, you should give the application a unique name. It is a good practice to give each master person

index application a unique name you create because certain services within the application server are based on the application name. Dependent services include the data source for the JDBC connection and the outbound Topic (if one is used).

8. In the **Application** field of the Name Application window, enter a name for the new master person index application, and then click **Next**.

   The Define Source Systems window appears.

9. In the **Name** field of the Define Source Systems window, enter the processing code of one of the source systems (for example, HOS or MC), and then click **Add** (see below).

   The source system is the key to your network. If it is a hospital (for example, Hospital or Medical Center, the system might be HOS or MC), all of its patient records would be sent into the master person index with a system code/LID of HOS/120210210 or MC/48481234. For more information on the LID, see *Oracle Healthcare Master Person Index User's Guide*.

   You can enter any of the following characters:

   - ! _ ~ ( ) { } + \Q # $ % & : ; - /

   - a-z

   - A-Z

   - 0-9

   - þ ÿ Þ ß 'à-ö ø-ý À-Ö Ø-Ý

     The value you entered appears in the Systems box.

     Note: Be sure to enter the processing code of the system and not the name. This value is entered in update.xml for defining survivor strategies for the single best record (SBR).

     ---

10. Do any of the following:

    - To define additional systems, repeat the above step for each source system that will share information with the master person index application.

    - To remove a system from the list, highlight the name of that system in the Systems box, and then click **Remove**.

    - To remove all systems from the list, click **Remove All**.

11. When you have defined all required source systems, click **Next**.

    The Define Deployment Environment window appears.

12. On the Define Deployment Environment window, enter the following information to specify information about the deployment environment, including the database, date format, and transaction mode:

    - **Database** - The type of database being used for the master person index application. Select **Oracle**.

    - **Date and Time Formats** - The date and time formats for the master person index system. This defines how date and time must be entered and how they appear on the MIDM. These formats acts as a default format if you do not set the field level format.

- **Object Date Format**: This is the default or application level format used by OHMPI backend for the *date* data type.

- **Object Time Format**: This is the default or application level format used by OHMPI backend for the *timestamp* data type.

- **MIDM Date Format**: This is the default or application level format used by MIDM for the *date* data type.

- **MIDM Time Format**: This is the default or application level format used by MIDM for the *timestamp* data type.

■ **Transaction Mode** - An indicator of whether transactions are distributed. Select one of the following options:

- **XA (across applications)**, if the transactions will be distributed across multiple applications.

- **XA (within application only)**, if the transactions will be distributed just across the master person index application.

- **Local**, if the transactions will not be distributed.

13. Click **Next**.

The Define Enterprise Object window appears.

14. Click the **Properties** tab.

15. Enter the required values.

The date format that you configure here gets copied to object.xml.

16. Click the **MIDM** tab.

17. Enter the required values.

The date format that you configure here gets copied to midm.xml.

18. From the drop-down list of the Add Solution icon, select **Provider** and then **Organization** or **Individual**.

The object model is populated. It has been pre-set, that is all the object fields were already created with a set of default properties that define each field, and you are unable to change anything (you can change it using the OHMPI Configuration Editor later).

> **Note:** If you mistakenly selected the wrong provider solution when you started the procedure, you can remove this provider solution by clicking the red X in the tool bar and selecting another provider solution.

Click **Next**.

The Generate Project Files window appears which lists the files that will be generated. You can choose to generate the remaining master person index files now by checking the box, but if you intend to change the configuration you will need to again generate all the application files.

Click **Finish**.

The Provider Index project is created.

19. In the Projects pane (left side of NetBeans), if not already expanded, expand the Provider Index application you just created.

20. To configure the created project, right-click **Configuration** and then select **Edit**.

The OHMPI Configuration Editor opens on the right side of the window. For detailed information about the Master Person Index object field properties, see the *Oracle Healthcare Master Person Index User's Guide*.

> **Note:** As the Individual and the Organization solution templates were created to be as useful as possible to all locales, they are general in format. This means that you may see fields that are not applicable to your healthcare needs. When this happens and you see an object or sub-object field that is pre-set to **true** when in fact it is not required, use the OHMPI Configuration Editor to either set it to **false** or right-click the field in the Object Definition column and select **Delete**.

21. As desired, modify the object properties for any field to suit your data processing, storage, and display requirements. After you modify a property value, press **Enter** to apply the change.

22. To save your change, click the **Save** icon on the OHMPI Configuration tool bar.

23. When you have completed configuring the object fields, right-click the **Provider Index application** and from the context menu select **Generate Master Index Files**.

The provider solution came with `codelist.sql` and `system.sql`; when you generate the master index files, two additional SQL files are created: `create.sql` and `drop.sql`.

You are now ready to set up the database and resources on the application server.

Setting Up a Database and the Application Server

Before you are able to use the Master Index Data Manager, you need to perform a few tasks that are required for runtime to function properly. These include creating one of the following databases and configuring one of the following applications servers:

- Creating an Oracle Database on page 1-7
- Using the Admin Console to Set Resources (WebLogic) on page 1-8

Creating an Oracle Database

All the necessary SQL scripts have been provided for the supported databases.

> **Note:** For detailed instructions on how to create a database, see the *Oracle Healthcare Master Person Index User's Guide*.

Before you begin, make sure you have Oracle installed as a service with the remote host access enabled. Perform the following steps to create all databases:

1. Create an Oracle environment and user for the Master Person Index tables by running the following command:

```
grant CREATE SESSION, CREATE TABLE, CREATE TRIGGER, CREATE PROCEDURE,
UNLIMITED TABLESPACE, CREATE TYPE to USER_NAME identified by PASSWORD
```

where *USER_NAME* is the user's name (for example: **ind**).

2. Open `systems.sql`, and if needed add additional source systems.

3. Open `codelist.sql` in a Text Editor, and add any common code information you need for the master person index system.

> **Note:** See Step 5 for the location of this file.

For more information about code lists and modifying this file, see the *Oracle Healthcare Master Person Index User's Guide*.

> **Note:** This step is optional. The default configuration does not use common code tables. Adding this feature will cause additional validations to be performed against incoming data.

4. Log in to the **ind** schema as the user you created above.

5. Run the following SQL files against the **ind** schema (*project_name*\ihe-mpi\src\DatabaseScript). The `create.sql` file must be run first.

   - `create.sql`

   - `systems.sql`

   - `codelist.sql`

Using the Admin Console to Set Resources (WebLogic)

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

1. Start and stop the Oracle WebLogic Server. For instructions, see *Oracle Fusion Middleware Online Documentation 12c Release 1 (12.1.3)*.

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 *application_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/*application_name*DataSource.

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

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, select 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: ind).

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, the default for Oracle).

16. In the **Database User Name** field, type the database account user name you want to use to create database connections (for example: ind, as created in the database step).

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 *application_name*DataSource 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/*application_name*SequenceDataSource.

You are now ready to deploy your application.

Creating a User and Group (WebLogic)

Use the following tables to create a user and group on WebLogic:

Table 1–1   Realm User Settings (MIDM Login)

User ID	Select a user name that is meaningful to you, for example **ohmpi**.
Group List	MasterIndex.Admin,Administrator[1]
Password	The password is of your choosing, for example **ohmpi**.

[1] This is a super group, with all privileges.

Table 1–2   Realm User Settings (Web Server Security)

User ID	This user name must be **MasterIndex.WSUser**.
Group List	`MasterIndex.Admin`[1]
Password	The password is of your choosing, for example **test123**.

[1]   This is a super group, with all privileges.

Deploying the OHMPI Application

1. On the left panel of the WebLogic Server Admin Console, under Domain Structure, select **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.

3. Locate your application EAR and click **Next**.

   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 OHMPI 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**.

You are now ready to open the MIDM and manage your OHMPI project.

Opening and Using the Master Index Data Manager

1. Open the Master Index Data Manager.

   The Master Index Data Manager (MIDM) is a web-based interface that allows you to access, monitor, and maintain the data stored by the master person index applications you create using OHMPI. Use the MIDM to search for, add, update, deactivate, merge, unmerge, and compare object profiles. You can also view and

correct potential duplicate profiles, view transaction histories, view an audit log, and print reports.

The MIDM is your primary tool to view and maintain the data stored in the master index database and cross-referenced by a master index application.

a. Using a browser, enter the URL to open the MIDM: `http://localhost:`*http-port-number*`/`*application_name*`MIDM`.

> **Note:** The default port number for WebLogic is **7001**. For *http-port-number* you need to use the port number defined during your OHMPI installation. The *application_name* is the name of the solution template you selected when you began to create the Master Person Index application. For example, you might choose to name the *solution-object-name* **Organization** for the Provider Index Organization solution, making the key string **OrganizationMIDM**.

b. If you changed the default port but cannot remember the new port number, do one of the following.

- From the NetBeans IDE, bring up the HTTP monitor and edit the port number of the HTTP server by selecting the **Client and Server** tab and then editing the port number which is listed as Port number of HTTP server.

- Open the `domain.xml` file.

> **Note:** This file is found in the `OHMPI-install`\appserver\domains\domain1\config directory.

Find a line similar to the following example. The line you are looking for has the following values:

- http-listener acceptor-threads="1"

- default-virtual-server="server"

- security-enabled="false"

This is usually the first http-listener entry in the `domain.xml` file.

```
<http-listener acceptor-threads="1" address="0.0.0.0"
blocking-enabled="false"

default-virtual-server="server" enabled="true" family="inet"
id="http-listener-1"

port="7001" security-enabled="false" server-name="" xpowered-by="true">
```

c. Log into the MIDM using **ohmpi** or your user for the User ID and Password.

For information about logging in and logging out of the MIDM, see the *Oracle Healthcare Master Person Index Data Manager User's Guide*.

2. Use the MIDM to add new records.

This provides the initial steps for creating a new record, and then offers suggestions for you to try as you familiarize yourself with the Organization or

Individual Provider Index application and using Master Index Data Manager to tweak the solution to meet your particular requirements.

To view tables that describe the properties you define on the MIDM Field Properties page of the wizard, see the *Oracle Healthcare Master Person Index User's Guide*.

a. In the MIDM GUI, click **Source Record**.

b. To create a new record, click **Add**.

c. In the **Pick Out System** drop-down list, select **GMH**.

d. Enter a Local ID.

For example, **444-444-4444**.

e. In the OrgProvider (or IndProvider) information section, at a minimum, specify the required values.

f. To add the record, click **Submit**.

The following are examples of what you might try to increase your knowledge of the Master Index Data Manager GUI.

- Add the same person twice, but give the two records different dates of birth. Be sure to select **MCT** as the system for the second record.

- Add different people.

- Add the same person twice. Be sure to select **MCT** as the system for the second record.

- Check for duplicates.

  – For information about finding, merging, and resolving duplicate profiles on the MIDM, see the *Oracle Healthcare Master Person Index Data Manager User's Guide*.

  > **Note:** This includes a section that discusses duplicate records search fields.

- Look at the various tabs and try different queries or actions once you have some duplicates.

2

Default Provider Object Model, Matching Configuration, and Code Lists

This chapter provides information about Organization and Individual Provider Index primary objects **(OrgProvider** and **IndProvider**). It also presents a listing of the organizational and individual Provider Index matching configurations, and pre-populated code lists.

This chapter includes the following sections:

Understanding Provider Index Primary Objects and Sub-Objects

This section provides tables that describe the provider index primary object and sub-objects and field values. The Provider Index data models are based on the following standards: US National Provider Identifier (NPI), Australia Provider Index standard, and the IHE Healthcare Provider Directory, along with the best practices of OHMPI. The below tables illustrate the Data Model for the Organizational Provider Index and the Individual Provider Index.

Note: In the following tables, the primary object attributes are in normal font and sub-objects are in *bold-italic* font, and sub-object attributes are in *italic* font.

Abbreviation List of Names Used in the Following Tables

- **BusNames**: Business name

- **Cert**: Certificates

- **DOB**: Date of Birth

- **DOD**: Date of Death

- **EIN**: Employer Identification Number

- **ESURI**: electronic service uniform resource identifier. e.g. web service URL

- **ITIN**: Individual Taxpayer Identification Number

- **MREmail**: Medical Record Delivery E-mail

- **MStatus**: Marital Status

- **SSN**: social security number

- **Telecomm**: telecommunication

Table 2–1   Organizational Provider Data Model - OrgProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
ProviderStatus	-	R	String	15
MREmail[2]	-	O	String	250
EIN[3]	-	O	String	16
Names	-	-	-	-
-	*NameType*	R	String	15
-	*Name*	R	String	200
-	*Name_Std*	O	String	200
-	*Name_Phon*	O	String	200
-	*Name_OrgType*	O	String	40
-	*Name_AssocType*	O	String	40
-	*Name_Industry*	O	String	40
-	*Name_Sector*	O	String	40
-	*Name_Alias*	O	String	200
-	-	-	-	-
Locations	-	R	-	-
-	*LocationType*	R	String	15
-	*AddressLine1*	R	String	40
-	*AddressLine1_HouseNo*	O	String	10
-	*AddressLine1_StDir*	O	String	5
-	*AddressLine1_StName*	O	String	40
-	*AddressLine1_StPhon*	O	String	8
-	*AddressLine1_StType*	O	String	5
-	*AddressLine1_Building*	O	String	5
-	*AddressLine1_Apart*	O	String	5
-	*AddressLine1_Structure*	O	String	5
-	*AddressLine1_Locality*	O	String	5
-	*AddressLine1_County*	O	String	45
-	*AddressLine2*	O	String	40
-	*City*	R	String	30
-	*StateCode*	O	String	2
-	*PostalCode*	O	String	8
-	*PostalCodeExt*	O	String	4

Table 2–1   (Cont.) Organizational Provider Data Model - OrgProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
-	*Country*	O	String	2
-	*LocPhone*	O	String	20
-	*LocFax*	O	String	20
-	-	-	-	-
Contacts	-	O	-	-
-	*ContactType*	R	String	15
-	*ContactName*	R	String	200
-	*ContactPhone*	O	String	20
-	*ContactEmail*	O	String	250
-	-	-	-	-
Languages	-	O	-	-
-	*Language*	R	String	2
-	-	-	-	-
Credential	-	O	-	-
-	*CredType*	R	String	15
-	*CredName*	O	String	250
-	*CredNumber*	O	String	20
-	*CredDesc*	O	String	250
-	*CredIssueDate*	O	Date	12
-	*CredRenewDate*	O	Date	12
-	*CredState*	O	String	2
-	*CredCountry*	O	String	2
-	*CredStatus*	O	String	15
-	-	-	-	-
Identifier	-	O	-	-
-	*ID*	O	String	20
-	*IDIssuer*	O	String	200
-	*IDType*	R	String	15
-	*IDGeoArea*	O	String	15
-	*IDStatus*	R	String	15
-	*IDRenewDate*	0	Date	12
-	-	-	-	-
Cert	-	O	-	-
-	*Certificate*	O	blob	NA
-	-	-	-	-
Specialty	-	O	-	-

Table 2–1   (Cont.) Organizational Provider Data Model - OrgProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
-	*Splty*	R	String	10
-	*SpltyLic*	O	String	200
-	*LicIssueState*	O	String	2
-	-	-	-	-
ESURIs	-	O	-	-
-	*ESURI*	R	String	250
-	-	-	-	-
Telecomm	-	O	-	-
-	*TelType*	R	String	15
-	*TelNumber*	O	String	20
-	*TelNumberExt*	O	String	6

[1]   In the Required or Optional column "R" represents required and "O" represents optional.
[2]   This is the medical records delivery email address.
[3]   This is the employer identification number.

Table 2–2   Individual Provider Index Data Model - Primary Object = IndProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
ProviderStatus	-	R	String	15
MREmail[2]	-	O	String	250
ITIN[3]	-	O	String	16
Gender	-	R	String	1
SSN	-	O	String	16
DOB	-	R	Date	12
DOD	-	O	Date	12
BirthState	-	O	String	2
BirthCountry	-	O	String	2
Citizenship	-	O	String	2
MStatus	-	O	String	1
Names	-	R	-	-
-	*Title*	O	String	15
-	*Prefix*	O	String	15
-	*FirstName*	R	String	40
-	*FirstName_Std*	O	String	40
-	*FirstName_Phon*	O	String	8
-	*MidName*	O	String	30

Table 2–2   (Cont.) Individual Provider Index Data Model - Primary Object = IndProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
-	*LastName*	R	String	40
	LastName_Std	O	String	40
-	*LastName_Phon*	O	String	8
-	*Suffix*	O	String	15
-	*NameType*	R	String	15
-	-	-	-	-
BusNames	-	O	-	-
-	*BusNm*	R	String	250
-	-	-	-	-
Locations	-	R	-	-
-	*LocationType*	R	String	15
-	*AddressLine1*	R	String	40
-	*AddressLine1_HouseNo*	O	String	10
-	*AddressLine1_StDir*	O	String	5
-	*AddressLine1_StName*	O	String	40
-	*AddressLine1_StPhon*	O	String	8
-	*AddressLine1_StType*	O	String	5
-	*AddressLine1_Building*	O	String	5
-	*AddressLine1_Apart*	O	String	5
-	*AddressLine1_Structure*	O	String	5
-	*AddressLine1_Locality*	O	String	5
-	*AddressLine1_County*	O	String	45
-	*AddressLine2*	O	String	40
-	*City*	R	String	30
-	*StateCode*	O	String	2
-	*PostalCode*	O	String	8
-	*PostalCodeExt*	O	String	4
-	*Country*	O	String	2
-	*LocPhone*	O	String	20
-	*LocFax*	O	String	20
-	-	-	-	-
Contacts	-	O	-	-
-	*ContactType*	R	String	15
-	*ContactName*	O	String	200
-	*ContactPhone*	O	String	20
-	*ContactEmail*	O	String	250

Table 2–2   (Cont.) Individual Provider Index Data Model - Primary Object = IndProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
-	-	-	-	-
Languages	-	O	-	-
	Language	R	String	2
-	-	-	-	-
Credential	-	O	-	-
-	*CredType*	R	String	15
-	*CredName*	O	String	250
-	*CredNumber*	O	String	20
-	*CredDesc*	O	String	250
-	*CredIssueDate*	O	Date	12
-	*CredRenewDate*	O	Date	12
-	*CredStatus*	O	String	15
-	*CredState*	O	String	2
-	*CredCountry*	O	String	2
-	-	-	-	-
Identifier	-	O	-	-
-	*ID*	O	String	20
-	*IDIssuer*	O	String	200
-	*IDType*	R	String	15
-	*IDGeoArea*	O	String	2
-	*IDStatus*	O	String	15
-	*IDRenewDate*	O	Date	12
-	-	-	-	-
Cert	-	O	-	-
-	*Certificate*	R	blob	NA
-	-	-	-	-
Specialty	-	O	-	-
-	*Splty*	R	String	10
-	*SpltyLicense*	O	String	200
-	*LicIssueState*	O	String	2
-	-	-	-	-
ESURIs	-	O	-	-
-	*ESURI*	R	String	250
-	-	-	-	-
Telecomm	-	O	-	-
-	*TelType*	R	String	15

Table 2–2   (Cont.) Individual Provider Index Data Model - Primary Object = IndProvider

Attributes of Primary Objects or Sub-Objects	Attributes of Sub-Objects	Required or Optional[1]	Data Type	Field Size
-	*TelNumber*	R	String	20
-	*TelNumberExt*	O	String	6

[1]   In the Required or Optional column "R" represents required and "O" represents optional.

[2]   This is the medical records delivery email address.

[3]   This is the individual taxpayer identification number.

Organizational and Individual Provider Index Matching Configuration

This section provides a listing of the default fields that are available for organizational and individual matching configuration, and are included with the Provider Index templates.

Listing of Organizational Provider Index Matching Configuration

You can find detail configuration in the Provider Index project configuration files: `mefa.xml, master.xml, matchConfigFile.cfg`.

- **Standardization Fields**

  `OrgProvider.Names[*].Name`

  `OrgProvider.Locations[*].AddressLine1`

- **Phoneticize Fields**

  `OrgProvider.Names[*].Name_Std`

  `OrgProvider.Locations[*].AddressLine1_StName`

- **Matching Fields**

  `Enterprise.SystemSBR.OrgProvider.Names[*].Name_Std`

  `Enterprise.SystemSBR.OrgProvider.EIN`

  `Enterprise.SystemSBR.OrgProvider.Locations[*].AddressLine1_HouseNo`

  `Enterprise.SystemSBR.OrgProvider.Locations[*].AddressLine1_StDir`

  `Enterprise.SystemSBR.OrgProvider.Locations[*].AddressLine1_StType`

  `Enterprise.SystemSBR.OrgProvider.Locations[*].AddressLine1_StName`

  `Enterprise.SystemSBR.OrgProvider.ESURIs[*].ESURI`

- **Matching Scores**

-	Agreement Score	Disagreement Score
Name_Std	15	-12
EIN	20	-20
AddressLine1_HouseNo	11	-3
AddressLine1_StDir	6	-1
AddressLine1_StType	6	-1
AddressLine1_StName	11	-9

-	Agreement Score	Disagreement Score
ESURI	15	-1
-	-	-
DuplicateThreshold: 16	-	-
MatchThreshold: 53	-	-

Listing of Individual Provider Index Matching Configuration

You can find detail configuration in the Provider Index project configuration files: `mefa.xml, master.xml, matchConfigFile.cfg`.

- **Standardization Fields**

    `IndProvider.Names[*].FirstName`

    `IndProvider.Names[*].LastName`

- `IndProvider.Locations[*].AddressLine1`

- **Phoneticize Fields**

    `IndProvider.Names[*].FirstName_Std`

    `IndProvider.Names[*].LastName_Std`

    `IndProvider.Locations[*].AddressLine1_StName`

- **Matching Fields**

    `Enterprise.SystemSBR.IndProvider.Names[*].FirstName_Std`

    `Enterprise.SystemSBR.IndProvider.Names[*].LastName_Std`

    `Enterprise.SystemSBR.IndProvider.SSN`

    `Enterprise.SystemSBR.IndProvider.DOB`

    `Enterprise.SystemSBR.IndProvider.Gender`

- **Matching Scores**

-	Agreement Score	Disagreement Score
FirstName_Std	10	-4
LastName_Std	10	-4
Gender	1	-20
SSN	15	-10
DOB	10	-15
-	-	-
DuplicateThreshold: 10	-	-
MatchThreshold: 30	-	-

Understanding What is Included in the Pre-populated Code Lists

Code lists are pre-populated for your convenience. The code lists (below) are found in the `codelist.sql` file. Feel free to customize the `codelist.sql` file.

- The "state" is populated with two-letter United States state code.

- The "country" is populated with two-letter country code.
- The "language" is populated with two-letter language code.