

Oracle® Healthcare Master Person Index
Command Line Reports and Database Maintenance User's
Guide
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Oracle Healthcare Master Person Index Command Line Reports and Database Maintenance User's Guide,
Release 2.0.2

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Preface

This guide provides information about setting up and running Oracle Healthcare Master Person Index (OHMPI) command line reports, maintaining databases, and implementing changes to existing OHMPI projects.

Audience

This document is intended for users of OHMPI that use command line reports, perform database maintenance, or need to make changes to their projects.

Documentation Accessibility

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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 Release 2.0 documentation set:

- *Oracle Healthcare Master Person Index Installation Guide*
- *Oracle Healthcare Master Person Index User's Guide*
- *Oracle Healthcare Master Person Index Data Manager User's Guide*
- *Oracle Healthcare Master Person Index Configuration Guide*
- *Oracle Healthcare Master Person Index Configuration Reference*
- *Oracle Healthcare Master Person Index Working With IHE Profiles User's Guide*
- *Oracle Healthcare Master Person Index WebLogic User's Guide*
- *Oracle Healthcare Master Person Index Standardization Engine Reference*
- *Oracle Healthcare Master Person Index Match Engine Reference*

- *Oracle Healthcare Master Person Index Provider Index User's Guide*
- *Oracle Healthcare Master Person Index United States Patient Solution User's Guide*
- *Oracle Healthcare Master Person Index Australia Patient Solution User's Guide*
- *Oracle Healthcare Master Person Index United Kingdom Patient Solution User's Guide*
- *Oracle Healthcare Master Person Index Message Processing Reference*
- *Oracle Healthcare Master Person Index Analyzing and Cleansing Data User's Guide*
- *Oracle Healthcare Master Person Index Loading the Initial Data Set User's Guide*
- *Oracle Healthcare Master Person Index Command Line Reports and Database Maintenance User's Guide*
- *Oracle Healthcare Master Person Index Release Notes*

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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.

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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.

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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.
<i>italic</i>	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.

Master Person Index Reports

This chapter introduces you to Oracle Healthcare Master Person Index (OHMPI) reports, and provides information about the different types of reports you can create.

This chapter includes the following section:

- ["Learning About Master Person Index Reports"](#)

1.1 Learning About Master Person Index Reports

Several standard reports are provided with master person index applications that allow you to monitor and review the state of the information in the master person index database. You can run these reports through the OHMPI Master Index Data Manager (MIDM) or from a command line. The following sections provide an overview of each report.

- ["Master Person Index Command Line Reports"](#)
- ["Master Person Index Report Configuration"](#)
- ["Creating Custom Master Person Index Reports"](#)
- ["Masked Data in Master Person Index Reports"](#)
- ["Master Person Index Production Reports"](#)
- ["Master Person Index Activity Reports"](#)
- ["Master Person Index Database Indexes"](#)

1.1.1 Master Person Index Command Line Reports

Oracle Healthcare Master Person Index provides a set of production and activity reports that can be generated from a command line or from the MIDM. The command line report client is created in *NetBeans_Projects\Project_Name\report-client* when you generate the master person index application.

The production reports provide information about transactional changes to the data in the master person index application and about the current state of that data, helping you monitor stored data and determine how that data needs to be updated. This information also helps verify that the matching logic and weight thresholds are defined correctly. Activity reports provide statistical information for transactions over specific periods of time.

In order to run the command line reports, you must have the Java Development Kit (JDK) 1.6.0_18 or later installed on the machine where the report files reside. For additional reporting needs, the database is accessible using any commercially available

ODBC-compliant reporting tool. You can also define reports using Java, PL/SQL, or SQL.

1.1.1.1 About Production Reports

Production reports should be run daily and provide information about the transactions that are processed through the master person index database. These reports provide lists of potential duplicate records, merge transactions, unmerge transactions, assumed matches, updates, and deactivated records for a specified time period. The information you find in these reports helps you analyze your matching threshold configuration, and provides valuable information about how data is being processed with your current configuration. In addition to running the production reports daily, you should run them against any data that has been loaded from existing systems into the master person index database in batch format.

1.1.1.2 About Activity Reports

Activity reports should be run weekly, monthly, and yearly to obtain statistical data about the transactions that are processed through the master person index database. These reports give the number of each type of transaction performed for the specified week, month, or year. They also provide cumulative information for the week, month, or year to date. The information you find in these reports helps analyze the matching threshold configuration and the condition of your data by giving you the number of potential duplicates created, the number of assumed matches, and so on.

1.1.2 Master Person Index Report Configuration

The reports are configured by XML files. For the command line reports, the configuration files are located in the report home directory in the config subdirectory. The file `CompanyReport.xml` provides an example of how the file might be configured for a company object; the file `PersonReport.xml` provides an example of how the file might be configured for a person object. You can use either file for your reports. When you create a new master person index application, you can specify the fields that appear on reports.

The configuration files allow you to specify which reports to run, the time period of the transactions to include in each report, and the name and location of the report files. You can also define various report details, such as the name of each report, which fields to include, and the names and sizes of the report columns. Most of these changes should only need to be made one time, before you first run the reports.

1.1.3 Creating Custom Master Person Index Reports

If the standard reports do not provide you with all the information you need, you can create custom reports using PL/SQL, SQL, or Java (using the “lookup” methods in the `MasterController` class). You can also access the database using any ODBC-compliant report writer (such as Crystal Reports), providing you with the flexibility to report on any information contained in the master person index database.

1.1.4 Masked Data in Master Person Index Reports

The MIDM can be configured to hide certain fields from users who do not have the appropriate security permissions. However, reports will display hidden data if those fields are configured to appear on the reports. Be sure to only give access to users who should be able to view this information, or do not include hidden fields in the reports.

1.1.5 Master Person Index Production Reports

The standard production reports help you to monitor and analyze the data in the master person index database. You can view information about the transactions processed and about any potential duplicates or assumed matches that result from these transactions.

Each report has certain fields that are always displayed and certain fields that are configured to display. You can customize the configured fields that appear on each report as needed. By default, `CompanyReport.xml` configures all reports to include the company name, type, stock symbol, primary contact, street address, city, and telephone number fields. `PersonReport.xml` configures all reports to include the first name, last name, date of birth, SSN, and address line 1 and 2 fields. The fields that are always displayed are described for each report in the following sections.

Production reports can be run for the current day, the previous day, or for a date range you specify. If you run your daily reports in the evening, you should run the current day's reports. If you run your daily reports in the morning, you should run the previous day's reports.

1.1.5.1 Assumed Match Report

This report displays information about any records that were automatically updated by incoming data during the specified time period. The information in this report, in combination with data from the potential duplicate report, helps you determine whether the matching threshold for assumed matches is accurate. You should review this report daily to ensure that no assumed matches were made in error. The master person index application provides the ability to undo an assumed match that was made in error.

The assumed match report always includes the following information about the record that was updated: enterprise-wide unique identifier (EUID), system code, local ID, and matching weight. The report provides the same information for the incoming message that updated the existing record with the exception of the EUID. You can configure the report to include any additional fields from the defined object structure in `object.xml` in the master person index project.

1.1.5.2 Deactivated Record Report

This report displays a list of all enterprise records that were deactivated during the specified time period. This report does not include system records that were deactivated. Review this report daily to ensure that no records were deactivated in error. The master person index application provides the ability to reactivate any deactivated record. The deactivated record report always includes the EUID of the deactivated record, and you can configure the report to include any additional fields from the defined object structure in `object.xml` in the master person index project.

1.1.5.3 Potential Duplicate Report

This report displays information about records that were marked as potential duplicates of one another during the specified time period. The information provided on this report can help you determine whether the matching (or upper) threshold and the duplicate threshold are configured accurately. The information for each record on the potential duplicate report always includes the EUIDs of both records, the system code, and the matching weight between each potential duplicate pair. You can configure the report to include any additional fields from the defined object structure in `object.xml` in the master person index project.

If same system matching is not enabled and two duplicate records from the same system on this report have a matching weight above the match threshold, it is an indication that the records most likely represent the same person. Review the potential duplicate report daily to determine if two records need to be merged or if they can be resolved. Use this report as a work list when working with potential duplicates.

1.1.5.4 Merge Transaction Report

This report displays a list of all enterprise records that were merged during the specified time period. Review this report daily to ensure that no records were merged in error. The master person index application provides the ability to unmerge any merged records. The merge transaction report always includes the EUID of each record affected by the merge. You can also configure the report to include any additional fields from the defined object structure in `object.xml` in the master person index project.

1.1.5.5 UnMerge Transaction Report

This report displays a list of all enterprise records that were unmerged during the specified time period. This report always includes the EUIDs of both records involved in the unmerge transaction, and you can configure the report to include any additional fields from the defined object structure in `object.xml` in the master person index project.

1.1.5.6 Update Report

This report displays records whose information was updated during the specified time period. Review this report daily to verify the updates made in a given day. This report can help explain why a resolved potential duplicate listing was reinstated to the potential duplicate list. The update report always includes the following information about the record that was updated: EUID, system code, and local ID. You can configure the report to include any additional fields from the defined object structure in `object.xml` in the master person index project. The updated fields might not necessarily appear on this report.

1.1.6 Master Person Index Activity Reports

The activity reports help you to monitor and analyze the transactions in the master person index database by providing statistical data about each transaction type. Unlike the production reports, the information displayed on the activity reports is not configurable. The information displayed on these reports is described for each report in the following sections. Activity reports can be run for any week, month, or year you specify.

1.1.6.1 Weekly Activity Report

This report displays a summary of transactions that occurred against the database on each day for the specified calendar week (always Sunday through Saturday). The information provided in this summary includes the number of each of the following transactions performed each day.

- Add
- Update
- EUID Deactivate
- EUID Merge
- EUID Unmerge

- LID Merge
- LID Unmerge
- LID Transfer

1.1.6.2 Monthly Activity Report

This report displays a summary of transactions that occurred against the database during the specified month. You can run this report for any calendar month. The information provided in this summary includes the number of each of the following transactions that were performed for the month:

- Add
- EUID Deactivate
- EUID Merge
- EUID Unmerge
- LID Merge
- LID Unmerge
- Unresolved Potential Duplicates
- Resolved Potential Duplicates

1.1.6.3 Yearly Activity Report

This report displays a summary of transactions that occurred against the database for the specified calendar year. You can run this report for any calendar year. The information provided in this report includes a summary of each transaction listed for the monthly activity report above.

1.1.7 Master Person Index Database Indexes

Some of the reports you run can grow quite large, impacting the performance of the report client. The following indexes are created in the database to improve performance.

```
CREATE INDEX SBYN_POTENTIALDUPLICATES3 ON SBYN_POTENTIALDUPLICATES
  (TRANSACTIONNUMBER ASC);
```

```
CREATE INDEX SBYN_ASSUMEDMATCH2 ON SBYN_ASSUMEDMATCH (TRANSACTIONNUMBER ASC);
```

```
CREATE INDEX SBYN_TRANSACTION4 on SBYN_TRANSACTION (EUID2 ASC, TIMESTAMP ASC);
```

```
CREATE INDEX SBYN_TRANSACTION3 on SBYN_TRANSACTION (TIMESTAMP ASC,
  TRANSACTIONNUMBER ASC);
```

Note: These indexes should be removed prior to performing an initial load or batch load of data.

Master Person Index Command Line Reports

This chapter describes elements in report configuration files, and provides instructions for configuring an OHMPI report environment, configuring OHMPI command line reports, and running the reports from a command line.

This chapter includes the following section:

- ["Working With Master Person Index Command Line Reports"](#)

2.1 Working With Master Person Index Command Line Reports

The following sections provide procedures for configuring the environment and reports, along with running the reports. They also provide information about report properties.

- ["Configuring the Master Person Index Report Environment"](#)
- ["Configuring Master Person Index Command Line Reports"](#)
- ["Running Master Person Index Command Line Reports"](#)

Note: For information about running the reports from the MIDM, see *Oracle Healthcare Master Person Index Master Index Data Manager User's Guide*.

The reports are automatically generated at `NetBeans_Projects/Project_Name/report-client`. You must also have the Java 2 Platform, Standard Edition v. 1.6 or later installed on the machine from which the reports are run. Be sure you have configured the database connection for the master person index application using the Oracle GlassFish System Application Service Admin Console or the WebLogic Admin Console.

2.1.1 Configuring the Master Person Index Report Environment

Before running the master person index reports from a command line, you must configure the report environment.

2.1.1.1 To Set up the Environment

1. If you install or move the reports files to a machine other than the application server machine, make sure JDK 1.6.0_18 or later is installed on the machine where the files reside.
2. Set up all Java environment variables as specified in the Java documentation.

3. Create one environment variable, `JAVA_HOME`, and set it to the home directory of the JDK installation.
4. If you run the reports using the Java command and not the supplied batch file, modify the `CLASSPATH` variable before running the reports for the first time by adding the absolute path and filename of the files in the `lib` subdirectory of the reports home directory to the `CLASSPATH` variable.

2.1.2 Configuring Master Person Index Command Line Reports

Before running any reports from the command line, you must customize the XML configuration file. You can use either of the files located in the reports directory in the OHMPI subdirectory. A default XML file named `PersonReport.xml` is defined for a person object and a default XML file named `CompanyReport.xml` is defined for a company object. You can use either of these as a basis for your production configuration file. Report configuration includes two steps: defining the overall report configuration and configuring the individual reports.

2.1.2.1 Defining the Command Line Report Configuration

The first section of the report configuration file is indicated by the `DOCTYPE` and the report elements and tells the report client how to connect to the application server, which application to run the reports against, and where to output the report files.

Note: The `DOCTYPE` element indicates the type of document being generated. Do not change this value.

2.1.2.1.1 To Define the Command Line Report Configuration

1. In the `SYSTEM` element, enter the location of the DTD file for the reports.
By default, this file is named `report.dtd`, and is located in the `config` directory. You should not need to modify this attribute unless you move `report.dtd`.
2. In the `appserver` element, enter the IIOP address for the application server.
This must be in the format `corbaname:iiop:host:port`, where `host` is the name of the server and `port` is the ORB port number.
3. In the `application` element, enter the name of the primary object used by the master person index application.
4. In the `output-folder` element, enter the location in which the generated reports will be placed.

If an output directory is specified in the command line, that directory overrides the one specified here. If the output directory already exists, the report client issues a warning that any existing report files will be overwritten and gives you the option of cancelling the reports.

2.1.2.2 Configuring Command Line Reports

A configuration section is defined for each of the six report templates. Use these sections to configure each report to display information as you want to view it. You can also specify which reports to run.

2.1.2.2.1 To Configure Command Line Reports

For each report, make the following modifications before running the reports. Each element or attribute mentioned in the following instructions is defined in the Master Person Index Command Line Report Properties table. There are six stanzas for you to modify, one for each report.

1. In the XML file you will use for your implementation, scroll to the *report* element.
2. Name the report in the report *name* attribute.
3. Specify whether or not to run the report in the *enable* element.
4. Define the name of the output file in the *output-file* element.
5. Specify a time period for the report by modifying the *type* element and, optionally, the *from-date* and *to-date* elements.
6. Define the fields to include on the report by modifying the elements in the *fields* element.
7. When you have finished configuring each report, save and close the file.

A sample report configuration appears below.

```
<report name="Potential Duplicate Today"
  template="Potential Duplicate">
  <enable>true</enable>
  <output-file>pot_dup_t.txt</output-file>
  <max-result-size>0</max-result-size>
  <page-size>100</page-size>
  <criteria>
    <dates type="today" from-date="" to-date=""/>
    <status></status>
  </criteria>
  <fields>
    <field path="Person.FirstName" label="First Name" width="10"/>
    <field path="Person.LastName" label="Last Name" width="10"/>
    <field path="Person.SSN" label="SSN" width="9"/>
    <field path="Person.DOB" label="DOB" width="10"/>
    <field path="Person.Address.AddressLine1"
      label="AddressLine1" width="30"/>
    <field path="Person.Address.AddressLine2"
      label="AddressLine2" width="30"/>
  </fields>
</report>
```

2.1.2.3 Master Person Index Command Line Report Properties

The following table lists and describes the elements in the report configuration files that define the configuration of each production and activity report.

Element/Attribute	Description
report	Defines each report run by the batch file. Each report is defined by a report element.
report/name	The descriptive name of the report. This can be any string, and appears as the title in the specified report.

Element/Attribute	Description
report/template	<p>The template to use for the type of report being generated. You should not need to modify this element, but you can specify any of the following templates.</p> <ul style="list-style-type: none"> ■ Assumed Match ■ Potential Duplicate ■ Deactivated ■ Merged ■ Unmerged ■ Update ■ Weekly Activity ■ Monthly Activity ■ Yearly Activity
enable	Specifies whether to run the report for the current run. Specify true to run the report; specify false to disable the report. This option allows you to run one report at a time.
output-file	The name of the file generated by the report client. This file is created in the output directory defined earlier in the file or in the output directory specified in the command line (the command line output directory overrides the configuration file output directory).
max-result-size	The number of records to display on the report. If no value is entered, or if the value is zero (0), the size defaults to 1000 records. To retrieve all records for a report, enter a very large value for this element.
page-size	The number of records returned to the report generator at one time for each report.
criteria	Defines the date range for the report.
dates/type	<p>Indicates the type of date range to use for the report. Specify today to report on transactions with today's date; specify yesterday to report on transactions with yesterday's date; or specify range to enter a specific range of dates. If you specify range, you must enter the date range in the from-date and to-date attributes.</p> <p>Note: If you enter a type of today or yesterday and you enter a date range, only the type will be used. For the activity reports, entering today runs the report for the current week, month, or year. Entering yesterday only runs the previous week's report if yesterday was a Saturday.</p>
dates/from-date	<p>The starting date when using a date range for the report. Enter the starting date for the report transactions in YYYYMMDD or YYYYMMDDHHmmss format. If you enter a date in this element, you must enter a later date in the to-date element and specify range in the type element.</p> <p>Note: For the activity reports, you can enter the range for the week, month, or year (depending on the type of activity report) on which you want to report. If the dates you specify do not fall within one calendar week, month, or year, the report client creates a report for the calendar week, month, or year containing the from-date and ignores the to-date value.</p>
dates/to-date	The ending date when using a date range for the report. Enter the ending date for the report in YYYYMMDD or YYYYMMDDHHmmss format.

Element/Attribute	Description
status	<p>This element is valid for the potential duplicate report only, and indicates the status of the potential duplicate pairs to display on the report. Specify any of the following values:</p> <ul style="list-style-type: none"> ▪ U - Only unresolved potential duplicates appear on the report. ▪ A - Only potential duplicates that are permanently resolved (auto-resolved) appear on the report. ▪ R - Only resolved potential duplicates appear on the report. <p>Leaving the status blank results in potential duplicates of all statuses appearing on the report.</p>
fields	<p>A list of fields to display on the report in addition to those that are displayed automatically. This element should be empty for the activity reports. If a list of fields is supplied for these reports, it is ignored.</p>
field/path	<p>The ePath to a field you want to include in the report. For more information about ePaths, see “Master Person Index Field Notations” in <i>Oracle Healthcare Master Person Index Configuration Reference</i>.</p> <p>Note: You cannot use the asterisk option in the ePaths you specify here.</p>
field/label	<p>The column label for the specified field in the report.</p>
field/width	<p>The width of the column for the specified field in the report. If a field value is larger than the width specified, that value will be truncated in the report.</p>

2.1.3 Running Master Person Index Command Line Reports

Once you have configured the reports, you can run them by either running the batch provided with the reports or using the Java command.

Caution: The application server must be running with the master person index project deployed and enabled in order to generate command line reports.

2.1.3.1 To Run the Reports Using the Batch File

1. From a command prompt, navigate to the location of the report files.
2. Type the following all on one line:

```
ReportClient.bat -f config_file- d output_directory
```

where *config_file* is the name of the report configuration file to use, and *output_directory* is the location to which the reports will be written. This value overwrites the value specified in the configuration file. If this option is not specified, the configuration file value is used.

Note: The `ReportClient.bat` file must reside in the reports home directory at the same level as the `lib` and `config` subdirectories in order for the environment variables to be set up correctly.

3. To view the reports, navigate to the location you specified as your output path and open the files in any text editor.

2.1.3.2 To Run the Reports Using a Java Command

Before running the reports for the first time, set up the environment variables as described in "[To Set up the Environment](#)".

1. At the command prompt, type the following all on one line:

```
java com.sun.mdm.index.report.ReportClient- f config_file- d output_directory
```

where *config_file* is the name of the report configuration file to use and *output_directory* is the location to which the reports will be written. This value overwrites the value specified in the configuration file. If this option is not specified, the configuration file value is used.

Note: An additional option, **-h**, can be used to obtain help information for the report client.

2. To view the reports, navigate to the location you specified as your output path and open the files in any text editor.

Master Person Index Database Maintenance

This chapter provides information about maintaining your Oracle Healthcare Master Person Index (OHMPI) database, including backing it up, restoring it, and restoring OHMPI data.

This chapter includes the following section:

- ["Maintaining the Master Person Index Database"](#)

3.1 Maintaining the Master Person Index Database

The database requires periodic maintenance tasks, such as backing up information or archiving certain tables. Perform backups regularly, and use the standards and policies of your organization to determine the best methods for backing up data. The following sections provide information about tasks you should perform for standard database maintenance.

- ["Backing up the Master Person Index Database"](#)
- ["Restoring the Master Index Database"](#)
- ["Archiving Master Index Data"](#)

3.1.1 Backing up the Master Person Index Database

The master person index database must be backed up on a regular basis. Typically, the database should be backed up once a month or once a quarter, depending on the size of the database and the volume of data being processed. The frequency of your database backups depends on your organization's internal policies and practices. Use your normal procedures for backing up a high availability database (this procedure should be determined by a database administrator).

3.1.1.1 Online Backups

The best practice for backing up the master person index database is an online backup during which the database is not shut down. (Note that this does require an offline backup as a starting point to which any online changes can be applied in the event the database must be restored). An online backup will always take a consistent snapshot, though it might not backup all transactions in progress.

Each transaction in the master person index application is saved under one commit command, so the state of the database is always consistent when a backup is performed. The history tables always match the transactions in the current tables and no partial transactions are committed. Even if a transaction is underway at the time of the backup, the database is consistent.

For the most reliable backups for Oracle databases, Oracle recommends running the Oracle database in ARCHIVELOG mode. ARCHIVE mode ensures that your database is protected from both instance and media failure and, because all changes made to the database are saved in a redo log, all database updates are available for recovery rather than just the most recent changes. For SQL Server, Microsoft recommends running the SQL Server database using the full recovery model, which allows a database to be recovered to the point of failure. Online backups are available for Oracle and SQL Server databases running in these modes.

3.1.1.2 Offline Backups

If needed, you can perform offline backups of the master person index database. In this case, you must queue any incoming messages using the JMS IQ Manager and undeploy the master person index application before beginning the backup. Once the backup is complete, restart the database, redeploy the master person index application, and then process the messages queued by the JMS IQ Manager.

3.1.2 Restoring the Master Index Database

In the unlikely event that you need to restore the master person index database to a previously archived version, you must undeploy the master person index application prior to performing the restoration to ensure that the application retrieves the correct sequence numbers from the database once it is restored. Any new transactions that occurred after the archived version was created will be lost, but they can be resent if the JMS IQ Manager is configured to journal all messages.

3.1.3 Archiving Master Index Data

In addition to regular database backups, some of the master person index database tables can grow very large. For performance reasons, you might want to archive the information in the `sbyn_assumedmatch` and the `sbyn_audit` tables.

Master Person Index Project Implementation

This chapter provides information about maintaining your Oracle Healthcare Master Person Index project after you have created it and it is in production. This includes modifying configuration files, the database, security and local ID formats.

This chapter includes the following section:

- ["Implementing Changes to the Master Person Index Project"](#)

4.1 Implementing Changes to the Master Person Index Project

After a master person index application has been in production, you might need to make changes to your project. For example, if you add a new external system, you need to add that system to the master person index database and you might need to modify the object structure and OTDs as well as update the application files. Changes occur as the needs of your end users evolve and as additional external systems are added. Do not make changes to the system hastily. Handle changes using the same change management process that was originally used to deploy your project. Applying this same process of planning, configuration, testing, migration, monitoring, and reevaluation will help ensure successful updates.

- ["Modifying Master Person Index Configuration Files"](#)
- ["Modifying the Master Person Index Database"](#)
- ["Modifying Master Person Index Security"](#)
- ["Modifying the Local ID Format"](#)

4.1.1 Modifying Master Person Index Configuration Files

Over time, you might need to make changes to your configuration files, such as adding fields or objects to the object structure, changing queries, or fine-tuning the matching process. Whenever you make a change to a master person index configuration file, you must undeploy the master person index server project, regenerate the application, and then redeploy the project.

This section provides tips for updating components of the configuration files. In order for any of these changes to take affect, you must regenerate the application and rebuild and redeploy the project.

4.1.1.1 Updating the Object Structure

If you make any changes to the object structure, keep the following in mind.

- If you want the new fields or objects to appear on the MIDM, make sure to add them to the first section of `midm.xml` and to any of the page definitions later in the file (this includes search pages).
- If the new fields require normalization, parsing, or phonetic encoding, define the new structures in `mefa.xml`.
- If a new field will be used for matching, add it to the blocking query used for match processing as well as to the match string in `mefa.xml`.

4.1.1.2 Updating Normalization and Standardization Structures

If you define normalization, standardization, or phonetic encoding for fields that are not currently defined in `mefa.xml`, or if you change existing standardization structures, make sure to do the following.

- Use the appropriate standardization type, domain selector, and field IDs.
- Add the new fields that will store the standardized versions of the original field value to the appropriate objects in `object.xml`.
- Add new columns to the database to store the standardized field values.

4.1.1.3 Updating the Match String

If you make changes to the match string, update the database indexes and the blocking query in `query.xml` accordingly. For example, if you remove a field from the match string, you might also want to remove that field from the blocking query and database indexes. If you add a field to the match string, add the field to the blocking query and to the appropriate database index to maintain performance.

4.1.2 Modifying the Master Person Index Database

There might be times when you need to modify the master person index database. For example, you might need to add or modify a stored procedure or index, or you might need to add new common codes. You must modify the database if you add fields or objects to the object structure in order to reflect the new structure in the database tables. If you make changes to the database, rebuild and redeploy the master person index server project to ensure the changes are picked up by the application. The only exception to this is when you add external systems.

4.1.3 Modifying Master Person Index Security

You can define new users for the database at any time using standard SQL statements to create the type of user you want to define. You can also add new users for the `midm.xml` through the GlassFish or WebLogic Application Servers. Neither of these procedures require any stoppage of the database or of the master person index application and redeployment is not required.

4.1.4 Modifying the Local ID Format

If you need to modify the local ID format for an external system, regenerate the application after you make the changes and then redeploy the project. If you extend the length of a local ID past 20 characters, make sure to increase the length of any database columns containing local IDs. Local ID columns are found in the following tables: `sbyn_parent_object`, `sbyn_assumedmatch`, `sbyn_enterprise`, `sbyn_systemobject`, and `sbyn_transaction`.