



Informatica® MDM Registry Edition  
10.0.0

# Data Director Installation Guide

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# Preface

The *MDM-RE Setup Guide* provides information on how to install and configure Informatica Data Director overview of

## Learning About Informatica MDM Registry

This section provides details of documentation available with the Informatica MDM Registry product.

### Introduction Guide

Introduces MDM Registry product and it's related terminology. It may be read by anyone with no prior knowledge of the product who requires a general overview of MDM Registry.

### Installation Guide

This manual is intended to be the first technical material a new user reads before installing the MDM Registry software, regardless of the platform or environment.

### Design Guide

This is a guide that describes the steps needed to design, define and load an MDM Registry "System".

### Developer Guide

This manual describes how to develop a custom search client application using the MDM - Registry Edition API.

### Operations Guide

This manual describes the operation of the run-time components of MDM - Registry Edition, such as servers, search clients and other utilities.

### Populations and Controls Guide

This manual describes SSA-Name3 populations and the controls they support. The latter are added to the Controls statement used within an IDX-Definition or Search-Definition section of the SDF.

# Security Framework Guide

This manual describes how to implement security in the MDM-RE product.

## Release Notes

The Release Notes contain information about what's new in this version of MDM - Registry Edition. It is also summarizes any documentation updates as they are published.

## What Do I Read If. . .

### I am. . .

. . . a business manager

The INTRODUCTION to MDM- Registry Edition will address questions such as "Why have we got MDM - Registry Edition?", "What does MDM - Registry Edition do"?

### I am. . .

. . . installing the product?

Before attempting to install MDM-RE, you should read the INSTALLATION GUIDE to learn about the prerequisites and to help you plan the installation and implementation of the MDM-Registry Edition.

### I am. . .

...an Analyst or Application Programmer?

A high-level overview is provided specifically for Application Programmers in the INTRODUCTION to MDM Registry Edition.

When designing and developing the application programs, refer to the DEVELOPER GUIDE which describes a typical application process flow and API parameters. Working example programs that illustrate the calls to MDM-RE in various languages are available under the <MDM-RE\_client\_installation>/samples directory.

### I am. . .

...designing and administering Systems?

The process of designing, defining and creating Systems is described in the DESIGN GUIDE. Administering the servers and utilities is described in the OPERATIONS manual.

# Informatica Resources

## Informatica My Support Portal

As an Informatica customer, the first step in reaching out to Informatica is through the Informatica My Support Portal at <https://mysupport.informatica.com>. The My Support Portal is the largest online data integration collaboration platform with over 100,000 Informatica customers and partners worldwide.

As a member, you can:

- Access all of your Informatica resources in one place.
- Review your support cases.
- Search the Knowledge Base, find product documentation, access how-to documents, and watch support videos.
- Find your local Informatica User Group Network and collaborate with your peers.

## Informatica Documentation

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The Documentation team updates documentation as needed. To get the latest documentation for your product, navigate to Product Documentation from <https://mysupport.informatica.com>.

## Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. You can access the PAMs on the Informatica My Support Portal at <https://mysupport.informatica.com>.

## Informatica Web Site

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## Informatica Marketplace

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## Informatica Velocity

You can access Informatica Velocity at <https://mysupport.informatica.com>. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at [ips@informatica.com](mailto:ips@informatica.com).

## Informatica Global Customer Support

You can contact a Customer Support Center by telephone or through the Online Support.

Online Support requires a user name and password. You can request a user name and password at <http://mysupport.informatica.com>.

The telephone numbers for Informatica Global Customer Support are available from the Informatica web site at <http://www.informatica.com/us/services-and-training/support-services/global-support-centers/>.



# CHAPTER 1

## Introduction

This document explains how to install and configure Informatica Data Director (IDD) for the Informatica MDM Registry Edition.

## CHAPTER 2

# Installing IDD

IDD is a web application that runs in an Apache Tomcat 5.5 container. It is installed automatically by the MDM-RE Installer provided that the IDD component is selected for installation.

The following softwares are the pre-requisites for installing IDD:

- JDK is required for MDM-RE (Java 1.6)
- Web Browser Internet Explorer (IE) 7 and 8 or Firefox 3.6 or Safari 5.0.3
- Adobe Flash Player 9.0.28.0 or later (required for IDD Relationship View)

The IDD package consists of the following directories:

- tomcat/ - Apache Tomcat servlet container with deployed IDD application
- dbscript/ - scripts used to create database schema needed for IDD
- icons/ - directory contains sample icons for IDD Relationship View

## CHAPTER 3

# Configuring Informatica Data Director

Perform the following steps to configure Informatica Data Director:

1. Download and install JDBC libraries for your database.
2. Create database tables for Informatica Data Director to store metadata.

**Note:** Informatica Data Director and MDM Registry Edition must use different database users. When you run the `create_schema.sql` script, specify a user name which is different from the name that MDM Registry Edition uses to access the source and target databases.

## Download and Install JDBC Libraries

Informatica Data Director requires JDBC libraries to connect to the database. The following table lists the required libraries for each supported database:

Database	Library Name
IBM DB2 UDB	db2jcc.jar
Oracle	ojdbc5.jar orai18n.jar
Microsoft SQL Server	sqljdbc4.jar

1. Download the required libraries from the database vendor's web site.
2. Copy the libraries to the following directory:
  - On Windows: <MDM Registry Edition Installation Directory>\tomcat\lib
  - On UNIX: <MDM Registry Edition Installation Directory>/tomcat/lib

# Oracle

1. Run the `create_schema.sql` script that you can find in the following directory by using a user name that has the DBA privileges:

- On Windows: <MDM Registry Edition Installation Directory>\dbscript\ora
- On UNIX: <MDM Registry Edition Installation Directory>/dbscript/ora

In the `create_schema.sql` script, the default schema name is `CMX_IDD`, and you can change this name in the script.

2. After you create the schema, create a Tomcat datasource for the schema.
3. Open the `server.xml` file that you can find in the following directory:
  - On Windows: <MDM Registry Edition Installation Directory>\tomcat\conf
  - On UNIX: <MDM Registry Edition Installation Directory>/tomcat/conf
4. In the <GlobalNamingResources> section, update the following values for Oracle:

**host**

Name of the host on which Oracle runs.

**port**

Port number through which Oracle listens.

**instance**

Name of the database instance.

**user**

Name of the user that the `create_schema.sql` script creates.

**Password**

Password of the user that the `create_schema.sql` script creates.

An example database configuration is as follows:

```
<Resource name="jdbc/siperian-cmx_system-ds"
  auth="Container"
  type="oracle.jdbc.pool.OracleDataSource"
  driverClassName="oracle.jdbc.driver.OracleDriver"
  factory="oracle.jdbc.pool.OracleDataSourceFactory"
  url="jdbc:oracle:thin:@localhost:1521:infaorcl"
  user="CMX_IDD"
  password="!!cmx!!"
  maxActive="20"
  maxIdle="10"
  maxWait="-1" />
```

# Microsoft SQL Server

1. Run the `create_schema.sql` script that you can find in the <MDM Registry Edition Installation Directory>\dbscript\msq directory.

```
sqlcmd -U <user> -P <password> -S <server> -i create_schema.sql -v  
idd_database=<database> idd_schema=<schema> idd_user_name=<idd_user_name>  
idd_user_pwd=<idd_user_password>
```

The command uses the following parameters:

**user**

Use name that has permissions to create user and schema.

**password**

Password for the user name.

**server**

Name of the Microsoft SQL Server.

**idd\_database**

Name of the database that the script uses to create user and schema. Ensure that you create the database before you run the `create_schema.sql` script.

**idd\_user\_name**

User name that the script creates.

**idd\_user\_password**

Password for the user that the script creates.

**idd\_schema**

Name of the schema that the script creates.

For example:

```
sqlcmd -U admin -P admin -S server1 -i create_schema.sql -v idd_database=idd  
idd_schema=idd idd_user_name=idd idd_user_pwd=idd
```

2. After you create the schema, create a Tomcat datasource for the schema.
3. Open the `server.xml` file that you can find in the <MDM Registry Edition Installation Directory>\tomcat\conf directory.
4. In the <GlobalNamingResources> section, update the following values for Microsoft SQL Server:

**host**

Name of the host on which Microsoft SQL Server runs.

**port**

Port number through which Microsoft SQL Server listens.

**database**

Name of the database that contains Informatica Data Director tables.

**user**

Name of the user that the `create_schema.sql` script creates.

**Password**

Password of the user that the `create_schema.sql` script creates.

An example database configuration is as follows:

```
<Resource name="jdbc/siperian-cmx_system-ds"
  auth="Container"
  type="javax.sql.DataSource"
  driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"
  url="jdbc:sqlserver://localhost:1433;DatabaseName=idd;SelectMethod=cursor;"
  username="idd"
  password="idd"
  maxActive="20"
  maxIdle="10"
  maxWait="-1" />
```

## IBM DB2 UDB

Informatica Data Director uses JDBC type 4 driver to access database, and you must configure the IBM DB2 UDB instance for TCP/IP communication. For more information about configuring TCP/IP communication, see the IBM DB2 UDB documentation.

1. Create a database and name it as `idd_db`.
2. Create a user with `idd_db` as the user name.  
**Note:** IBM DB2 UDB uses the external authentication mechanism, so you can use the operating system to create the user.

3. Grant the following authorities to the user:

- CONNECT
- CREATETAB
- IMPLICIT\_SCHEMA

4. On a IBM DB2 UDB command line processor, run the `create_schema.sql` script that you can find in the following directory:

- On Windows: <MDM Registry Edition Installation Directory>\dbscript\udb
- On UNIX: <MDM Registry Edition Installation Directory>/dbscript/udb

```
db2 -tvf create_schema.sql -z create_schema.log
```

In the `create_schema.sql` script, `idd_db` is the default database name, user name, and password, and you can change this name in the script.

5. After you create the database, create a Tomcat datasource for the database.
6. Open the `server.xml` file that you can find in the following directory:
  - On Windows: <MDM Registry Edition Installation Directory>\tomcat\conf
  - On UNIX: <MDM Registry Edition Installation Directory>/tomcat/conf
7. In the <GlobalNamingResources> section, update the following values for IBM DB2 UDB:

### host

Name of the host on which IBM DB2 UDB runs.

### port

Port number through which IBM DB2 UDB listens.

**database**

Name of the database that contains the Informatica Data Director tables.

**user**

Name of the user that the `create_schema.sql` script creates.

**Password**

Password of the user that the `create_schema.sql` script creates.

An example database configuration is as follows:

```
<Resource name="jdbc/siperian-cmx_system-ds"
  auth="Container"
  type="javax.sql.DataSource"
  driverClassName="com.ibm.db2.jcc.DB2Driver"
  url="jdbc:db2://localhost:50000/
idd_db:fullyMaterializeLobData=true;fullyMaterializeInputStreams=true;progressiveStre
aming=2;progressiveLocators=2;"
  username="idd_db"
  password="idd_db"
  maxActive="20"
  maxIdle="10"
  maxWait="-1" />
```

## Configure the Path to the IDHome Directory

You must configure the path to the `IDHome` directory in the `server.xml` file for the Informatica Data Director to create temporary files during run time.

1. Open the `server.xml` file that you can find in the following directory:
  - On Windows: <MDM Registry Edition Installation Directory>\tomcat\conf
  - On UNIX: <MDM Registry Edition Installation Directory>/tomcat/conf
2. Search for the `iddHome` entry in the `server.xml` file, and update the `value` parameter with the path to the `IDHome` directory.

```
<Environment name="iddHome" value="<IDD Home Directory Path>"
  type="java.lang.String" override="false"/>
```

For example, `<Environment name="iddHome" value="c:/InformaticaIR/tomcat/IDHome/"`  
`type="java.lang.String" override="false"/>`

## Enable SSL for Informatica Data Director

You can enable SSL for a secured communication between Informatica Data Director and MDM Registry Edition Server.

1. Open the `server.xml` file that you can find in the following directory:
  - On Windows: <MDM Registry Edition Installation Directory>\tomcat\conf
  - On UNIX: <MDM Registry Edition Installation Directory>/tomcat/conf

2. Remove the following entries from the `server.xml` file:

```
<Connector executor="tomcatThreadPool"
  port="8080" protocol="HTTP/1.1"
  connectionTimeout="20000"
  redirectPort="8443"/>
```

3. Add the following entries to the `server.xml` file:

```
<Connector port="8443"
  protocol="HTTP/1.1"
  SSLEnabled="true"
  maxThreads="150"
  scheme="https"
  secure="true"
  keystoreFile="<Directory Path of the server.keystore File>"
  keystorePass="informatica"
  clientAuth="false"
  sslProtocol="TLS"/>
<!-- Define an AJP 1.3 Connector on port 8009 -->
<Connector port="8009"
  protocol="AJP/1.3"
  redirectPort="8443"/>
```

Ensure that you update the value of `keystoreFile` parameter with the absolute path of the `server.keystore` file that you can find in the following directory:

- On Windows: <MDM Registry Edition Installation Directory>\security\cert
- On UNIX: <MDM Registry Edition Installation Directory>/security/cert

For example, `keystoreFile="C:\InformaticaIR\security\cert\server.keystore"`



## CHAPTER 4

# Configuring Security

Before you configure security for the Informatica Data Director client, ensure that you configure the `SecConfig.xml` file. For information about configuring the `SecConfig.xml` file, see *MDM Registry Edition Security Framework Guide*.

To configure security for the Informatica Data Director client, perform the following steps:

1. Open the `server.xml` file that you can find in the following directory, and configure the parameters based on your environment.

- On Windows: <MDM Registry Edition Installation Directory>\tomcat\conf
  - On UNIX: <MDM Registry Edition Installation Directory>/tomcat/conf
- ```
<!-- Configuration for Secure Search Server -->

    <Environment name="iir_login_server_host" value="localhost"
type="java.lang.String" override="false"/>
    <Environment name="iir_login_server_port" value="1670" type="java.lang.Integer"
override="false"/>
    <Environment name="iir_trust_store" value="C:\InformaticaIR\security\cert
\infastore" type="java.lang.String" override="false"/>
    <Environment name="iir_trust_store_password" value="informatica"
type="java.lang.String" override="false"/>
    <Environment name="iir_key_store" value="C:\InformaticaIR\security\cert
\infastore" type="java.lang.String" override="false"/>
    <Environment name="iir_key_store_password" value="informatica"
type="java.lang.String" override="false"/>
```

Ensure that you configure the following parameters:

- `iir_login_server_host`. Name of the host on which the MDM Registry Edition servers run.
  - `iir_login_server_port`. Port number of the Secure Search Server.
2. Based on the database that you use, run the database security script by running the following command:

### Oracle

```
sqlplus <User Name>/<Password>@<Oracle Server> @secora.sql
```

### IBM DB2 UDB

```
db2 "connect to <Database> user <User Name> using <Password>"
db2 -tvf secudb.sql
```

### Microsoft SQL Server

```
sqlcmd -U <User Name> -P <Password> -S <Service Name> -i secmsq.sql
```

You can find the database security scripts in the following directory:

- On Windows: <MDM Registry Edition Installation Directory>\security\scripts
- On UNIX: <MDM Registry Edition Installation Directory>/security/scripts

3. Open the following file, and add `-tDB` to the end of the start command:

- On Windows: `<MDM Registry Edition Installation Directory>\bin\secup.bat`

- On UNIX: `<MDM Registry Edition Installation Directory>/bin/secup.sh`

```
start /b "Security Server" "%SSAJAVA%" %SSA_JAVA_OPTS% %SSA_SEC_JAVA_OPTS% ^
-Djavax.net.ssl.keyStore=%SSA_SEC_KEYSTORE% ^
-Djavax.net.ssl.keyStorePassword=%SSA_SEC_KEYPASSWORD% ^
-Djava.util.logging.config.file="%SSA_SEC_LOGGING_PROPERTIES%" ^
-classpath "%SSA_SEC_CLASSPATH%" com.informatica.rbss.server.impl.SecurityServer ^
-w%SSASERVERWORKDIR%-l%SSASERVERLOGSDIR% -h%SSA_SSHOST% %SSA_SEC_ARGS% -tDB
```

**Note:** On Windows, you do not have to run the `secup.bat` file separately because the `idsup.bat` file automatically runs the `secup.bat` file. On UNIX, you do not have to run the `secup.sh` script separately because the `idsup.sh` script automatically runs the `secup.sh` script.

## CHAPTER 5

# Starting Tomcat

Before you start Tomcat, ensure that the `JRE_HOME` environment variable is set. If the variable is not set, set the variable with the location of the directory that contains the supported JRE as its value.

By default, Java allocates only 64 MB of memory heap. For enterprise applications, 64 MB is small and might cause `OutOfMemoryErrors`. Initially, set the `JAVA_OPTS` environment variable as follows, and you can update the variable based on your environment:

```
JAVA_OPTS=-Xms256m -Xmx512m -XX:MaxPermSize=256m
```

- On Windows, run the following command to run the `catalina.bat` file that you can find in the <MDM Registry Edition Installation Directory>\tomcat\bin directory:

```
catalina.bat run
```

- On UNIX, run the following command to run the `catalina.sh` script that you can find in the <MDM Registry Edition Installation Directory>/tomcat/bin directory:

```
catalina.sh run
```

**Note:** If you do not have execute permission on the <MDM Registry Edition Installation Directory>/tomcat/bin directory, run the `chmod +x *.sh` command to grant execute permission to all the scripts.

Use the following URL to launch Informatica Data Director:

```
http://localhost:8080/idd/config
```

To shut down Tomcat, run the `shutdown.bat` command on Windows and the `shutdown.sh` script on UNIX.