Creating a Model Repository Service
Abstract

This article describes how to create a Model Repository Service. It also provides overview, requirement, and configuration information for a Model Repository Service.

Supported Versions

- Data Services 9.0.0

Table of Contents

- Model Repository Service Overview ....................................................  2
- Model Repository Database Requirements ...............................................  2
  - IBM DB2 Database Requirements ...................................................  3
  - Microsoft SQL Server Database Requirements ...........................................  3
  - Oracle Database Requirements ....................................................  4
- Properties for the Model Repository Service ..............................................  4
  - General Properties for the Model Repository Service .......................................  4
  - Repository Database Properties for the Model Repository Service ..............................  4
  - Search Properties for the Model Repository Service .......................................  5
  - Advanced Properties for Model Repository Service ........................................  5
  - Custom Properties for the Model Repository Service .......................................  6
- Properties for the Model Repository Service Process .........................................  6
  - Node Properties for the Model Repository Service Process ...................................  6
- Creating a Model Repository Service ...................................................  8

Model Repository Service Overview

The Model Repository Service manages the Model repository. The Model repository stores metadata created by Informatica products in a relational database to enable collaboration among the products. Informatica Developer, Informatica Analyst, Data Integration Service, and the Administrator tool store metadata in the Model repository.

You can use the Administrator tool or the infacmd command line program to administer the Model Repository Service. You create one Model Repository Service for each Model repository. When you create the Model Repository Service, you can create a new Model repository or use an existing Model repository. You manage users, groups, privileges, and roles on the Security tab of the Administrator tool. You manage permissions for Model repository objects in the Informatica Developer and the Informatica Analyst.

Because the Model Repository Service is not a highly available service and does not run on a grid, you assign each Model Repository Service to run on one node. If the Model Repository Service fails, it automatically restarts on the same node. You can run multiple Model Repository Services on the same node.

Model Repository Database Requirements

Before you create a repository, you need a database to store repository tables. Use the database client to create the database. After you create a database, you can use the Administrator tool to create a Model Repository Service.
Each Model repository must meet the following database requirements:

- Have its own schema. Two Model repositories or the Model repository and the domain configuration database cannot share the same schema.
- Have a unique repository database name.

In addition, each Model repository must meet database-specific requirements.

**IBM DB2 Database Requirements**

Use the following guidelines when you set up the IBM DB2 database:

- On the IBM DB2 instance where you create the database, set the following parameters to ON:
  - `DB2_SKIPINSERTED`
  - `DB2_EVALUNCOMMITTED`
  - `DB2_SKIPDELETED`
  - `AUTO_RUNSTATS`
- On the database, set the following configuration parameters:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>applheapsz</td>
<td>8192</td>
</tr>
<tr>
<td>appl_ctl_heap_sz</td>
<td>8192</td>
</tr>
<tr>
<td>logfilsiz</td>
<td>4000</td>
</tr>
<tr>
<td>DynamicSections</td>
<td>1000</td>
</tr>
<tr>
<td>maxlocks</td>
<td>98</td>
</tr>
<tr>
<td>locklist</td>
<td>50000</td>
</tr>
<tr>
<td>auto_stmt_stats</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>Note: DB2 version 9.5 only</td>
</tr>
</tbody>
</table>

- The tablespace pageSize parameter must be set to 32768.
  - In a single-partition database, specify a tablespace that meets the pageSize requirements. If you do not specify a tablespace, the default tablespace must meet the pageSize requirements.
  - In a multi-partition database, you must specify a tablespace that meets the pageSize requirements.
- The database user account must have the CREATETAB and CONNECT permissions.

**Microsoft SQL Server Database Requirements**

The database user account must have the CONNECT and CREATE TABLE permissions.
**Oracle Database Requirements**

Use the following guidelines when you set up the Oracle database:

- Set the following configuration parameter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>open_cursors</td>
<td>1000</td>
</tr>
</tbody>
</table>

- The database user account must have the CONNECT and RESOURCE permissions.

**Properties for the Model Repository Service**

Use the Administrator tool to configure the following service properties:

- General properties
- Repository database properties
- Search properties
- Advanced properties
- Custom properties

**General Properties for the Model Repository Service**

The following table describes the general properties for the Model Repository Service:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the Model Repository Service. The name is not case sensitive and must less than 128 characters. The name cannot have leading or trailing spaces, carriage returns or tabs. The name cannot contain the following characters: / * ? &lt; &gt; &quot;</td>
</tr>
<tr>
<td>Description</td>
<td>Description of the Model Repository Service.</td>
</tr>
<tr>
<td>License</td>
<td>Not applicable to the Model Repository Service.</td>
</tr>
<tr>
<td>Node</td>
<td>Displays the node on which the Model Repository Service runs.</td>
</tr>
</tbody>
</table>

**Repository Database Properties for the Model Repository Service**

The following table describes the database properties for the Model Repository Service:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Type</td>
<td>The type of database.</td>
</tr>
<tr>
<td>Username</td>
<td>The database user name for the Model repository.</td>
</tr>
</tbody>
</table>
Password | An encrypted version of the database password for the Model repository.
JDBC Connect String | The JDBC connect string used to connect to the Model repository database. For example, the connection string for an Oracle database contains the following syntax: jdbc:oracle:thin:@1521;SID=Marble;MaxPoolSize=20;CatalogOptions=0;EnableServerResultSet=true
Dialect | The SQL dialect for a particular database. The dialect maps java objects to database objects. For example: org.hibernate.dialect.Oracle8iDialect
Driver | The Data Direct driver used to connect to the database. For example: com.informatica.jdbc.oracle.Oracle10gDriver
Database Schema | The schema name for a Microsoft SQL Server database.
Database Tablespace | The tablespace name for an IBM DB2 database.

**Search Properties for the Model Repository Service**
The following table describes the search properties for the Model Repository Service:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search Analyzer</td>
<td>The fully qualified java class name of the search analyzer. Default is: com.informatica.repository.service.provider.search.analysis.MMStandardAnalyzer For example, specify the following java class name of the search analyzer for Chinese, Japanese and Korean languages: org.apache.lucene.analysis.cjk.CJKAnalyzer</td>
</tr>
<tr>
<td>Search Analyzer Factory</td>
<td>The fully qualified java class name of the factory class.</td>
</tr>
</tbody>
</table>

**Advanced Properties for Model Repository Service**
The following table describes the Advanced properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Heap Size</td>
<td>Amount of RAM in megabytes allocated to the Java Virtual Manager (JVM) that runs the Model Repository Service. Use this property to increase the performance. Default is 1024 megabytes.</td>
</tr>
<tr>
<td>JVM Command Line Options</td>
<td>Java Virtual Machine (JVM) command line options to run Java-based programs. When you configure the JVM options, you must set the Java SDK classpath, Java SDK minimum memory, and Java SDK maximum memory properties. You must set the following JVM command line options: - Xms. Maximum heap size. Default value is 256 m. - MaxPermSize. Maximum permanent generation size. Default is 128 m. - Dfile.encoding. File encoding. Default is UTF-8.</td>
</tr>
</tbody>
</table>
**Custom Properties for the Model Repository Service**

Custom properties include properties that are unique to your environment or that apply in special cases. A Model Repository Service process does not have custom properties when you initially create it. Use custom properties only if Informatica Global Customer Support instructs you to.

**Properties for the Model Repository Service Process**

The Model Repository Service runs the Model Repository Service process on one node. When you select the Model Repository Service in the Administrator tool, you can view information about the Model Repository Service process on the Processes tab. You can also configure repository search and logging for the Model Repository Service process.

**Note:** You must select the node to view the service process properties in the Service Process Properties section.

**Node Properties for the Model Repository Service Process**

Use the Administrator tool to configure the following types of Model Repository Service process properties:

- Search properties
- Repository database properties
- Audit properties
- Repository properties
- Custom Properties
- Environment variables

**Search Properties for the Model Repository Service Process**

Search properties for the Model Repository Service process.

The following table describes the search properties for the Model Repository Service process:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Search Index Root Directory | The directory that contains the search analyzer index files. Default is:  
  :./target/repository/1249674846269/prs/index |

**Repository Database Properties for the Model Repository Service Process**

Repository database properties for the Model Repository Service process.

The following table describes the repository database properties for the Model Repository Service process:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hibernate Connection Pool Size</td>
<td>The hibernate connection pool size. Default is 10.</td>
</tr>
<tr>
<td>Hibernate C3P0 Max Size</td>
<td>The maximum hibernate C3P0 size. Default is 10.</td>
</tr>
<tr>
<td>Hibernate C3P0 Min Size</td>
<td>The minimum hibernate C3P0 size. Default is 1.</td>
</tr>
</tbody>
</table>
## Audit Properties for the Model Repository Service Process

Audit properties for the Model Repository Service process.

The following table describes the audit properties for the Model Repository Service process:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Enabled</td>
<td>Displays audit logs in the Log Viewer. Default is False.</td>
</tr>
</tbody>
</table>

## Repository Properties for the Model Repository Service Process

Repository properties for the Model Repository Service process.

The following table describes the repository properties for the Model Repository Service process:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repository Logging Directory</td>
<td>The directory that stores logs for Dump Persistence Configuration or Log Persistence SQL. Do not specify a directory path to disable the logs. These logs are not the repository logs that appear in the Log Viewer. Default is blank.</td>
</tr>
<tr>
<td>Repository Logging Severity Level</td>
<td>The severity level for repository logs. Valid values are: fatal, error, warning, info, trace, and debug. Default is info.</td>
</tr>
</tbody>
</table>

## Custom Properties for the Model Repository Service Process

Custom properties include properties that are unique to your environment or that apply in special cases. A Model Repository Service process does not have custom properties when you initially create it. Use custom properties only if Informatica Global Customer Support instructs you to.
Environment Variables for the Model Repository Service Process

Environment variables for the Model Repository Service process.

The following table describes the environment variables for the Model Repository Service process:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Variables</td>
<td>Environment variables defined for the Model Repository Service process.</td>
</tr>
</tbody>
</table>

Creating a Model Repository Service

To create a Model Repository Service:

1. Create a database for the Model repository.
2. In the Administrator tool, click the Domain tab.
3. On the Domain Actions menu, click New > Model Repository Service.
4. In the properties view, enter the general properties for the Model Repository Service.
5. Click Next.
6. Enter the database properties for the Model Repository Service.
7. Click Test Connection to test the connection to the database.
8. Select one of the following options:
   - **Do Not Create New Content.** Select this option if the specified database already contains content for the Model repository. This is the default.
   - **Create New Content.** Select this option to create content for the Model repository in the specified database.
9. Click Finish.

Authors

Manuel Castro  
Principal Technical Writer

Dominic Sartorio  
Senior Product Manager

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