Configuring a Microsoft SQL Server Resource in Metadata Manager 9.0
Abstract
This article shows how to create and configure a Microsoft SQL Server resource in Metadata Manager 9.0 to extract metadata from a Microsoft SQL Server database.

Supported Versions
- Metadata Manager 9.0

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Microsoft SQL Server
You can create and configure a Microsoft SQL Server resource to extract metadata from Microsoft SQL Server. When you load the resource, Metadata Manager extracts schema details from a Microsoft SQL Server database.

Configuring Microsoft SQL Server
Before you create a Microsoft SQL Server resource, you must configure the metadata source. If you do not correctly configure the metadata source, the metadata load can fail or the metadata can be incorrectly loaded in the Metadata Manager warehouse.

To configure Microsoft SQL Server, complete the following tasks:
- Configure permissions.
- Configure an ODBC connection on UNIX.

Configure Permissions
Before you create a Microsoft SQL Server resource, configure the permissions for the Microsoft SQL Server database user account that you use to connect to Microsoft SQL Server.

The Metadata Manager Agent uses SQL Server authentication to connect to the Microsoft SQL Server database. The user account that you use to connect to Microsoft SQL Server must be a SQL Server login account.
The following table lists the schema objects and system tables on which you must configure SELECT permissions for the Microsoft SQL Server database user account:

<table>
<thead>
<tr>
<th>Schema Objects</th>
<th>System Tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tables</td>
<td>sysobjects</td>
</tr>
<tr>
<td>Views</td>
<td>sysusers</td>
</tr>
<tr>
<td>Indexes</td>
<td>master.dbo.sysservers</td>
</tr>
<tr>
<td>Packages</td>
<td>syscolumns, sysindexkeys</td>
</tr>
<tr>
<td>Procedures</td>
<td>systypes</td>
</tr>
<tr>
<td>Functions</td>
<td>syscomments</td>
</tr>
<tr>
<td>Sequences</td>
<td>sysreferences</td>
</tr>
<tr>
<td>Triggers</td>
<td>sydependes</td>
</tr>
<tr>
<td>Synonyms</td>
<td>sys.synonyms (Microsoft SQL Server 2005)</td>
</tr>
</tbody>
</table>

**Configure an ODBC Connection on UNIX**

If the PowerCenter Integration Service runs on UNIX, the service uses an ODBC driver to connect to the Microsoft SQL Server database when loading the resource.

To configure an ODBC connection on UNIX:

1. Log in to Informatica Administrator.
2. In the Navigator, select the Metadata Manager Service.
3. Select the Properties view, and then click **Edit** in the Advanced Properties section.
4. Set the ODBC Connection Mode property to True.
5. Disable and enable the Metadata Manager Service for the change to take effect.
6. Log in to the UNIX machine where the PowerCenter Integration Service runs.
7. Configure an ODBC connection to the Microsoft SQL Server database.

   For more information about connecting to an ODBC data source, see the *Informatica Installation and Configuration Guide*.

   When you create the Microsoft SQL Server resource in Metadata Manager, use the ODBC data source name as the connect string.

**Creating a Microsoft SQL Server Resource**

Before you create a Microsoft SQL Server resource, configure the Microsoft SQL Server source.

To create a Microsoft SQL Server resource:

1. On the Load tab, click **Actions > New Resource**.
   - The **Resource Selection** window appears.
2. Click **Database Management > SQLServer**.
3. Click **Next**.
   - The **Properties** page appears.
4. Enter the following information:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name for the resource. The resource appears in the Resources panel with this name. The name must be unique and have from 1 through 256 characters. It cannot include the following characters: / \ : * &quot; &lt; &gt;</td>
</tr>
<tr>
<td>Description</td>
<td>Description for the resource. Description cannot exceed 4,000 characters.</td>
</tr>
</tbody>
</table>

5. Click **Next**.

The **Configuration** page appears.

6. Configure the following resource connection properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User name</td>
<td>Name of the SQL Server user account used to connect to the Microsoft SQL Server database. The Metadata Manager Agent uses SQL Server authentication to connect to the Microsoft SQL Server database.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the user account used to connect to the Microsoft SQL Server database.</td>
</tr>
<tr>
<td>JDBC connection URL</td>
<td>JDBC URL used to connect to the Microsoft SQL Server database. Metadata Manager uses this URL to verify connection information to the Microsoft SQL Server database. The JDBC connection URL uses the following syntax: jdbc:informaticasqlserver://</td>
</tr>
<tr>
<td>Connect string</td>
<td>If the PowerCenter Integration Service runs on Windows, enter the native connect string used to create a source connection to the database in the PowerCenter repository. The connect string uses the following syntax: &lt;server_name&gt;@&lt;database_name&gt; If the PowerCenter Integration Service runs on UNIX, enter the ODBC data source name that you configured on the UNIX machine.</td>
</tr>
<tr>
<td>Encoding</td>
<td>Code page for the Microsoft SQL Server database. The code page for the resource, the Metadata Manager repository, and the machine where the associated Integration Service for Metadata Manager runs must be the same.</td>
</tr>
</tbody>
</table>

7. Click **Test Connection** to test the connection to the source system.

If Metadata Manager cannot connect to the source system, an error message appears. Correct any error and test the connection again.

8. Click **Next**.
9. To enable profiling information extraction for the resource, select the **Profile Source** option.
10. To add schemas to the Selected Schemas list, select the schema in the Available Schemas list and click **Add**.
11. To add all available schemas, click **Add All**.
12. To remove schemas from the Selected Schemas list, select the schema in the Selected Schemas list and click **Remove**.
13. To remove all schemas from the Selected Schemas list, click **Remove All**.
14. Click **Next**.

The Schedules window appears.

15. To add a schedule, select **Attach a Schedule**, and select a schedule in the Schedule list.
If you have not created a schedule, you can assign a schedule to a resource after you create the resource.

16. Click Finish.

The resource appears in the Resources panel on the Load tab.

Troubleshooting

I loaded a Microsoft SQL Server resource with the profiling option enabled. However, when I view profiling data on a table for the Microsoft SQL Server resource, the following message appears in the Profile tab:

No profiling data available.

This error can occur for the following reasons:

- **No data in table.** The table does not contain any data.
- **Unsupported characters in table or column name.** Metadata Manager does not extract profiling information for tables or columns with the following characters in the name:
  
  `+=~!%&*()[]<>/;?:\\^

  In addition, Metadata Manager does not extract profiling information if the Microsoft SQL Server table begins with a numeral.

- **Table profile limit.** The number of tables to profile may exceed the table profile limit. The Max_Tables_To_Profile property in the imm.properties file determines the maximum number of tables to profile. Increase the value of the Max_Tables_To_Profile property to the number of tables in a resource.

  By default, imm.properties is located in the following directory:

  `<Informatica installation directory>\tomcat\shared\classes`

  After you configure properties in imm.properties, disable and enable the Metadata Manager Service for the changes to take effect.

Reference

Metadata Manager extracts the following object types from Microsoft SQL Server:

- Schema
- Table
- Column
- Datatype
- View
- Index
- IndexColumn
- PrimaryKeyConstraint
- ForeignKey
- UniqueConstraint
- CheckConstraint
- Function
- Procedure
- TableTrigger
- ViewTrigger
Metadata Manager does not extract the following object types from Microsoft SQL Server:

- Default or DEFAULT constraint
- Log
- Replication filter stored procedure
- Extended stored procedure
- System schemas
- System views

**Data Lineage for Database Management Resources**

Data lineage includes a database table if data is extracted from or loaded to the table. If the table is included in a join statement but no data is extracted from or loaded to it, the table does not appear in data lineage.

For example, an SQL view includes two tables, CUSTOMER and CITY as described in the following SQL:

```
CREATE VIEW SF_CUST_VIEW AS SELECT CUSTOMER.ID, CUSTOMER.NAME
FROM CUSTOMER, CITY
WHERE CUSTOMER.CITY_ID = CITY.ID AND CITY.NAME = 'SFO'
```

Because the view only exposes data from the CUSTOMER table, the CITY table does not display in data lineage for the view. Instead, data lineage displays the CITY table as a Related Catalog Object of the view.

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