Creating and Configuring a Cognos Resource in Metadata Manager 8.5.x and 8.6
Abstract
This article shows how to create and configure the Cognos ReportNet resource in Metadata Manager 8.5.x and 8.6 to extract schema and reports metadata from Cognos.

Supported Versions
- Metadata Manager 8.6
- Metadata Manager 8.5.x

Table of Contents
Overview ........................................................................................................................................................................... 2
Before You Begin .............................................................................................................................................................. 2
  Get the External Dispatcher URI .................................................................................................................................. 2
  Test the Connection ..................................................................................................................................................... 3
  Verify Authentication ................................................................................................................................................ 3
Configure the Cognos SDK and Connection Parameters ......................................................................................... 4
  Cognos SDK ................................................................................................................................................................. 4
  Connection Parameters ................................................................................................................................................ 5
Create the Resource ......................................................................................................................................................... 7
Troubleshooting .............................................................................................................................................................. 10

Overview
Cognos is a business Intelligence tool that includes applications for reporting, dashboards, scorecarding, and analysis. Cognos version 8 combines the features of several Cognos products such as ReportNet, PowerPlay, Metrics Manager, Noticecast, and Data Manager formerly known as DecisionStream.

This article illustrates how to create and configure the Cognos ReportNet resource in Metadata Manager 8.5.x and 8.6 to extract schema and reports metadata from Cognos.

Before You Begin
Before you configure a Cognos Content Manager version 8 resource, complete the following tasks:
- Get the external dispatcher URI.
- Test the connection.
- Verify authentication.

Get the External Dispatcher URI
To extract metadata from Cognos Content Manager version 8, get the external dispatcher URI. The URI is required to configure the Cognos Content Manager resource in Metadata Manager. The value corresponds to one of the
dispatchers in a Cognos Content Manager installation. Verify the URI in the Cognos Content Manager configuration/cogstartup.xml file.

The URI is similar to the following URL:

http://localhost:9300/p2pd/servlet/dispatch

The following example shows an excerpt from cogstartup.xml:

```xml
<crn:parameter name="sdk">
</crn:parameter>
```

**Environment Directory**

You can also find the Gateway URI and the Dispatcher URI under the Environment directory on the machine that runs Cognos.

The following figure shows the Environment Group properties in the Cognos client:

![Environment Group Properties](image)

**External Dispatcher URI Rules and Guidelines**

Use the following rules and guidelines for the external dispatcher URI:

- Use the actual machine name or an IP address for the server name, not localhost.
- The https:// prefix for the URI indicates SSL is required.
- The Cognos server must support chunking and attachments for large volumes of data. To verify this requirement, contact the Cognos administrator.
- If Metadata Manager and Cognos Content Manager are separated by an intermediary server like a load balancer or proxy, use the host and port number of the intermediary in the external dispatcher URI.

**Test the Connection**

You can test the connection by accessing the URI in a web browser. If the URI is correct, Cognos displays a status message with the current state of the server. Before you load a Cognos resource, the current status of the server must be ‘running.’

**Verify Authentication**

If the Cognos server is set up for LDAP authentication, use the web-based Cognos client tool to verify the connection and authentication properties. Use the following URL to test the authentication:
Use the login namespace, user name, and password you configured in the Cognos client under Security > Authentication.

The following figure shows the LDAP server namespace properties in the Cognos client:

![LDAP Server Namespace Properties](https://localhost:8080/c8/cm_tester.htm)

**Configure the Cognos SDK and Connection Parameters**

You can use the Cognos SDK instead of the Metadata Manager Agent to connect to the Cognos server. You can also configure additional parameters that determine how metadata is extracted from Cognos. You must modify the Metadata Manager MitiSupportedBridges.xml configuration file to configure the Cognos SDK or configure additional parameters.

To modify MitiSupportedBridges.xml:

1. Stop the Metadata Manager Service.
2. Delete the mm and mmhelp folders from the following directory:
   ```
   <PowerCenter installation directory>\ Server\tomcat\mmapps
   ```
3. Create a copy of MitiSupportedBridges.xml from the following directory:
   ```
   <PowerCenter installation directory>\server\tomcat\mmapps\mm.war\WEB-INF\lib\imas-impl-8.5.0-snapshot.jar\com\informatica\metadata\services\imas
   ```
4. Open MitiSupportedBridges.xml and make the required changes.
5. Save the changes and copy MitiSupportedBridges.xml to the following directory:
   ```
   <PowerCenter installation directory>\server\tomcat\mmapps\mm.war\WEB-INF\lib\imas-impl-8.5.0-snapshot.jar\com\informatica\metadata\services\imas
   ```
6. Start the Metadata Manager Service.
7. Create a Cognos resource.

**Cognos SDK**

You can direct Metadata Manager to connect to the Cognos server using the Cognos SDK instead of the Metadata Manager Agent. For example, if the Cognos server uses connection redirect, configure Metadata Manager to use the Cognos SDK.

After you configure Metadata Manager to use the Cognos SDK, the option to specify the Cognos SDK appears in the Resource wizard when you create a Cognos resource.

The following example shows the section of MitiSupportedBridges.xml you modify to configure the Cognos SDK:

```xml
<TYPENAME>CognosRnRepository</TYPENAME>
<DISPLAYNAME>Cognos ReportNet Content Manager</DISPLAYNAME>
<REPOTYPE>Cognos ReportNet</REPOTYPE>
```
To configure the Cognos SDK, change the USER_EDIT option to YES. To make the Cognos SDK option mandatory when you create a Cognos resource, change the OPTIONAL option to False.

You can verify that Metadata Manager uses the Cognos SDK in the correct location by viewing mm_agent.log in the <PowerCenter installation directory>/server/tomcat<service name>/temp/logs directory.

The following excerpt from mm_agent.log shows the path of the Cognos SDK used after you load a Cognos resource:

```
<!-- MIRLog size=154 --><Message type="INFO" code="MIMB_I0031"
timestamp="2008- 4-03T12:11:42Z"> Cognos SDK library path = C:\Program Files\cognos\crn\sdk\java\lib</Message>
```

### Connection Parameters

You can configure additional metadata extraction parameters for Metadata Manager in MitiSupportedBridges.xml.

The following table describes the parameters you can configure:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repository Subset</td>
<td>Path of models or reports to extract from Cognos. To extract models, use the path to the package containing the model. To extract packages and reports, use the complete search path to the package or report appended with the following characters: //*</td>
</tr>
<tr>
<td>Add dependent objects</td>
<td>Import all objects that depend on the objects in the repository subset. For example, if the path parameter is a model, Cognos will also include all reports that depend on it. If you select a report, Cognos will import the report and the model used by the report. Configure one of the following options: • True. Import all objects that depend on the objects in the repository subset. • False. Do not import dependent objects. Default is True.</td>
</tr>
</tbody>
</table>

Use Cognos to find the search path for packages or reports. In the Cognos Administration Console, select the package or report and click Set Properties > View the Search Path, ID, and URL.

If the search path contains multiple reports or published versions of a model, Metadata Manager extracts the last report or model. Separate multiple values with a semicolon (;). For more information about the search path syntax, see the Cognos documentation.

For example, to extract packages at the root level, use the following syntax:

```
/content/package[@name='GO Sales and Retailers']//*
```

To extract packages within a folder, use the following syntax:

```
/content/folder[@name='Cognos - Folder']/package[@name='GO Sales and Retailers']//*
```

To extract a single report, use the following syntax:

```
/content/folder[@name='Cognos - Folder']/package[@name='GO Sales and Retailers']/folder[@name='User Reports']/report[@name='Cascading prompt report']//*
```

If you configure this property, you cannot retrieve or refresh the list of available models in Metadata Manager. Metadata Manager includes the list of models or reports defined by this property.
<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
</table>
| Filter objects                | Types of objects to include. By default, all supported objects are imported. You can choose to import only model objects or report objects. Configure one of the following options:  
  - Include all supported objects  
  - Include models only  
  - Include reports only  
  Note: If you configure the Add Dependent Objects property, Metadata Manager ignores this property. |
| Fail if query results are empty | Fail the import if any paths in the repository subset does not return objects for import. Configure one of the following options:  
  - True. Fail the import if any path in the repository subset does not return objects.  
  - False. Do not fail the import.  
  Default is False. |
| Folder representation         | Method to represent the folders from Cognos Framework Manager. Configure the following options:  
  - Ignore. Ignore folders.  
  - Flat. Represent folders as Diagrams. Do not preserve folder hierarchy.  
  - Hierarchical. Represent folders as Diagrams. Preserve the folder hierarchy.  
  Default is Hierarchical. |
| Package representation        | Represent packages as Subject Areas. Configure one of the following options:  
  - Ignore. Ignore packages.  
  - Subject Areas. Subject areas are visible in Metadata Manager.  
  Default is Ignore. |
| Reverse engineer relationships | Reverse engineer relationships between two dbQueries from Cognos Framework Manager as referential integrity constraints. Reverse engineering backtracks from the dbQuery relationship to the referential integrity constraints that exist on the warehouse tables on which the query is built. Configure one of the following options:  
  - True. Reverse engineer the relationships.  
  - False. Do not reverse engineer the relationships.  
  Default is True. |
| Tables design level           | Design level of the imported tables.  
  If you export metadata to a target tool that supports a logical view and a physical view, use this parameter to control whether a table appears both as a physical table and as a logical entity for data modeling tools such as ERwin. You can also use this parameter if a table appears both in the physical model and in the business view of the model for business intelligence tools. Configure one of the following options:  
  - Logical and physical. Tables appear both in the logical view and in the physical view of the model.  
  - Physical. Tables appear only in the physical view of the model.  
  Default is Physical. |
| Ignore usage property         | Include the usage property of a queryItem in the results for the import. A queryItem of attribute is represented as a dimension attribute. A queryItem of fact is represented as a measure. Configure one of the following options:  
  - True. Include the usage property for a queryItem. |
### Parameters and Description

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>False. Do not include the usage property. Default is False.</td>
<td></td>
</tr>
<tr>
<td>Remove temporary XML file</td>
<td>Delete the temporary XML file from the Metadata Manager Agent directory. Configure one of the following options: True. Delete the XML file. False. Do not delete the XML file. Default is True.</td>
</tr>
</tbody>
</table>

### Create the Resource

Create a Cognos resource in Metadata Manager. When you create the resource, you configure the name and description, configure source connection information, select models to extract metadata from, and add schedules.

**To create a Cognos ReportNet Content Manager resource:**

1. On the Load page in Metadata Manager, click New.
   The Resource Selection window appears.

2. Click Business Intelligence > Cognos ReportNet.

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 Resource List section with this name. The name must be unique, not exceed 256 characters, and not include the following characters: /:*?'&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 configuration parameters to connect to the Cognos 8 server:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent URL</td>
<td>Host name and port number of the Metadata Manager Agent. Use the Metadata Manager Agent on the Metadata Manager application machine or a Metadata Manager Agent installed on another machine. Note: The Metadata Manager Agent does not need to run on the machine where the Cognos client is installed to extract metadata from a Cognos source.</td>
</tr>
<tr>
<td>Source system version</td>
<td></td>
</tr>
<tr>
<td>Version</td>
<td></td>
</tr>
<tr>
<td>Login Server URL</td>
<td></td>
</tr>
<tr>
<td>Login Namespace</td>
<td></td>
</tr>
<tr>
<td>Login User</td>
<td></td>
</tr>
<tr>
<td>Login Password</td>
<td></td>
</tr>
<tr>
<td>Cognos SDK Library Path</td>
<td></td>
</tr>
<tr>
<td>Encoding</td>
<td>UTF-8 encoding of Unicode</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Version</td>
<td>Version of Cognos. Select one of the following options:</td>
</tr>
<tr>
<td></td>
<td>• Cognos ReportNet 1.x</td>
</tr>
<tr>
<td></td>
<td>• Cognos 8</td>
</tr>
<tr>
<td>Login Server URL</td>
<td>URL of the Cognos ReportNet Content Manager server gateway for Cognos ReportNet 1.x or the Cognos Content Manager external dispatcher URL for Cognos 8.</td>
</tr>
<tr>
<td>Login Namespace</td>
<td>Namespace that defines a collection of Cognos ReportNet Content Manager user accounts from an authentication provider. If you do not configure authentication for Cognos, do not configure this option.</td>
</tr>
<tr>
<td>Login User</td>
<td>User name to log in to the Cognos ReportNet Content Manager repository database. Required if the Cognos ReportNet repository database has been set up to require a user name and password. If you did not configure authentication for Cognos, do not configure this option.</td>
</tr>
<tr>
<td></td>
<td>The following is an example of the Cognos ReportNet 1.x Login Server URL:</td>
</tr>
<tr>
<td></td>
<td><a href="http://localhost:80/crn/cgi-bin/cognos.cgi">http://localhost:80/crn/cgi-bin/cognos.cgi</a></td>
</tr>
<tr>
<td></td>
<td>The following is an example of the Cognos 8 Login Server URL:</td>
</tr>
<tr>
<td></td>
<td><a href="http://localhost:9300/p2pd/servlet/dispatch">http://localhost:9300/p2pd/servlet/dispatch</a></td>
</tr>
<tr>
<td>Login Password</td>
<td>Password to log in to the Cognos ReportNet Content Manager repository. Required if the Cognos ReportNet Content Manager repository database has been set up to require a user name and password. If you did not configure authentication for Cognos, do not configure this option.</td>
</tr>
<tr>
<td>Cognos SDK Library Path</td>
<td>Path to the Cognos SDK installed on the Cognos ReportNet server. By default, the SDK libraries are installed in the following directories:</td>
</tr>
<tr>
<td></td>
<td>Cognos Content Manager 8: c:\Cognos installation\c8\sdk\java\lib</td>
</tr>
<tr>
<td></td>
<td>Cognos ReportNet 1.x: c:\Cognos installation\crn\sdk\java\lib</td>
</tr>
<tr>
<td></td>
<td>You can use the Cognos SDK located on the Cognos server machine or copy the libraries to a different directory. The directory must be accessible to the Metadata Manager application. Use this option if you want to use the Cognos SDK instead of the Metadata Manager Agent to connect to Cognos. For example, if the Cognos server uses connection redirect, configure this option.</td>
</tr>
<tr>
<td>Encoding</td>
<td>Code page for the Cognos ReportNet Content Manager repository database.</td>
</tr>
</tbody>
</table>

7. Click Next.
   The Parameters window appears.

8. Click Retrieve/Refresh Models to update the Available Models list with the models in the Cognos ReportNet repository.

9. To add models to the Selected Models list, select the universe in the Available Models list and click Add.
   -or-
   To add all available models, click Add all.

10. To remove models from the Selected Models list, select the universe in the Selected Models list.
    -or-
    To remove all universes from the Selected Models list, click Remove All.

11. Click Next.
    The Schedules window appears.

12. 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 the resource after you create the resource.
13. Click Finish.

The resource appears in the Resource List section on the Load page.

**Troubleshooting**

I attempted to load a Cognos resource, but encountered a java.lang.nullpointer error.

This error occurs when Cognos version 8 cannot handle very large requests for metadata. As a workaround, load only a few models at a time. You can add models, load the resource, and then add additional models and load the resource again.

I get the following error when I try to refresh or retrieve models from the Cognos server:

```
Metadata Manager Agent failed to extract metadata from source.
```

This error may occur for the following reasons:

- The Metadata Manager Agent URL is incorrect. Verify the Metadata Manager URL.
- The Metadata Manager Agent is not running. For Metadata Manager 8.6, verify that the service for the Metadata Manager Agent is running on the machine. For Metadata Manager 8.5.x, go to the following URL on the machine where the Metadata Manager Agent runs and verify that the agent is running:
  
  `http://<host name>:<port>/MIMBWebServices`

- Cognos Login Server URL is incorrect. To verify the URL, log in to Cognos using the authentication parameters you configured for Metadata Manager.
- Verify that the Cognos server is running.
- Authentication parameters are incorrect. Use one of the following methods to troubleshoot authentication parameters:
  - Verify the connection. Use the following URL:
    
    `http://localhost:8080/c8/cm_tester.htm`

    Verify that you use the same Login Namespace, login user, and password that you use in Metadata Manager.

    Test these parameters using the machine on which the Metadata Manager Service is installed.
  - Verify the Namespace parameter. If Cognos is not configured to use LDAP or any other authentication, leave the Namespace parameter blank.

If the error persists, the Metadata Manager Agent is not able to communicate with the Cognos server. Use the Cognos SDK to connect to the Cognos server from Metadata Manager instead.

**Authors**

Krishna Kumar  
Software Engineer

Lewis Gault  
Principal Technical Writer