Data Sources Reference Guide

1

8.4.0
1. Data Sources Summary ................................................................. 1
   1.1. Supported Data Sources ...................................................... 1
   1.2. Teiid Translators ............................................................... 2
   1.3. Connection Categories ...................................................... 3
      1.3.1. ODA Connections ....................................................... 3
      1.3.2. Teiid-specific Connections ......................................... 6

2. JDBC Connections ................................................................. 7
   2.1. DB2 Connection Profiles ................................................... 8
      2.1.1. DB2 for Linux, Unix and Windows .................................. 8
      2.1.2. DB2 for is/OS ........................................................... 10
      2.1.3. DB2 for z/OS ........................................................... 12
   2.2. Derby Connection Profile .................................................. 14
   2.3. DB2 Connection Profile .................................................... 17
   2.4. Informix Connection Profile .............................................. 17
   2.5. Ingres Connection Profile ................................................ 17
   2.6. MaxDB Connection Profile ................................................ 17
   2.7. Modeshape Connection Profile .......................................... 17
   2.8. MySQL Connection Profile ................................................. 18
   2.9. Oracle Connection Profile ................................................ 18
      2.9.1. Section 1 Title ......................................................... 18
      2.9.2. Section 2 Title ....................................................... 18
      2.9.3. Section 3 Title ....................................................... 18
   2.10. PostgreSQL Connection Profile ......................................... 18
   2.11. SQLite Connection Profile ............................................... 18
   2.12. SQL Server Connection Profile ......................................... 18
   2.13. Sybase Connection Profiles ............................................. 18
   2.14. Teiid Connection Profile ................................................. 18
   2.15. ............................................................... 18
Data Sources Summary

Teiid Designer provides the ability to model, federate, virtualize, test and access your various and disparate data sources. These data sources come in many forms and formats. This references guide documents the data sources supported by Teiid and describes how each data source connection should be created and managed in Teiid Designer.

1.1. Supported Data Sources

The matrix below indicates for a given data source how a model can be created (Designer Import Option) and how the data source is integrated (Translator) for data access.

### Table 1.1. Teiid Designer Supported Data Sources

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Translator Type</th>
<th>Designer Import Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apache Derby</td>
<td>JDBC - derby</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Files</td>
<td>file</td>
<td>File Importer</td>
</tr>
<tr>
<td>General JDBC</td>
<td>JDBC - jdbc-simple</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>HDFS (Hadoop)</td>
<td>hive</td>
<td>use DDL importer or perform modeling manually</td>
</tr>
<tr>
<td>HSQL</td>
<td>JDBC - hsql</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>H2</td>
<td>JDBC - h2</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Ingres</td>
<td>JDBC - ingres (Ingres 2006 or later)</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td></td>
<td>JDBC - ingres93 (Ingres 9.3 or later)</td>
<td></td>
</tr>
<tr>
<td>IBM DB2</td>
<td>JDBC - db2</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Informix</td>
<td>JDBC - informix</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>LDAP/ActiveDirectory</td>
<td>ldap</td>
<td>LDAP Importer</td>
</tr>
<tr>
<td>LoopBack</td>
<td>JDBC - loopback</td>
<td>use DDL importer or perform modeling manually</td>
</tr>
<tr>
<td>MetaMatrix</td>
<td>JDBC - metamatrix</td>
<td>JDBC Importer</td>
</tr>
</tbody>
</table>
## 1. Data Sources Summary

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Translator Type</th>
<th>Designer Import Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>ModeShape/JCR</td>
<td>JDBC - modeshape</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>MongoDB</td>
<td>mongodb</td>
<td>model manually</td>
</tr>
<tr>
<td>Mondrian</td>
<td>olap</td>
<td>use DDL importer or perform modeling manually</td>
</tr>
<tr>
<td>MS Access</td>
<td>JDBC - access</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>MS Excel</td>
<td>JDBC - excel-odbc</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>MS SQL Server</td>
<td>JDBC - sqlserver</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>MySQL</td>
<td>JDBC - mysql5 (mysql)</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Netezza</td>
<td>JDBC – netezza</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Oracle</td>
<td>JDBC - oracle</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>PostgreSQL</td>
<td>JDBC - postgresql</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Salesforce.com</td>
<td>salesforce</td>
<td>SalesForce Importer</td>
</tr>
<tr>
<td>SAP Gateway</td>
<td>ws</td>
<td>File Source (XML) Importer</td>
</tr>
<tr>
<td>SAP R/3</td>
<td>ws</td>
<td></td>
</tr>
<tr>
<td>SAP Services Registry</td>
<td>ws</td>
<td>WSDL Importer</td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>JDBC - sybase</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Teradata</td>
<td>JDBC - teradata</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Teiid</td>
<td>JDBC - teiid</td>
<td>JDBC Importer</td>
</tr>
<tr>
<td>Web Services (SOAP/WSDL)</td>
<td>ws</td>
<td>WSDL or URL Importer</td>
</tr>
<tr>
<td>Web Services (Rest/OData)</td>
<td>ws</td>
<td>File Source (XML) Importer</td>
</tr>
</tbody>
</table>

### 1.2. Teiid Translators

The driving factor for connectivity from the Teiid runtime is based on the concept of translators. Translators represent deployed runtime code that performs the function of communicating with the actual data source and transforming the data from its native structures and properties into common Teiid-defined metadata. The translators available in Teiid 8.4 release are:

- Cassandra
- Delegating
- File
- Google Spreadsheet
- JDBC
- JPA
• LDAP
• Loopback
• MongoDB
• Object
• OData
• Salesforce
• SAP Netweaver Gateway
• SimpleDB
• Web Services

1.3. Connection Categories
Teiid Designer leverages the connection profile framework of the Eclipse Data Tools project. There are currently 3 categories of connection profiles:

• JDBC Connections
  Connections pertaining to the JDBC (Java DataBase Connectivity) API see: Chapter 2, JDBC Connections

• Open Data Access (ODA) Connections
  Connections adhering to the ODA spec such as MongoDB, Flat File (CSV) etc.

• Custom Teiid Connections
  Connections defined for Teiid-specific translators not covered via JDBC or ODA

1.3.1. ODA Connections
In Teiid Designer, the following ODA Connection Profiles options are available:

• BIRT Hive
• BIRT JDBC
• BIRT POJO
• BIRT Sample DB
Chapter 1. Data Sources Summary

• Excel

• Flat File - Local File System

The file system flat file data source is designed to represent one of 2 file structures.

• Folder containing multiple delimited files containing data representing identical column data for single table definition. For this case, the usage pattern will involve using a file definition in your view SQL consisting of a "***" wildcard.

• Folder containing multiple delimited files containing data for multiple table definitions. For this case, each file will be modeled separately and each view will contain SQL specific to the file name (table) that it represents.

The primary wizard page contains inputs for home folder or file URI. There are also options for setting:

• Character Set

• Flat File Style includes:
  • CSV formatting (Comma ',' separated values)
  • SSV formatting (Space ' ' separated values)
  • PSV formatting (Pipe '|' separated values)
  • TSV formatting (Tab separated values)

Additional properties can be set including:

• Use first line as column name

• Use second line as datatype

• Use trailing null columns
Figure 1.1. ODA Flat File Connection Profile
Figure 1.2. ODA Flat File Connection Profile Properties

- MongoDB
- Web Services - WSDL
- XML Data

1.3.2. Teiid-specific Connections

In Teiid Designer, the following custom Teiid Connection Profiles options are available:

- Flat File - Remote URL
- XML File - Remote URL
- XML File - Local File System - WSDL
- LDAP
- Salesforce
- Web Services - Odata
- Web Services - REST
- Web Services - SOAP
JDBC Connections

Teiid Designer utilizes the Eclipse Data Tools JDBC connection profile definitions. The following is a comprehensive definition of the available JDBC connection profiles.
2.1. DB2 Connection Profiles

2.1.1. DB2 for Linux, Unix and Windows

Figure 2.1. DB2 Standard Connection Details
Figure 2.2. DB2 Standard Properties
2.1.2. DB2 for is/OS

![DB2 is/OS Connection Details](image)

**Figure 2.3. DB2 is/OS Connection Details**
### Figure 2.4. DB2 is/OS Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>New DB2 for i5/OS</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Auto connect at startup</td>
<td>False</td>
</tr>
<tr>
<td>Auto connect on finish</td>
<td>true</td>
</tr>
<tr>
<td>Host</td>
<td>host</td>
</tr>
<tr>
<td>Username</td>
<td>joe</td>
</tr>
<tr>
<td>Save password</td>
<td>true</td>
</tr>
<tr>
<td>Default schema</td>
<td>sample</td>
</tr>
<tr>
<td>URL</td>
<td>jdbc.as400:host;prompt=False;</td>
</tr>
</tbody>
</table>
2.1.3. DB2 for z/OS

![DB2 connection details](image)

Figure 2.5. DB2 z/OS Connection Details
Figure 2.6. DB2 z/OS Properties
2.2. Derby Connection Profile

Figure 2.7. Derby Standard Connection Details
### Figure 2.8. Derby Standard Connection Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>NewDerby</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Auto connect at startup</td>
<td>False</td>
</tr>
<tr>
<td>Auto connect on finish</td>
<td>true</td>
</tr>
<tr>
<td>Database</td>
<td>sample</td>
</tr>
<tr>
<td>Host</td>
<td>localhost</td>
</tr>
<tr>
<td>Port number</td>
<td>1527</td>
</tr>
<tr>
<td>Username</td>
<td>user</td>
</tr>
<tr>
<td>Create database (if required)</td>
<td>true</td>
</tr>
<tr>
<td>Upgrade database to current version</td>
<td>False</td>
</tr>
<tr>
<td>Save password</td>
<td>false</td>
</tr>
<tr>
<td>URL</td>
<td>jdbc:derby://localhost:1527/sample;create=true</td>
</tr>
</tbody>
</table>
Figure 2.9. Derby Embedded Connection Details
2.3. DB2 Connection Profile

DB2 Profile.

2.4. Informix Connection Profile

TBD.

2.5. Ingres Connection Profile

TBD.

2.6. MaxDB Connection Profile

TBD.

2.7. Modeshape Connection Profile

TBD.
2.8. MySQL Connection Profile
TBD.

2.9. Oracle Connection Profile
TBD.

2.9.1. Section 1 Title
section 1 text.........

2.9.2. Section 2 Title
section 2 text.........

2.9.3. Section 3 Title
section 3 text.........

2.10. PostgreSQL Connection Profile
TBD.

2.11. SQLite Connection Profile
TBD.

2.12. SQL Server Connection Profile
TBD.

2.13. Sybase Connection Profiles
TBD.

2.14. Teiid Connection Profile
TBD.

Generic JDBC
Figure 2.11. Generic JDBC Connection Details
Figure 2.12. Generic JDBC Connection Properties