

Data Sources Reference Guide

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8.4.0

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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.



Note

The DDL Import option is an available option to build a source model for any data source. Note there are some data source types where no specific importer is available.

Table 1.1. Teiid Designer Supported Data Sources

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

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

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 it's 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

- 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

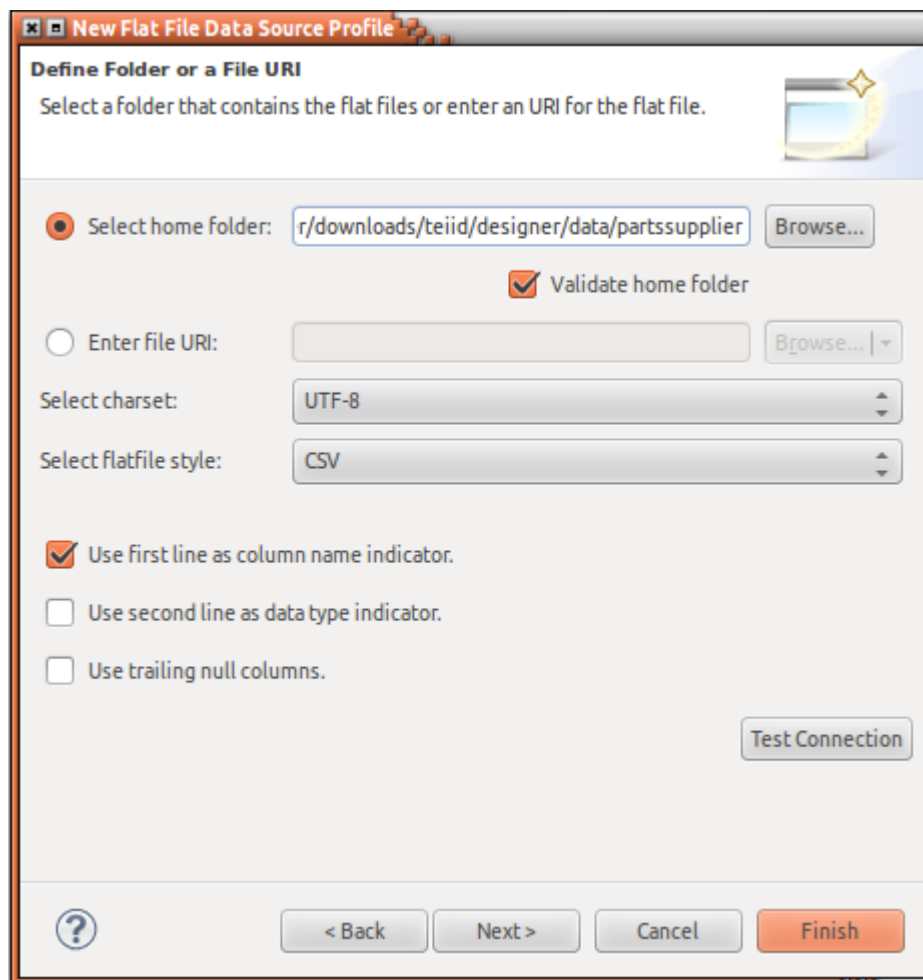


Figure 1.1. ODA Flat File Connection Profile

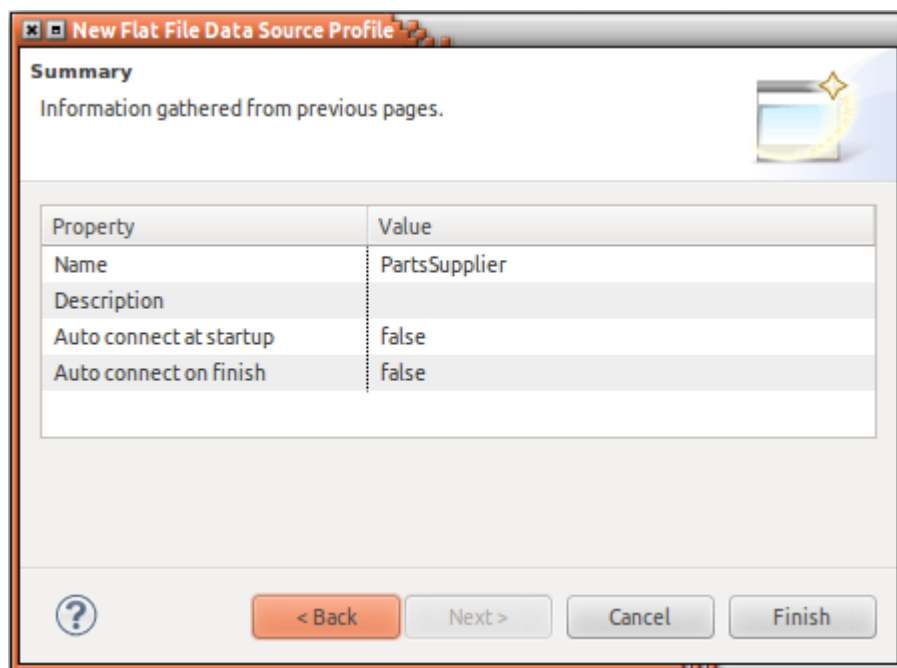


Figure 1.2. ODA Flat File Connection Profile Properties

- 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

New Connection Profile

Specify a Driver and Connection Details
Select a driver from the drop-down and provide login details for the connection.

Drivers: IBM Data Server Driver for JDBC and SQLJ

Properties

General Tracing Optional

Database: SAMPLE

Host: localhost

Port number: 50000

☐ Use client authentication

User name: joe

Password:

☒ Save password

Default schema:

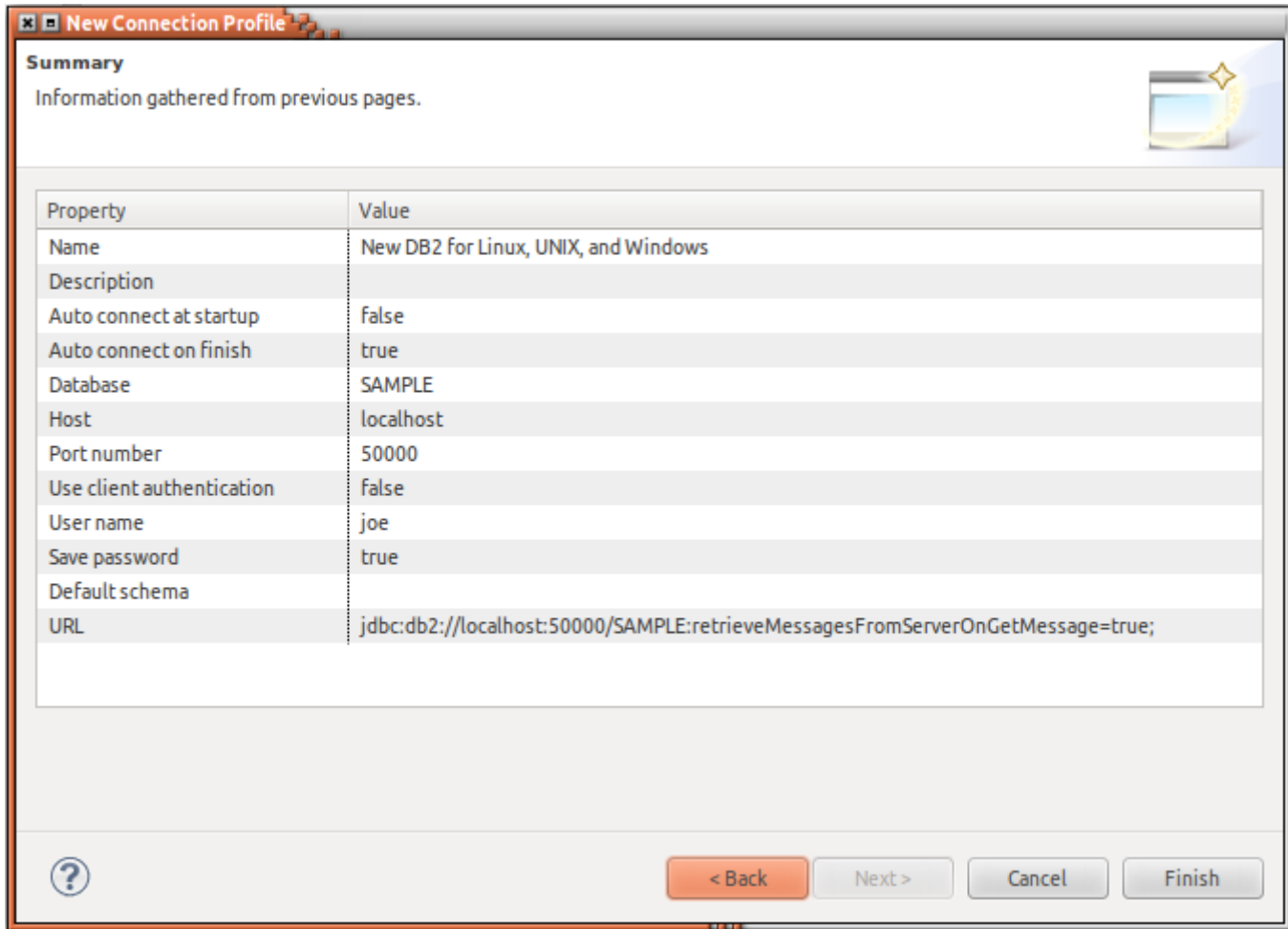
Connection URL: jdbc:db2://localhost:50000/SAMPLE:retrieveMessagesFromServerOnGetMessage=true;

☒ Connect when the wizard completes

☐ Connect every time the workbench is started

? < Back Next > Cancel Finish

Figure 2.1. DB2 Standard Connection Details



New Connection Profile

Summary
Information gathered from previous pages.

Property	Value
Name	New DB2 for Linux, UNIX, and Windows
Description	
Auto connect at startup	false
Auto connect on finish	true
Database	SAMPLE
Host	localhost
Port number	50000
Use client authentication	false
User name	joe
Save password	true
Default schema	
URL	jdbc:db2://localhost:50000/SAMPLE:retrieveMessagesFromServerOnGetMessage=true;

? < Back Next > Cancel Finish

Figure 2.2. DB2 Standard Properties

2.1.2. DB2 for is/OS

New Connection Profile

Specify a Driver and Connection Details
Select a driver from the drop-down and provide login details for the connection.

Drivers: AS/400 Toolbox for Java

Properties

Host: host

User name: joe

Password:

☒ Save password

Default schema: sample

Connection URL: jdbc:as400:host;prompt=false;

☒ Connect when the wizard completes

☐ Connect every time the workbench is started

Test Connection

? < Back Next > Cancel Finish

Figure 2.3. DB2 is/OS Connection Details

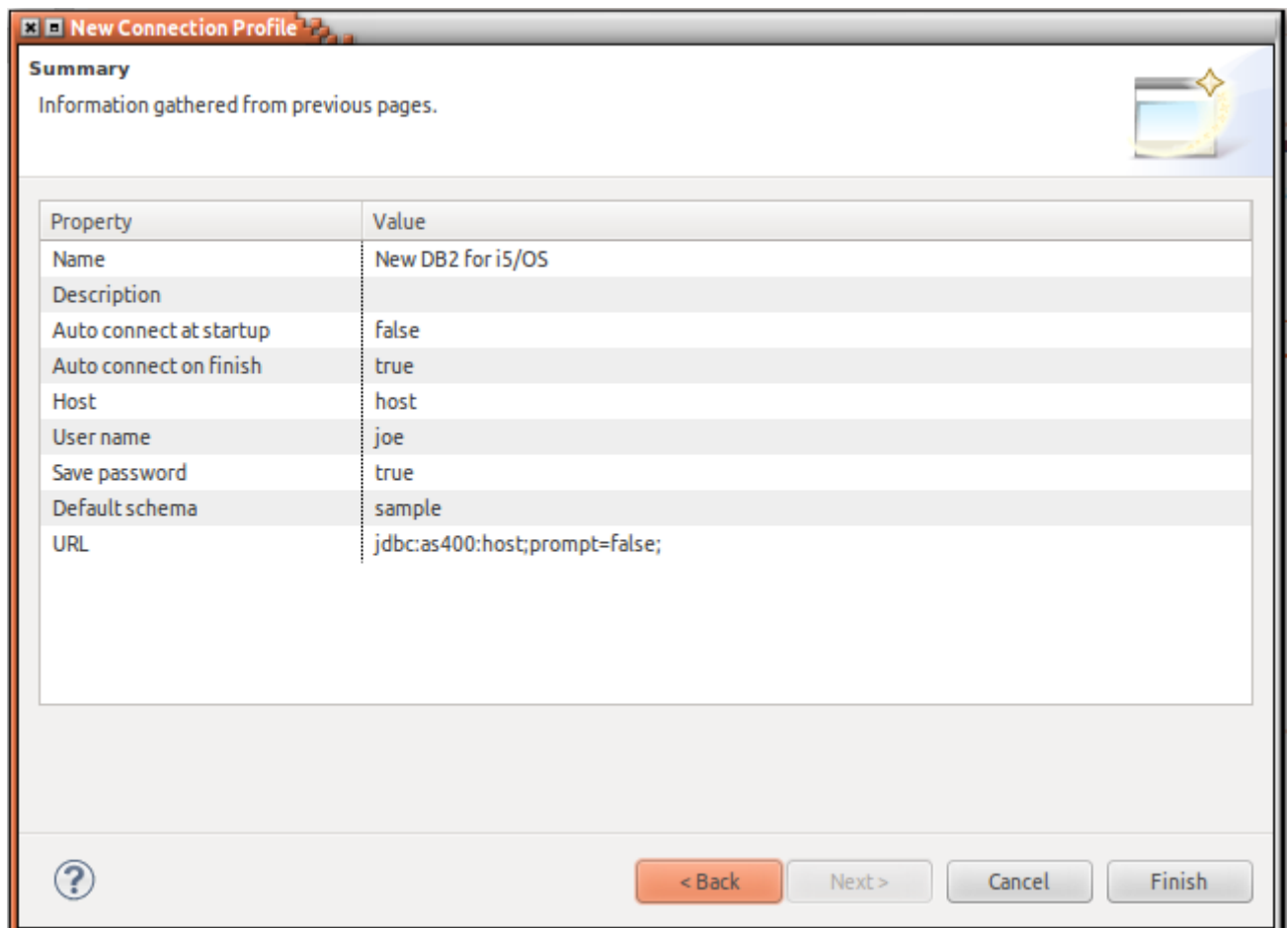


Figure 2.4. DB2 i5/OS Properties

2.1.3. DB2 for z/OS

New Connection Profile

Specify a Driver and Connection Details
Select a driver from the drop-down and provide login details for the connection.

Drivers: MyDB2_z_OS

Properties

General Tracing Optional

Location: qe.database.db005.com

Host: 15000

Port number: 446

☐ Retrieve objects created by this user only

User name: joe

Password:

☐ Save password

Default schema: sample

Connection URL: jdbc:db2://15000:446/qe.database.db005.com:retrieveMessagesFromServerOnGetMessage=true;emulateParameterMetaDataForZCalls=1;

☒ Connect when the wizard completes

☐ Connect every time the workbench is started

Test

? < Back Next > Cancel

Figure 2.5. DB2 z/OS Connection Details

New Connection Profile

Summary
Information gathered from previous pages.

Property	Value
Name	New DB2 for z/OS
Description	
Auto connect at startup	false
Auto connect on finish	true
Location	qe.database.db005.com
Host	15000
Port number	446
Retrieve objects created by this user only	false
User name	joe
Save password	false
Default schema	sample
URL	jdbc:db2://15000:446/qe.database.db005.com:retrieveMessagesFromServerOnGetMessage=tru

? < Back Next >

Figure 2.6. DB2 z/OS Properties

2.2. Derby Connection Profile

New Derby Connection Profile

Specify a Driver and Connection Details
Select a driver from the drop-down and provide login details for the connection.

Drivers: Derby Client JDBC Driver

Properties

General Optional

Database: sample

Host: localhost

Port number: 1527

User name: user

Password: ...

☒ Create database (if required)

☐ Upgrade database to current version

☐ Save password

URL: jdbc:derby://localhost:1527/sample;create=true

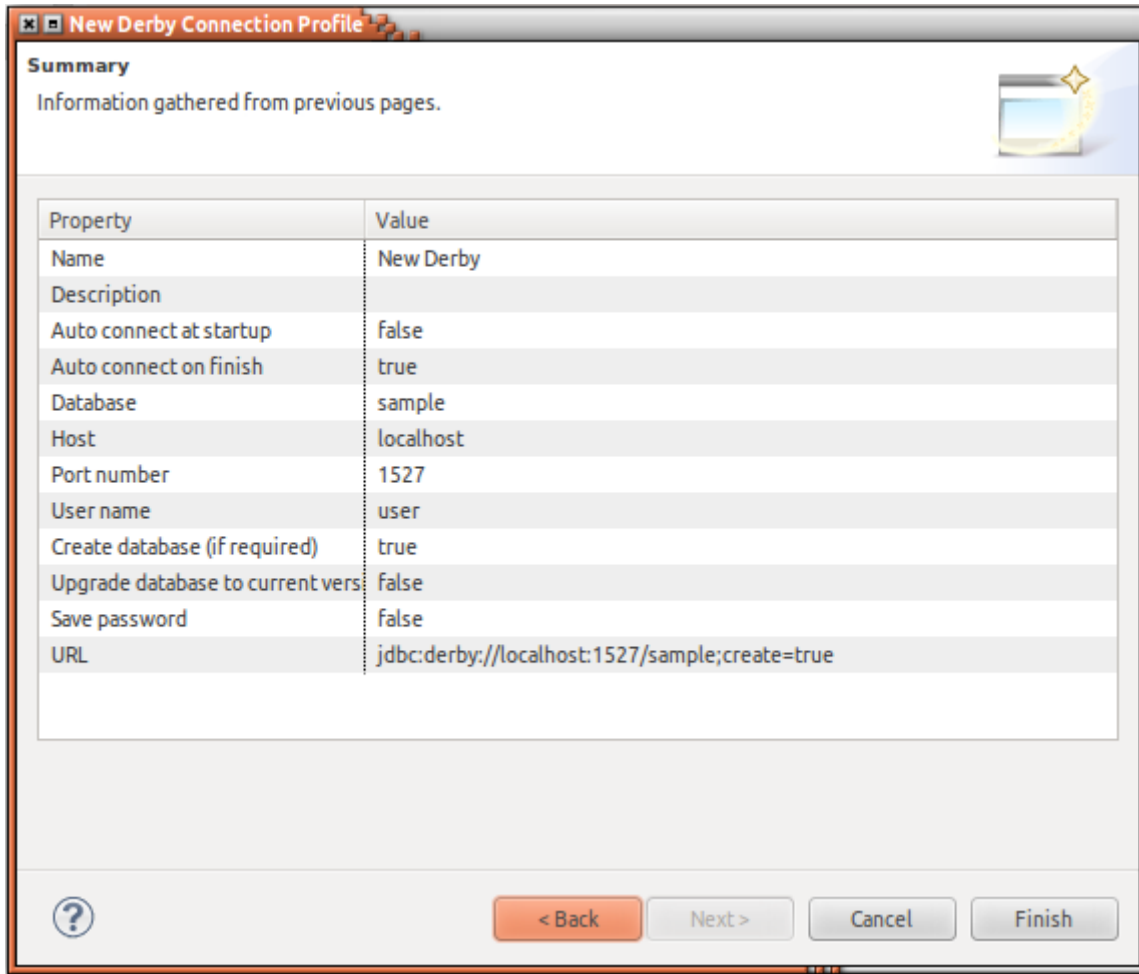
☒ Connect when the wizard completes

☐ Connect every time the workbench is started

Test Connection

? < Back Next > Cancel Finish

Figure 2.7. Derby Standard Connection Details



The image shows a 'New Derby Connection Profile' dialog box. It has a title bar with a close button and a maximize button. The main area is titled 'Summary' and contains the text 'Information gathered from previous pages.' To the right of this text is a small icon of a folder with a star. Below the text is a table with two columns: 'Property' and 'Value'. The table contains the following rows: Name (New Derby), Description (empty), Auto connect at startup (false), Auto connect on finish (true), Database (sample), Host (localhost), Port number (1527), User name (user), Create database (if required) (true), Upgrade database to current vers (false), Save password (false), and URL (jdbc:derby://localhost:1527/sample;create=true). At the bottom of the dialog box are four buttons: a help button (question mark icon), '< Back', 'Next >', and 'Finish'.

Property	Value
Name	New Derby
Description	
Auto connect at startup	false
Auto connect on finish	true
Database	sample
Host	localhost
Port number	1527
User name	user
Create database (if required)	true
Upgrade database to current vers	false
Save password	false
URL	jdbc:derby://localhost:1527/sample;create=true

Figure 2.8. Derby Standard Connection Properties

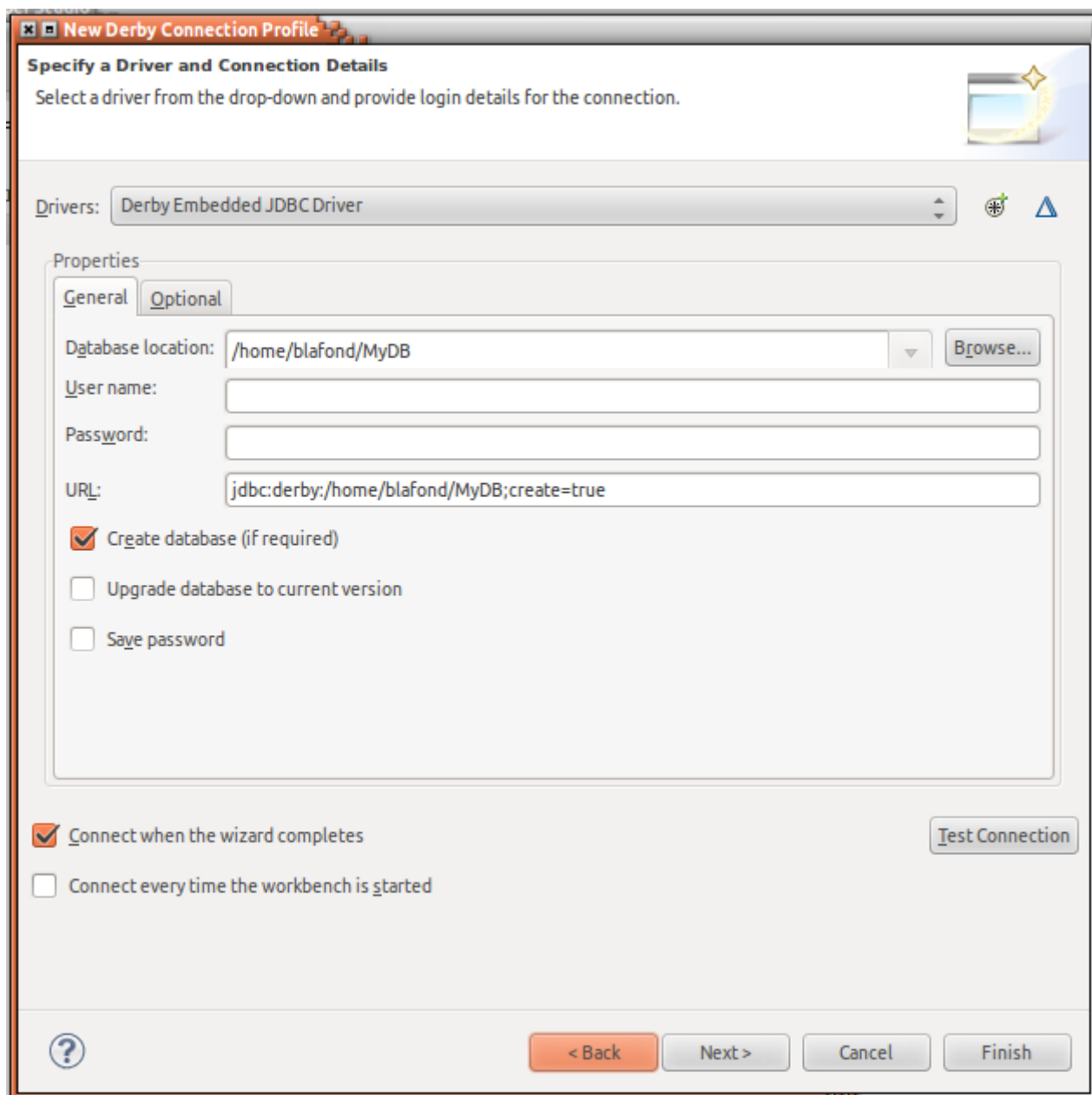
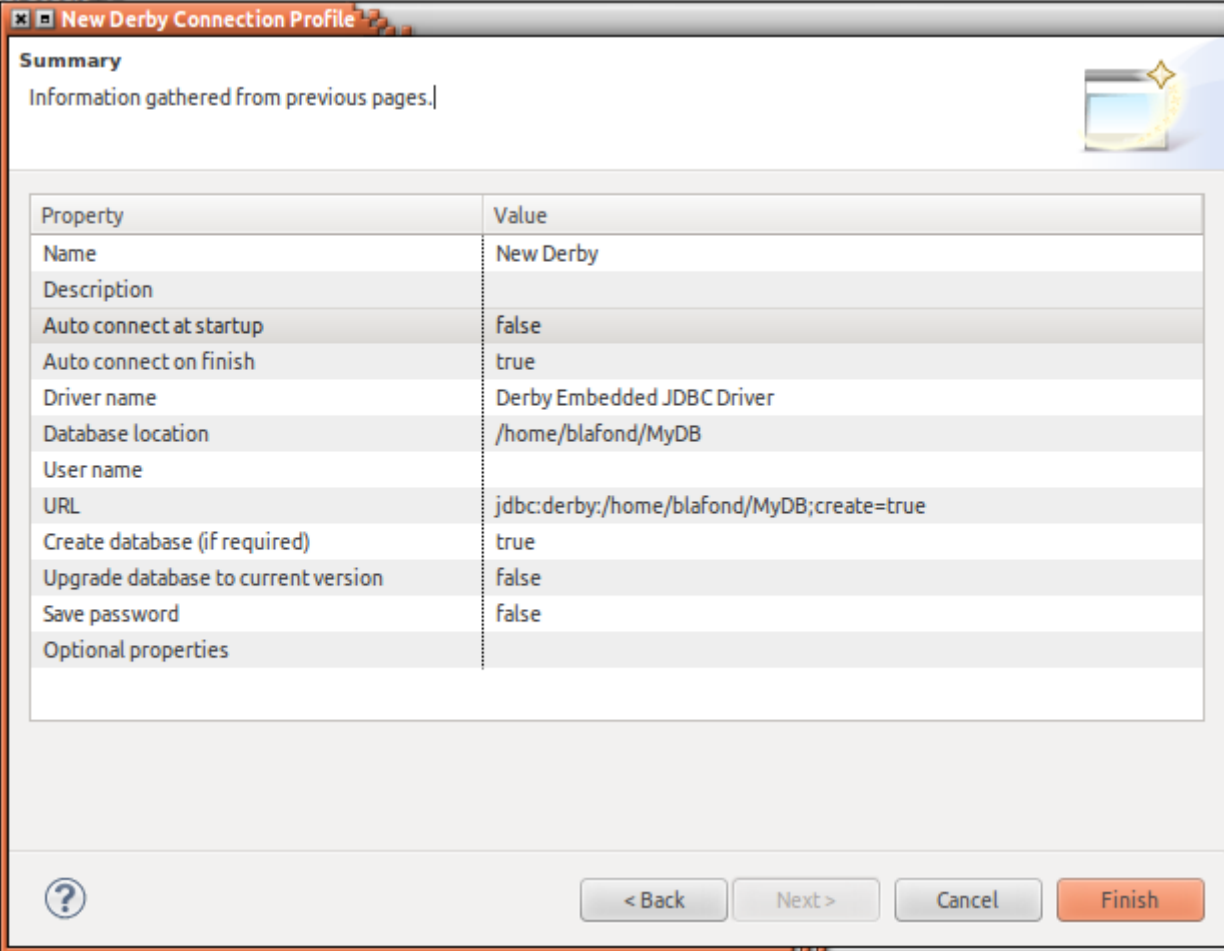


Figure 2.9. Derby Embedded Connection Details



New Derby Connection Profile

Summary
Information gathered from previous pages.

Property	Value
Name	New Derby
Description	
Auto connect at startup	false
Auto connect on finish	true
Driver name	Derby Embedded JDBC Driver
Database location	/home/blafond/MyDB
User name	
URL	jdbc:derby:/home/blafond/MyDB;create=true
Create database (if required)	true
Upgrade database to current version	false
Save password	false
Optional properties	

Buttons: ? < Back Next > Cancel Finish

Figure 2.10. Derby Embedded Connection Properties

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

The screenshot shows a 'New Connection Profile' dialog box with the title bar 'New Connection Profile'. The main heading is 'Specify a Driver and Connection Details' with a sub-instruction: 'Select a driver from the drop-down and provide login details for the connection.' Below this, the 'Drivers' dropdown menu is set to 'Generic JDBC Driver'. The 'Properties' section has two tabs: 'General' (selected) and 'Optional'. Under 'General', there are four text fields: 'Database' with 'SAMPLE', 'URL' with 'jdbc:', 'User name' with 'sample', and 'Password' with masked characters '*****'. A 'Save password' checkbox is checked. At the bottom of the 'General' section, there are two checkboxes: 'Connect when the wizard completes' (checked) and 'Connect every time the workbench is started' (unchecked). A 'Test Connection' button is located to the right of these checkboxes. The bottom of the dialog features a help icon (question mark), and four navigation buttons: '< Back', 'Next >', 'Cancel', and 'Finish' (highlighted in orange).

New Connection Profile

Specify a Driver and Connection Details
Select a driver from the drop-down and provide login details for the connection.

Drivers: Generic JDBC Driver

Properties

General Optional

Database: SAMPLE

URL: jdbc:

User name: sample

Password: *****

☒ Save password

☒ Connect when the wizard completes

☐ Connect every time the workbench is started

Test Connection

? < Back Next > Cancel Finish

Figure 2.11. Generic JDBC Connection Details

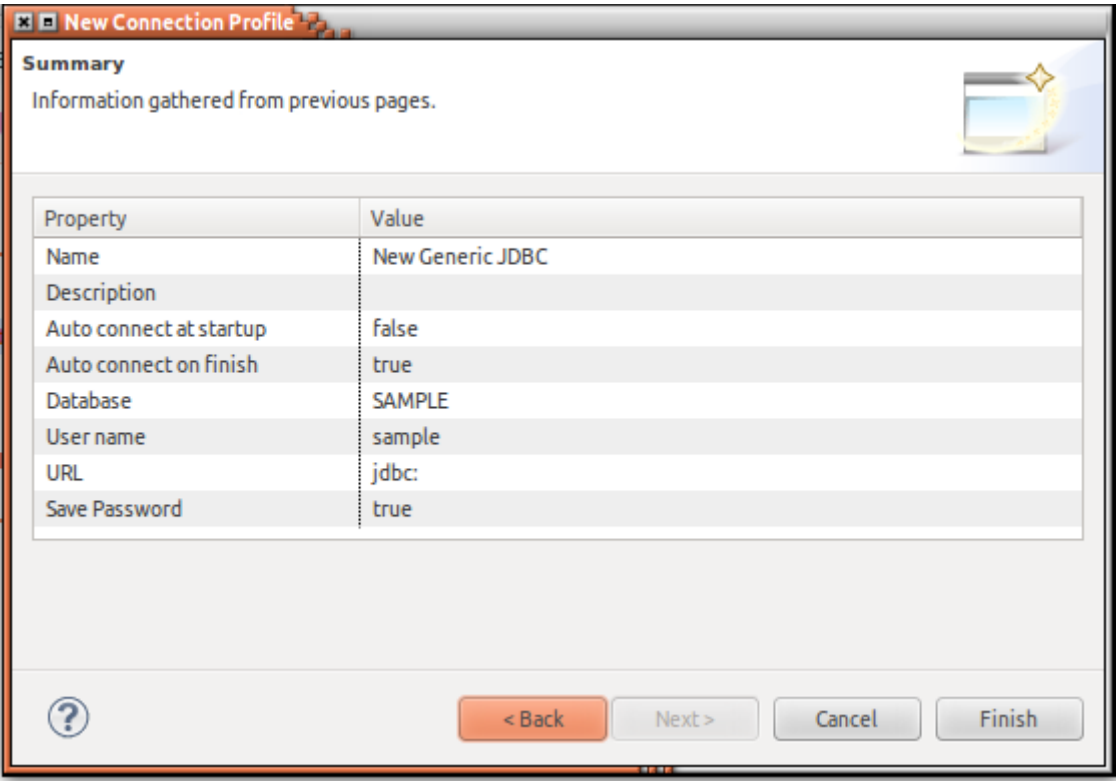


Figure 2.12. Generic JDBC Connection Properties